



International Conference on Education **Proceedings**

Theme: Innovative Teacher Education and
Classroom Practice in the 21st Century

July 8-10, 2009
Nairobi, Kenya

Editors

Dr. Adelheid Bwire
Prof. Joanna Masingila

Mr. Yan Huang
Prof. Henry Ayot

KENYATTA UNIVERSITY
SYRACUSE UNIVERSITY

Proceedings of the International Conference on Education

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Preface

Kenyatta University and Syracuse University have had an institutional linkage since 2000. This conference is one of the activities sponsored through the Kenyatta University-Syracuse University Partnership.

These proceedings are a written record of the research presented at the International Conference on Education held July 8-10, 2009 at the Kenyatta University Conference Centre, Nairobi, Kenya. The theme of the conference, *Innovative Teacher Education and Classroom Practice in the 21st Century*, focuses on an important set of opportunities for research to be useful in improving teaching and learning. Keynote addresses were given by Prof. John W. Tillotson, Prof. George S. Eshiwani, and Dr. P. L. O. Lumumba.

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THE NEPAD e-SCHOOL PROJECT: THE KENYAN CASE

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Abstract

In July 2001, the 37th summit of the heads of states of the African Union, (AU), adopted an integrated social-economic development framework for African renewal. This framework was named the **New Partnership for African Development, (NEPAD)**.

The objectives of NEPAD were well linked to the millennium development goals but centered around eradicating poverty levels in Africa, accelerating sustainable development, and halting the marginalization of Africa from the globalization process. These objectives would be achieved through capacity building and improvement of infrastructure in ICT, education, energy, transport and health sectors.

An offshoot from the NEPAD initiative was a program known as the “**NEPAD e-School Project**”. The e-school project was born and launched in Durban South Africa, at the African Summit of the World Economic Forum, in June 2003. The aims of the **NEPAD e-school project** were to impart ICT skills to primary and secondary schools, while harnessing ICT technologies to improve, enrich and expand access to education in Africa.

The pilot phase was launched in Sixteen (16) countries that acceded to the memorandum of understanding of NEPAD peer review mechanism. These countries included Algeria, Burkina Faso, Cameroon, Congo, Egypt, Gabon, Kenya, Lesotho, Mali, Mauritius, Mozambique, Niger, Rwanda, Senegal, South Africa and Uganda

In Kenya, the pilot phase was initiated in six (6) Kenyan secondary schools in the year 2004. This paper explores and reviews the extent of use of the NEPAD’s ICT resources in the classroom, examines and provides data related to access of ICT equipment by students, analyses the effectiveness and competencies of the teaching staff in ICT integration, and describes the environmental acceptability of the **NEPAD e-school initiative** by the school community. The paper ends by giving its recommendations to individuals and institutions wishing to fund future ICT programs for schools in Kenya and in Africa.

Introduction

This study sought to obtain data on the success and challenges facing the NEPAD's e-School project in Mumbi Girls' secondary school in Murang'a District of Central Province, Kenya. The study explored the extent to which the e-learning facilities are being used to facilitate learning during science lessons. The study further sought to find out the extent of teacher preparedness in the use of the e-School facilities in Kenyan Secondary schools.

ICT stands for information communication and technology. ICT can be seen to encompass a wide range of technologies including telephone, fax machines, televisions, video, compact disk (CD) players, compact disk read only memory (CDROMs) players, personal organizers, programmable-remote operated toys, as well as computers (O'Hara 2004:ix). In the early years of its development, ICT was formally known as Information Technology (IT), and widely revolved around the computer itself. However today, computers form only a component of ICT. While the term ICT was used in this study, the term computer has frequently been used, without suggesting that the wider context of communication and other related equipment are being omitted or overlooked.

Though appearing as a new concept, ICT can be traced back into antiquity, about a hundred thousand (100,000) years ago, when *Homo sapiens* begun using intelligence to meet and further their goals. The first recorded ICT device is the abacus, believed to have been made in the oriental China, around 3,000 B.C. The abacus, a primitive calculating device, was a bead and frame device which was developed for adding large sets of numbers which abacus remained a primary calculating device through the early human history. Two thousand years (2,000) years later, water clocks were made in China, Egypt and Assyria. The records of the works of Plato reveal inclination of the human thought towards the mechanics of machines. At around 415 B.C., Plato founded an academy for the pursuit of science and philosophy, an institution which formed a fertile ground for the development of mathematical theory. The outcomes of the academy was solid geometry, concepts which resulted to production of more elaborate automata during the European renaissance (William 1995)

Since the time of Plato, the world of computing showed tremendous innovations leading to the development of new hardware, software and applications. Computers found specific applications in business, industry, government institutions and amongst wealthy individuals.

This exciting technology has also descended onto our learning institutions. ICT has been used as a catalyst to initiate changes in teacher pedagogical perceptions and practices, transforming the teaching-learning transaction form being dull teacher-dominated activity, geared to dishing factual knowledge, to an exciting learner centered process which nurtures confidence, initiative and mental skills" Makau (1989: X) suggested that the multimedia

capabilities of the new technologies open a new pedagogical paradigm, which need replace the more traditional educational methods, rendering learning easier and more pleasant”.

The effective use of the ICT technologies can be used as a tool that can enhance the teaching of school subjects, especially mathematics and sciences. ICT can be an effective mode of delivery of distant education through the e-learning concept. Similarly, ICT resources can help in the automation of the management and administrative processes such as timetabling, administration of exams, duty allocation to teaching staff and support personnel, and can provide a very effective tool for financial monitoring and control. It can provide fast means of communication for staff and students, while providing effective tool for doing business with suppliers, examiners, career trainers, colleges and policy makers in the ministry headquarters (Jonathan: 1986). A very crucial role of ICT technologies is that it has opened some new bodies of knowledge, particularly in the area of informatics, otherwise known as computer science (Jonathan: 1986)

The main challenges posed by integrating ICT in teaching science revolve around three areas. Access to ICT equipment, environmental acceptability of ICT by teachers and students, and competencies of teachers to integrate ICT during classroom interaction

The NEPAD e-School Project

With the increased craving for ICT in education, the New Partnership for African Development (NEPAD) vision for an electronic School (e-School) was born. The NEPAD e-School initiative aims at imparting ICT skills to young African primary and secondary schools, and harnessing ICT technologies to improve, enrich and expand education in African countries. A body called “the Information Society Partnership for African Development” (ISPAD) was selected as the vehicle for the private sector involvement in the NEPAD e-School initiative. ISPAD would bring together fiscal, human resources, ICT infrastructure, curriculum material for the private sector partners and the civil society, so as to merge them to the Africa e-School initiative. The private partners identified by ISPAD have already initiated pilot projects in sixteen (16) countries that acceded to the memorandum of understanding of the NEPAD African peer review mechanism. ISPAD was mandated to organize and manage the e-School project.

The NEPAD e-School project had several objectives. Firstly, to provide ICT software and hardware such as computers, radios, Television set(s), communication equipment, scanners and copy printers to African schools. Secondly, the e-School project aims at providing African schools with connectivity to the internet, while providing satellite networking of all schools in the continent. The project also aims at providing ICT training for teachers while

mobilizing the community to be involved and own the e-School ICT project. Lastly, the project focuses its efforts towards proving a health point within the school.

The NEPAD e-School project was to be executed in a period of ten (10) years, with secondary schools being completed in the first five (5) years, which was to end in June 2008. Over six hundred thousand (600,000) schools in Africa were set to benefit. In Kenya, the NEPAD e-School project was launched in the year 2004. The pilot phase is in progress in six (6) Kenyan secondary schools, namely Mumbi Girls in Murang'a District of Central Province, Isiolo Girls, Isiolo District of Eastern Province, Menengai High School in Nakuru District of the Rift Valley province, Chavakali High school, Western Province, Wajir High School of the North Eastern province, and Malanda Secondary School in the Coast Province.

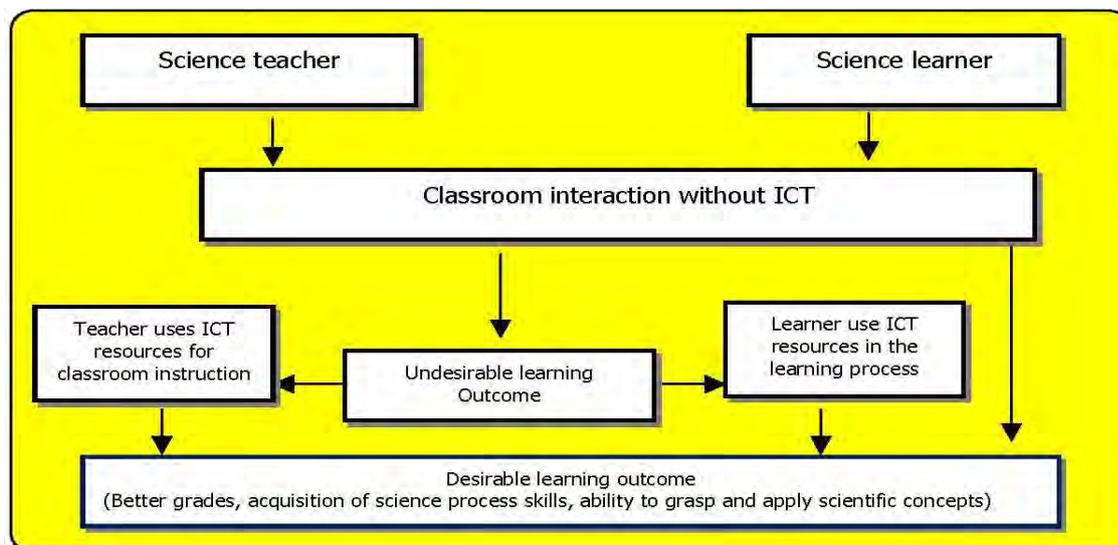
OBJECTIVES OF THE STUDY

- a) To document the e-School hardware and software equipment at Mumbi Girls' secondary school, and relate them to access of the e-School technology to teachers and students
- b) To find out the extent to which the e-School facilities are being used for classroom instruction during science lessons
- c) To find out the extent to which the science teachers are trained to handle the e-School facilities for instruction delivery

CONCEPTUAL FRAMEWORK

The use of ICT resources to facilitate teaching and learning process is highly justifiable. ICT in instruction delivery, in the most strict sense, is a fairly recent innovation, so by and large, in the traditional classroom, teaching and learning was facilitated by other resources and not ICT. The outcome of the traditional classroom was pointed towards two expectations, desirable outcomes or undesirable outcomes. The extent to which desirable learning outcomes can be obtained is crucial in any teaching learning process. The use of ICT resources opens up new methodologies of instruction, which can make the learning of sciences more interesting and exciting. If the ICT resources are utilized effectively, both by the teacher and the learner, better indicators of the learning outcome would be obtained.

Figure 1. A diagrammatic representation of the role of ICT in classroom interaction



HARDWARE AND SOFTWARE EQUIPMENT IN RELATION TO ACCESS

The study documented the variety of hardware at the NEPAD e-school. Table 1 represents the data obtained

Table 1 A profile of hardware equipment at Mumbi Girls' ICT laboratory

TYPE	BRAND	QUANTIT Y	WORKING CONDITION		
			Good	Fair	Salvage
DSTV DECODER	DSTV	1	√		
KEYBOARD, SYSTEM UNIT, MONITOR, MOUSE	MECER	21	√		
WHITE SCREEN	EPSON	1	√		
COMPUTER SERVER	MECER	1	√		
UNINTEUPRED POWER SUPPLY	MECER	1	√		
MODEM	DirecWay	1	√		
SATELITE DISH	AphSAT Kenya	1	√		
PRINTER	XEROX	5	3√	2√	
EARPHONES	N/A	21	√		
TELEVISION SET – 29 INCH	SHARP	1	√		
VIDEO RECORS PLAYER	SONNY	1√	√		
COMPUTER PROJECTOR	EPSON	1	√		

All equipment was in good condition, except the copier printer which was grounded. The copier printer had stalled due to a technical fault, yet the ICT champion (the NEPAD e-School project manager in the school) was not mandated by the Xerox Company to carry out repair and maintenance of the printer.

Science teacher

Science learner

Learner use ICT resources in the learning process

Undesirable learning

Outcome

Teacher uses ICT resources for classroom instruction

Desirable learning outcome

(Better grades, acquisition of science process skills, ability to grasp and apply scientific concepts)

Classroom interaction without ICT

Table 2: Computer student ratio in Mumbi Girls Sec School

CLASS	ENROLLMENT	COMPUTER:STUDENT RATIO
Whole school	520	1 : 25
Form 1	135	1 : 7.0
Form 2	135	1 : 7.0
Form 3	18	1.16 : 1
Form 4	15	1.4 : 1

The results in table 2 indicate a ratio of 1 computer for every twenty five (25) students in the school. This means that if all students were to access the computers at any one time, twenty five (25) students would be sharing one computer at such a time. These ratios are very high when compared to the international standards of two is to one (2:1) (www.scott.k12.va.us)

Software. Software is always bubbled in hardware. Consequently the challenges that face science teachers and students when accessing hardware are by virtue, experienced when handling software. This study documented the following concerning software

Table 3: Software in the ICT laboratory

TYPE	BRAND	QUANTITY	VERSION		
			Recent	Fairly recent	Fairly recent
aSc-Timetable	Hemmisoft Solutions	Enough		v 2004	
Microsoft Office	Office 2003	Enough		v 2003	
Internet explorer	Microsoft	Enough		v 2003	
Digital Library	Ms Encarta	Enough		v 2003	
e-School	Oracle	Enough		v 2002	
Thinkpad.com		enough			
Letts Revisions Series	GCSE mock papers (Physics And Biology)	Enough		v	

Two revelations from the table above are striking. First, there are no home made programs tailored to meet the objectives of the Kenyan secondary school science syllabus. The **Letts series** is a revision program for the General Certificate of Secondary Education, which is a British curriculum. The **Microsoft Encarta** is a digital library program containing topical content in almost all subjects. It is not systematically programmed for use by Kenyan Students. Though the science teachers and students can use these programs, they are faced by the never ending hassle of sieving the material over and over until the desired content is achieved.

Secondly the **HEMMISOST SOLUTIONS**, which has installed time table program- **aSc time table**-, raises a policy question: - within which policy framework do private software developers operate, and how do they infiltrate into the school ICT laboratories?

QUALIFICATIONS OF THE RESPONDENTS

Professional and academic qualifications. The respondents were classified as follows based on their major teaching subject

Table 4: Number of respondents by their major teaching subject

RESPONDENT	NO OF TEACHERS	PERCENTAGE	CUMMULATIVE
Biology teacher	2	28.6	28.6
Chemistry teacher	3	42.6	71.4
Mathematics	1	14.3	85.7
Computer	1	14.3	100
Total	7	100	

Form this table it is evident that Biology and chemistry was handled by teachers who were qualified to handle the subject. 71.4% of them being specialists in the listed subjects, the teachers were armed with sufficient subject matter during pre-service. The ongoing assumption is that the respondents would spend more of their free time experimenting with newer methodologies (such as ICT integration in the instruction of sciences) rather than acquainting themselves with subject matter.

Academic qualifications of respondents

With regard to academic and professional qualifications, all the seven (7) (100%) respondents had either a college diploma or a university degree. A college diploma or a university degree is an indicator that the respondents possess highly developed cognitive structures. This information is represented in the table below.

Table 5: Highest academic and professional qualifications of the respondents

		Number of teachers	Percent	Valid Percent	Cumulative Percent
Valid	College	4	57.1	57.1	57.1
	University	3	42.9	42.9	100.0
	Total	7	100.0	100.0	

The information regarding academic qualifications reveals that the respondents possess dispositions that confer them the flexibility to emerging issues, both in their formal life and in their professional practice. This argument is validated by Makau (1989) who observes

“...education disposes the beneficially to readily adopt to change... hence academic qualifications are a facilitating factor in the implementation of any educational program”

The expectation is that the respondents would embrace the emerging pedagogical approaches readily.

THE QUALIFICATIONS OF TEACHERS IN ICT

The researcher, in finding out the qualifications of the science teachers, further compared the college which the respondents attended and the institution which offered the first training in ICT. The table 6 confirms that all the seven (7) received their pre-service training in respected public teacher training institutions.

Table 8: Areas of ICT for which the respondents use ICT

	CLASSROOM USE		PERSONAL USE		ADMINISTRATIVE	
	N	D	N	D	N	T
INTERNET	71.4	28.6	57.1	14.3	100	0
W.W.W.	71.4	14.3	57.1	14.3	85.7	14.3
SATELLITE n. WORKING	85.7	0	71.4	0	100	0
Email	100	0	57.1	14.3	100	0
CDROM	71.4	14.3	85.7	14.3	100	0
FAX	100	0	85.7	0	100	0
E-LEARNING	57.1	0	42.9	0	100	0
WRD PROCESSOR	57.1	14.3	42.9	14.3	71.4	14.3
SPREADSHEET	57.1	14.3	57.1	14.3	71.4	14.3
DATABASE	71.4	14.3	71.4	14.3	85.7	14.3
DT PUBLISHING	85.7	14.3	71.4	14.3	71.4	14.3
ED. SOT WARE	71.4	14.3	71.4	14.3	85.7	14.3

The outcomes of the teachers' responses reveal inadequate use of ICT resources in almost all areas. First, though 100% of all the respondents have received training in the use of word processor, only one (1) 14.3% of the respondents use the program to further their classroom objectives. A similar percentage uses the word processor and spreadsheet software for personal and administrative purposes on a daily basis.

COMPETENCE OF TEACHERS TO HANDLE THE E-SCHOOL FACILITIES

The competence of the respondent would be probed further by asking the frequency with which each of the respondent used the knowledge gained during training for the instruction of science lessons. Table 9 below represents the data captured.

Table 9: Areas of ICT for which the respondents have received training

Area of ICT training	No	Yes		No	
		No of teachers	Percent	No of teachers	Percent
Internet & World Wide Web	7	2	28.6	5	71.4
E-mail	7	3	42.9	4	57.1
E-learning	7	4	57.1	3	57.1
Networking	7	1	14.3	6	85.7
Word Processing	7	7	100.0	0	0
Database Management	7	3	42.9	4	57.1
Spreadsheet	7	5	71.4	1	14.3
Desktop publishing	7	2	28.6	5	71.4
Networking with other teachers	7	0	0	7	100
Faxing	7	1	14.3	6	85.7
Video conferencing	7			7	100
Digital Camera	7	1	14.3	6	85.7
Digital scanner	7	1	14.3	6	85.7
Educational software	7	0	0	7	100
Online information sourcing	7	1	14.3	6	85.7
Digital timetabling	7	3	42.9	4	57.1
Web design	7	1	14.3	6	85.7
		7	100.0		

The frequencies and percentages obtained in table 9 indicate alarming revelations. There are high proportions of respondents with inadequate know-how on the crucial computer programs. Imperatively only two (2) (28.6%) have received training on how to use the internet, one (1) (14.7%) can source information from a computer network, zero percent (0%) can exchange educational views on Video conferencing, Zero percent (0%) can share electronic experiences with other teachers from other schools in Kenya and Africa. None of the respondents (0%) have previous exposure to educational software of any kind. The fore-

mentioned areas are the core programs for the most acclaimed e-learning and the e-School concept. This argument is supported by the electronic Wikipedia dictionary which states

“ E-learning is a form of advanced learning technology, which deals with the computer as a tool and associated methodologies in learning using networked and multimedia technologies. The internet and multimedia technologies are the basic enablers of e-learning.”

SUMMARY OF THE FINDINGS

The e-School Hardware and software in relation to access to ICT

a) Hardware. Concerning hardware this study made observations. Firstly, the facilities are barely enough to provide sufficient access for e-learning resources during a normal science lesson. A high student computer ratio of one to twenty five (1:25) at school level, and one to seven (1:7) at class level compares unfavorably with the international standards of one to one (1:1) or one to two (1:2)

Secondly the e-School facilities are not being used for e-learning in the most strict sense, rather as facilities for learning computer studies. The provision of a forum for newly emerging e-learning approach is being overlooked to a large extent.

Thirdly, the placement of the ICT resources in one ICT laboratory is greatly limiting access. A centralized room can only be accessed one at a time.

Fourthly, the ICT laboratory layout exposes the issue of ergonomics, presenting strain to the lumbar and shoulder muscles. Closely related to this finding is the competition for the most comfortable middle bench amongst students

b) Software. Relating to software, this study made two observations: First, none of the programs installed are homemade or tailored to meet the objectives of the Kenyan secondary school science syllabus. The science teachers and students have to sieve through the existing programs until the desired content is achieved. This by itself has a time element which teachers are resisting.

Secondly, private software developers are making their own programs and infiltrating into schools and sell those programs. The contention to this observation is that policy issues relating to ICT should be developed and implemented in the strictest sense.

Professional and academic qualifications of the respondents

a) Professional and academic qualifications. With regard to academic and professional qualifications, the researcher observed that all the seven (7) (100%) respondents are graduates of with either a college diploma or a university degree. A college diploma or a university degree is an indicator that the respondents are highly qualified to grasp content in ICT training with ease. Secondly, being qualified, the teachers can spend more time experimenting with methodology, rather than content.

b) The qualifications of teachers in ICT. The study observed that the science teachers' are deficient of adequate training and competence in the use of ICT. Teachers who are not well trained in ICT will shy off from utilizing such resources in classroom instruction.

Secondly the study revealed that five (5) (71.4%) against two (2) (28.6%) of the respondents received their first ICT exposure not at their teacher training institution, but training in other institutions. The implication is that the Teacher Training Programs are inadequate in preparing teachers in ICT, leave alone training teachers on how they can use ICT resources to further their classroom objectives.

Competence of teachers to handle the e-School facilities

This study observed that a high proportion of respondents do not have adequate skills to handle the hardware facilities and have difficulties in handling the installed software. Without knowledge of the installed programs teachers cannot facilitate their lessons using the e-learning approach. A roll out of the program without addressing the key area of teacher education in ICT would be a terrible mistake.

The study further observes that all the science teachers are trained to make basic computer files using a word processing program, spreadsheet and database management programs.

The three areas form the basics of ICT training forming an opinion that the respondents are trained in the basics of the technology.

This study also revealed that all respondents (100%) are for the opinion that they require more training on how to utilize ICT resources for classroom instruction.

Extent of use of ICT resources by science teachers

This study revealed that inadequate use of ICT resources in almost all areas. The inadequate use was observed to be due to three factors.

Firstly, the ICT laboratory is fully engaged in the teaching of computer studies, so teachers can only access the facilities when such a room is not being used for any other purpose. The computer studies are given a first priority, and teachers must postpone their priority until such a time when they are free and the ICT resource room is free.

Secondly, the computer studies teachers are fully utilizing the ICT facilities when teaching their subjects, but the use of the resources to further the other objectives of the NEPAD e-School project, e.g. to harnessing ICT technology to improve, enrich and expand education, was observed to be at minimum.

Thirdly, due to inadequate time and facilities, teachers stream to the ICT laboratory over lunch hour, the same time when the students are completing their assignments and sharpening their ICT skills. This precipitates competition between teachers and students.

The study further revealed that a major impediment to ICT adoption and utilization is because the relevant programs tailor-made for the Kenyan schools are non-existent. In some cases, only fragments of the syllabus can be covered by use of ICT. The existing programs are based on foreign syllabi or too detailed beyond the level of the student.

Lastly, the study revealed that the low key utilization of ICT resources by teachers was due to inadequate exposure with the technology. Most teachers are not experts in the use of ICT resources.

RECOMMENDATIONS

This study revealed issues that led to the following recommendation

1. That the roll out of the NEPAD's e-School project be postponed until such a time when teachers are well mentored and exposed on how to incorporate the technology as a new instructional tool.
2. While in-service for practicing teachers is recommended, this study suggests that student-teachers must be oriented towards ICT adoption right from the first semester in campus. The student-teachers need to try out their ICT skills in lessons during microteaching, teaching practice and during their actual practice.
3. That the quality and standards office should become more aggressive in enforcing ICT adoption to schools. An ICT taskforce mandated to enforce ICT policies should be placed on a performance contract and its effectiveness monitored
4. A home made digital syllabus in line with the Kenyan syllabus need be developed. Digitizing should start with those subjects that require urgent methodology reform such as science and mathematics.

5. The Ministry should develop policies regarding timetabling, examination analysis and entry of school records. Teachers should be encouraged to present their exam scripts in form of soft copies. They should be encouraged to key in their continuous assessment tests and exam results on a spreadsheet, maintain a digital class register, and maintain other data electronically. The policy should be enforced at the school level by the Principal.
6. A revision of the teacher training curricular must be considered with a view of orienting it to the emerging issues in ICT.
7. The computer laboratory layout need be revised so that competition for strategic positions is reduced and ergonomic considerations are provided for.
8. The study proposes a comprehensive in-servicing oriented towards ICT for science teachers. The training should be voluntary, and viewed as part of teacher professional development, which should be used as criteria for promotion. Those lacking ICT skills, and those showing resistance to its use, should be demoted or phased out from service.
9. This study proposes that all NEPAD demo schools be declared regional support centers when the project is adopted nationwide.

SUGGESTIONS FOR FURTHER RESEARCH

1. The study restricted itself to the study of the NEPAD e-School project. Other schools under a different ICT program were not covered. There is need for a study that can explore the achievements and challenges of other ICT programs in Kenyan secondary schools.
2. This study examined the role ICT can play in the teaching and learning of Biology, chemistry and physics. However, ICT is not always suited for use by the science teachers and science students. The role of ICT in the teaching and learning of other school subjects can well be covered by another study.
3. The study did not address the details of the suitability of educational software, which form the core element of ICT use in education. There is need for a study to exhaustively cover the suitability of the existing education software with a view of providing sound recommendations to policy makers and program developers.

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GENDER DIFFERENCES IN INTERNET USAGE INTENTIONS FOR LEARNING IN HIGHER EDUCATION: AN EMPIRICAL STUDY

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Abstract

The processes of globalization present opportunities and challenges for higher education learners. This process increasingly depends upon information and communication technologies (ICTs) such as the internet. Despite the fact that there have been frequently observed male/female differences in ICT usage, this has not received adequate explanations especially in higher education internet usage. Consequently this paper presents the findings of an empirical study that adds insight and understanding into the causes of this difference. The study proposes a Technology acceptance model (TAM) to investigate the effect of gender differences in internet usage intentions in higher education. Four exogenous constructs namely, perceived relevance, perceived enjoyment, computer self-efficacy, computer anxiety, voluntariness, and two believe factors namely perceived ease of using the Internet, and perceived usefulness were modeled to influence behavioral intention in the TAM.

A questionnaire survey (N=1092) was administered and data were collected from university students in a selected sample of public and private universities in Kenya. Structural equation modeling (SEM) was used to examine the model. There exists significant gender difference in the influence of perceived ease of use and computer anxiety, influence on internet usage intentions for males and females. The influences of perceived ease of use, relevance to studies, and perceived enjoyment had significant influence on intentions for both males and females had a higher anxiety than males in using the internet. However they had greater usage of the internet for their studies. Having a greater understanding of how males and females view internet usage for learning in their universities will contribute to deploying gender specific interventions in the usage of internet as a learning tool in and outside the classroom.

Keywords: *Gender, SEM, Higher education Technology Acceptance Model, Individual, Differences.*

1. Introduction

Information and Communication Technologies (ICTs), are increasingly being accepted and integrated in teaching, learning and research agenda in universities in all the nations of the earth., (Hites, 2005. The preference to incorporate ICTs is motivated by the prospective and actual benefits that grow from the use of ICT, such as increased access to education and better educational quality (Hashim, 2008). The use of ICTs can offer a rich selection of learning experiences that are suitable to the needs, pace, space, space, aspirations and learning methods (Phil, 2005). Learning and teaching could become interactive in contrast to the teacher centered, and one way delivery system of traditional face to face teaching. Further, this could even promote self learning (Phil, 2005).

Despite these numerous benefits resulting from the use of ICTs in teaching and learning, there could also be negative consequences such as (i) students becoming distracted by pursuits such as illegal download adding of music and movies, (ii) use of online pornograph, (iii) environmental hazards that emanate from disposing of obsolete computers, and (v) the problem of gendered digital divide (GDD) manifests in observed gender disparities in both access and usage. Thus, this paper focuses on the later dimension of ICTs. Latest studies have posited that there remains a gender imbalance despite a significant growth in ICT sector in recent years (Chiu, Lin, & Tang, 2005; Hashim, 2008). This gender imbalance has been partly blamed for both the shortage of qualified ICT professionals, and the under representation of some segments of the population, mostly females (Trauth & Howcroft, 2006). Previous studies have stated that there is an urgent need to get women particularly involved in the use of ICTs both as literate users and as professionals. This challenge applies to institutions and nations as well as to students and individuals (Gefen & Straub, 1997; Wang, Liu, & Jong, 2000). The problem of GDD is a disadvantage economically, socially, politically and educationally to those who do not access it or use it. The paper is an effort to further understanding and possible interventions to overcome or reduce the GDD problem.

2. Research framework

This paper, uses a modified (Davis, Bagozzi, & Warshaw, 1989) proposed the TAM model which has over the years received better empirical support in information and communications technology studies than the theory of planned behavior (Ajzen, 1985). A further modification of TAM is necessary since TAM was created for a general explanation of the determinants of computer acceptance, rather than for the specific topic of behavioral

intentions of internet (Venkatesh & Bala, Technology Acceptance Model 3 and a Research Agenda on Interventions, 2008). The model of this study shown in figure 1 not only includes variables similar to the ones used in the TAM (Davis et al., 1989), such as perceived usefulness (Davis F. D., 1989) and perceived ease of purchasing (Davis F. D., 1989), but also integrates other critical variables specific to the learning environment and that are, relevant to gender and ICT studies (Sreberny, 2004; Wickramasinghe & De Zoyza, 2006). Further, this study, apart from building on previous research by integrating several critical antecedent variables specific to internet usage, it also fills a gap in existing academic knowledge by empirically testing the main effects and moderating effects across gender during the formation of internet usage intentions. While various studies have indicated that some antecedent variables, for example, perceived usefulness, may influence internet usage intentions through attitudes indirectly (Taylor & Todd, 1995b), others have argued for direct effects as well (Agarwal & Karahanna, 2000). This study obtains empirical results, by testing direct and indirect influences. Consequently, the conceptual model herein hypothesizes that two antecedent constructs – namely, perceived ease of internet, and perceived usefulness – have direct influences on internet usage intentions, while Computer Self Efficacy, Computer Anxiety, Perceived Enjoyment, Voluntariness, Relevance to Studies have indirect influences on internet usage intentions through the mediation of PU, and PEOU internet.

Group : Combined males & females

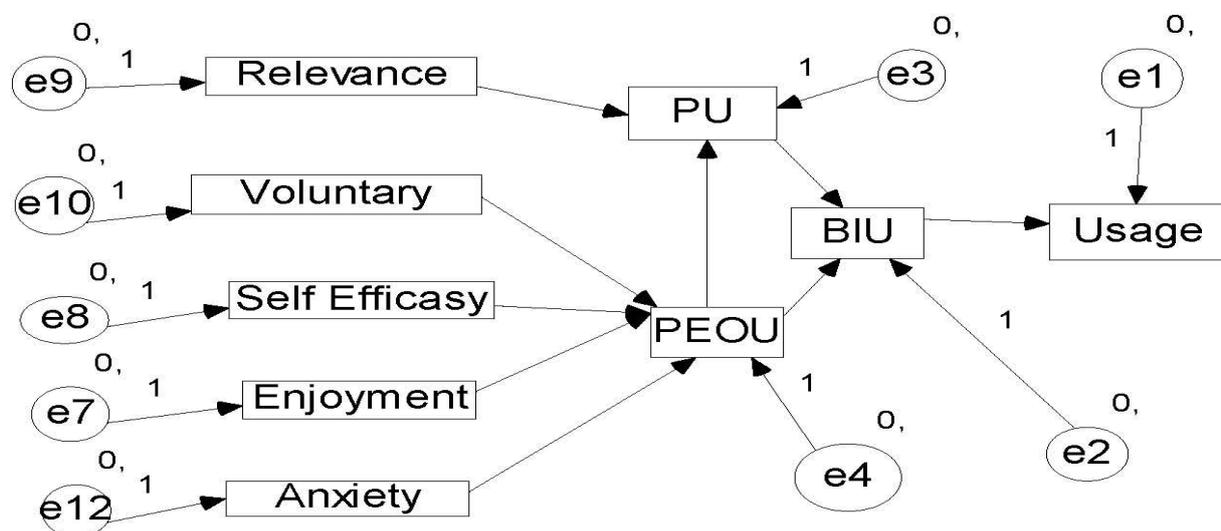


Figure 1: The Research Framework

When genders stick to alternative sex roles, individuals with stronger feminine or masculine identities make internet usage decisions. Some studies have argued that males are guided predominantly by controlling tendencies and stress self-assertion, self-efficacy, mastery, and avoidance of insecurity and uncertainty (Chiu, Lin, & Tang, 2005). This trend implies that the

influence of self-efficacy and internet usage intentions may be moderated by gender, and such an influence is hypothesized to be stronger for male students than for females (Chiu, et al. 2005). Compared to the traditional learning tools such as reading books, the use of the internet for studies is a novel way to acquire additional learning resources for learners. For this reason, the personal innovativeness of an individual student becomes critical to his/her internet usage intentions. Based on the above review, the hypotheses for this paper are summarized as follows:

- H1. The relationship between relevance and perceived usefulness is stronger for females than for males.
- H2. The relationship between voluntariness and perceived ease of use is stronger for females than for males.
- H3. The relationship between self efficacy and perceived ease of use is stronger for males than for females.
- H4. The relationship between perceived enjoyment and perceived ease of use is stronger for males than for females.
- H5. The relationship between anxiety and perceived ease of use is stronger for males than for females.

Venkatesh and Morris, (2000) posits that the influence of perceived ease of use on intentions to utilize IT is stronger for females than for males, suggesting a greater impact of perceived ease of the internet for females than for males. Females potentially have higher levels of computer anxiety (Igbaria, Zinatelli, Cragg, & Cavaye, 1997) and consequently rate the hardness of service and physical environment more highly than males. According to (Venkatesh & Davis, 1996), this implies that the influence of perceived ease of use on IT usage may be moderated by gender, in which it may be stronger for females than for males.

Compared to females in general, a strong pattern is found of men rating practical advancement highly (Chiu, Lin, & Tang, 2005) by efficiently completing study tasks on the internet, indicating that usefulness reflecting a practical sense is more influential during the formation of internet usage intentions specifically for male students. This trend suggests that the influence of perceived usefulness on internet usage intentions may be moderated by gender, and the influence is stronger for males than for females. Based on the above review, the hypotheses are summarized as follows:

- H6. The relationship between perceived usefulness and intention to use is stronger for males than for females.
- H7. The relationship between self perceived ease of use and intention to use is stronger for females than for males.

- H8. The relationship between perceived ease of use and perceived usefulness is stronger for females than for males.
- H9. The relationship between intention to use and usage is stronger for males than for females.

3. Research methods

This study was a cross sectional study which entailed the collection of data using a questionnaire survey of a sample of selected universities. in connection with several variables, which were then examined to discover patterns of association (Sekaran, 2003; Robey, 1996)Data collection methods were triangulated through the use of focus group discussions, interviews, observations and document reviews, to examine the interaction of students with the internet in their studies.

3.1 Subjects

In this research, data was obtained from a large cross-sectional sample of students' form a sample of private and public universities in Kenya. Sampling was conducted in three stages, first, convenience sampling of private and public universities, followed secondly by proportionate stratified sampling for each selected university, thirdly random sampling of students in each university or strata. Convenience sampling is appropriate as the universities are neither serial nor acyclic. One thousand five hundred and fifty questionnaires were distributed to the respective universities, and the graduate assistants, in collaboration with faculty or students assistants in those universities, gave them to the students and made a follow up for collection. One thousand and ninety two usable questionnaires were returned to the researchers (response rate of 72 percent), including males 52 percent and female 48 percent. The educational backgrounds for males comprising 93.5 percent undergraduates and 6.5 percent masters and for females comprising 85 percent undergraduates and 15 percent masters reflect the fact that the average educational level is quite high for the sample. Table I also lists the distributions for age across gender.

Table I: Distributions for Age across Gender.

Age	Male		Female		Total	
	No	%	No	%	No	%
Below 20 Yrs	49	8.6%	136	26.0%	185	16.9%
21 – 30 Yrs	443	78%	307	58.6	750	68.7%
31-40 Yrs	58	10.2%	54	10.3%	112	10.3%
Over 40 yrs	18	3.2%	27	5.1%	45	4.1%
Total	568	100.0%	524	100.0%	1092	100.0%

3.2 Measures

This study used constructs measured using seven-point Likert scales obtained and customized from the literature review. The constructs and their respective items were adopted and modified from various studies that are shown in Table II. The constructs were all designed by considering internet for university students' context. This is important, because constructs related to internet usage intentions cannot be precisely measured if the target usage of internet is not made clear in the instrument.

Table II: List of items used for developing each construct

Construct	Items	Adapted from
Perceived Usefulness	1. Using internet/www improves performance in my learning & study. 2. Using internet/www increases my effectiveness in learning & study. 3. Using internet/www makes it easier to do my learning & study. 4. I find internet/www to be useful in my learning& study.	(Venkatesh & Bala, 2008)
Perceived Ease of Use	1 .Learning to use the internet/www is easy for me, 2. Interacting with internet/www does not require a lot of my mental effort. 3. I find internet/www to be easy to use, 4.I find it easy to get internet/www to do the work I want it to do.	(Davis, 1989; Venkatesh & Bala, 2008)
Intention to Use	1. I intend to use the internet/www for my learning & studies, 2. I intend to use the internet/www, for social activities and general information	(Davis, 1989; Venkatesh & Bala, 2008;
Usage	1. On average, how much time do you spend each day on the Internet _____Hrs	(Davis et al., 1989), (Venkatesh & Davis, 2000),
Computer Self Efficacy	I could complete the job using a software package ..., 1....if there was no one around to tell me what to do as I go. 2....if I had just the built-in help facility for assistance. 3....if someone showed me how to do it first. 4....if I had used similar packages before this one to do the same job.	(Luarn & Lin, 2005; Wang, Liu, & Jong, 2000)
Computer Anxiety	1. Computers do not scare me at all, 2. Working with a computer makes me nervous, 3. Computers make me feel uncomfortable, 4. Computers make me feel uneasy.	Venkatesh & Bala, 2008
Perceived Enjoyment	1. I find using the ICTs to be enjoyable, 2. The actual process of using the ICTs is pleasant. I have fun using	Venkatesh & Bala, 2008;

	the ICTs.	
Voluntariness	1. My use of the internet is voluntary, 2. My university/lecturers does not require me to use the internet, 3. Although it might be helpful, using the internet is certainly not compulsory in my job.	(Venkatesh & Davis, 2000)
Relevance to Studies	1. In my studies, usage of the internet/www is important, 2. In my studies, usage of the internet/www is relevant. 3. The use of the internet is pertinent/www to my various studies-related tasks.	Venkatesh & Bala, 2008
Gender	1. What is your gender	(Crump, Logan, & McIlroy, 2007)(Hashim, 2008
Age	What is your age	(Yang & Jolly, 2008; Amoroso, 2004)
Internet Experience	For how long have you used the Internet	

3.3 Measurement model

The reliability in this research was evaluated using Cronbach’s alpha. As shown in Table III, The reliabilities (Cronbach’s alpha) for all constructs exceed 0.7 except one. Consequently the reliability of this study meets threshold level of acceptable reliability according to (Nunnally, 1978). Hence, the common requirement of reliability for study instruments is satisfactory. Moreover, in this study, for all three models (total group, male group, and female group) all factor loadings for indicators measuring the same construct are statistically significant indicating that all indicators effectively measure their corresponding construct (Straub, Boudreau, & Gefen, 2004; Madu, 1998) and support convergent validity.

Table III, Reliabilities (Cronbach’s alpha)

Construct	Items	Cronbachs’alpha
Perceived Usefulness	4	0.907
Perceived Ease of Use	4	0.826
Intention to Use	2	0.834
Usage	2	0.833
Computer Self Efficacy	4	0.742

Computer Anxiety	3	0.874
Perceived Enjoyment	3	0.856
Voluntariness	3	0.535
Relevance to Studies	3	0.861

3.4 Structural model

Following the first step, the second step analyzing the structural models was then performed. Figure 2 shows the path coefficients of the structural model.

Chi-square=1563.125 (81 df)
p=.000

Group : Combined males & females

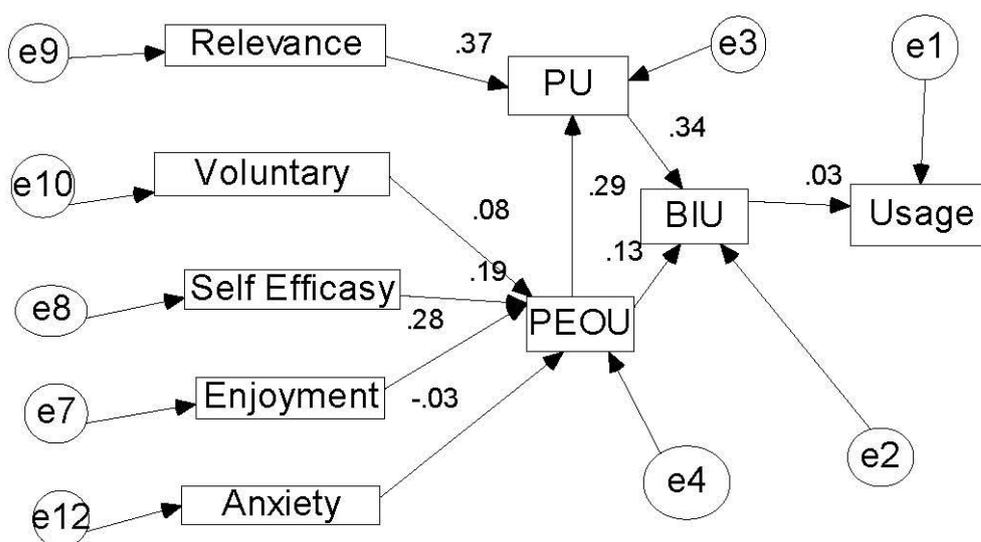


Figure 2: Path coefficients

4. Results

Table III lists the empirical test results based on the male and female group samples. two path H3 and H9 for male group and three paths (H2, H5, and H9) for female group were not supported while the remaining paths are all significant (H1, H3, H4, H6, H7, and H8) were supported.

Table III lists the test results

Hypothesis	Standardized Path coefficient Male Group	Standardized Path coefficient Female Group	Male versus
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								Female
		Estimate	S.E.	P	Estimate	S.E.	P	
H4	PENJ --> PEOU	0.315	0.033	***	0.186	0.041	***	M>F
H3	CSE --> PEOU	0.167	0.035	***	0.211	0.046	***	M>F
H5	CA --> PEOU	-0.026	0.033	0.428	-0.026	0.039	0.506	M=F
H2	VOL --> PEOU	0.098	0.031	0.002	0.041	0.04	0.317	M>F
H7	PEOU --> PU	0.223	0.04	***	0.371	0.039	***	F>M
H1	REL --> PU	0.402	0.036	***	0.321	0.039	***	M>F
H6	PU --> BIU	0.379	0.044	***	0.348	0.046	***	M=F
H8	PEOU --> BIU	0.157	0.047	***	0.13	0.047	0.006	M=F
H9	BIU --> Usage	0.001	0.028	0.971	0.062	0.033	0.061	F>M

Notes: *p, 0:10; **p, 0:05 and *** p, 0:01

Table IV: presents the T-test for equality of means for the two groups namely male and female of the variables Perceived Usefulness, Perceived Ease of Use, Computer self Efficacy, Computer anxiety, Perceived, Enjoyment, Voluntariness, relevance, Behavioural Intention and Usage.

Table IV: **T-test for Equality of Means**

	t	df	Sig. (2-tailed)	Mean Difference	Male Versus Female
Perceived Usefulness	3.05	1090	0.002	0.27	M>F
Perceived Ease of use	1.64	1090	0.102	0.14	M>F
Self-Efficacy	0.46	1090	0.644	0.04	M>F
Computer Anxiety	-2.98	1090	0.003	-0.27	F>M
Enjoyment	2.77	1090	0.006	0.25	M>F
Voluntariness	-1.27	1090	0.203	-0.12	M>F
Relevance	1.49	1090	0.137	0.13	M>F
Intention	3.52	1090	0.000	0.33	M>F
Usage	-2.85	1090	0.004	-0.19	F>M

Based on the results of Levene's test, violation of the assumption of homoscedasticity is not supported, given an α of less than .05 (p -value < 0.5) for Perceived Usefulness, Perceived Ease of Use, Computer self Efficacy, Perceived, Enjoyment, Voluntariness, relevance, Behavioural Intention and Usage. So, the t test results based on "Equal variances assumed" is interpreted.

5. Discussion and Managerial Implications

The test results of this study reveal that one antecedent construct – namely, Relevance to Studies, has indirect influence via Perceived Usefulness, while four antecedent construct – namely Computer Self Efficacy, Computer Anxiety, Perceived Enjoyment, Voluntariness have indirect influence via Perceived Ease of Use of the internet on internet usage intentions. These findings suggest that boosting the five antecedents can simultaneously increase students' intentions to use the internet except for voluntariness and anxiety.

Regarding the main effects of gender, the significant difference for the means of two exogenous constructs (perceived ease of use of the internet and perceived usefulness) across the subgroups leads to following suggestions for higher education. To begin with, the significantly lower mean of perceived ease of internet for female students compared to males indicates that female students tend to give a lower evaluation than males of the effortlessness of internet. This unique finding is very helpful for higher education, indicating that a user-friendly system which facilitates internet usage should be emphasized during orientation and literacy training. Besides, word-of-mouth broadcasting by other female students may be another important approach to help female students overcome hurdles and barriers to accepting internet usage for their learning, especially during the early years of study. Establishing an internet based social group forum based on gender and studies provides another method of improving female perceptions of ease of using the internet owing to the effective communications among female students themselves.

The significantly lower mean of computer anxiety for males compared to females indicates that male students are less likely to consider the internet problematic. The lower computer anxiety score for male students reveals that male students do not find the internet usage fearful. A comparison of genders reveal that males tend to expose more "masculine" traits (Chiu, Lin, & Tang, 2005) such as being assertive, impatient, and goal-oriented (Venkatesh and Morris, 2000), indicating that they desire to successfully accomplish efficient internet usage without distraction. Nevertheless, due to the overwhelming explosion of information on the internet, it takes a longer time for students to search and select useful information for their studies, causing lower mean scores of computer anxiety for male students. This remarkable finding is important for higher education. The evidence suggests that female

students are more anxious when using the internet for their studies. This could be attributed to the uncertainty attributed with the time it takes, and the difficult task of determining the relevance of the information obtained. This finding suggests a need for an efficient internet system that may require search mechanisms designed to help students compare content from different internet sources, thus producing an extensive list of comparative content to enable students to rapidly identify relevant information. Features such as improving usage speed are also important for female students.

For example, offering an expert endorsement of the most popular study relevant content on the first page to be accessed via a single click, would facilitate female students (who tend to be more anxious) to make the decisions efficiently, since they prefer to visit the sites with readily available and useful information to provide quick advice. Finally, offering female students the right internet content whenever they need it and placing it a click away can strengthen the usage intentions of female students.

The finding of significant gender differences provides additional support to psychological theories, stating that males and females have different gender-based perceptions (Venkatesh and Morris, 2000) which can influence their preferences and decisions during interaction with internet for their studies. The implications of this study can be applied to the wireless area where students can surf with their cell phones to learn and listen to videos etc from higher education institutions. Universities might consider the importance of corresponding regularly with students via the internet, thus providing students with substantive information from the perspective of gender differences. Learning gender differences is critical, as educators and institutions can better target students and consequently foster more internet usage intentions.

6. Limitations and Future Research Directions

This has some limitations relating to data collection and results' interpretation. The first limitation is the possibility of a common method bias by using a single questionnaire to measure all constructs. Another limitation was that this study has been conducted in the higher education sector of a single country setting (Kenya). As a result, the generalisability of the findings might be limited. Further, research across different countries will be required in order to generalize the findings. The third limitation in this study is using only one ICT artifact category (internet), which may seem gender-specific given that ICTs are considered appealing to male students. The fourth limitation arises from some indicators being removed during the measurement model testing. Lastly, this study in fact measured subjects' intentions and attitudes towards behavior rather than actual behavior. However, intentions may not be necessarily perfect predictors of behaviors. Therefore, a future study can try to improve such a shortcoming by directly observing the subjects over time. Future

studies can take note of these shortcomings in planning future research work by, for example, specifying to some different models. It would be also interesting for future studies to investigate whether other countries and sectors also display similar gender differences in internet usage intentions.

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THE COUNSELORS' ROLE WITHIN SCHOOL-FAMILY-COMMUNITY (SFC) PARTNERSHIPS: APPLICABILITY WITHIN A KENYAN CONTEXT

Melissa Luke

Abstract

Increasing family and community involvement in schools has been associated with multiple positive outcomes for youth, including increased school engagement and educational resilience (Henderson & Mapp, 2002; Libbey, 2004). Fostering this family and community involvement has been identified as a central responsibility for counselors working in educational settings in the United States (Keys, Bemak, Carpenter, & King-Sears, 1998). However, counselors' work towards these ends has been described as inconsistently instituted, and when done, consisting of hierarchal one-way communication that has inadvertently perpetuated institutional and systemic barriers to further familial and community involvement (Eschenauer & Chen-Hayes, 2005).

This paper will introduce the concept of School-family-community (SFC) partnerships as an effective means of increasing family and community involvement in schools, thereby increasing student academic success (Bryan, 2005). An overview of the literature related to SFC partnerships will be provided, including the potential cross cultural fit between the theoretical grounding and a Kenyan context. Further, a definition of SFC partnership will be offered, with a discussion of both stakeholders involved and the various forms SFC partnerships can take. Research findings regarding the benefits and challenges of SFC partnerships will be explored, identifying specific strategies than counselors in educational settings can use to develop, facilitate, and expand SFC partnerships. Handouts and references will be provided.

Increasing family and community involvement in schools has been associated with multiple positive outcomes for youth, including increased school engagement and educational resilience (Henderson & Mapp, 2002; Libbey, 2004). In recognition of the vital role of family and community in the success of students, federal and state government in the United States have passed school reform initiatives that have included guidelines for schools to

increase stakeholder involvement in education through more formalized practices of collaboration (Bryan, 2005; U.S. Department of Education, 2001; U.S. Congress, 1999). Fostering this family and community involvement has been identified as a central responsibility for school counselors (Keys, Bemak, Carpenter, & King-Sears, 1998). However, counselors' work toward these ends has been described as inconsistently instituted, and when done, consisting of hierarchal one-way communication that has inadvertently perpetuated institutional and systemic barriers to further involvement (Eschenauer & Chen-Hayes, 2005).

School-Family-Community (SFC) partnerships have been defined in the literature as collaborative initiatives that actively involve school personnel, family, and community for the purpose of increasing student academic success (Christenson & Sheridan, 2001). There is a growing literature that demonstrates the positive relationship between SFC partnerships and positive student outcomes (Amatea, Daniels, Bringman, & Vandiver, 2004; Sheldon, 2005; Whiston & Bouwkamp, 2005). Moreover, studies conducted in the United States have suggested that benefits are greatest for students from historically marginalized groups (Abdul-Adil & Farmer, 2006; Atkins, Adil, Jackson, McKay, & Bell, 2001), including students of color, students living in poverty, and English language learners. To date there has been no research that has explored the effectiveness of SCF partnerships facilitated by counselors in general, or more specifically, SFC partnership taking place outside of an American educational and community context.

Who is involved?

Although there has been increasing discussion of SFC partnerships in the counseling literature (Amatea, Daniels, Bringman, & Vandiver, 2004; Bemak & Cornely, 2002; Bryan & Holcomb-McCoy, 2004), the extant research has largely overlooked counselors' potential contribution to SFC partnerships (Bryan, 2005), particularly in urban schools (Holcomb-McCoy & Mitchell, 2005). This is perplexing and problematic, as SFC collaboration is recognized as part of contemporary 'best practice' within comprehensive, developmental school counseling (ASCA, 2005; Keys, Bemak, Carpenter, & King-Sears, 1998). Accordingly, it has been suggested that counselors can employ their multicultural competence and specialized training in interpersonal communication in tandem with their distinct position within the school to facilitate SFC partnerships, thereby more effectively addressing precipitating environmental factors and systemic stressors that put students from historically marginalized groups at risk for school failure (Council of the Great City Schools, 2003; Payne, DeVol, & Smith, 2006).

Familial involvement is a recognizable topic in educational research and the benefits for students, schools, and families have been demonstrated (Mattingly, Prislin, McKenzie, Rodriguez, & Kayzar, 2002). However, little is known about the mechanisms through which this positive impact takes place (Hill & Craft, 2003). Most research on familial involvement has focused on families who become involved on their own, without connecting this to the policies and actions of the school itself (Dauber & Epstein, 1993) or counselors more specifically. At the same time, there is some evidence to suggest that district and building-level policy is related to school outreach efforts, which in turn can positively or negatively impact family involvement in schools (Sheldon, 2005). Reflecting the content of the American School Counseling Association (ASCA) National Standards and the process of the Transforming School Counseling Initiative, the ASCA National Model (ASCA, 2005) explicitly directed school counselors' role in family and community involvement, calling for their "proactive leadership, which engages all stakeholders in the delivery of activities and services to help students achieve success in school" (p. 17). However, to date no systematic research has been conducted to examine how counselors are or can more effectively involve families and communities in schools, or to explore the ways in which counselors can collaborate with SFC stakeholders in this work.

Nonetheless, research has identified systemic influences that can act as barriers to familial involvement in schools (Abdul-Adil & Farmer, 2006; Bemak & Cornely, 2002; Bryan, 2005). It is recognized that *what* families do to support student learning better predicts student achievement than *who* they are (Christenson & Sheridan, 2001). Related studies have suggested that although most *consultation* practices between schools and families occur at similar rates across all families, there are significant differences in the *collaborative* relationships between schools and families by race and ethnicity (US Department of Education, National Center for Educational Statistics, National Household Education Survey, 1996). The cross-cultural interface of school, family, and community contexts also emerged as a factor related to familial involvement in school. Specifically identified were differences in language, parent cliques, parent education, attitudes of school staff, cultural influences, and family issues (Peña, 2000). Other studies also have found ethnic differences in the meaning and impact of familial involvement (Hill & Craft, 2003), but that familial involvement increased in *all* families when school personnel solicited and structured collaborative participation (Henderson & Mapp, 2002; Simon & Epstein, 2001). Methods of outreach, communication, and relationship building enacted by the school appear especially important to families of color, families living in poverty, and families learning the English language (Espinosa, 1995; Martinez & Velazquez, 2000). Collectively, these findings suggest that *collaboration* is effective in cultivating family involvement (Boethel, 2003; Dearing, Kreider, Simpkins, & Weiss, 2006), particularly so with families historically viewed by the educational system as 'peripheral' or 'deficient' (Kessler-Sklar & Baker, 2000). As a

profession, counselors have been challenged to redefine their roles and responsibilities to include collaboration within and across school, familial, and community contexts (Keys, Bemak, Carpenter, & King-Sear, 1998). However, the training for school personnel in the required collaboration skills has been inadequately provided, and when provided not robustly assessed (Peña, 2000).

What defines a SFC partnership?

SFC partnerships are a multidimensional concept (Epstein & Sheldon, 2006) and have been operationalized in various ways (Baker & Soden, 1997; Franklin & Streeter, 1995; Taylor & Adelman, 2000). However, it is generally accepted that SFC partnerships involve school, family, and community stakeholder collaboration around one or more of the following six foci areas: parenting, communicating, volunteering, learning, decision making, and resource connecting (Bryan & Holcomb-McCoy, 2004; Epstein, 2001). These intentional collaborations can take myriad forms, but may include formats as diverse as school-community meetings, site-based management committees, parent training workshops, mentoring programs, advisory councils, volunteer centers, school-business forums, familial education and assistance, or referrals. All forms of SFC partnerships have been distinguished from a terminal goal in and of itself and instead have been described as ongoing, bi-directional, and strategic interaction between school, family, and community for the purpose of maximizing student social, emotional, and academic development (Weiss & Edwards, 1992). By definition, SFC partnerships build connections and relationships leading to networks of trust, which in turn, can mobilize financial and social capital resources (Epstein & Sanders, 2000). It has been suggested that SFC partnerships are in themselves a protective factor contributing to educational resilience in students (Bryan, 2005).

Why is this important?

SFC partnerships have been demonstrated to be an effective means to increase familial and community involvement in schools (Bryan, 2005; Christenson & Sheridan, 2001; Epstein & Sanders, 2006; Henderson & Mapp, 2002). Research on SFC partnership conducted in the United States using cross-sectional design and including program evaluations of localized SFC partnership efforts has consistently reported positive findings such as more engaged families, improved communication between SFC stakeholders, increased trust between stakeholders, increased caregiver knowledge about child and adolescent development, better student attitude toward learning, more consistent positive student academic achievement, reduced reoccurrence of fighting, and improved school climate (Epstein & Sheldon, 2006; Luke, 2008). Although there remains a need for more large-scale, quasi-experimental studies to investigate the potential role and responsibilities of counselors in

establishing or maintaining SFC partnerships and the subsequent systemic effects on student learning in both the United States and other educational contexts, research supports a positive relationship between counselors' work toward SFC partnerships within comprehensive, developmental school counseling and the academic, social-emotional, and career development of all students (Bemak & Cornely, 2002).

What's the applicability within a Kenyan context?

Ecological systems theory (Bronfenbrenner, 1979, 1992) contends that as the immediate settings of which youth are a part, namely school, family, and community, all have a strong influence on their development. As SFC partnerships occur within the nexus where the three contexts intersect and require as well as create connections between SFC stakeholders, they function as transactional systems change agents (Bronfenbrenner, 1979). Concurrently, it is also theorized that the process of collaboration taking place within SFC partnerships across stakeholders will result in systemic changes that ripple through what Epstein (2001) refers to as the "overlapping spheres of influence," whether the SFC partnerships are taking place in the United States, Kenya, or elsewhere. As a result, the concept of SFC partnerships is applicable across the three types of schools in Kenya, including private schools, government-aided schools, and harambee schools (Kenya, 2009). However, by definition the SFC partnerships may be enacted differently across the varied contexts depending upon both needs and resources.

Atkins and colleagues (2001) have theorized that the increased collaboration necessary for and resulting from SFC partnerships can foster familial involvement in schools. To effect SFC partnerships, schools need to recognize and engage the unique resources and strengths of families and communities (Bryan, 2005), especially those not having been traditionally embraced or been embraced by the culture of the school (Geenen, Powers, & Lopes-Vasquez, 2001). Historically, educational policies and practices in Kenya have failed to attend to the development of meaningful familial or community stakeholder involvement beyond financial obligation (Kenya, 2009). However, Siringi (2009) reported a recent proposal made by a group of head teachers in Kenya, requesting that educational authorities form "councils for the learners" at each secondary institution for the purpose of improving the linkage between students and teachers. Thus, there would seem to be a cultural fit between the Kenyan collectivist ideals of family, socialization, and education (Sue & Sue, 2007) with the implementation of SFC partnerships within a Kenyan context. In addition, SFC partnership implementation may be particularly timely, given the impending review of the education curriculum by the Kenya Institute of Education (Siringi). Specifically, SFC partnerships could be enacted as an innovative structure through which the increasing shortages of teachers and other educational resources in Kenya can be addressed, just as

SFC partnerships have been used to address barriers to teaching and learning in the United States (Taylor & Adelman, 2002).

How does the counselor begin in practice?

Although the literature has categorized various types of SFC partnerships (Adelman & Taylor, 1997, 1998; Bryan & Holcomb-McCoy, 2004) and the related processes explicated (Epstein & Sheldon, 2006), it is recommended that counselors wanting to develop SFC partnerships first assess the existent counseling program to determine the specific needs, purpose, contextual appropriateness, and systemic sustainability of their SFC partnership efforts (Amatea, Daniels, Bringman, & Vandiver, 2004). Luke (2008) has proposed that SFC partnerships can readily be incorporated into counseling activities across the Foundation, Delivery system, Accountability, and Management system of the ASCA National Model (2005) of school counseling. She has suggested that as part of the Foundation, counselors can strive to foster familial and community involvement in participation on school-based advisory councils that are then involved in the development and refinement of various school counseling related documents and policies (i.e., mission, vision statement, program standards, goals, guiding principles). Further, she recommends counselors solicit the perspectives of family and community members to assist in determining the direction and delivery of counseling services within the school. For example, as part of the Delivery system, SFC partnerships can have a role in determining the preventative and responsive services provided (i.e., areas of foci, individual planning, consultation, referral), participate in delivering them (i.e., career day, multicultural fair, college night), and be one of the stakeholder populations utilizing the interventions (i.e., computer literacy program, health screening, community services). Luke (2008) went on to explain that as part of Accountability efforts, counselors can utilize the range of viewpoints within SFC partnerships to gather data, as well as inform the focus of evaluation, processes and measures used (i.e., assessment, satisfaction, outcome). She also asserted SFC partnerships can inform the Management system of a school counseling program through involvement in planning and communicating counseling related activities. Family and community members can be part of committees, task forces, and foci groups concerned with CDSCP mapping and any efforts designed to expand or improve them. Although most SFC partnerships will share common elements, by definition, each will be distinctive to its particular participants and the organic school-community context in which it is situated.

Conclusion

SFC partnership research has been challenged to identify policies, programs, and practices that “promote greater equity in the involvement of diverse families and greater equality of

effects for students” (Epstein & Sheldon, 2006, p.91). This concern is shared by the entire school counseling profession (ASCA, 2005) and is an articulated aim of comprehensive school counseling programming (Gysbers & Henderson, 2000). Although the counseling literature has recently included discourse related to SFC partnerships (Amatea, Daniels, Bringman, & Vandiver, 2004; Bemak & Cornely, 2002; Bryan & Holcomb-McCoy, 2004), SFC partnerships have not been incorporated into the standard education or training of counselors (CACREP, 2009). Moreover, the extant SFC partnership literature has largely overlooked counselors’ potential contribution to SFC partnerships (Bryan, 2005), particularly related to collaborative efforts in urban schools (Holcomb-McCoy & Mitchell, 2005) or within educational and community contexts outside of the United States. Although further investigation is needed, SFC partnerships may be one effective mechanism through which counselors can address some of the challenges facing the Kenyan educational system.

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ENGLISH LITERACY NORMS PROJECT INTERVENTIONS: EFFECTS ON CLASSROOM PRACTICE

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Introduction

The importance of Literacy in the LOI

- An essential learning competence and tool in accessing content and skills in English and in other subjects both in and out of school.
- Key in impacting educational quality and relevance

Brief Background

- From previous research (SACMEQ, 2002 and Kenyatta University, 2004): a large percentage (+ 70%) of learners were found to be below the desired level of competence in English;
- Parents valued/preferred mastery in English; over 40% of the teacher trainees did not attain the DCL on an English language test based on standard six norms.

Purpose of project

- The overall purpose of the project was to help improve literacy by developing interventions that support English Language teachers in improving their classroom practice (teaching/learning).
- The overall outcome of the project was to improve the teaching/learning of literacy, which subsequently improves learning in other subjects in basic education and beyond.
- This paper covers the work carried out in the second phase of the ELN project, which covered three years starting from mid 2005-2008 during which various activities were undertaken.
- These interventions were institutionalized through a variety of sensitization, training and dissemination workshops. Monitoring and evaluation of the progress and impact of the interventions was also done for the whole 3-year period.

The interventions

- Development of the Teachers 'Resource Books (TRB),
- Development of Learn Language Skills (LLS) Guides,
- Capacity building for teachers and education field officers
- Development of school-made reading materials
- Purchase of class readers and book boxes for the LLS materials, Monitoring & Evaluation
- Criterion-referenced testing (CRTs), for pupils and pre-service teachers
- Interventions were based on what is now known as the Norms-based Approach (What are 'norms')

4. What are norms?

- Language norms are language descriptions of what its native speakers consider standard and correct.
- Attaining the expected standards within a norm is, therefore, important for one to become a proficient user of a language.
- With regard to grammatical norms, the British Standard English (BSE) is used in Kenya as the norm.

Why norms were developed

- Norms guide teachers, trainers, curriculum developers, publishers, learners, parents, test developers.
- Help curriculum developers to produce competence-based instructional materials.
- Guide teachers in classroom practice.
- Norms can be formatively used to check learning achievements in primary school. The teacher can also check his/her own performance against the competences, during teaching& testing.
- Exams can be designed based on norms -using CRTs that make it easy to identify specific language areas of weakness or strength.

Methodology

Research Design

- A quasi-experimental design was set up where the performance of pupils taught by teachers who underwent in service exposure to norms based-teaching was assessed

and compared to that of a similar group of pupils in the classroom where teachers were not exposed to norms-based teaching methodologies.

- Pupils in classes (3 and 6 and 4 and 7) where teachers underwent norms-based approach to language teaching were tested as they proceeded through the various grades of the cycle. This was done in order to assess how they were progressing and to see how the teachers' new knowledge and skills were translating into pupils' better learning and performance.
- Alongside the interventions, pupils' school attendance was tracked.
- The CRTs were administered as pre-tests and post-tests (before and after the interventions) in both the primary schools and the PTTCs to determine the impact of the literacy interventions on teaching and learning of English.
- Tracking the performance of schools on the KNEC examinations before and after the year 2004-this data assisted in answering the questions of improvement in performance in the whole school compared to CRT testing(awaiting KCPE results 2009)
- A quasi-experimental design was set up where the performance of pupils taught by teachers who underwent in service exposure to norms based-teaching was assessed and compared to that of a similar group of pupils in the classroom where teachers were not exposed to norms-based teaching methodologies.

The Research Sample

- Research involved a national sample of 30 poor performing public primary schools selected nationally (identified from their 2004 KCPE performance). 22 of these schools were experimental (subjected to ELN interventions) while 8 served as the control schools. Variables such as sex, locale and class size were considered.
- 44 English teachers, 3 primary teachers' colleges selected nationally were involved. The research subjects were the 2400 (1760 experimental, 640 control) primary school pupils, 6 PTTC lecturers and 120 pre-service teachers.

National Sample of Schools for Intervention Research Study.

Schools	Scenario	Treatment	Testing
Cohort 1: 8 Schools	Business as usual. No treatment. The status quo remains. Used the usual traditional methods	No treatment	Language skills using criterion referenced tests pre and post/ Analysis of KCPE results (2004-2008)

	of teaching literacy. Tracking indices of attendance and retention		Assessment of Tracking attendance and persistence (2007-2008)
Cohort 2: 22 Schools	Treatment group (Literacy) Tracking indices of attendance and retention	Full literacy package understanding current NBA teaching methods. Tracking indices of attendance and retention	Language skills using criterion referenced tests (pre and post) Analysis of KCPE results (2004-2008) Assessment of Tracking attendance and persistence (2007-2008)

The Research Hypothesis

H1 -*The use of a norms-based approach to teaching English promotes better classroom teaching of the language skills of listening, speaking, reading and writing, grammar and vocabulary.*

H2 -*Use of a norms-based approach to learning English promotes better mastery of desirable competency levels in the four language skills by pupils.*

H4 – *Exposure to norms-based teaching methods will improve the PTTC tutor’s and primary teacher’s performance.*

The Interventions

a) The TRB

Two volumes: one for use at lower primary and upper primary PTTC lecturers also used these resources to train the pre-service teachers.

Use of TRB:

- To help primary school teachers & teacher trainers to interpret, teach, practice, consolidate and assess mastery of the four basic English language skills at different primary grade levels.
- The TRBs elaborate and provide support for primary school teacher and teacher trainer to ensure that they can identify gaps in students’ language competences, thus enabling them to mount appropriate remedial work for their pupils and students.

- Guide teachers in desired competencies and methods of engaging learners and providing enriching learning experiences that make language learning interactive and negotiated with learners, in a friendly environment.
- To complement the syllabus and course books. These books are highly simplified and help the teacher on how to systematically teach each of the English language skills.
- The norms and the TRB have ultimately given rise to what we now call, the Norms-Based Approach (NBA) to teaching and gives preference to Criterion –Referenced Testing (CRT).

b) LLS Activities and school-made reading materials

- Learn Language Skills (LLS) events is an activity-based intervention intended to build on what learners' already possess in terms of language proficiency and develop their language skills. These were storybooks, audiocassettes & posters.
- Parents were highly encouraged to participate in children's reading both at home and in school and children had a supportive environment that could ensure quality language learning.
- Teachers were trained to develop their own school-made reading materials for use with their learners.

c) CRTs for Pupils and Pre-service teachers

- 3 papers were developed to provide baseline information on the subjects and to be used for pre-and post test in the 30 research schools.
- 3 papers were developed to test competencies of pre-service teachers in English before the interventions and for pre-and post tests.

Use of CRTs

- Guides teachers on how to identify in what skills pupils are strong or weak.
- Guides the teacher on how to evaluate language-learning outcomes of their learners instead of sourcing for tests externally. The teacher is thus empowered to formatively assess learners' competence and play a big role in setting language tests for them instead of drilling for examinations and using ready-made tests.
- In NBA, learner's performance is gauged against a set of standards/norms (performance indicators)

d) Training Workshops

Three workshops were held over the three years to:

- Train teachers and teacher trainers on:
- Understanding, interpretation and use of the norms in the TRB and get feedback on the same.
- How to engage learners in using the LLS materials. Teachers learnt to apply learner-centered teaching methods, where teacher is a facilitator who stands on the side and leads the class in interactive language learning. The learning environment was made conducive with the use of pictures and giving students freedom to interact with a variety of audio-visual materials as they learnt English.
- Preparing & using school-made reading materials.

e) Unique Elements of the Project

- Establishment of mechanisms for monitoring and evaluating of quality of improvements to assess the impact of interventions, the views of education field officers, head teachers, teachers, pupils and parents were sought.
- It involved capacity building/strengthening for both in-service and pre-service teacher education
- It involved classroom-based teaching, testing and remedying of mastery of language and literacy skills and parents and communities in supporting literacy and student friendly schools; and
- It involved both teachers and education officers in development of relevant instructional materials and children's literature.
- KIE panels and evaluation teams on all subjects at primary and teacher education supported the innovation materials.
- Seminars with policy makers, teachers, and other education stakeholders at all stages.

Findings

- Teachers enjoyed using the TRBs. They embraced the idea and showed commitment to its use.
- Over 70% of the teachers found the NBA very useful despite the challenges faced in the initial stages of implementation. 83% of pupils found their teachers interesting and the classes very friendly.
- Results showed that the NBA to English language teaching/learning was effective in improving learning of the language in all experimental schools
- There was significant positive change in the experimental schools as compared to control schools in both class 4 and 7 in all the three papers

- Performance in the control schools remained the same or with slight improvement indicating that improvement in experimental schools could be attributed to interventions. Many parents said that their children could now speak English at home
- In 56% of the experimental schools, the ELN teachers have trained their colleagues and the norms-based approach has taken root

Conclusions

- Learner achievement has implications for instructional procedures and materials used. For example, students are more motivated when language-learning materials (such as storybooks) seem relevant to their communicative needs and interests and resemble authentic language use.
- The NBA proved the possibility of improving the quality of education in Kenya through the establishment of norms at certain levels of learning in the primary school system.
- TRBs were very effective in guiding teachers in the teaching of English.
- CRTs are an effective means of assessing students learning achievement and eliciting the required feedback of conducting school based assessment.
- Experience from learners and teachers showed that engaging pupils in a variety of language activities enriched language learning. It was observed that learners opened up and could communicate more freely using the English language.
- It is possible to improve education quality in Kenya through the NBA in the teaching and learning of the LOI (English).
- The fact that the standardized LOI through NBA improved learning in the experimental schools is enough proof of the ability of NBA to contribute to educational equity and to minimize the marginalization of underprivileged groups.
- When equity is introduced through the LOI this is an effective method of bringing peaceful change in the socio-economic set up of the nation of Kenya.

Recommendations

a) Teacher Preparation and Development

- Would-be primary school teachers of English should be proficient in the LOI (enforce admission grade of English (C+)-no policy on this at present).
- Pre-service and in service teacher education should provide sound grounding in linguistics and teaching of the language skills

- Primary teacher training should ensure that the trainees become thoroughly conversant with the primary school syllabus in English.
- Use of the NBA in primary English teaching.
- Constant monitoring and evaluation, coupled with frequent in-service courses, should become a common feature in the teaching and learning of English since it is the central means of accessing knowledge and skills in all the primary school subjects except Kiswahili.
- The ELN project helped teachers develop school-made materials to supplement the reading resources in schools. Schools and communities can exploit this potential.
- Expansion of NBA to cover all primary schools in of Kenya-a mammoth investment
- The Ministry of Education should advocate for a paradigm shift in classroom testing.
- NBA should be introduced in all levels of learning including the university level, especially at entry point and in every subject.
- The CRT method and approach should be adopted by the Kenya National Examinations Council (KNEC) so that learners can be assessed on learning competence.
- The KIE should adopt the NBA in the development of school syllabi in order to support the implementation of NBA in the Kenyan education system.
- The ELN project should serve as a guide for implementing the NBA in all the schools of Kenya, and in interested countries.

Suggestions for further research

- Research should be designed in other disciplines to explain the influence of other phenomenon the quality of teaching/learning.
- Irrespective of which subject, studies should be carried out to see the effectiveness of establishing norms in other levels of the education system in Kenya.

HUMAN AND PUBLIC RELATIONS IN MANAGING EDUCATION

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Quote. In emphasizing the centrality of human relations, John Donne in 'For whom the bell tolls' states that; 'No man is an Island, entire of itself, every country is a piece of the continent, a part of the main, if a clod is washed away by the sea, the continent is less, as well as a minor friend of my own were: any man's death diminishes me, because I am involved in mankind and therefore never send to know 'For whom the bell tolls, it tolls for none, but thee; (Donne John: Abridged).

1. Introduction: There are three schools of thought which have involved psychologists at different epochs. The first school of thought comprised psychologists who viewed man as instinctive, irrational and doomed to conflicts. A second school of thought comprised behaviourists (psychologists) who view man as a puppet, controlled by the web of his environment. Yet a third school of thought in the recent past (sixties - eighties) views man as a consolidated being who is growing, generous, healthy being who is in control of his/her destiny. The basic elements in human behaviour are well articulated by the domain theory with notions of identity (ID), Ego and Superego. These elements are represented through hunger, thirst, nakedness, peace, love, psychological and social ethics the sense of belonging etc. An overview of the three schools of thought indicates the evolution of organizational behaviours which are depicted as;

- i. Task oriented approaches
- ii. Human oriented approaches and.
- iii. Situational oriented approaches, highlighting on motivating people to perform expected tasks within specified period of time.

2. Definition and the concept of human and public relations.

Human and public relations is an approach to organizational theory which emphasizes on the importance of organizations effectiveness In order to underscore the importance of human and public relations two common adages state that:

- i. The human being is the centre and yardstick of everything (cf: Demello E.)
- ii. If you dig very deeply into any problem, you get people; (cf: Wislon Watson)

The Human element is uniquely important in management because the human resource is the most crucial resource in any organization for the effective production and utilization of goods and services. Other resources such as facilities, equipments money or time are secondary to the human factor. The concept of management has the human element at the centre. The management process from the humanistic approach involves aspects such as human relations, communication, delegation, decision – making and problem solving.

Human and public relations may thus be defined as;

The art of accomplishing predetermined organizational goals

A process that promotes individual efficiency and satisfaction

A process that promotes group solidarity and effectiveness

A process that assists the organizations productivity profitability and growth

A process that harmonizes the needs and expectations of the organization as well as the needs and

expectations of the individual on the other hand.

An organization with good human relations set up will allow the growth of persons in it their participation and their welfare as individuals and groups.

Human and public relations are currently referred to as Organizational behaviour. The main consideration for the human element in organizations gained prominence with Industrial revolution. Mass productivity in industry gave rise to surplus goods and increased knowledge leading to increased wages for workers, shorter working hours and job satisfaction. For example, in 1800 a welsh industrialist (Robert Owen) cared for human needs of his employees and became the Father of personnel management. In 1911, Fredrick Taylor developed the concept of scientific management resulting in improved recognition and productivity for individual workers. Taylor argued that' there were best men for a job just as there were best machines for a given job. Although Taylor was associated with advancement of the 'man – machine' theory or the 'input – output' concepts he is rightly viewed as the Father of scientific management.

The concern for workers welfare in organizations has evolved gradually over the years giving rise to National Personnel Associations, such as our Central Organization of Trade Unions (COTU) Kenya National Union of Teachers (KNUT) and the Federation of Kenya Employers (FKE). In the 1920s, scholars such Elton Mayo (Havard University) researched into the Human element in commerce and Industry. The findings from these studies transformed the earlier school of thought as advocated by the likes of Fredrick Taylor to the second school of thought where organizations were viewed as social systems with workers as vital components i.e. the human relations school of thought. The emphasis focused on

'humanizing' productivity and profitability in organizations. These developments in human resource management gave rise to organizational behaviour characterized by:

- i. Attempts to overcome cultural barriers and trying to understand the human factor in organizations in dealing with the changes in science, technology, productivity and profitability.
- ii. Top management (managers) focusing on acquiring knowledge, skills and attitudes relevant to handling human elements in organizations.
- iii. Social concerns and human welfare giving rise to labour movements, compensation schemes, trade unions and professional associations to cater for human factors such as improved conditions and terms of service, improved remunerations and generally improved positive attitudes towards 'people' in organizations. The social responsibilities of organizations towards people have improved tremendously. For instance, the Webuye paper mill has a responsibility to care for its workers as well as the communities around who are affected by the industrial waste from the mill entering into River Nzoia.
- iv. Increasing complexity of the working environment requires more attention from the management. As an organization increases in size and the technologies advance, more employees become less aware of the products and services they produce and how these product and services may affect their social welfare. These factors have necessitated consideration of theories and practices in motivation as have been advocated by such management gurus as Douglas McGregor (1957) expounding on specific assumptions such as the **Theory X** and **Theory Y**. Therefore, organizational behaviourists have focused on the nature of people as individuals, and groups in respect to personality's specialization or professionalism. In particular, concern in the value of a person, i.e. human dignity has been related and compared to the organization or the dignity of labour. The nature of organizations has been related to social systems and mutual human interests. The nature of people and organizations has led to industrial harmony through individual performance and tangible organizational results.

3. Human Relations Assumptions

There are seven operational assumptions on effective measurers to improve and promote successful human relations: These are

- i. Good human relations practice is the product of experience, intuition and interdisciplinary generalization that an individual takes.

- ii. An employee participation is often essential to higher productivity and greater human satisfaction
- iii. The role assumptions stems from the variety of demands and individual's job oriented – role and the informal group – oriented role.
- iv. Teamwork is an indispensable element of organizational survival Teamwork is a matter of mutual anticipation and agreement on goals.
- v. Human being is diversely motivated and has a hierarchy of needs which are quite changeable. (cf; Abraham Maslow: 1943)
- vi. An organization is a social system. The work situation should be viewed as a network of Interrelated elements and a major feature of modern human relations.
- vii. We can develop skills in human relations. We may be trained to be aware, sensitive and competent to cope with human problems in organizations.

4. Human Relations at workplace and its relationships between people and organizations (Authority, Responsibility and Influence).

The concept of authority is simply defined as the right to command. According to human relations theorists such as 'Henry Fayol' Authority is the right to give orders and the power to exert obedience.

Authority may delegated to subordinates so that they are able to make decisions and to implement these decisions in their respective operations. However, it is important to remember that delegation of authority to subordinates does not absolve the responsibility of superiors for the actions and outcomes of their decisions. The superiors remain accountable and responsible for the actions of their subordinates.

Responsibility is the duty to perform the assigned tasks in a satisfactory manner. It is the obligation to perform certain activities that are assigned to the individual. The source of responsibility lies within the individual. If one accepts a job then that individual should ensure the job is completed to the best of his/her ability. Responsibility is governed or controlled by two aspects of obligations. These are the contractual obligation and moral obligation. An employee has contractual obligation to ensure that the job assigned is done and also has moral obligation to ensure that the job is done honestly and efficiently. Since responsibility as an obligation that one accepts, it cannot be delegated to the subordinates even when the activity is performed by the subordinates. Responsibility is the accountability for the authority vested in the individual or office. Authority must be used in a responsible manner. The available literature identifies different types of 'authority' which may be exercised by an individual or the relevant office either directly or indirectly. These types of

authority may comprise the following (i) Formal/structural or legal authority (ii) Expert or professional authority (iii) Traditional or inherent authority (iv) Charismatic authority (v) Moral (vi) Physical (vii) Parental and (viii) Clerical authority.

The legal/formal authority is based on rank or position of the person in the organizational structure. It may also be called official authority i.e. authority that is vested in a respective office. This type of authority could be provided either by law or social rules. For example, the authority of a policeman to arrest a criminal or the authority of a company director to hire and fire an employees. The expert or professional authority or simply the 'sapiential authority is based on knowledge, skills and experience of the individual. For example, the authority of a doctor to prescribe medicine and the authority of a mechanic to repair the clients vehicle.

Traditional authority evolves from social order and the community. This authority is passed from father to son – e.g. from the king to the prince. The traditional chief and the father in a family enjoy traditional authority.

The charismatic authority is based on the personality and natural power of leadership of the individual. For example, a leader commands respect of his/her followers because of his/her personality and integrity. These leaders include politicians and religious leaders. Usually, a charismatic leader is a forceful speaker or orator. For example, the late Mzee Jomo Kenyatta and the late Ayattolah Khomeni and the late John F. Kennedy.

The moral authority is based on the integrity and 'goodness' of the individual. The physical authority is based on physical superiority of the individual. The statutory authority is based on the legal powers e.g. the authority of a factory inspector,

It is also known as the structural or formal authority. The parental authority is based on the special relationship which exists between parents and there children. The clerical authority is often associated with the charismatic authority. However, this type of authority is sometimes called reverence authority. It is the relationship that exists between the 'men of the cloth' and the laymen. Church ministers, priests, rabbis and chaplains fall in this category.

5. People as the focal point in human and public Relations.

In the introduction, we stated that 'If you dig deeply into any problem, you get people'. The implications in this adage is that the relationships within and between people inside and outside organizations are extremely crucial in determining their productivity, delivery of

goods and services as well as success or failure. When dealing with 'people' the following points should be considered.

- i. It is probable that your reputation has preceded you in terms of either winning their confidence and respect or losing that respect and confidence resulting in non – acceptance.
- ii. Whenever one is dealing with people it is important to remember that one's appearance, manners, personality, knowledge and even dressing will be under scrutiny and will contribute in forming other people's opinion about him/her.
- iii. One's future conduct will be compared against the first impression to allow consolidated opinion to be formed.
- iv. There is a tendency for 'black marks' to be awarded after the first impressions were positive.
- v. There are always allies and critics in an organization and their feelings will normally be attributed to the individual and his/her actions.

The relationships at workplace will be labeled or categorized into:

- a) Seniors (seniors vs. juniors)
- b) Subordinates (bosses vs. subordinates)
- c) Colleagues (partnerships)
- d) Specialists vs. non-specialists
- e) Shop-stewards or union representatives
- f) Officials
- g) Customers
- h) Visitors/Guests.

6. Action Reactions Cause and Effects.

Generally actions and reactions may be planned, foreseen, calculated and measured. It is not so with people and human relations. For example, a simple action or remark can produce a reaction sometimes completely unexpected in its nature, impact and severity. For instance, suppose a smoker asks to give Otieno / Atieno a hand?" what would you do?. The latter is normally seen and the former is invisible.

Opinions, feelings and emotions are personal and sometimes private. They are formed and arise in the mind, invisible to the world. All that the observant onlooker can do is look for attitudes and physical signs such as facial expressions to try and determine why a person is reacting in a particular way. Normally, you may ask a person why he/she has reacted so, by the reply, if you get one, may be far from the truth. A skilled interviewer observes as closely as he listens.

7. The Individual

No two people are exactly alike. The individual is a complex combination of many factors and in our dealings with people it is important that we try to understand their makeup or what is popularly called 'chemistry'. There are many causes for unexpected reaction. If one understands the person in question, then one is in a better position to predict the reaction and the effect it may have on the two. An individual may react to situations or comments due to any of these factors or a combination of them.

rem.

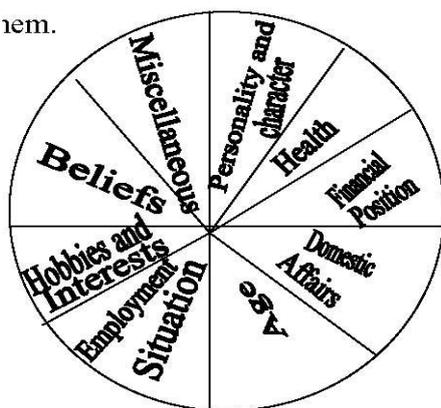


Figure 1. Determinants of individual's cause and effect reactions.

NB. Few of these factors remain static, thus it is essential that one does not become habitual when dealing with an individual.

8. Hints for good Human Relations.

- a) Treat people as individuals. For example, 'a pat on the back' at the right time can work wonders for morale and assists in gaining future co-operation and effort. It can also pave the way for criticism being accepted without ill – feeling and resentment.
- b) Remember your manners at all times. This refers to common statements such as 'say what you mean and mean what you say'. You must communicate to maintain good relationships.
- c) Be tactful: Do nothing to hurt your team or others. Let the other person save his/her face. Don't nag and don't show impatience at the rate of progress. Don't pass the buck.
- d) Admit your mistakes and the team's mistakes; they are your mistakes too. As the leader, accept more than your fair share of the blame. Depersonalize comments and criticism – think about the idea not about the person.
- e) Keep your temper – Losing you temper always hurts the other person and will damage your relationship.
- f) Be patient – Keep your emotions and those of your team, cool and calm.

- g) Be tolerant – Mistakes will happen – be tolerant of them even while trying to avoid their being repeated. Accept your team as they are. It is your job to improve their work and their attitudes, but accept that this will be a gradual process.
- h) Be courteous – Treat your team with courtesy and respect. They will respond in kind and also work better. NB. They say ‘courtesy costs nothing’ Show that you are always willing to do that little bit extra – for the job and for them.
- i) Do as you would be done by others – Treat your team in the way you would like your superiors to treat you.
- j) Acknowledge importance (worthwhileness)
Treat your team as individuals. Remember personal details. Listen to their ideas and encourage suggestions.

9. Effects of Relations on Performance and Productivity.

Remember: Being considerate always makes the leader’s job easier because it improves group atmosphere. The following points will improve the leader’s relationships with his employees or subordinates thus leading to better performance and increased productivity.

1. Communicate – See and talk to your employees/subordinates regularly. Make them aware of your own positive attitudes towards them and their work. Let them get to know you as a person. NB. Communication is a two– way processes. It involves receiving as well as giving. Get your team to talk to you and listen to them as people.
2. Praise – Always give praise where it is due, but avoid flattery. Always express approval, appreciation, commendation and thanks. What do people give and never borrows? Answer – Thanks.
3. Be sincere – As said earlier ‘mean what you say and say what you mean’ Don’t make rash promises you have no intention of keeping. Keep the promises you make.
4. Be loyal- To each member of the team – Do not criticize one member in front of the others. Or even behind his/her back. Defend individuals when necessary.
 - i. To your team or group – be objective and reasonable but don’t criticize your team in front of others. Fight for your team when you have to.
 - ii. To the company (organization). Don’t criticize the company’s (organization’s) policy to your team. If you snipe at top management behind their back, your team will suspect you do the same to them. Believe in your team and its capabilities–it is through them you have to work.
5. Be enthusiastic – Your enthusiasm will rub – off on your team and inspire them. Remember; the leader must aim to generate or cultivate the following virtues in his team and within the organization.
 - (a) RESPECT
 - (b) TRUST

- (c) LOYALTY and
- (d) CO – OPERATION.

Handling Human and Public Relations Problems.

In dealing and handling human and public relations problems the manager/boss should consider the following points:

1. Recognizing that individuals are different.
2. Gather all information on a continuous basis.
3. For similar needs, two individuals may require different approaches in solving them.
4. All information about individuals must remain confidential.
5. Allow time for gathering information in your daily routine activities.
6. Results are not necessarily immediate or even apparent
7. Take immediate action whenever possible.
8. Eliminate or change the cause.
9. Keep informal notes on each case.
10. Know each individual so that rapport is established.
11. Separate facts from opinions
12. Do not forget that you are involved and that you may have to change
13. Do not let suggestions for change appear to come from the individual.
14. Recognize that in some situations action by you is not appropriate.
15. Do not express surprise.
16. Do not express moral judgments, be objective.
17. Find out what the individual wants.
18. Needs may be changed by changing conditions.
19. Ask for assistance from your colleagues or other managers.

11. Guidelines for Good Human and Public Relations Practice.

An effective manager or leader must take into account the following points that either concern himself as a person or concern his employees or subordinates.

1. Understand and accept people as they are.
2. Be aware and sensitive to other's points of view along with an ability to maintain your own position.
3. Be willing to understand and to respond to the feelings and attitudes of others which might not be purely logical from your own frame of reference.
4. Be aware of yourself and appreciate the scope of your influence on others.
5. Appreciate the social structure or social system in which you are involved.

6. Be realistic about your authority and status and aware of how they affect others.
7. Attempt to predict how the organization will respond to change that you introduce.
8. Make use of your experience and abstract generalizations about the social environment while taking any action.

12. The Ten Commandments of Humans and Public Relations.

1. Give facts; inform in advance.
2. Do not dominate allow self respect.
3. Promote competitive spirit among people but avoid a fight.
4. Set examples for others e.g. respect to their superiors and their colleagues
5. Consider others' sentiments and social situations, it is out of these that their World is built and they view the World through these social mirrors.
6. Make others feel important – appeal to their drives. Give them opportunities not only for advancement but also for expression. Provide them with reasonable security, safe and healthy working conditions.
7. Be firm. Do not give concessions too easily. Let those others feel they have earned them fairly.
8. Treat each person as an individual; determine what makes him/her valuable.
9. Make decisions as fairly as possible after considering the valuable facts.
10. Be especially careful to be objective in making decisions.

13. Conclusion.

An effective personnel manager or human Resources manager should have blends or combinations of the three managerial styles, taking cognizance of the human and public relations discussed in this paper. These three major managerial styles or approaches are (i) Job – centred or task oriented manager (ii) People centered or human resource manager and (iii) Situational or on – the spot manager. The three managerial styles depict a good human and public relations manager who is aware and practices the following virtues:

- i. People need to be treated with respect and dignity
- ii. People are aware of their rights and they need to be free from threats and coercion.
- iii. People will resist any attempt that tries to threaten or coerce them in the organization.
- iv. People's attitudes, skills and culture will inhibit or promote human relations.
- v. People are able to distinguish between sincerity and pretences. What they want sincerity and honesty.

- vi. The manager or generally any leader should develop an atmosphere of trust and confidence from others i.e. his/her colleagues and subordinates.
- vii. People are concerned by the behaviour of the leader (manager) and thus he/she should encourage them by good deeds.
- viii. As mentioned earlier a leader or manager should admit and learn from past mistakes.
- ix. The leader (manager) should avoid passing the back of blames to others.
- x. The manager or leader should try to understand others as well as making others understand him/her.
- xi. Overall the manager or leader should create favourable conditions or environment necessary for human and public relations. This is the central or focal point in any effective style of management including human resource management. As mentioned in the introduction 'if we go in depth into any problem we will find people'. Similarly if we take care of human and public relations aspects then we shall have succeeded in managing all other resources.

This is what is summarized as the centrality of factor human factor in any management style as well as the emphasis that human and public relation are the pinpoint in any management.

14. Group Discussion and Exercises for Human and Public Relations;

NB. Small groups could discuss these aspects and report back to the plenary session,

1. Consider the merits and demerits of communicating using the following methods or strategies.

- a) Pinning messages on the Notice Boards.
- b) Writing minutes/letters to individuals to give them warnings, instructions and general information.
- c) Calling staff meetings to discuss issues related to individual staff performance.
- d) Face to face consultations with individual employees or members of staff in the managers' office.
- e) Informal consultations with individual colleagues, superiors and subordinates over a cup of tea or coffee.

2. Mr. Mpole has just been appointed H.o.D at Kenya Technical College for the first time. He has been working in the field as a Factory Supervisor and then a Production Engineer.

- a) What problems in human and public relations do you think Mr. Mpole is likely to encounter with his colleagues, subordinates and superiors in his new position?
- b) What advice would you give him if you are his (i) Boss (ii) Colleague or (iii) Junior

NB. Written reports should be handed to the presenter to be incorporated in the final paper.

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KISWAHILI AS A TOOL OF INTEGRATION IN THE EAST AFRICAN COMMUNITY: PEDAGOGICAL CHALLENGES

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Abstract

This paper focuses, inter alia, on the role of Kiswahili and its increasingly growing emergence as a unifying factor and a cultural vehicle in East Africa. Not only is Kiswahili well established in Kenya and Tanzania as an official and national language, but it is also widely used as a common language of communication across various ethnic communities. This is also true to a certain extent in Uganda despite the few socio-historical barriers it has encountered there. However, recent developments indicate that it is becoming increasingly popular across the entire region of the East African Community. Though the decree making it a national language in Uganda in 1986 has never been effectively implemented, neither has it ever been officially revoked. More importantly, the 2002 amendment of the 1995 Uganda Constitution recognizes Kiswahili as the second official language in Uganda. This has been accompanied by concerted effort to promote it through the education system. Similar developments are likely to take place in Rwanda and Burundi following the admission of these countries to the expanded East African community. It should also be noted that Kiswahili is the official language of the community; and more specifically, an organ called the East African Kiswahili Commission has been established for the express purpose of developing and disseminating the language in the region. One can therefore, confidently predict that the language will increasingly become a main communication medium in the region. There is therefore needed to come up with innovations in both teacher training and classroom practices with respect to the teaching of Kiswahili as a discipline in both tertiary and pre-tertiary levels of learning in East Africa today.

Key Words: Kiswahili, East African Community, Pedagogy, Globalization, Integration

I. Status of Kiswahili in the 21st Century

At the dawn of the twenty-first century, Kiswahili has emerged as one of the well established languages of international communication. It is one of the seven languages recognised by the United Nations (UN) beside French, Russian, Spanish, Chinese, Arabic and English. It is also one of the four official languages of the African Union (AU) beside Arabic, English and French. The adoption of Kiswahili at the AU was the result of concerted advocacy based on recognition of its potential as a medium of Pan African communication.

The language has expanded beyond its East African base and now has a presence in other regions such as Central Africa. For example, in the Democratic Republic of the Congo (DRC), it is one of the four national languages chosen from among over 400 languages. The other three national languages of the DRC are Lingala, Kikongo and Chiluba. Kiswahili in the DRC is mostly spoken in the Eastern and Southern parts of the country such as Bukavu, Goma, Bunia, Kisangani and Lubumbashi in the Katanga region. The language is also making headways into new regions such as the Southern Sudan due to the cross-border movements of people to and fro between the country and Swahili phone East Africa. The language is currently an established discipline in institutions of learning in East Africa and beyond. Some universities in North Africa such as the Al Fateh University in Tripoli, Libya offer Swahili courses. The language is also taught outside Africa in a number of European, Asian and American universities. The School of Oriental and African Studies (University of London) in the UK, the University of Leipzig in Germany, the University of Osaka in Japan and the University of Florida in the USA have strong traditions of teaching Kiswahili.

From the foregoing, it is evident that Kiswahili is indeed one of the fastest growing and spreading African languages across the continent and beyond (Mulokozi, 2000; Moshi, 2006; Njogu, 2008). The language can be considered as a potential medium for East Africa's social transformation, regional development and participation in the global village. The phenomenon of globalization is the hallmark of the twenty-first century. Innovativeness is a *condition sine qua non* in facing the challenges associated with it. For instance, nations across the globe are adopting regional integration as one of the innovative coping strategies in response to intensified globalization. East African regional integration initiatives are being pursued at, *inter alia*, economic, social, and political levels. The establishment of the East African Common Market, East African Customs Union, a common currency and eventually the formation of a political union, the East African Federation, are the four phases through which the integration efforts are being pursued. As the people of East Africa move towards

this supranational identity as well as renewed and expanding regional consciousness, it is imperative to have a supranational language that expresses the same. That language is undoubtedly Kiswahili.

Not only is Kiswahili well established in Kenya and Tanzania as an official and national language, but it is also widely used as a common language of communication across various ethnic communities in the region. This is also true to a certain extent in Uganda despite the few socio-historical barriers it has encountered there (Kawoya, 1985; Pawlikova-Vilhanova, 1996). However, recent developments indicate that the language is becoming increasingly popular across the entire region of the East African Community and beyond. Though the decree making it a national language in Uganda in 1986 has never been effectively implemented, neither has it ever been officially revoked. More importantly, the 2002 amendment of the 1995 Uganda Constitution recognizes Kiswahili as the second official language. This has been accompanied by concerted efforts to promote it through the education system in the country. Although not examinable at the end of primary education as is the case in Kenya and Tanzania, Kiswahili is now a compulsory subject in Ugandan primary schools. It is also a compulsory subject in S1 (Form One) and S2 (Form Two) but it is optional in the rest of the levels of secondary education.

Similar developments are likely to take place in Rwanda and Burundi following the admission of the two countries to the expanded East African Community in 2007. It should also be noted that Kiswahili is the official language of the Community; and more specifically, an organ called the East African Kiswahili Commission (EAKC) has been established for the express purpose of developing and promoting the language in the region. One can therefore, confidently, predict that the language will increasingly become a main communication medium in the region.

Kiswahili is also one of the major disciplines in language education across the region especially at the tertiary level. In Kenya and Tanzania, for example, the language is predominantly taught in teacher training institutions as a subject within the national curricula of the respective countries. In both countries teacher trainees are prepared to handle the language as one of the compulsory subjects at both the secondary and primary levels within their respective national contexts. The teaching of Kiswahili in the two East African countries is informed by specific national interests and ideological idiosyncrasies reflected in their national curricula. With the importance and increasing popularity of the language as the supranational medium across the East Africa region becoming more evident, innovativeness in the teaching of this *lingua franca* especially in tertiary institutions is imperative. There is need to incorporate the regional dimension of the language into the design and development of the respective national curricula of the member states.

II. Some Contextual Challenges Facing Kiswahili Pedagogy

The challenges facing Kiswahili as a language of integration differ from one country to another depending on the different socio-historical and political experiences. In the case of Uganda, for example unlike in Kenya and Tanzania, some people vilify the language and perceive it in negative terms as, *inter alia*, a language of intimidation and banditry. This is partly due to the fact that for a long time the language was predominantly used by the Armed, Prison and Police forces. From the experience of ordinary citizens, these institutions could not be described as people friendly. Furthermore, in the past, people engaged in antisocial practices found it convenient to conceal their identity by using Kiswahili and thereby, unfortunately, giving the language a bad name.

The other challenge is that Uganda, unlike Kenya and Tanzania, lacks a vital linguistic support base in terms of native language speakers of Kiswahili such as the littoral communities of the Swahili spread from Lamu to Kilwa. Vibrant print and electronic Swahili phone media have been (and continue to be) vital support systems for the growth of the language in Kenya and Tanzania. The same has not been the case in Uganda. It should be noted, however, that before independence in Uganda there was a newspaper called *Habari za Polisi* (Police News) whose audience was primarily the Uganda Police Force. During the days of Idi Amin, a magazine called *Lulu ya Afrika* (Pearl of Africa) was produced once only. A newspaper called *Mwenzako* (Compatriot) came up after the overthrow of Amin but went into oblivion immediately after its first publication (Kawoya, 1985).

It is evident from the foregoing that though the initiatives to spread Kiswahili through print media have been there for a while, the lack of a steady readership rendered such efforts unsustainable. This environment makes teaching and learning a second or foreign language, no matter how vital it is, a major pedagogical challenge. Take the teaching of English and French in Kenya, for example. While English is taught as a second language, French is taught as a foreign language. This means that two distinct instructional models are being used to teach two European languages in Kenya. The case of Kiswahili is more complex in Kenya and more so in Uganda. Under what model between Kiswahili as a Second Language (KSL) or Kiswahili as a Foreign Language (KFL) is the language being taught in Kenya and Tanzania? And under what model should it be ideally taught in Uganda, and even Rwanda and Burundi which virtually lack native speaker communities?

Ensuring that there is enough and competent personnel (e.g. teacher trainees) to disseminate knowledge of the language through the education system are also a challenge. This goes together with the production and provision of suitable learning materials

developed particularly to cater for the unique needs and challenges of learners in Uganda. The Kiswahili text books used in Kenya and Tanzania may not necessarily be appropriate in Uganda where the majority of learners and teachers are very rarely exposed to the language in meaningful communication situations. Institutional intervention is therefore necessary to fill in the vacuum and ensure that unscrupulous people do not take advantage by publishing unsuitable books for purely commercial purposes. Such intervention can be made under the supervision of the Ministry of Education or the Uganda National Curriculum Development Centre (UNCDC).

III. Recommendations

The issues raised above highlight aspects of a multi-level and multifaceted phenomenon. They require a multi-sectoral response and adjustments which, *inter alia*, include:

1. Setting up a regional language curriculum centre for Kiswahili. The centre should develop learning materials and instructional models for the different member states taking into consideration their unique socio-historical circumstances and linguistic realities. The centre should also develop Kiswahili educational materials for airing in radio lessons to be conducted by a proposed regional broadcasting corporation (See Kawoya and Makokha, 2009).
2. Rethinking the concept of the East African Kiswahili Commission to include a regional mandate that empowers it to conduct research in Kiswahili pedagogy.
3. Establishing an office within the Ministry of Education to promote Kiswahili as a discipline in Uganda, Rwanda and Burundi.

IV. Conclusion

Regional integration is a response to the forces of globalization in the twenty-first century. With its increasing international status and dynamism, Kiswahili is an indispensable language in efforts towards social transformation and development in East Africa. Its role as a regional and supranational medium can be further entrenched across Tanzania, Uganda, Rwanda, Burundi and Kenya through supporting it within the educational systems. The focus on Kiswahili pedagogy in the respective national curricula of the member countries should be expanded to include the regional dimension of the language. Innovations in Kiswahili teacher training and classroom practices should be the way forward. The ideal Kiswahili teacher trainees in the twenty-first century should be empowered to teach the language in classrooms within their national contexts, the regional context and beyond.

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SUPPORTING PRE-SERVICE TEACHERS' STUDY OF TEACHING THROUGH THE USE OF MULTIMEDIA CASE STUDIES¹

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Introduction

Mathematics teacher educators face practical problems in their work with pre-service teachers. There is a set of difficult issues involving the complexities of field placement experiences. First, there are insufficient numbers of high quality, reform-based classrooms available for pre-service teacher placements. Many teacher educators struggle with the difficulty that their pre-service teachers face when confronted with the disparity between what is taught in a methods course as "best-practices" or "research-based practice" and the reality that pre-service teachers find in the classrooms in which they begin their observations and teaching experiences. Second, even when placed in exemplary classrooms to work and observe, student teachers lack the experience necessary to observe meaningfully the complex and rapid interactions that can occur. The subtleties of multiple human interactions, the unspoken rules and agendas in an experienced teacher's classroom, and the apparent ease with which an exemplary teacher can interact with students and their ideas make it exceedingly difficult for an inexperienced pre-service teacher even to know what to focus on or what questions to ask of the experienced teacher. Third, during their field placement experiences, pre-service teachers lack a common experience upon which they can reflect with their peers as they strive to make sense of classrooms. This situation limits their ability to reflect on their own practice and also limits their opportunities to analyze the processes of teaching and learning more generally. Without a shared experience, pre-service teachers are less able to appreciate the multiplicity of interpretations and perspectives on classroom interactions. These problems have slowed the pace of change envisioned in mathematics reform documents (National Council of Teachers of Mathematics [NCTM], 2000; National Research Council, 1990).

This set of issues, namely the difficulties inherent in pre-service teachers' field placement experiences, led my colleagues and me to investigate the use of multimedia case studies to support the professional development of pre-service teachers. Carefully designed, multimedia case studies that capture the complexities and richness of exemplary, reformed-

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based classrooms may be of value to teacher educators in their work with pre-service teachers to the extent that such case studies can create new images of practice. However, the critical importance of such images is that they can become sites for investigation, reflection and study by pre-service teachers in ways that are not easily accomplished with actual classroom experience. To this end, my colleagues and I developed several multimedia case studies for use with grade 7-12 pre-service mathematics teachers. In this paper, I discuss how one cohort of intern teachers used one of these case studies to reflect on their own emerging teaching practices through their analysis of a case study teacher's practice.

Guiding Frameworks

Two areas of research have informed this study: (a) research on teacher development, and, (b) research on the use of case studies in supporting this development. Research on teacher development has identified several key issues with respect to the preparation of pre-service teachers. Some researchers have focused explicitly on pre-service teachers' content knowledge (e.g., Even & Lappan, 1994); many researchers have focused on the relationship between pre-service teachers' pedagogical beliefs and the impact of those beliefs on their developing knowledge of teaching (e.g., Eisenhart, Borko, Underhill, Brown, Jones & Agard, 1993; Meredith, 1993; Thompson, 1992). Following Shulman's early work (1986), other researchers have investigated pre-service teachers' pedagogical content knowledge (e.g., Ball & Wilson, 1990; Barnett, 1991). This set of issues, however, does not fully capture the complexity of what it is that teachers need to know and the situations in which they know these ideas. Teachers' knowledge needs to include at least the knowledge of psychological development of children's thinking, the logical (or mathematical) development of concepts, the curricular instantiation of ideas in instructional materials, the representational (or media) development of mathematical ideas, the practical development of discourse, and strategies for management in the classroom.

Research on the use of cases in pre- and in-service teacher development courses has suggested that case-based instruction has potential for addressing these issues. Yet, the reported data on the use of text, video, and multimedia case studies is rather limited. In part, this is due to the complexities of teaching and the complexities of teaching about teaching. It is also due to the fact that the use of case studies (in whatever media) will only be one component of a pre-service teacher's preparation program. Any use of case studies will be necessarily deeply embedded in a larger context of field observations, methods courses, supervised practice, and content courses. In addition, pre-service teachers entering their preparation programs have already had 12 or more years of first hand experience in classrooms. Within the context of the preparation programs, it is my goal to

understand how case studies can support the development of case-based pedagogical understandings by pre-service teachers by providing a shared focus for their reflection on their own emerging practice.

Methods

I used a multimedia case study with a cohort group of pre-service mathematics teachers (grades 7-12), who were concurrently student teaching. In this section, I describe the case study materials and how they were used, the participants in this study, the data sources and the methods of analysis.

Working with my colleagues, I have developed two multimedia case studies for use with pre-service mathematics teachers (Bowers, Doerr, Masingila & McClain, 1999, 2000). The materials of these cases were not posed as specific dilemmas for novice teachers to analyze and propose resolutions, but rather these materials were designed to be sites for investigation, analysis and reflection on the part of those teachers. The case lessons were designed to engage the students in actively learning mathematics, generating and critiquing mathematical arguments, and expressing their mathematical ideas about problematic situations. We chose to focus on a teacher who was particularly reflective on her own practice and who readily expressed her understanding of student ideas and showed how she expected to use student thinking to further her mathematical agenda. We intended that this would provide impetus for the pre-service teachers to reflect on their own practice in light of the reflections of an experienced teacher.

The multimedia case study that was used in this study involved a four-day lesson sequence in an eighth-grade mathematics class in an urban public middle school. The mathematical focus of the lesson sequence was on making decisions by ranking and weighting data. The case study materials include a video overview of the school setting, the teacher's lesson plans, video of class lesson, student written work, and a video journal of the teacher's reflections and anticipations on each lesson, and the transcripts of all video. In addition, to help use these materials, the case includes an issues matrix with links to video clips and text organized around four sets of issues: planning, facilitating, student thinking, and mathematical content and context. A search tool allows the user to search the transcripts. A bookmarking feature supports the tagging of video clips and a notebook allows the pre-service teacher to make annotations as s/he is using the materials. Study guide questions, mathematical activities for the pre-service teachers, and bibliographic resources are also included. The classroom video contains about 40 minutes of edited video for each day of the four-day lesson sequence.

The video journal contains the teacher's anticipations of each lesson and her reflections on the lesson that just occurred. The teacher discusses her concerns in planning the lessons, how she will build on student understanding, her approaches for engaging all students in the lesson, her thoughts as she is monitoring small group activities, ideas for assessing how well students are understanding the mathematical issues, and her strategies for orchestrating whole class discussion and developing classroom norms for participation, explanation, and justification.

An "issues matrix" was designed to provide some structured access to the episodes in the case; the matrix was organized about the four main issues (a) planning the lesson, (b) facilitating group interactions and whole class discussion, (c) understanding and using student thinking in the lesson, and (d) the mathematical content and context of the lessons. The matrix consisted of links to selected portions of the classroom video and the teacher's reflections for each of these issues (and related sub-issues) across the four days of the lesson. However, these tools for accessing the records of practice in this classroom were not intended as an exhaustive means of investigating any particular issue, but rather were intended as a possible starting point for a pre-service teacher's investigation of practice.

The participants in this research study were nine pre-service mathematics teachers (grades 7-12) who were completing an eleven-week, full-day student teaching experience. They were enrolled concurrently in a seminar class that met once a week for two hours in the afternoon after student teaching. These student teachers had completed a six-week, half-day student teaching experience during the previous semester while concurrently enrolled in a mathematics methods course. Prior to the first student teaching experience, they had completed sixty hours of field experience divided between at least two different classrooms. Three of these pre-service teachers were graduate students who had already earned an undergraduate degree in mathematics and were completing a master's degree in mathematics education that included a teacher certification program. The other six pre-service teachers were undergraduate students who were earning an undergraduate degree in mathematics while completing a teacher certification program. This group of pre-service teachers formed a cohort in the program and had been together as a group in both student teaching semesters and in education classes.

The seminar (taught by me) engaged the student teachers in thinking about and discussing issues of assessment, teaching and learning, and developing one's teaching practice. Early in course, the pre-service teachers identified goals for themselves that they were addressing in their own student teaching practice. For five weeks near the end of the seminar class, the multimedia case study was used. The pre-service teachers were asked to identify a specific issue that they had been working on in their own practice and that they saw addressed in

the case study teacher's practice. They traced this issue throughout the case study and through their own teaching practice. For each of the first four weeks of the five-week period that the multimedia case study was used, these pre-service teachers viewed the video on the multimedia case study from one day of the four-day lesson sequence and the teacher's journal. The pre-service teachers watched the video separately from the seminar class, with an assigned journal question. This viewing of the classroom data and the teacher's reflections became the basis for their discussion in the seminar class. This culminated in a paper discussing this issue and giving evidence from the case study and from their own teaching practice. During the fifth week, the pre-service teachers presented their papers in class and used video from the multimedia case study (using a book marking feature) and video and/or dialogue examples from their student teaching experience as evidence.

The data for this study consisted of transcripts of all class discussions, transcripts of the video of the presentations and the students' bookmarks in the multimedia case study, the students' written journal assignments related to each day of the case study, the students' final papers discussing the issue that they linked to their own practice, a questionnaire concerning the case study completed by the students at the end of the semester, a journal kept by the instructor of the seminar and field observations made by one of the researchers. The data were analyzed through inductive coding methods, beginning with the first two class discussions, progressing through the generation of notes describing the meaning of each code. Then the remaining transcripts were coded and issues raised by the teacher educator and those raised by the pre-service teachers were carefully identified and distinguished. Pre-service teachers' types of reasoning about the case were identified. Next, a detailed analysis of the issues of concern to the pre-service teachers was completed. The pre-service teachers' final papers were included in the data analyzed at this stage. Finally, the synthesis of each pre-service teacher's issue and reasoning was compared with the issues and reasoning that had been identified in the class transcripts. The syntheses of the students' issues and reasoning were then categorized into clusters of common issues and differences.

Results

Throughout the four one-hour class discussions and the writing and presentations of their issue papers, the nine pre-service teachers made a variety of links between the case study teacher's practice and their own emerging practices. When analyzing the data, I found that the data fit into three categories: (a) pedagogical issues, (b) pedagogical issues from a mathematical perspective, and (c) mathematical issues from a pedagogical perspective. I

note that no issue arose that we found to be purely mathematical. Table 1 summarizes the categorization of the links made by the pre-service teachers.

Table 1

Categorization of Pre-service Teachers' Links from Case Teacher Practice to Emerging Practice

Pedagogical Issues Not Limited to Mathematics	Pedagogical Issues from a Mathematical Perspective	Mathematical Issues from a Pedagogical Perspective
1. Keeping students participating in class by keeping comfort levels high	1. Checking for student mathematical understanding	1. Introductions and transitions to mathematical ideas
2. Facilitating classroom interactions	2. Role of questioning in promoting student mathematical thinking	
	3. Use of student responses in furthering the teacher's mathematical agenda	

I categorized the links made by the pre-service teachers to their own practice as pedagogical issues when they dealt exclusively with issues related to teaching, independent of teaching a specific content such as mathematics. The issues that I found were (1) student participation, and (2) facilitation of classroom interactions. I categorized links made by the pre-service teachers as pedagogical issues from a mathematical perspective when they dealt with issues related to teaching mathematics and the teaching aspect was primarily the focus of the issue. I found three related sets of links in this category: (a) checking for student mathematical understanding, (b) the role of questioning in promoting student mathematical thinking, and (c) using student responses in furthering the teacher's mathematical agenda. I categorized links made by the pre-service teachers to their own practice as mathematical issues from a pedagogical perspective when the mathematics aspect was the primary focus of the teaching issue. I found one link that a pre-service teacher made to his own practice, that of introductions and transitions to mathematical ideas. For a fuller, data-rich discussion of these connections, see Masingila and Doerr (2002).

The use of a multimedia case enabled pre-service teachers to delve more deeply into issues revealing the complexities of teaching through guidance by the seminar instructor. Unlike observational field experiences where inexperienced teachers are on their own to observe and interpret practice, the analysis of the case study provided a common experience for these pre-service teachers to observe and interpret. This shared experience enabled the

pre-service teachers to analyze pedagogical issues in ways that appeared to go beyond the usual concerns with classroom management issues and allowed them to focus instead on more complex classroom issues. In our analysis of the pre-service teachers' use of the multimedia case study we found that the case study enabled these novice teachers to understand better through reflection the tacit and implicit knowledge that teachers have when reflecting on reflection-in-action (Schön, 1995). The case study teacher reflections, the classroom video, and the lesson plans, coupled together with the assignment of tracing an issue through the case and their own teaching practice, promoted the pre-service teachers' reflection and helped make explicit the action strategies, the assumptions, and aspects of the problem-settings that were implicit in the case study teachers' reflection-in-action. We found that this provided impetus for the pre-service teachers to reflect on their own practice in light of the reflections of an experienced teacher. In each of the illustrations above, there is evidence that the pre-service teacher analyzed the issue and made generalizations that go beyond the case.

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LOVE FOR ONE'S COUNTRY IN THE 21ST CENTURY: The Need for Civic Education in Tertiary Education.

Osoro Eric and Dr. Kiio Mueni

Abstract.

The importance of Civic Education in the development of a country cannot be overlooked. Civic Education commands a place in the University. Not only does it encompass political education, it exceeds it. It seeks to enable the citizens of a country acquire the knowledge, skills and personal value attributes that would make them understand and appreciate the processes, values and systems of by which they are governed and the means by which they can participate in these processes. Against this back drop, that is why this paper is all about Civic Education. It is the prerogative of the African universities and other tertiary colleges to embrace this noble idea so as to produce youths, who are able to appreciate their nation, understand the society and be grateful of its values. Otherwise it is simple logic that minus Civic Education there might be fragments of African nations in the near future. This paper gives a background on Civic Education. It shows how Civic Education is taught in the primary and secondary schools in Kenya and therefore identifying the gap that is existing in University and Tertiary education. It also expounds on the dangers of lacking civic education in tertiary Education. It further portrays the dangers of teaching civic education as loyalty to one's country and not love for one's country. This paper illustrates on the term civic and wisely on the phrase Civic Education. It justifies it as a significant tool to counter the many Socio political challenges citizens face in society as a result of lacking patriotism and the love for one's country. The paper goes further to suggest the different methods of teaching civic education and the topics that can be incorporated into its curriculum.

Introduction

For the Kenyan population to be converted to a responsible citizenry there ought to be some adjustments in the tertiary education to understand their country well. Civic Education (CE) commands a place in the tertiary Education. The Republic of Kenya (1964) Education commission report observes that under the colonial leadership system, specifically Christian Missions, much that was good in our African indigenous cultures was lost or buried. Report on the National Committee on Educational Objectives and Policies (NCEOP), 1976 also observes that the value of African traditions had greatly guided the development of our society. It states that a society that cannot define, uphold and teach its values would inevitably be subject to invasion by other values that may have no real survival

value in the long run. The commission passed a recommendation commonly known as recommendation 142 which emphasized the teaching of cultural subjects giving emphasis to local culture and history and exposing the student to the best of other traditions.

What is Civic Education?

Daraja (2004) says that CE in Paul Freire's interpretation is what can be referred to as a liberating canon whose recipients are projected to be objective, civil, inquisitive and ready to use reason as a weapon in problem solving.

According to Civic Initiatives Forum (2004) CE should not be mistaken for political education because it exceeds that. This is an area that goes beyond the boundaries of political education as it aims at enabling the masses to acquire the skills that make them check blind obedience, make them arrive at sound and informed decisions and take actions on issues but not on tribal grounds or for political expediency.

The basic aim of CE is not propaganda, but rather to enable one to form an opinion of his own. It is not indoctrination as done by Adolf Hitler in the Nazi Germany. Civics commands it should be taught in a way that love of one's country is distinguished from loyalty to one's state. Critics or academicians can ask why? The answer is that Nazism and apartheid were never short of values.

History and Civics

History is an adjunct to civics, the study of recent history is invaluable, for without in any way departing from historical accuracy; it is possible to make the student aware of both his rights and his duties as a citizen of Kenya. All education of future citizens aims at creating the desire and capacity to understand the problems of the world today and to participate actively in the political, economic and social life of the community. The teaching of civic should aim to give students norms of social thought and behavior, respect for fundamental values, love of one's country and the understanding of the community (Kenya) and the world.

Geography and History have their own identifiable procedures and substantive content. That content is concerned with living in organized, legally recognized communities whose study depends on an alliance not only of history and geography but also at the very least of economics and politics. Slater (1995) affirms that if civics is not a distinct discipline, it is a competitor for time and a threat to History. If however, it is a federal term dependent on history, it is one of the guarantors of its presence.

Justification for Civic Education

KNEC (2002) Observes that the candidate overall enrolment for History and Government between the years 1997-2002 compared with Geography which is considered a science shows a big disparity. Students have always sought to pursue subjects that are considered to be sciences in nature as shown in Table 1.

Table 1. The candidates overall enrolment in History& Government and Geography over a period of six years.

YEAR	1997	1998	1999	2000	2001	2002
History	83,019	86,720	87,076	87,987	81,945	84,848
Geography	106,744	111,264	116,487	121,275	126,550	131,510

Source: KNEC Performance report 2000 and 2002

The political, social and economic growth of a country entirely relies on the knowledge that is gained from the social sciences, social studies and the natural sciences. The three areas mentioned play rather different roles but it is important for the people to appreciate their importance. In the development of an all round person, one area cannot be overlooked at the expense of the other.

Apparently the secondary school students have continued to have a low opinion and unfavorable attitudes towards History and Government as a discipline in the school curriculum. According to Kiio, (1999) History and Government is not a popular subject among learners today in some secondary schools worldwide because it does not give the learners job security. Hence there may be a serious exodus of learners from History and Government to other school subjects because they have guaranteed job security. This ascertains that the students have already developed attitudes towards the subject. The strong bias in science has pushed History and Government to a corner. Hence it is not given prominence by policy makers and employers. Therefore it can be simply summed up that institutions are producing by products that are good in sciences but mentally they lack the aspect of love for one's country and not the loyalty to ones country.

Osoro (2006) also found out that most of the secondary school students have developed negative attitudes towards studying History and Government due to the bulkiness of the subject, poor teaching methods and due to lack of job security. This purely means that even if students are pursuing History and Government they lack the passion and thereby they do not know the importance and essence of the great Mother of all disciplines.

In the year 2000, the 32nd Annual Phi Delta Kappa/ Gallup Poll found that Americans rank 'preparing people to become responsible citizens' as number one purpose of their schools. To add it all over the thirty two years of the poll, the public has never wavered in its conviction that the schools and educators have a special responsibility to educate young people for citizenship. I wonder if such a poll was carried within the Kenyan society what could have topped the list for the last couple of post independent years; self reliance/ preparation for white collar jobs? For brain wash? Or for responsible citizenly?

Over one fourth of all State constitutions state that, a system of public instruction is required because an informed and capable citizenly is vital to the preservation of a free and democratic government. In addition to schools, many other institutions- from religious congregations to scouting organizations to political parties also profess commitments to CE

For the citizens to understand the conflicts and violence in contemporary Africa, for them to understand the role of presidency in the African conflicts, for them to understand the importance of exercising their franchise, the principles of democracy and its cost, CE remains inevitable. Some critics can argue that it is taught within social studies in primary school, in History and Government and Geography in secondary schools. But what they forget is that at those two levels of education the learners are still in the process of growing and maturing hence they might be learning those disciplines for the sake of it since they are there and not for empowering themselves. Okoth (2000) states that the citizens need to understand that there is no vaccine for Africa's conflicts and violence. Africa's problems Kenya inclusive stem fundamentally from its deep rooted underdevelopment and lack of capacity to develop its resources.

WHAT MAKES A RESPONSIBLE CITIZEN?

We can agree to have CE but the challenge comes with us. Who is a responsible citizen? Different people have different opinions on which the responsible citizen is. There is a school of thought which believes that responsible citizens are people who provide direct voluntary care for others in need. Others think that a responsible citizen is one who is able to think critically, deliberate with others and when necessary challenges the authority. Some think that it is those who know and respect our nation's social and political History, founding documents of independence and the constitution.

To achieve all the above descriptions given by different schools of thought we suggest that the following topics need to be incorporated in the CE syllabus.

- 1) What is CE?

- 2) Benefits of CE
- 3) Citizenship Rights and Responsibilities
- 4) Constitution and Constitutionalism; functions, types.
- 5) Democracy ;principles, and benefits
- 6) Human rights and development
- 7) Government and its processes
- 8) Leadership; Definition Roles and Duties
- 9) Elections and electoral process
- 10) Land Tenure system and use
- 11) Environment management and law
- 12) Emerging issues i.e. Gender Equity, HIV &Aids, Conflict and Conflict Resolution, Drug Abuse, Corruption, Political Violence.

The Purpose of Civic Education.

CE aims at inculcating in the individuals a sense of universal values and behavior that form the foundations of a culture of democracy. It gives skills of co-operation and sharing of ideas so as to have an equitable, peaceful and democratic society. This means the individuals have to be empowered to develop some sense of autonomy to make such sound decisions in their day to day life.

CE also has the basic role of teaching the youths to be tolerant to one another, and have mutual respect. This will enable them to make meaningful choices by basing their judgments on both the analysis of the future implications and present situation. Richard N and Jane, J. (1998) assert that adults with high levels of political knowledge are likely to be socially tolerant, trustful, and engaged in community affairs.

It is out to help the learners to develop characteristics and conceptions that will enable them to appreciate the cultural, social, political and economical environment and therefore equip them with the best problem solving dexterity.

Children of a society that has enhanced CE will develop skills and values for the respect of human rights, child rights. They get to learn to appreciate cultural diversity to their advantage. They uphold human dignity and always strive to prevent conflicts or solve them amicably.

CE helps the people to recognize, accept and respect socio-political institutions, orders and practices. According to Civic Initiatives Forum (2001) for democracy to obtain and prosper it requires that the people are bathed in and drenched with democratic ethos. Hence CE has

those elementary mainstays of democracy. Hence people should be trained to nurture different institutions and values. Richard N and Jane, J. (1998) say that one can live one's whole life without knowing that the president is the commander in chief of the armed forces or, for that matter without knowing the name of the president. The question is how many political discussions and how many news reports would be inconceivable without this information?

The Basic Approaches to CE Today.

The History Curricular Approach

The importance of knowing and respecting our nations' social, economic and political history is the primary vehicle for true CE. The current disengagement of young people is a curricular deficiency in history and that the remedy is in revision of the History Curriculum and requirements (Osoro 2006)

The Critical Thinking Pedagogical Approach.

By having students seated in a classroom, listening to lecturers and reading books only as instructed creates a passivity that is antithetical to democracy. Hence what is needed is a whole new approach to education in which students take an active part in learning. This entails giving them meaningful involvement in the creation of curriculum, classroom like and school organization and governance. Such an approach teaches democracy by practice.

The Service learning Approach.

It is almost like community service, except that it is seen as an extension of the curriculum and a component of traditional course work. Teachers are to involve students in community service learning experiences that compliment directly with classroom learning and should be incorporated in the grading process. Such experiences will help the students understand the world better and also create an opportunity for them to learn the meaning of citizenship actively and not passively.

Community service will make the students get involved in public life, expose them to people and agencies and show them how to live in as an engaged responsible citizen.

SUGGESTIONS FOR RURTHER RESEARCH.

A study should be conducted to establish the youth attitudes on politics, citizenship, government and voting. Such a study will help to compare with what has been conducted in the western countries.

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CONTRIBUTION TOWARDS GIRL - CHILD EDUCATION IN KENYA FRANCISCAN SISTER OF ST. JOSEPH, ASUMBI. (A CASE OF SOCIAL TRANSFORMATION OF LOCAL WOMEN)

SR. Dorothy Akoth, FSJ; H.O. Ayot; M. Kii AND M. Nasibi

Introduction - Background - Origins of the Religious Life

HERMITS

In the world today, there are thousands of different religious orders, congregations and societies within the Catholic Church. As long as the Church was being persecuted at the beginning of Christianity, the few Christians, seemed to be fervent believers; but when persecution ended, Christianity attracted more lukewarm adherents, who lived almost like non-Christians and sometimes even in vice. Monasticism was, therefore, direct reaction to this new condition. It was a protest against a life that was seen to be negatively different from the original Christian living.

The earliest evidence of people who felt that they needed to be set apart appeared in the middle of third century (about 260 AD); these people thought they were being called by God to a radical Christian living; so they went and lived in caves and huts in desert areas such as Egypt and Arabia. These were called Hermits or Fathers and Mothers of the Desert¹ among whom were St Anthony and St Paul of Egypt who were considered to be the founders of desert life of prayer. Athenasius, Bishop of Alexandria, Egypt, wrote about the life of Anthony in about 357 AD. Although these people lived in caves out of sight of each other, they were connected by common pathways called Lauras², which made it possible for them to know where to find each other in cases of necessity. The Lauras converged on the chapel where the hermits gathered for prayer on designated days and times. More and more Christians “fled” *Laxed Christian living*, especially after the edict of Milan in 313, Granting Religious Tolerance. This happened after Constance came into power in Rome in 312 A. D. One of these hermits became the spiritual guide of the group. This was the beginning of the Religious Life, with a religious superior. They were thinking of themselves and their own life of prayer, not necessarily of others.

1 Isichei, Elizabeth (1995). *A History of Christianity in Africa for the world*. London: pages 27-28

2 Battelli, G. MCCJ (1990). *Religious Life in the Light of the New Canon Law*. Nairobi: St Paul’s Communication. Page 9

Cenobites³

The style of hermitical Religious Life lasted for about a hundred years. Thus in the fourth century another form of Religious Life emerged, the Cenobites or monks living in common. It began with Pachomius (292 AD – 346 AD), a Roman soldier stationed in Egypt who was so impressed by the charity of Christians, that he renounced his career in order to live a life of intense relationship with God. He gathered disciples around himself and set up a community of monks at Tabennesis in North Africa. Basil of Caesaria (330 – 379 AD) was to adapt a modified type of Cenobite life. He considered his monks as family living under one roof. There were many other prominent people who felt called to undergo drastic change of life. Such included Martin of Tours, Gaul (today France), who resigned his position in the army to organize a group of hermits at Marmoutier near Tours; a wealthy widow called Melanie traveled to Jerusalem from Egypt in the company of Rufus of Aquileia, Italy, to establish a male and female monasteries there. Benedict and his sister Scholastica started the monastic life which was to be modified and lived as we know it today.⁴

Early Missionaries

Then people began to feel that they were being sent to others, that they should explain what they were doing and urge others to emulate, according to their context. This is what developed to be termed Charism. It went on through the years until the era of Dominic of Spain and Francis of Assisi, Italy, in the 12th century, who were to found the Dominicans and the Franciscans, respectively. The former emphasized preaching the word of God and how it was to be interpreted and lived in the light and context of their time; so they were known as Order of Preachers, while the latter were known for their humility and poverty preached and lived radically; and these were known as Friars Minor (Lesser Brothers). These two Orders had their female counterparts. They were not satisfied with what they were seeing and what they were doing or not doing about it. They felt called to do more, and light was given to them on how to do it. In other words, they aimed at social transformation in their time by preaching (teaching) and living the example of the life they would like to see lived at a given time, a given epoch, a given era. It was a change they were to address in the context in which they found themselves. They hoped that people around them would see how they lived and imitate them⁵. The response was positive as people in the context also experienced discontentment and longed for a change, a transformation, as is seen in the last

3 Battelli, G. MCCJ (1990). Religious Life in the Light of the New Canon Law. Nairobi: St Paul's Communication. Page 7

4 Ditto. Pages 12-14

5 Tugwell, Simon O.P. (1982). Early Dominicans, Selected Writings. New York: Missionary Society Publishers. Page 54

two cases – Dominicans and Franciscans. There are countless disciples of St Francis today, for example. That is to say, many orders in the Catholic Church practise the “Franciscan Spirituality” to some extent, having adapted it to their own context – the practice of humility and poverty and trying to live according to the Gospel radically. Today there are lay people who practice this way of life and they are called “Franciscan Third Order Secular”. Then came the era of the Jesuits and their total obedience to the Pope, ready to be sent anywhere the Church needed them to be, in order to “set the world ablaze”⁶. These became great scholars. They built many universities all over the world. The people of the Western Civilization saw that further afield there was need for social transformation; and this influenced the growth of missionary spirit. Their thrust pointed mainly to Africa, especially during the colonial era, although the missionaries also went to the Americas, Asia, Australia and New Zealand.

Missionaries in the 19th century

The 19th century will remain remarkable for its missionary upsurge. Many Orders having the mandate to go out and evangelize came into being. This was the era of Cardinal Lavignerie and his missionaries for Africa, otherwise known as the White Fathers and White Sisters. These were founded specifically for the African missionary work.

Then there was Father Joseph Alamano, an Italian from Genoa, who founded the Consolata Missionaries – both male and female, also with Africa in mind. In introducing their most recent Constitutions and General directory, revised in 1982, and presented to their members on March 19th of the same year, the Superior General, Father Joseph Inverardi, remarks “here are our constitutions, renewed according to the teachings and directives of Vatican 11, and approved by the Sacred Congregation for the Evangelization of Peoples. It is a true privilege for me to present them to our family and promulgate them. They are our response to Vatican 11’s invitation that all religious and missionary institutes review their legislation in order to guarantee their fidelity to the original inspiration, the charism of their founder, their specific mission, and their particular way of living the Gospel.

These constitutions and general directory are the result of a lengthy process of deliberations, the fundamental stages of which are represented by the documents of our 1969 Chapter and the Acts of our 1975 Chapter. Prepared and studied with the co operation of, and in consultation with our whole congregation, they were long and carefully considered, article by article, by our 1981 General Chapter which, on July 30th, 1981, having invoked the light of God’s Spirit, approved the entire text.

6 Battelli, G. MCCJ (1990). Religious Life in the Light of the New Canon Law. Nairobi: St Paul’s Communication. Page 35.

The constitutions and general directory will come into force on 20th of June, 1982. On that day they will become law, binding all Consolata missionaries. But the study, a deepening of understanding and assimilation of their contents will constitute the missionary's main commitment for the next six years and for the rest of their lives.

Now that the long process of the renewal of our constitutions has come to an end, I would like to invite you, as our Founder did on a similar occasion, to fervently thank God and Our Lady of consolation for all the graces granted to our Congregation from its beginning until now". Thank God for having raised up our Congregation in the Church to carry out its mission of announcing the Gospel to all peoples, under the maternal protection of Our Lady of Consolation. Thank God and Our Lady for having kept us faithful to the teaching and missionary yearning of Father Alamano, 'a father of apostles'. We should be grateful for all the good we have been able to achieve in his name and for the ability for the renewal made evident to us which we now want to develop and bring to maturity, so that it may produce true holiness and fruitful missionary apostolate. According to the teaching and firm belief of our Founder, the spiritual progress of each one of us, the good spirit of our Congregation, and God's blessing on our work, all will depend on our fidelity to the rules we have made for ourselves, and which indicate the way we should live and carry out our mission in the Church. We shall try not only to announce God's glory to all peoples, but also to live it out ourselves by fidelity to our calling. In this way, we shall give witness to the Father who has called us, to the Son who sends us into the world to proclaim Salvation, and to the Holy Spirit who gathers us in missionary brotherhood. May Our Lady of Consolation obtain for us the strength to give such witness."

What comes out rather clearly is that the missionary constantly evaluates faithfulness to the original *gift* and *mission*. The Catholic Church has made it mandatory that such evaluations be done at designated intervals, by gathering members into serious meetings periodically. These gatherings are called *Chapters*. The laws governing them are found in the *Canon Law* and the laws proper to each institute, *Constitutions* and *Directives* also called *Directory*.

The following is an extract from a text written in Turin on the feast of Our Lady of Consolation, 20th June, 1923, by Father Joseph Allamano, the Founder of the Consolata Missionaries, and it is self-explanatory:

"Dearest sons in Our Lord Jesus Christ,

I am presenting to you the book of our Constitutions, reviewed and corrected according to the new Code of Canon Law, and approved by the Sacred Congregation 'de Propaganda Fide' 'ad experimentum' for ten years; after this period - or may be earlier - they will be

approved in a definitive way....You are aware of how humble and how severely tried our beginnings were. The plan for the founding of the Institute, submitted to Cardinal Simeoni, Prefect of the Sacred Congregation 'de Propaganda Fide' in 1891 and approved by him, could not be realized because of many and varied difficulties, and so for the next ten years nothing further happened. It was only in 1900, when these difficulties were removed and circumstances were more favourable, that the plans were put before the Subalpine (Piedmontese) Bishops' Council, during their meeting at the Consolata Shrine in Turin. The Bishops unanimously approved it. Work for the realization of the project started immediately, and on 29th January, 1901, the 'Consolata Society for Foreign Missions' was canonically and officially established by decree of His Eminence Cardinal Augustine Richelmy, our beloved Archbishop. In the history of our Congregation, this is our official birthday which must be celebrated every year out of gratitude to God.

Five months later, on 18th of June, 1901, a small and modest building in Corso Duca di Genova became the first house of the first small group of the Consolata Missionaries. There were only a few of them; in fact on the 8th of May, 1902, when our first Missionaries departed for Kenya, our little mother house became childless and empty. In humble obscurity and enduring many trials our Institute began to lay its solid foundations, so that in due time it could grow like a giant and come to full light.

In 1905 (September 14), our first and already flourishing mission field became independent mission territory and, four years later, on the 28th June 1909, an 'Apostolic Vicariate. In 1909 also, an unusually short time after its foundation, our Congregation was granted the 'Decretum Laudis' (official approval from the Holy See), which, among other things - and I like to remind you of this – approved our method of evangelization as follows:

'The characteristics of these missions is that the missionaries do not limit themselves to introducing religion...but together with the splendour of the faith they promote the development of those peoples by teaching them new methods of agriculture, animal husbandry, and the exercise of the most common trade'.

In 1910 we had the inauguration ceremony of our newly built and specious mother House. This had become necessary because of the ever increasing number of aspirants. In the same year, our Sister Congregation came into being: that of the Consolata Missionary Sisters”.

The story of the Consolata Missionaries has been told in some details here as an example of what happens basically and how it happens in forming religious congregations, when some one or some people believe that they have received a charism from God in order to work for the social transformation of others. The result of the Consolata foundation has been astounding for Kenya and for the world. Father Joseph Allamano's first missionaries came

to Mt Kenya Region in 1902. Today, most of the best schools in that area were initiated by them - Nyeri High, Ngandu Girls.....Among the Consolata Missionaries are some of Kenya's great sons and daughters – Sister Ignasia Pia (Now retired and living in Nairobi), Sister Josephine Nyawira in Liberia, Bishop Peter Kihara in Marsabit, Father Stephen Okello in Nairobi, to name only a few. Kenyan born Consolata missionaries work all over Africa and South America. In all these places, the missionaries seek to provide social transformation to the people they are sent to, through education and faith practised.

Father Daniel Comboni and his Comboni Fathers and Sisters, founded specifically for Africa work in Kenya, Egypt and Sudan. In Sudan, there are many Comboni Institutions of learning aimed at helping the locals to undergo social change.

These were founded by an inspired person or persons who believed that they were inspired directly by God for a specific purpose. That is why today we hear of Medical Mission Sisters specifically founded to provide healthcare, Mercy Sisters to care for the poor, School Sisters of Notre Dame for the purpose of providing education, mainly to the girl child. There are others who may not have specific titles related to the task before them, but have a mission all the same to specific people. Such are the Loreto Sisters who were founded in Ireland to provide education to girls, Franciscan Sisters of St Joseph who were founded in Asumbi, Kenya, to provide education to the girl child with the specific aim of **raising and maintaining the dignity of the women** around them.

CHARISM

In the official language of the Catholic Church, a person is given a **Charism** (a gift from God to be passed on for the good of others, to correct a threatening situation). For example to provide education to those who otherwise would go without it; to give medical care to those who needed it; to take care of orphans and so on. Such a person eventually developed a vision which some people could see and identify with. It was understood that the gift was meant to be taken to the people who were in need. Such people saw a situation to be wrong, and the vision was how it should really be. Thus, the person given the gift aimed at making the vision a reality. That understanding became known as the mission. So the person given the charism was to be sent on a mission with a clear vision of how the situation should be. The means and methods they were to use to carry out their mission were to be known as **ministry**.

Ministries could be described as vessels in which the gifts are carried. The need may concern the down trodden, health, needy, orphans, widows/widowers and the vessels could be raising of the standard through education, restoring of health through medical care, building of orphanage to take care of orphans.

The Mill Hill Fathers⁷

Thus Cardinal Herbert Vaughan heard the call in his heart, to found a society that would go to foreign missions; the day was April 20th, 1863, as he was at prayer- he was saying Mass. This was the beginning of the St Joseph's Society for the Foreign Missions, otherwise known as the Mill Hill Fathers, because of where they started, Mill Hill London. Following closely were the Franciscan Sisters of St Joseph otherwise known as Mill Hill Sisters, not only because of their close association with the Mill Hill Fathers, but more especially because of their taking root and growing at Mill Hill London along side the Mill Hill Fathers, from 1878. They were to be established as a religious Congregation in and in 1885, five of these sisters were sent to Boneo, in Asia as missionaries. When the Mill Hill Fathers sent their missionaries to Kenya, from England, they were very specific as to where they would go. The first missionaries who were meant for what is today Kenya left England in 1895. Eventually, they reached Uganda from where they were to spread back to what is today known as Kenya. Their first mission station was in Kisumu's Milimani, although later they were to settle in Ojolla for a short time. It was from here that they eventually spread back to Asumbi.

In the Archives of the Mill Hill Fathers in London there is a wealth of information dealing with the foundation of the Mill Hill Fathers at this place called Mill Hill on Lawrence street in London, England. The intention of Father Herbert Vaughn, who was destined to become a Bishop and a Cardinal of the Catholic Church, was to eventually send missionaries to Africa, not only to give them the word of God but also to give them modern education, as can be seen from their inclusion of education institutions in each of their mission compound.

THE FRANCISCAN SISTERS OF ST JOSEPH, ASUMBI

The Franciscan Sisters of St Joseph's first sisters have always talked about the beginnings of their Congregation.⁸ Sister Teresa the first of the lot,⁹ spoke constantly of how they were many by 1930 and how by 1939 only six of those early girls were in Asumbi and four others living in Kakamega. Sister Celestine talks¹⁰ of the little girls she saw in the Mission, being taught by the older girls. Sister Pacifica would set us laughing when she would demonstrate how the teacher trainees conducted Physical Education in Dholuo..."acham..achwich.." ¹¹ It all sounded so funny. They talked of the difficulties they had faced in those early years of

7 O'Neil Robert (1995). Cardinal Herbert Vaughan. Tunbridge Well: Burns and Oats

8 Conversations with the First Franciscan Sisters of St Joseph, Asumbi, no.16 in the foot note.

9 Ibid

10 Ibid

11 Ibid

their foundation. They spoke of how nearly impossible it was to live with the white sisters who were teaching them the ways of religious life. Those first sisters at the beginning did not speak English, while the white sisters did not know Dholuo, which was the language spoken in South Kavirondo where most of them had come from and where Asumbi is situated. Both groups had to learn each other's spoken language and culture. Before they mastered either language, they had to speak, though; so they mixed English and Dholuo at times in order to pass messages. Obviously some misunderstanding would arise as in the case of a Mill Hill Sister sending a *little sister* as the FSJs were known. The scene is Rangala Parish Church "Sister go to the convent and bring **canopy** for the procession with the Blessed Sacrament. Father Rabinsteiner is waiting, so run! Get a work man to help you carry it". It does not make sense to her, but she says "yes Mother" and takes off to the convent. As she runs she reflects in her mind "can **of pi?** What would they want to do with it in the procession of the Blessed Sacrament? And a worker to help me carry it – that small *can of water?*" So the "little sister" returns with a **can filled with water!** In their vocabulary even today, they have words like "**oppogoress**" meaning **progress**; "**odidi**" meaning **did you**; "**mia haf**" meaning **may I have**. It had been a difficult task for both parties.¹²

Another difficulty was the "strange" way of preparing food – cooking and preserving it. From the stories told by the early Franciscan Sisters of St Joseph, the Mill Hill Sisters introduced bulk cooking so that what remained could be kept for later use. They also thought that the Africans girls ate a lot at ago, from observing the men who worked for them. Thus Ugali was served in a huge tin plate per person and one had to finish it, otherwise it was a bad sign. Porridge was cooked over night in a big drum and heated the following morning and served and placed for each one in huge tin bowls which became quite hot. Cow peas which was the main vegetable, was bought in bulk and dried and stored in sacks, to be prepared for meals when needed¹³.

Again, lifestyle as a whole was alien and their parents did not approve of their going and living in the Mission without returning home and getting married, to say the least. According to their people, mainly the Luos and the Luhyas, and, later, the Kisiis followed by the Kalenjins, these girls were going to "die without seeing their back". This was considered a great tragedy. The girls themselves knew this. There were times when some of them were beaten up by their exasperated relatives and roughly dragged away and returned to their homes; but those who were able, returned to the convent, to continue living in this difficult and "strange" environment. They persisted and the result was that the Franciscan Sisters of St Joseph came into being and are here today, growing steadily in numbers and in

12 Ibid

13 Ibid

strength. It is fascinating that these primitive girls wanted to become sisters even before they were Christians, and they had never seen a sister! Moreover, they wanted to provide education to others, while they themselves had very little. One is tempted to want to know and bring out what these girls understood by the life they were choosing; what was it that was pulling them, and towards which they turned their faces so resolutely that no difficulty could turn them away. What did they want to do there at Asumbi that they could not do at home? They had experienced something that Father Scheffer and his fellow missionaries had and they were identifying with it and decided to be part of it.

They felt within them that God was calling them to provide the girl child with self-actualization. An actualization that was bound to transform the social order of things in Luoland as they saw it; they wanted to give dignity to the woman in their fast changing world, even that long ago.

In the office of the Congregation for Religious and Secular Institutes in Rome is recorded that the official year of the foundation of the Franciscan Sisters of St Joseph was 1932, although some of the girls living in Asumbi had developed the idea of serving God as early as mid-1920s. In the annals in the Vatican where all the Religious Orders are recorded, it is stated: "the Franciscan Sisters of St Joseph (Kenya), Religious Congregation of Diocesan Rite, was founded in 1932 by Bishop Nicholas Stam, in the Vicariate Apostolic of Kisumu, in collaboration with the Franciscan Missionary Sisters of St Joseph"¹⁴. The document further says that they were to be involved "in formal education, teach Catechism and engage in social work". This was how the Franciscan Sisters of St Joseph understood their mission. They wanted women to live fairly alongside their men folk. Later they translated this into education for girls; and before long they realized that boys had to be educated too if they were to understand the position of the 'modern' African girl, by their standard at that time.¹⁵ They were to embrace the boys' education as well. Although during those early days all that was taught was reading and writing in one's own native language, simple Mathematics and Home Science, the student was seen as already set apart, as one who was advanced in the society. They were readily listened to as they offered advice. Through these people, positive change could easily come.

It is important to note that these girls were not satisfied with what they were seeing in their traditional society, and they had to do something to change it. They understood that light was being given them how to do it through Father Scheffer. In other words, they aimed at social transformation in their time by preaching (teaching) and living the example of the life

14 Dizionario Degli Istituti Di Perfezione, Roma

15 Conversation with the First Franciscan Sisters of St Joseph, Asumbi

they would like to see lived at this given time, this given epoch, this given era. It was a change they were to address in the context in which they found themselves then. They hoped that people around them would see how they lived and emulate. Already they were assertive by the very fact that they defied their culture and went to live in Asumbi Mission. They learned to read and write and did not return home to comply with the tribal cultural norms that stipulated that all girls, on reaching adulthood, must get married.

Sister Mary Stephen dwelt on the History of the Franciscan Sisters of St Joseph between 1936 and 1986. Here she recounts progress of the Asumbi Sisterhood through difficulties, but with determination of those who remained behind after some left. She talks of the hardships, of prayer life, the coming of the European Sisters and their education of the young girls. Sister also gives a brief history of the Rangala aspirants – Leonora Gwila, Felisitas Akoth and Susan Ogola. These all eventually went Asumbi to join the main group there. She goes on to describe the problems that occurred so that a big number left Asumbi and went to Kakamega, Uganda and home. Most moving is her account of how the Bishop Stam came to close the novitiate in 1939 and how the six that had remained behind had stood their ground so that Bishop Stam was unable to actually close the novitiate, their training house. Instead, he gave his permission and blessing for the remaining six to carry on with their training.¹⁶

In her account, the Institute continued to grow steadily after the profession of March 1940. Every year from then on there were professions. Young women who had received the gift, charism, who shared the dream with those of the Franciscan Sisters of St Joseph and saw an opportunity of fulfilling them came to the Institute. Then in 1952, for the first time, the first nine Sisters made their final commitment. This was their **final profession** also known as **perpetual vows**¹⁷. Sister Mary Stephen speaks of education of the members to higher learning, in Rome, in America and in England. As is stipulated in their Constitutions based on Canon Law, the Sisters were being prepared for their education mission. To be equal to the task before them, of being sent to people of every works of life, they had to acquire higher learning.¹⁸

Sister Mary Stephen talks about the period before the chapter when they were being prepared for leadership. Then she goes through to the chapter landmark and passes on to the education development of members and to the foundation of some of their schools, up to the time when the Sisters celebrated their golden jubilee. Featuring prominently were

16 Nkoitoi, Sister Mary Stephen, F.S.J. (1986). A Short History of the Franciscan Sisters of St Joseph. Nairobi: Man Graphics. Page 11

17 Ibid. Page 13

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the Spiritual and academic development as well as the sisters ability to lead themselves. The fact that they have always been focused is apparent in this literature.

The part played By The Mill Hill Missionaries in preparing the Franciscan Sisters of St Joseph to take their role as educators

The same Mill Hill Fathers had assisted the Franciscan Missionary Sisters of St Joseph (Mill Hill Sisters) also to form themselves into a Religious Congregation, in the latter half of the 19th century. These Sisters were destined to join the Mill Hill Fathers in Africa, particularly in Kenya where they were to participate in helping the Franciscan Sisters of St Joseph to take shape in Asumbi. Later Father Philip Cornelius Scheffer and fellow missionaries in Kenya were to write letters about a budding native Congregation that gave a lot of hope to the indigenous people, especially concerning education of girls. These letters are found in the Mill Hill Fathers and Sisters Archives in England.

In his book **The Way the Catholic Church Started in Western Kenya**, Father Bugman, while giving some relevant historical beginnings of the Mill Hill Fathers and their work in Uganda, dwells on their Mission to Kenya, especially their settlement in Kisumu and its environs. The priest who was to be involved with the foundation of the Franciscan Sisters of St Joseph, Father Philip C. Scheffer, and his prowess in South Kavirondo is well documented by Father Hans Burgman in this book. Father Philip C. Scheffer was to live in Kisumu and serve Asumbi as an out station of Milimani. Later, he was given the responsibility of starting the Asumbi Mission in 1913. In June of that year, he and Father Wall visited Asumbi and measured out the plot, put up temporary building and left a catechist there to start instructing people who would want to be instructed. The Mission of Asumbi was officially opened on November 22nd 1913, with Father Scheffer as the resident priest – he was assisted by Father Ferris; and that was the cradle of the Franciscan Sisters of St Joseph, otherwise known as Asumbi Sisters. Father Scheffer, together with Father Ferris worked hard and the Mission grew by leaps and bounds, so much so that by Easter of 1914 eleven candidates were baptized in the Catholic Church in Asumbi. Father Bugman notes that the “Luo were, by then, considered to be very well disposed towards Christianity. Whereas the Kisii were opposed to it.” It was then that Father Scheffer (in Asumbi) and Father Wall (in Kisii) “agreed that the Luo might be helpful in bringing Nyabururu, in Kisii, to life”. Note that “Nyabururu had opened in 1911; yet up to this time there was no baptism yet. Details are to be found in the baptismal registers of Asumbi and Nyabururu”. Soon Nyabururu community chased away their missionaries and Father Scheffer served Nyabururu as an out station of Asumbi. The Asumbi registers show that the first Kisii Christians were baptized there by Father Ferris while Father Scheffer was the God father. .Father Bugman’s book confirms that wherever the Mill Hill Fathers went to start a mission education went alongside the Catechism they taught. One

has only to examine the history of Yala, Aluor, Nyabururu, Asumbi which remain good education centres to this day.

Of the difficulties that was faced all round at Asumbi, Father Bugman writes “at Asumbi, through lack of African experience some European Sisters were too eager to keep their standard high; where as on the African side there were the Bawezi with their fully developed status of sisterhood, unable to bend far enough to stand the extraordinary irritations.”¹⁹ Yet one of the tasks of the Mill Hill Sisters was to train the young women into Sisterhood. It would appear that the Mill Hill Sisters were afraid of the girls they found there, at Asumbi as is reported by the three Sisters who went first to survey the situation, and were filled with apprehension at finding Father Scheffer’s Bawezi a perfect Sisterhood with “a complete scheme of training, a programme of work, an excellent spirit, admirable commitment of the members, richness of religious life, plus all the trappings of nice dresses, veils, insignia...”²⁰ Instead of admiring this, the Sisters found themselves wondering how they were to dismantle all this and bring them into line with their own way of life in Europe. This explains why, although Mother Pacifica, Sister Philip and Sister Benigna had visited Asumbi 1930, they took a long time to decide to come to go there. It was not until 1936 when two sisters were finally sent there – Sister Francis There and Sister Constance. Father Bugman calls this early period “Purgatory days at Asumbi”.

The Mill Hill Fathers’ Missionary background History especially in Nyanza confirms their undertaking in education where ever they opened a mission centre. Sister Mary Stephen Nkoitoi in her book, **A short History of the Franciscan Sisters of St Joseph**, says “among the Mission centres opened by the Mill Hill Fathers were: Nyabururu in 1911, Asumbi in 1913, Rangala in 1920, and Kibuye in 1926”. One has only to glance at the mentioned mission stations to notice the power of education institutions in those centres. Obviously, this author was interested only in those centres where the Franciscan Sisters of St Joseph were to be found, for there are other centres such as Yala founded at this time which she did not mention.

Evidence Found in Letters from the Mill Hill Sisters Archive in Manchester, England

Letters written by the Mill Hill Sisters from 1929 to 1974. The Sisters, especially those who had been sent to Asumbi, recount their experiences with the natives around them. They speak of the girls they found there who were waiting to be taught how to become religious Sisters. They speak of their hopes and fears for these girls. They speak of a lot of the

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schools they had founded and the assistance they were receiving from the native girls, some of whom they were already training to be teachers. Some of these girls later became Franciscan Sisters of St Joseph. From these one learns of how the Franciscan Missionary Sisters of St Joseph eventually accepted the challenge of starting the founding of what they called the native sisterhood in Asumbi in 1936. For the girls this was a second beginning. They had been waiting since 1927, the year Father Scheffer clothed them in the religious garb; and they had believed that they were already Sisters, as they wore their distinctive garbs that set them apart from other girls and as they taught and took care of the younger girls. The letters describe the long road of re-shaping the already formed and mature girls. In a letter addressed to their Mother General in January 1936, soon after their arrival in Asumbi, Sister Francis Therese expresses her satisfaction with the situation they found. "Father Scheffer has been kindness itself to Sister Constance and me. He has handed the aspirants entirely over to us and seems pleased with everything..." already some of the aspirants were government teachers, earning salaries. Sister Francis' letter continues..."he (Father Scheffer) has agreed to send some money to us until the aspirant teachers' salaries arrive. The aspirants are very good and have had good training. One girl, a teacher, has been here for eleven years; she is about 23 years old and is very promising". Sister Constance also writes, mainly describing the girls' willingness to give up all they had "we had heard that they were possessors of many superfluous clothes, therefore, asked individual, to bring along everything they owned...they did willingly". She then goes on to describe the horarium (daily schedule) that they would follow. In another letter written 16th February 1936, Sister Francis Therese tell her Mother General "the ten aspirants surprised both sister and me. They are most edifying and you can see they have already had a good spiritual training.

They appear to us like sisters already." These kinds of letters did not persist; by the time they were novices, the climate was gradually changing and by 1939, it was hostility on both sides, with the priests taking sides and some in the middle. Naturally, the letters describe the difficulties that ensued and the near despair that was felt on both sides. At one point 36 girls left at once. Some went to Kakamega to join the group that was already in place, others went to Uganda while some went back to their natural homes. The letters also talk about the project as a failure citing lack of religiosity as the cause. In Sister Constance letter of September 23rd to Mother General, she says "my opinion is that the life pointed out to them is too had. They have had too much of their own way, and now it is too much for them to obey. It was a blow after all we have done for them." And Mother Philip wrote to Mother General at the same time, forgetting the positive things that had been written about the same girls a few years back, "I then told the Bishop...they did not know what they wanted...we did not think that they really had a vocation" to the religious life. The truth,

however, is that the girls did know what they wanted. Life was too difficult for anybody who was not sure of what she wanted, to persevere. Some did actually leave.

The letters continue to describe how the difficulties were overcome until the Franciscan Sister of St Joseph Institute was born in Asumbi, and grew and gradually gained autonomy, took over the Mill Hill schools and created other schools besides as needs arose. Those Mill Hill Sisters were to assist the FSJs with their first Chapter at the end of 1973.

The year 1974 was a land mark in that the Franciscan Sisters of St Joseph completed their first Chapter and elected their first Superior General, Mother Mary Stephen Nkoitoi, and a Maasai who had been a convert from KPCEA. The sisters achieved their complete independence from their European “Mothers” and could now run their affairs freely in line with the directives of the Catholic Church. Sister Gerald, a Mill Hill Sister, had been asked to help these Asumbi Sisters run the Chapter and come up with the laws proper to them, based on the Canon Law, which is the law guiding the Catholic Church.

It had been a gradual training, known as **formation**, which actually is a transformation. Character is built up and self discipline is acquired. This person is then able to apply meaningful discipline on her students. Meanwhile, the Franciscan Missionary Sisters of St Joseph began to see the real potentiality in the African Sisters on the one side. On the other, the African Sisters saw the difficult rules as a means to acquire self discipline-that was to enable them not only to inherit and run ably, the schools and other Institutions started by the Mill Hill Sisters, but also to start new ones when the need arose.

Bishop, in his book **Mission to the Maasai**, talks about the Franciscan Sisters of St Joseph’s involvement in education in the Diocese of Ngong and more particularly about Sister Mary Stephen Nkoitoi, who hailed from that Diocese. Sister worked for a time in two stations as a teacher in Narok and in Rombo, having founded the latter.²¹ This Bishop worked in the Diocese of Ngong as a leader for forty-seven years. Currently Bishop Colin C. Davies is the Chaplain of the Franciscan Sisters of St Joseph and lives at Asumbi.

FRANCISCAN SISTERS OF ST JOSEPH INVOLVEMENT IN EDUCATION IN KENYA

Today the Franciscan Sisters of St Joseph run/teach in over one hundred schools in Kenya in the following Provinces:

21 Davies, Bishop Colin C. (2006). *Mission to the Maasai (1959 – 2003)*. Chapter 13, beginning on page 72.

Nyanza – *Asumbi*, Mirogi, Ulanda, *Nyabururu*, Rangenyo, Kibirigo, St Martha's, *Sega*, *Rangala*, Mbagala, Ukwala, *Kibuye*, Ahero, Nyamonge, Bolo,

Western – Kitale, Hambale

Rift Valley – Kapnyabera, Yamumbi, *Chepterit*, *Kobujoi*, Kaiboi, Nakuru, Narok, Rombo, Bomet, *Kaplong*, Kaplomboi, Kipchimchim

Eastern – Kisima, Baragoi, Merti, Oldonyiro, Meru

Nairobi – Kilimani, Hekima, Tangaza, Chemchem ya Uzima

Mombasa – Kwale

Note that those schools written in italics were inherited from the Mill Hill Sisters while the others were started by the Franciscan Sisters of St Joseph later, or inherited from other Missionaries, notably, the Consolata schools for the blind in Meru. Also note that in most cases, there are more than one school in a location. For instance, there are six institutions of learning in Asumbi. From these schools, there have thousands of students. Some of these are in various leadership situations in the country; and most of them are women. Many, very many of them are great scholars who have, themselves, contributed to the social transformation of their fellow women situation.

Oral Tradition

The first nine Sisters who finally became full fledged religious of the Catholic Church in Asumbi, used to talk about the beginnings of their Congregation. They wanted the younger Sisters to know that there had been a force within them that made it possible for them to persevere in spite of difficulties. They recounted how they admired Father Scheffer and would imitate his ways of praying, of relating to people and how he served, especially those of lowly estate. That is how they learned to express their compassion towards others.

Regina Nyangoge was the daughter of a very affluent village elder known as Ondenge, in Karachuonyo, Kanam. She was the first one to become a sister in 1940 and became known as Sister Teresa. She got trained as a nurse and cateress and a nursery school teacher. She began as a nurse, then was engaged in hospitality and ended up as a nursery teacher. She died in 1994. Sister told the story of the Bishop who came with Father Scheffer to close the novitiate. According to her she felt to do something about it. So she asked the Bishop "My Lord why are you closing the novitiate and we are here? Are we useless?" The Bishop was taken aback, as he did not expect a black sister to question the action a white Bishop.

²¹ Davies, Bishop Colin C. (2006). *Mission to the Maasai (1959 – 2003)*. Chapter 13, beginning on page 72.

Felicitas Akoth hailed from Bunyala. She was number two; also became sister in 1940 and was named Sister Celestine. She was trained as a nurse and did nursing all her active life. She died in 2003. Sister Celestine recounted over and over again as she made efforts to leave her home in Bunyala to go to Rangala in order to join those who were there waiting to go to Asumbi. For her Asumbi was extremely far away, but she felt an urge, which she could not explain, to go. **Leonora Gwila** came from Rangala, Ugenya. She was number three. Leonora also became Sister in 1940 and was known as Sister Joseph. She was a trained cateress and did catering as she tended her kitchen gardens, all her active life. She died in 1993. She always talked about her suffering in trying to remain a part of the group that was waiting to be Sisters. She was escorted many times to her home, but came back promptly. At long last, the Franciscan Missionaries Sisters of St Joseph gave up and let her stay. On that fateful day, she said to the Bishop "if somebody wanted to remain could she not be allowed to stay here?"

Felicitas Onyisi was from Mawego, Karachuonyo Kobuya. She was trained in house keeping, laundering and tailoring. She did these until her death in 1964.

Josephine Oloo was the daughter of another prominent man Raruowa, Karachuonyo, Kauma. She became sister in 1941, becoming known as Sister Anthony. She was trained as a primary school teacher and taught all her active life. She only died in 2008. She was among the younger girls who were taught by the older girls. She talked of the inner force that led her escape from home to go to Asumbi in 1928, and returned home until 1970.

Magdalena Akeyo came from Kisumu. She became Sister in 1942, becoming known as Sister Pacifica. She was also trained as primary school teacher and taught all her active life. She died in 1999. Sister Pacifica also talked of her great desire to go to Asumbi and when she managed to leave home and reach Kibuye, in Kisumu, she never went home again until she went to Asumbi.

Angelina Amolo hailed from Kanyada, Kabunde. She became sister 1943, taking the name of Sister Claver. She was trained as primary school teacher and taught all her active life. She is now retired and lives at Asumbi. She says she ran away from home when she was five and went to Asumbi, and never went back home again for fear that she would not be allowed to return to Asumbi.

Celina Odumbe was the daughter of the Paramount Chief Adiang of Kasgunga; she was sister to Chief Damianus Ajuang also of Kasgunga. She became sister in 1943, taking the name of Sister Clara. She was trained in child care and house keeping which she did until her retirement. Sister Clara died in 1999. She was allowed to go to Asumbi to learn

catechism, but not to stay there and become a Sister; but she could not bring herself to agree to go back home.

Lydia Orwa hailed from Kanyada, Imbo and became Sister 1944, becoming known as Sister Gabriel. She was trained as a seamstress and farming. She died in 1990. she too, like the others felt that she had to go to Asumbi and wait to become a sister.

The above were the first Franciscan Sisters of St Joseph. One thing which is common to them all is that they valued education and tried all their lives to encourage those who came into contact with them, to benefit from education. This included members of their own families as well. All of them speak of Father Scheffer as the model. They saw him as an extra ordinary person and they admired and imitated him in many ways. They prayed like him and sometimes some of them even smoked pipes because they saw him do so. At this point it, might be useful to take a look at the Catholic Church Laws that guide all Catholic Institutions of learning – **Code of Canon Law**. On this law are based laws proper to each institute, as well as circulars written by Popes regarding education in Catholic Institutions

Code of Canon Law/Constitutions/Directives

These are the laws that direct and guide the Franciscan Sisters of St Joseph on how to go about giving education within the boundary of the Catholic norms. Canon Law, hereafter referred to as canon, gives the directives on the Catholic stand regarding education. For example , canon 793-1, states “parents as well as those who take their place are obliged to enjoy the right to educate their offspring: Catholic parents also have the duty and the right to select those means and institutions through which they can provide more suitably for the Catholic Education of the children according to the local circumstances”. 2, states “parents also have the right to make use of those aids to be furnished by civil society which they need in order to obtain Catholic Education for their children.” Another Canon 795 states that education should be applied in such a way that it is holistic.. “since a true education must strive for the integral formation of the human person, a formation which looks toward the person’s final end, and at the same time toward the common good of societies, children and young people are to be so reared that they can develop harmoniously their physical, moral and intellectual talents, that they acquire perfect sense of responsibility and a correct use of freedom, and they be educated for active participation in social life.” Canon 801 refers specifically to Religious Sisters thus “Religious Institutes, whose proper mission is that of education, while faithfully retaining this mission of theirs, are also to devote themselves to Catholic education through their schools established with the consent of the Diocesan Bishop.”

Code of Canon Law goes on to give details guiding educators on their rights, duties and responsibilities, those of parents and guardians as well as the children to be educated in Catholic Education Institutes. The FSJ Constitutions 55 refers specifically to adequate preparation of each of the Franciscan Sisters of St Joseph in order to be effective in giving education to the young people. This constitution number is based on Canon number 670. Directives give further explanations to the Constitutions.

It remains to give some example of the writing of Popes through the years: extracts taken from a letter entitled **SPECTATA FIDES (On Christian Education)** written by Pope Leo 13 on November 23rd 1885, the following is said “in these days and in the present condition of the world, when the tender age of childhood on every side by so many and various dangers..we strongly approve of voluntary schools...which have been established in France Belgium, America, and in the colonies of the British Empire....in these schools the liberty of parents is respected...it is by these schools that good citizens are brought up for the State, for there is no better citizen than the man who has believed and practiced the Christian Faith from his childhood” “the beginning and the seed of that human which Jesus gave to mankind, are to be found in Christian Education of the young...the future condition of the State depends upon the early training of its children”

Pope Paul the Sixth, in a long treatise **DECLARATION ON CHRISTIAN EDUCATION** written on October 28, 1965, deals with various aspects of education such as:

- *The meaning of the universal Right to an Education*
- *Christian Education*
- *The authors of education*
- *Various Aids to Christian Education*
- *The importance of Schools*
- *The Duties and Rights of Parents*
- *Moral and Religious Education in all Schools*
- *Catholic Schools*
- *Different Types of Catholic Schools*
- *Catholic Colleges and Universities*

CONCLUSION

What began as a vague notion of commitment to serve the girl child in Asumbi by local young women who had gone there to be catechized, became a great mission of bringing an opportunity of social transformation to the women of Kenya, mostly, through education. The Franciscan Sisters of St Joseph, Asumbi, have ably taken their place among the Catholic educators in Kenya. This they have done because they have paid close attention to the

teaching and regulations, on education, of the Catholic Church, starting from Canon Law to its interpretations, through the ages.

The Franciscan Sisters of St Joseph, have ably participated in the social transformation of the nation. The members are still open to further challenges in this area and currently sharpening their tools in order to venture into new areas that might threaten the girl child.

FOOTNOTES

1 Agreement between the Vicar Apostolic of Kisumu and the Franciscan Missionary Sisters of St Joseph, Patricroft, re: the Aspirants of Asumbi, signed 6/7/1936

2 Agreement between the Vicar apostolic of Kisumu and the Franciscan Missionary Sisters of St Joseph, Patricroft, Manchester, England, on their undertaking to commence in the said Vicariate, a Native Sisterhood.

3 Arbuckle, Gerald A.,(1996). From Chaos to Mission, refounding Religious Life Formation. London: printed by Redwood Books.

4 Battelli, G. MCCJ (1990). Religious Life in the Light of the New Canon Law. Nairobi: St Paul's Communication.

5 Bishop Stam's Letter – Diaries in the Rosendaal Archives

6 Bishop Stam writes to Mother Pacifica about the Asumbi Novitiate 14/4/1939.

7 Bishop Stam writes to Mother Celestine about the Novices at Asumbi, 2/5/1939.

8 Bishop Stam writes to Mother Celestine about the Novices and Postulants who left asumbi, 6/10/1939.

9 Bishop Stam writes about the Aspirants in Asumbi in response to the Regional Superior 's letter (Mother Pacifica), and the Superior General.

10 Browne, Maura (1996). The African Synod (Documents, Reflections, Perspectives). New York: Orbit Books.

11 Burgman, Hans (1990). The Way the Catholic Church Started in Western Kenya. Nairobi: Mission Book Service.

12 Code of Canon. Prepared by the Canon Law Society of great Britain and Ireland, in association of Canon Law Society of Australia and New Zealand and the Canadian Canon Law Society. (in accordance with the n. 3 of the norms issued by the Cardinal Secretary of State on 28th of January 1983, this translation is approved by the Episcopal Conferences of Australia, Canada, England and Wales, India, Ireland, New Zealand, Scotland and Southern Africa).

13 **COMMUNICATIONS** in the Mukumu Archives

14 Constitutions of the Franciscan Sisters of St Joseph

- 15 Contract between the Vicariate Apostolic of Kisumu and the congregation of the Franciscan Missionary Sisters of St Joseph, Patricroft, 29/6/1935.
- 16 Conversations with the First Franciscan Sisters of St Joseph, Asumbi – Sister Teresa Nyangoge, Sister Celestine Akoth, Sister Joseph Gwila, Sister Anthony Oloo, Sister Pacifica Akeyo.....
- 17 Davies, Bishop Colin C. (2006). Mission to the Maasai (1959-2003)
- 18 Dr. Schut writes to Mother Celestine concerning the Aspirants in Asumbi.
- 19 Dr. Schut writes to Mother Celestine about the Asumbi Novitiate, 10/12/1939.
- 20 **Declaration on Christian Education** (proclaimed by His Holiness) Pope Paul VI on October 28, 1965
- 21 **Encyclical Divini Illius Magistry** (On Christian Education) by Pope Pius XI, 1929
- 22 Father H. P. Gale's "**Uganda and the Mill Hill Fathers**", page 259 ff. his dates for the opening of Ojolla Mission (May 10th 1904 or April 21 1904) are not correct; the real date is May 10th 1906.
- 23 Father Hebert Doyle's sharp reaction to Mr. Scott's 1929 Annual Report appeared in the East African Standard on Saturday, February 1st, 1931 and was made available to interested parties as a special reprint.
- 24 Father Matthews, who actually run the Vicariate in Bishop Hanlon's time and was a prodigious letter writer as is clear from the Mill Hill Archives, wrote the following letters about the foundations of the first Mill Hill Missions: from November 1905 to October 1906 - 400 letters.
- 25 Father Grimshaw in his "**Short Notes**", gives an eye witness account in pages 67 and 68.
- 26 Father Scheffer writes to Mother General about the Postulants-to-be, in Asumbi, 20/3/1936.
- 27 First growth of Missionary activities in Kavirondo are learned from the letters in the Mill Hill Archives as written by the following Missionaries: Father Mathews, Father Wall, Father Bouma and Bishop Hanlon.
- 28 The Franciscan Missionary Herald, May 1936
- 29 The Franciscan Missionary Herald, January, 1941.
- 30 The Franciscan Missionary Herald, April, 1945
- 31 The Franciscan Missionary Herald, 1963
- 32 The Franciscan Missionary Herald, 1974
- 33 The Franciscan Missionary Herald, 1983
- 34 The Franciscan Missionary Herald, January, 1996
- 35 The Franciscan Missionary Herald, June 2000
- 36 **Gravissimum Educationis** (Speech made by Pope Benedict on the occasion of His Audience on November 23rd, 2007)
- 37 Habig, Marion (1973). St Francis of Assisi, Writings and Early Biographies. Chicago: Franciscan Herald Press.

- 38 Isichei, Elizabeth (1995). A History of Christianity in Africa for the World. London.
- 39 Kakamega Diary
- 40 **Kisumu Diary** by Bishop Stam and Father Wall
- 41 Mother Michael's Letter of March 7, 1941, to Mother General in England.
- 42 Mother Pacifica's letter of Appointment to Sister Francis Therese dated 28/12/1935 as first Superior of the sisters in Asumbi (European Sisters).
- 43 Mother Celestine writes to Mother Pacifica about the Aspirants in Asumbi, 13/7/1936.
- 44 Mother Pacifica writes to Mother Celestine about the Postulants in Asumbi, November 1936.
- 45 Mother Celestine writes to Bishop Stam about the Asumbi Novitiate, 21/10/1939.
- 46 Mother Celestine writes to Dr. Schut (Canon Lawyer in Rome) about the Aspirants in Asumbi.
- 47 Mother Celestine writes to Sister Mary Philip about the Asumbi Novitiate, 31/10/1939
- 48 Mother General writes to Sister Mary Philip, about the Asumbi Novitiate, possible profession, 18/1/1940.
- 49 Nkoitoi, Sister Mary Stephen, F.S.J. (1986). A Short History of the Franciscan Sisters of St Joseph (1936 – 1986). Nairobi:Man Graphics.
- 50 Nyasani, Dr. Joseph. The British Masacre of the Gusii Freedom Fighters.
- 51 O'Neil, Robert M.H.M. (1995). Cardinal Herbert Vaughan. Tunbridge Well: Burns & Oats.
- 52 Part of a Letter from Mother Mary Philip to Mother General 29/12/1939
- 53 Report given by Sister Francis Therese on December 2, 1940.
- 54 . Scott's "**Memorandum in Regard to Education of Africans**". On behalf of the Council of Ordinaries of Kenya Bishop Brandsma published a reply on April 11th 1929, entitled "**Catholic Position in regard to Memorandum – re: Education of the African**", Nyeri , Consolata Catholic Mission Press, 1929. a copy of this 18 page document in the Mill Hill Archives
- 55 Sister Francis Therese writes to Mother General about the handing over of the Aspirants to her by Father Scheffer in January 1936.
- 56 Sister Constance writes to Mother General about their life with the Aspirants in Asumbi, in January 1936.
- 57 Sister Francis Therese writes about the Aspirants again, February 16, 1936.
- 58 Sister Constance writes to Mother General about the Asumbi Novitiate, 2/9/1939
- 59 Sister Mary Philip Writes to Mother General about Asumbi Novices who have asked to leave, 22/9/1939
- 60 Sister Mary Philip writes to Mother General about the Asumbi Novices who have left, 18/10/1939.
- 61 **Spectata Fides** (On Christian Education), Encyclical by Pope Leo X111
- 62 Undated, an unidentified write up about the call of African girls in Asumbi...as early as 1923.

63 ***“Whither And How”*** was a Kenya Catholic Education Policy Hand Book from the Kenya Episcopal Conference.

64 van Heeswijk, Brother Joseph who arrived in East African in 1924 and died in Kampala in 1990, knew many of the persons and happenings during this period and gave a lot of information about them.

SOURCES.

- Letter from Bishop Hanlon to Dr. Casartelli (Rector of St Bede’s College, Alexandra Park, Manchester, England). The most important events are described in January 23, 1895, January 13 1896, January 14 1896, March 14, 1896, October 31, 1896.
- Bishop Hanlon’s Diary – just notes
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- Father Plunkett’s Account: a 6 page letter to Father Henry at Mill Hill, dated September 14th, 1895
- FATHER BRANDSMA CARAVAN: Father Plunkett’s Account, letter to Father Henry, Mill Hill, January 20th, 1900.
- Father Kirk’s Account: Two letters to Father Henry, Mill Hill: January 22nd, 1900, February 20th 1900.
- Father Grimshaw’s Account: contained in his “some notes on the Apostolic Vicariate of the Upper Nile” pages 265 to 29.
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- From October 1906 to August 1907 - 400 letters
- From September 1907 to October 1909 – 200 letters
- Nzambya Diaries
- Kisumu Diary. A section from 12-4-1906 to 29-4-1906 has been removed and is lost.
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- Bishop Stam’s ***“Short History of Mumias”*** (December 1935)
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FIRST GROWTH OF MISSIONARY ACTIVITIES IN KAVIRONDO

- ***“Kenya under the British, 1895 to 1963”***, by B. A. Ogot. In Zamani chapter 13. This study underlines the imposition of a new administrative ruling class, the establishment of education as a road to elitism, and the new economic factor called money. The octagonal dining room of Mukumu Mission is still there.

A NEW SURGE 1925 -1935

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- Short History of Amukura by Bishop Stam
- Short History of Kibabii by Bishop Stam
- Short History of Sega by Bishop Stam
- Short History of Asumbi by Bishop Stam
- Short History of Nyabondo by Bishop Stam
- Short History of Aluor by Bishop Stam
- Short History of Nyabururu by Bishop Stam
- Short History of Isisbania by Bishop Stam
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- Short History of Chepterit by Bishop Stam
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EDUCATION FOR SOCIAL TRANSFORMATION: THE ROLE OF HISTORY IN SECONDARY SCHOOL CURRICULUM IN KENYA

*Dr Mary W. Were Nasibi, Prof. H. Ayot, DR M. Kiio
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Abstract.

Education has been perceived as an agent of change world wide. The development of any nation is peaked upon the number of literate people in that society. The education offered must be relevant to the needs and aspirations of the people it serves. It should not only bring up individual development, but also the desired change, while preserving the culture and values of the society. The history curriculum is well placed to contribute to societal transformation because it deals with a whole range of human and global issues in the political, economic, social, cultural, technological and scientific fields. Kenya is beset with many problems ranging from governance, ethnicity, corruption, violence, HIV & AIDS, hunger, environmental degradation among others. This is a disturbing scenario given that history has been a subject in the secondary school curriculum since 1960's at the attainment of the country's independence. This paper contends that, if the right historical information is transmitted to the majority of the Kenyan youth, history will not only transform the Kenyan society but the entire African continent as observed by M'Bow (1981) : "Africa's efforts to strengthen the hard –won independence, to fight neo- colonialism, racialism, ethnicity, gender bias; to secure sustainable development and assert its cultural characteristics must be rested in historical awareness, renewed and taken up by each succeeding generation". Its importance lies in integrating the society, giving the youth identity and preparing them for societal citizenship and membership, while training in democratic principles and morality It is recommended that certain aspects of history should be compulsory at secondary and university levels because of the subject's uniqueness and concerns with the reconstruction of the past

1.0 Introduction

The change inducing power of education has been widely recognised by social scientists who contend that the extent and nature of economic development in a nation and its degree of political awareness, have been found to be connected with the diffusion of education and degree of literacy in that society (Sanda: 1973). This is more so in developing countries where education is considered not only as key to self fulfillment, the ladder to personal advancement, but also as one of the main factors in the process of national modernization and development (Tran Dinhtri: 1976).

In Kenya, education is seen as an agent for shaping the society, and schools are taken as places for training in social obligation and responsibility (Ominde: 1964). This has been evident since 1963 soon after Kenya attained her independence from the British colonialists. The new African government identified three enemies which were to be eradicated at all costs; diseases, ignorance and poverty. Education was seen as a vehicle to this end. It called for the overhaul of the educational system to meet the needs and aspirations of the independent Kenyan nation as aptly put by Tom Mboya :

Our new system must aim at eliminating the colonial psychology and creating a truly independent psychology aimed at instilling in the minds of boys and girls, the pride that they are Africans...greater appreciation of African culture, history and the African personality. (Tom Mboya in Gathara, 1970, 33)

To address this, the government appointed the first commission of education Ominde commission in 1964 to review education. The commission came up with six goals of education which were to be the focus of Kenya educational system. They stated that education in Kenya should promote:

- National unity
- National development (social and economic)
- Individual development and self-fulfillment.
- Social equality
- Respect and development of cultural heritage.
- International consciousness

These goals were revised to eight in 1999 by Koech commission .They stipulate that education should promote:

- Nationalism, patriotism and national unity.
- National development (economic social, technological and industrial)
- Individual development and self fulfillment.
- Social equality and responsibility
- Respect and development of cultural heritage.
- International consciousness
- Moral and religious heritage
- Positive attitudes towards good health and environmental protection.

These commissions and others like Gachathi 1976 and Mackay of 1981 came up with recommendations concerning the aims and goals of education from primary, secondary and university levels. They also identified the subjects to be taught and what should be the focus of the curriculum in an independent African nation.

In spite of the Government's efforts and recognition of the role of education in societal transformation, forty five years after the first commission (Ominde Commission), the nation is beset with many problems threatening to tear it apart . These problems and challenges include the following:

- ❖ Poor leadership which is manifested in bad governance. Leaders who lack patriotism and have put their personal interests and egos above the state. This was evident during the 2007 election when those in power falsified the election results and declared themselves winners amidst protests and violence among the electorate leaving over 1000 people dead and thousands misplaced.
- ❖ Lack of democratic instructions to put in place democratic processes and ideals.
- ❖ Ethnicity at the expense of nationalism.
- ❖ High level corruption in government institutions and parastatals which go unchecked .Impunity is so entrenched in the system that perpetrators of financial scandals like Goldenberg and Anglo-Leasing in spite of evidence have not been brought to justice.
- ❖ Diseases like HIV &AIDS which has killed over one million people and is threatening to wipe out the entire human race.
- ❖ Violence and destruction in schools, universities, and in the country as a whole where aggressive youth go destroying any thing on sight.
- ❖ Insecurity witnessed by the armed militia attacking and killing thousands of people unchecked .*Mungiki* has been the worst of these groups causing untold suffering to people in Central province , Nairobi and some parts of Rift Valley.

The nation's achievement of millennium goals and vision 2030 are dependant on finding solutions to these problems. The millennium goals for instance state as follows:

- ❖ To eradicate extreme poverty and hunger.
- ❖ To achieve universal primary education
- ❖ To promote gender equality and empowering women.
- ❖ To reduce child mortality.
- ❖ Improve maternal health.
- ❖ Combat HIV & AIDS, Malaria and other diseases.
- ❖ Ensure environmental sustainability.

The Kenya vision 2030 too cannot be realized without the in-put of history. The vision envisages the following:

- Kenya to be transformed into middle- income economy in 2030.
- Kenya to have a sustained annual growth of 10 per cent for 15 years
- Creation of a just and cohesive society and
- To have an accountable political leadership.

1.1 History in the school curriculum

History as a subject in the secondary school curriculum can help meet the above challenges. History has been recognized worldwide as unavoidable element of education since time immemorial. In Europe, laws of Charlemagne (800 – 814 A.C) and Alfred the Great (871-899 AC) were used to train young people in character in the first century of the Christian era. In the Middle Ages (400-1500 A.C), the church in Europe taught church history in order to reinforce the doctrines by which it lived (Nasibi and Kiio: 2005). American history has remained part and parcel of education transmitted to all those who pass through its education system at all levels of education.

In Africa, education consisted of learning the history of ones community based on legends, heroes, wars, social customs and taboos. The last two formed the basis of laws which governed people’s behavior .With the introduction of western education in the mid-19th century, history became one of the subjects being taught as illustrated by Professor Were in 1978: “Throughout my school career, I noticed practically all the history taught was foreign and European, albeit with American, Canadian and Indian (and Arab) sprinklings.”(Were 1967:13)

1.2 Justification of history in the curriculum and its transforming role

History has been recognized as an important subject in the curriculum worldwide because of the following;

1. It creates a sense of identity among individuals and groups of people. This happens when the learners are taught about their own origins, their communities’ and nation’s origins. They are able to see themselves as part and parcel of the nation. This gives students an understanding of their own cultural roots and shared inheritance.

2. It educates learners on principles which shape and mould people and governments of the world. These principles and related concepts are essential to individuals and societal development. They include unique concepts like democracy, revolution, morality, equality, justice, human rights, civilization, nationalism, patriotism, continuity and change. Some of these concepts can only be transmit by history or its sister discipline political science/government. There is no other subject in the curriculum which can transmit most of these concepts except history, thus making it unique.
3. It integrates people in society by creating unity, harmony and security. The learners are exposed to forces which bind and wield the society together. Thus creating a spirit of togetherness and interdependence among people of a given society; “without history a society scarcely exists”.
4. It helps to modify and improve the society by pointing out strengths and weaknesses of peoples’ deeds. This is realized when the students are exposed to the achievements and failures of historical personalities. The learners are equipped with knowledge on what they should do for their success and what they should avoid in life if they have to make a positive impact in their societies .Thus, it contributes to the shaping of the present through the knowledge of a known past.
5. It enables the young people to acquire wisdom and values which have been accumulated over the ages. History ensures that the younger generation is exposed to peoples’ discoveries; inventions, principles, laws, morals among others .This exposure incites a spirit of virtuous emulation which inspires them to walk in the footsteps of those who demonstrated such genius and talent. One historian summarized this point when he remarked:

.....by reading history, young men acquire wisdom of age, history promotes high deeds and great discoveries; it also works through glory for history is the only pledge of the immortality of noble acts. History is of special worth to the prince who can gather from it the home truths a friend dare not give him (Tillyard, 1961:56)

6. History inculcates critical thinking skills in the learners who learn to be critical of the present and the past. They learn to ask the why question. This is important in a society where people make decisions based on their personal or ethnic interests. One learns to weigh issues, considering the pros and cons before making a move.

7. It provides standards of reference by which to criticize our own age and to inculcate moral values such as tolerance, sympathy and responsibility. Carpenter (1985) saw the purpose of history as moral.
8. It is the only discipline which deals exclusively with time and the reconstruction of the past According to Carpenter (1985); “there is nothing to relate to if there is no history.”
9. It helps us understand our present because the present is based on the past. For instance , our present crisis in Kenya may well be understood and solved by going back to the past and finding out when the crisis began and what could have contributed to it among others.

1.3 Teaching and learning of History and Government in secondary schools

Although history is a key subject in Kenya education system, its impact has been minimal. Kenya’s present plight could be attributed to the failure of the subject to assert itself in the curriculum. According to M’Bow (1981) the problems facing Africa can only be solved if the right historical information is passed to the African child:

Africa’s efforts to strengthen the hard- won independence; to fight neo- colonialism: racialism, ethnicity, gender bias; to secure sustainable development and assert its cultural characteristics must be rested in historical awareness, renewed and taken up by each succeeding generation.

The state of history in Kenya could be understood if one looked at factors affecting its teaching and learning in secondary schools. These factors are analyzed below and they include the following:

1. The Government Policy which made History and Government an optional subject at secondary school level: This has resulted in low enrolment with majority of the students dropping it in form three before adequate cover of Kenyan and African history. In some private schools, it is not taught at all. This explains why majority of the youth are unpatriotic and strive to glorify ethnicity at the expense of nationalism. Some have even denounced their citizenship to become citizens of European or American countries because of financial benefits.
2. History has been given as an alternative to Geography and C.R.E at Kenya Certificate of Secondary Education (KCSE). Many students end up choosing Geography out of

the three because it is categorized as a science. Therefore, clustering of subjects has further affected the dismal performance of history as a secondary school subject.

3. The combination of history with government has diluted history as a discipline.
 - a. About the nature of the syllabus: The history syllabus is very wide and lacks coherence and consistency (Were: 1999). A broad syllabus forces teachers to use teacher-centered methods which facilitate wide content coverage. This makes the subject not only difficult to the learners but also boring because of lack of interesting learning activities which are favored by child-centered approaches. At the same time, learners are not able to relate what they are learning to their lives and therefore fail to internalize and identify with the historical events.
 - b. The content is neither systematically arranged nor coherent. In most cases each topic is independent and has little or no relation to the topic which precedes it. For instance, after the first topic on the meaning and importance of the history and government, the syllabus gives Early Man as the second topic. This is followed by Early Agriculture and then Urbanisation. Although the topics follow a chronological order the learners are not made to see the connection and the teachers do not bother to explain and justify the sequence.

he syllabus also fails to start with what is simple / familiar to what is more complex / unknown. This makes the history taught unnecessarily difficult and uncoordinated.
 - c. Research by Were (1999) and Kiio (1999) show that students find form 1 content difficult and abstract especially the topic on Early Man. The teachers too complain that the topic is difficult to teach and comprehend. This has resulted in low motivation among students who end up dropping the subject before they are grounded in their own nation's and continent's history.
 - d. The syllabus has adopted both spiral and thematic approaches which makes it repetitive and boring. Each of the themes taught is repeated at different levels (local, national and international levels) and in each class. This makes the content boring, affecting further the motivation of the students.
4. The emphasis on science and technology as means of realising industrialization in 2030 has relegated history to a subject of no consequence. Science has infiltrated even in careers which traditionally required history like law. Today it does not

require one to do history to pursue law yet, this is a career which exclusively requires historical thinking and therefore knowledge of history. A study by Osoro (2006) shows that majority (54 %) of students did not attach much importance on history with 95.3 % of parents insisting that their children concentrate on sciences.

5. Limited job opportunities: It has been argued that to pursue history is to limit ones chances of getting a job. Unlike specialists of science subjects, there are very few opportunities open for those who excel in history. They include teaching, law, administration, archeology, political analysis, sociology and anthropology. Osoro (2006) indicates that only 13.3 % of the students see history as helping them to secure jobs.
6. Limited and incompetent teachers: The number of teachers being trained to teach history in secondary schools has been declining at an alarming rate. For instance, classes which in the 1990's used to have more than six-hundred students (600+) in Kenyatta University the then leading teacher training institution country-wide have been reduced to between 45 - 50 students in the 2000's. The situation could be worse in other universities.

Consequently, the schools have been forced to employ untrained teachers to fill the gap. These teachers lack content, methodology and confidence of handling students of almost their age and level. Research abound on poor delivery of history content .For instance about 27.5% of students in Were (1999) cited poor methodology as one of the factors affecting their learning of history. Kiio's reaseach in the same year shows that 90% of teachers use lecture method while Osoro (2006) records that over 50% of the methods are transmission in nature with dictation of notes scoring 76%.

4. Unavailability of adequate resources required for effective teaching: Although there is a wide range of resources for teaching history ranging from print to audio to audio-visual and community resources, many schools have only print media and basically the text book as the main resource of teaching the subject. Teachers neither have reference books nor other teaching materials, which would engage learners' senses for optimal learning. Resources like newspapers, maps, charts pictures, videotapes, and radios are none- existent in many schools. In Were (1999) resources related problems featured most among students with 56.8% of them citing it as the main problem they faced in learning the subject. A study by Kiio (1999) indicates that about 80% of students shared a textbook among two or four. About 82.7% of teachers in this study singled out resources as a major factor facing the teaching of the subject. In Osoro's research 66.7 % of

history students did not have a single textbook. Given the importance of resources in learning such as motivational role, bringing reality to history learning and high retention capacity, a subject that ignores resources suffers a major shortfall.

5. Assessment in history teaching and learning: Both formative and summative evaluation focus on learning at cognitive domain at the expense of social relating and affective domains. The learners are asked to describe, explain, discuss and even recall events but little attention is paid on critical analysis of issues or changes in attitudes as a result of lessons learnt or values inculcated in students. This has resulted in high scores in examinations with little change in behaviour on issues like ethnicity, corruption, democracy etc. This explains why Kenya is at the brink of destruction.
6. Negative attitude to history as a subject: All the above factors have contributed to students, teachers, administrators, the Kenya government, the parents and the public in general having a negative attitude to the subject and therefore influencing all those who would have shown any interest in it. A study by Osoro (2006) reveals that 86.6 % of the students have this attitude with over 77% of students being discouraged by their colleagues from continuing to study history. An earlier study by Were (1982) shows that 72% of the head teachers noted that their students were not interested in the subject.

Conclusion

The above analysis has underscored the importance attached to history world-wide. In a great nation like United States of America, it is taught to all students at all levels of education cycle. Africa's survival depends on accepting the contribution of history in the curriculum and in giving African identity to the youth. Kenya can not achieve both the millennium goals and the vision 2030 when history is held in disrepute by its citizens. Its transformational nature must be recognized by all regardless of race, ethnicity, gender, speciality, social/ economic / political background and level of education. Addressing the factors affecting its teaching and learning would go a long way in re-establishing it in the curriculum.

Recommendations

In order for history to transform the Kenya society the following is recommended:

- History has to be recognized as an important element of the curriculum and made compulsory at secondary school level. This will ensure that young people coming out of schools are equipped with information about their community, their nation and their African origin.
- At the university level, a specific aspect of history has to be taught to all students regardless of their careers.
- The secondary history curriculum has to be reviewed to reflect the challenges Kenya is facing. The syllabus should focus more on regional and continental history drawing a balance between Kenya, East Africa, Africa and the wider world. A component of the syllabus ought to concentrate on morality, culture, religion, science, history of women so that all aspects of human development are put in place.
- The teacher training institutions should encourage more of the trainees to specialize in history teaching by may be giving them incentives or ensuring them of immediate deployment upon graduation.
- The teachers in the field who are untrained could be equipped with pedagogical skills through sandwiched courses during the holidays. Those in the field should be in-serviced frequently in the field of methodology, and up-dated on new research findings in history and education. They should also keep at pace with changes taking place in the teaching of the subject.
- The older and more experienced teachers could mentor newly employed teachers and those who are untrained.
- The teaching methodology to be advocated for should be that which puts the child at the center of learning with adequate resources to allow for the development of social skills.
- There is need to revive historians association which could disseminate the latest historical research findings through its journal and other publications.
- The society should be enlightened on the importance of the subject through open discussions and debates in the media, and publication of articles in magazines and newspapers among others.
- The assessment in the teaching and learning of the discipline should focus on both affective and cognitive learning. Behavioral change would be seen as an indicator of effective learning.

FACTORS CONTRIBUTING TO VIOLENCE IN SECONDARY SCHOOLS: THE ROLE OF GUIDANCE AND COUNSELING IN KENYA

DR Mary W. Were Nasibi

ABSTRACT

At the close of the 20th century and the onset of the first decade of this century, Kenya has witnessed unprecedented unrest and violence in secondary schools. This has been taken the form of property destruction, assaults, sexual abuses, deaths and arsons. Although the Kenya government over the years has appointed various committees to investigate possible causes of the problem and solutions, the issue still persists. The findings by various presidential committees indicate that violence in schools is a manifestation of violence in the wider society. Students imitate what they see in the media, family, government and the society at large. Unrest and associated violence have also been attributed to an overloaded curriculum which gives little room for extra- curricular activities, lack of motivation in learning, abusive and incompetent teachers, autocratic leadership and poor parenting. This paper argues that guidance and counseling at family and school level would go along way in addressing the problem of violence. The parents are called upon to change their parenting practices by opening communication with their children and acting as their role models. The school administrators and teachers are to open dialogue with their students and view them as young adults to be listened to and understood. There is also need to have guidance and counselling departments in schools well equipped and manned by professional counsellors whose task would be not only to give guidance and counselling to students but also to counsel teachers, administrators, and even parents. This will lead to self awareness and the development of emotionally adjusted individuals who will shun violence and strive to meet the demands of the schools and the society at large.

INTRODUCTION

Violence in institutions of learning is one of the challenges facing education system in Kenya. Both private and public secondary schools have participated in school strikes which have caused untold suffering (physically and psychologically) to the students, their teachers, administrators and even parents. Property worthy millions of shillings has been reduced to rubble and students arrested and judged for arson:

Nine Kabarnet High School students were yesterday arrested after fire razed a shs. 20 million dormitory (Nation: July24, 2008)

School violence has taken the form of burning down dormitories, classrooms, science and computer laboratories, administration blocks, staff rooms and teachers' houses. It has also been manifested in physical assaults to individual students, teachers and administrators. There are cases where school prefects have been burnt to death as in the Nyeri High School case of 1999 where four prefects died. This was the cry of one Anthony Kariuki (1999) during the rescue operation :

Nipeni maji, nipeni maji, (Give me water! Give me water)...
Kwa nini wametuchoma? (Why have they burnt us?)

In Nyahururu High school a student was stabbed by colleagues three times. During the operation in one of the hospitals a nail cutter was removed from his stomach (Nation, July 24, 2008). One student by the name Noor Abdi was burnt to death in the 2008 riots: "A Form three student at Upper Hill School died in a dormitory fire believed to have been sparked by unrest." (Aluanga in Nation July 26,7, 2008)

The issue of school unrest is not a new phenomenon in Kenya. It is older than the Kenya education system which has been in operation since 1964. The first case of students' unrest goes back to 1908 in Maseno. However, it is in the 1970's, mid 1980's, 1990's and now the first decade of the 21st Century, that its impact has been felt.

In the seventies the unrest not only affected secondary schools but also middle level colleges and tertiary institutions. What featured in these disturbances was violence and destruction of property. The schools involved numbered 22 (0.9%). The number moved to 187 (7.2 %) in the period between 1980 and 1990 (MOEST, 2001). In the period between 1986-1991, the incidents of unrest and indiscipline per province in the country were as follows:

Table : Unrest in Schools per province 1986-1991

Province	Percentage
Coast	23
Nyanza Province	10
Western Province	11
North Eastern	7
Rift Valley	11
Eastern	11
Central	17
Nairobi	6

Source: MOEST, 1

In the 1990's the strikes took a new dimension. Violence was no longer limited to buildings but to individuals as well. For instance, on 13th July 1991 boys of St. Kizito attacked girls in the same institution and raped a number. This led to the death of nineteen (19) girls. The end of the 1999 witnessed the death of four school prefects whose cubicle was set on fire by other students in Nyeri High School, Central province.

In the period of 1999 – 2001, Central province alone had 106 reported cases of students unrest .These disturbances ranged from murder, destruction of the school property and harassment of teachers and fellow students. The state of affairs continued to 21st century as the table below shows:

Province	Existing number of secondary schools	Number of schools the experienced students unrest	Percentage of schools going on strike	Gravity
Central	630	85	13.5	Violence and destruction
Coast	151	04	2.6	Destruction of school property
Nyanza	680	07	1.0	Destruction of school
Eastern	626	76	12.4	Destruction of school property and loss of human life
Rift Valley	626	50	8.0	Violence and destruction
Western	408	19	4.7	Minor destruction of school property
Nairobi	93	02	0.02	Minor damages to school property
North Eastern	21	07	33.3	Destruction of school property.

Source: Ministry of Education and Technology

The latest wave of unrest June- July 2008 reported over 300 schools (5.4%) having been involved in strikes in the month of June alone. This gives an average of 10 cases per a day. In both months the number was estimated at 500 schools (8.9%) with over 90% of the cases involving district schools. In central province about 50 schools participated in strikes within a period of two weeks with one single school losing nine (9) buildings to fire (Njagi in Nation ,

July 21, 2008). At Coast province 15 schools were affected in just one month The month of July 2008). The minister of education Sam Ongeru had this comment:

The youth have gone beyond the limits ... A culture of impunity is creeping in to our society and we must nip it.

The schools affected range from academic giants to little known schools cutting a cross national, provincial and district levels.

The Government has appointed task forces to look into the issue since 1990. For instance in 1991 after the Kizito incident, the then President Daniel Arap Moi appointed a committee to look in to students unrest. In 2001 Henry Kosgey the then Minister of Education appointed a task force led by director of education Naomi Wangai to investigate the causes of unrest. The later task force came up with useful recommendations it had one shortcoming. It failed to establish a protocol for stopping future strikes. Subsequently the country faced another wave in 2008.

In 2008, Professor Sam Ongeru the Kenya minister of education appointed another commission following unprecedented wave of riots. It consisted of top education experts who were to investigate the cases and make recommendations on how the problem could be alleviated.

Factors Contributing to violence in schools.

The above task forces come up with many explanations concerning the causes of violence among the youth. What follows are the possible factors contributing to the problem.

1. The Government failure to implement most of the recommendations made by the appointed task forces on students' unrest. The Presidential Taskforce in 2001 for instance recommended the following among others:
 - To put an end to the ranking of schools by Kenya National Examination Council (KNEC).
 - Establishment of a comprehensive system of examination that could accommodate and recognise individual talents through continuous assessment tests.
 - Scrapping of district mock exams and replacing them with school based mocks during 2nd term of the year.
 - Banning of holiday, weekend and after school tuition.
 - Rating of movies and confiscation of pornographic materials in schools.
 - Organizing talks for parents on issues related to discipline

- Streamlining of admission criteria to address students' social backgrounds and avoiding bias.
- Residing of head teachers and their deputies on the school premise in cases of boarding schools.
- Adhering to the Government regulations on class size of 40 and decongestion of dormitories.
- Establishment of guidance and counseling services in schools

A few of the foregoing recommendations were implemented. They include scrapping of school's ranking in national exams and; organisation of talks for parents by some schools. However, with free primary and subsidized secondary education, it has been difficult to have class size of 40. This is worse in secondary district schools where classes have about 60 students. It has also been difficult to establish guidance and counseling departments in most schools and in cases where they exist a few are manned by professionals. Thus, the government's failure to implement the above recommendations and many others has led to continuous unrests.

2. Examination oriented curriculum: Kenya education system puts a lot of emphasis on learning in the cognitive domain with examination as a determinant of certification and career placements. The parents, teachers and the school pressurise students for good results leading to stress. It is significant to note that riots occur second term when students are preparing for Kenya Certificate of Secondary Education (KSEC) mocks. The examination is seen as the main cause of tension, anxiety and fear among students. They use strikes as a way of venting this tension. During the 2008 riots for instance several schools refused to sit for mocks because of fear of failure. In the last wave of strikes, over 50% of the cases were because of this fear in provinces like Coast, Eastern, Nairobi and Central.
3. Over- loaded curriculum: A broad curriculum has been a main feature of 8.4.4 system of education. Although some subjects were removed from the curriculum and the content of some reduced, the curriculum remains broad. The teachers rarely cover the syllabus within the stipulated time. This forces them to look for extra time outside the established timetable to cover the content. Thus, the students are in class when they should be relaxing, this leads to stress.

Besides, the students are examined on content covered for a period of four years. This makes retention difficult due to interference of both new and old material in learning. Interference as a forgetting theory is of two types: proactive and

retroactive. In proactive the old material interferes with the new material being learnt while in retroactive new material interferes with the old one.

4. Corruption and inefficiency at Kenya National Examination Council (KNEC): The council has been accused of examination leakages for years. These leakages and open cheatings in many schools have gone unpunished and at times undetected. Accusations by KNEC officials have ranged from selling examination papers to parents, schools and students or middlemen / women. It seems the council has institutionalized cheating.

KNEC is using school mocks as a yardstick for leakages. Whenever cheating has been dictated, the council has resorted to mock scores to moderate the grades. Owing to this both the students and teachers are attaching a lot of importance on mocks. Given a chance, students would prefer rather to avoid it or sit for a less demanding examination. Some would even find satisfaction in cheating. This was evident when during the 2008 mocks, candidates in some schools demanded that they be allowed to carry their notes, textbooks and mobiles to the exam rooms. Thus, frustrations over the fading confidence in KNEC's competence and capacity to oversee an open and fair competition in schools and is one factor affecting management of schools leading to unrest.

5. Subsidized secondary education which has raised transition level of primary to secondary schools to 70%: This has overstretched facilities in public secondary schools. Most of the strikes (over 90%) occurred in public districts schools, low cost private and provincial schools that had admitted students without injection of extra learning resources or facilities.

A delay in releasing funds for secondary education has been a source of tension in some schools in Western province.

6. Poor role modeling at home, in schools and the society in general: Students come from families where domestic violence thrives. At school, teachers react to them violently when they find them at fault. There are schools still using caning as a form of discipline even after corporal punishment was banned in 2001.

The post –election violence of early 2008 demonstrated to young people that authority can be defied with no consequences and that violence is a means of communication and attention seeking. They learned that personal demands are more important than other people's lives and property.

The role of the media: It is argued that strikes are fueled by the media which report the schools which have defied authority. These striking schools pose as heroes to other schools causing the former to do the same.\

Emerging issues in education: These include the rights of children and the role of each player in education. Section 13, 18, and 23 of the Act denied teachers power to punish wayward students. Students are aware that any form of assault is a crime under section 25 of the penal code and is punishable by five years in jail. This has led senior education officials and the courts interfering with discipline cases and overruling certain issues unconditionally. There are cases where Board of Governors expel students but are later confronted by senior ministry of education officers to readmit the students unconditionally (Nation, July, 23, 2008).Such a scenario makes students big headed and disobedient to the school authorities and rules, causing chaos

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9. Lack of discipline among students: Both teachers and parents have failed to instill discipline among their children and students respectively. Decrying this Balala remarked: "Parents have failed to discipline their children because of foreign ideology which is detriment to African form of disciplining children "(Najib in Nation, July 21, 2008)

For a long time the use of the cane was the only form of discipline known to teachers and parents. With the passing of children Act in 2001, which banned corporal punishment and made it criminal, teachers and parents have not found alternative

methods of discipline. There were no in-service courses which were carried out to equip teachers with basic skills of dealing with the problem. The students have taken advantage of this unpreparedness and disobey authority at will. They know they cannot be caned nor given manual work and that they are at liberty to sue either their parents or teachers incase they subject them to physical and psychological abuse.

10. Poor parenting has emerged as a major factor in schools violence .Research by Obuto (2005) indicate that 99.9% of students and teachers cited poor parental upbringing as a factor contributing to school strikes. In another study by Mwikali(2005) ,poor parenting scored 100% among head teachers with 96% of students asserting that their parents are poor role models. The psychologists argue that although the child is born with the potential of becoming healthy and successful, the way he/she is brought up will determine whether the individual will grow into an emotionally healthy individual or not. Varkey (1997) contends that: “The parents can be princes charming that turn the children to princes or princesses or the witches that turn him them into frogs”. This responsibility is not an easy one because “it is easier to rule a nation than to bring up a child” (Chinese proverb in Varkey (1997:68.)

Many parents have been found lacking in this area. They have neglected their parental duties in pursue of their careers. They have also embraced a foreign child rearing practices which are destructive to the children. For instance, a study by Africa Mental Health Foundation found out that “many children who abuse drugs came from families where one of the parents or other members of the family are abusing drugs.”

11. Alcohol and drug abuse: A recent study showed that alcohol abuse among students has gone up by 71% over the last four months. The drugs’ influence during the unrest was unearthed when among the items found in the burnt dormitories were “condoms, diesel, cigarettes and alcohol.” A study in 2002 in 17 public schools indicated that students took the following drugs; beer, wine, sprits and cigarettes, bhang, cocaine, alcohol, petroleum products and among other drugs. This constituted about 18.1%.both in urban and rural schools. A study by Orifa (2004) in Kiambu, Central province showed that about 62% of secondary school students admitted having ever abused drugs in their lives with 23% still abusing them. In the same document 16% of indiscipline cases in the year 2001 in Central province were from this district.

Research shows that when one is under the influence of drugs, a sense of responsibility diminishes leading to perpetuation of acts which the individual might not have engaged in had he or she been sober. This explains why the students lose control of their instincts and destroy lives and property without a second thought.

12. Poor management skills by the administration: The school leadership has been accused of failing to have an open dialogue with students. It applies authoritative approach to discipline and autocratic management style closing the door to dialogue. For example in Lenana School which is an old national school of high standing , the cause of the strike was because of administration's failure to address the students grievances , the deputy principal's highhandedness and bullying by senior students (Nation ,July, 23rd 2008). In the same paper, the causes of unrest in Pumwani Secondary, a provincial School in Nairobi was poor food and congestion of dormitories. In Godama the students and parents complained of mismanagement of donated funds by the principal. Wachanga (2003) established that 66.7% of students viewed their headteachers as being autocratic and 86% as being inaccessible. All these are administrative related issues which could have been solved with a more responsible administration.

Inadequate management skills have led the administration investing a lot of power in prefects who harass and punish other students. Some of them set up kangaroo courts, which they preside over and mete corporal punishment on fellow students. Some students have reacted to these abuses with tragic consequences. The cases in mind are those of Nyeri High School already cited and that of Thomas Oguya and Allan Odaga both of Nyando Otieno Oyoo Secondary School who were assaulted by prefects at mid- night leading to dire consequences (Standard, July 23, 2009) .

13. Unbalanced curriculum which emphasises on cognitive development of the learners at the expense of the moral. It overlooks the religious element in teaching and the role of pastoral care programmes. The wave of unrest can be attributed to spiritual vacuum among students which if not checked, could destroy the fabric of nationhood (Eshiwani : 2001). The moral decay among the youth is so serious that some of them sneak out of school to engage in sex with either boy friends or adult members of their parental home. Such students would like to cause chaos so that they can be sent home and have an opportunity to be involved in pre-marital sex.
14. Teacher related problems: These include poor teaching strategies which do not meet the needs of the students and lack of commitment displayed by non- planning for their lessons or absconding from duties. Some have been accused of uncalled for

strictness or highhandedness or even humiliation of students by abuses and slaps. All these cause discontentment and dissatisfaction among the students' body. For instance, a study by Wachanga in 2003 indicates that 84% of students viewed their teachers as dictators who hardly listened to them nor involved them in anything. Similarly, Obuto (2005) found out that 70.8% of students did not like their teachers' authoritative behaviour, while 90.9% complained of harshness and dictatorial tendencies from both teachers and head teachers.

15. Political interferences: These were the causes in Eastern, Rift Valley, Western, Nairobi, Coast and Nyanza provinces. It is alleged that politicians have been influencing field officers to transfer either teachers or head teachers and replace them with the locals in the region where the schools are located and who are mainly their supporters. Some of the politicians had pledged to do this once elected. The transfers are affected regardless of the performance of those concerned.
16. Inadequate or lack of Guidance and Counseling services in schools: Although the services have been recommended over and over for every school, a number have yet to achieve this.

The justification of guidance and counseling as an intervening strategy

The problem of violence in schools can be addressed by using Guidance and Counselling Services (GCS) as an intervention strategy at school level. Below are reasons why it is the best option.

1. Guidance and counselling services have been recommended in schools by all commissioners of education since 1964. The Ominde Report in 1964 for instance, suggested that schools should provide some guidance to the students. This led to the Ministry of Education starting a sub-section within the inspectorate to deal with the implementation of guidance in schools in 1971. The emphasis however, was more on career advising than on counselling.

The Gachathi Commission of 1976 recommended that the Ministry of Education should expand its services to include guidance and counselling in each school. The head teacher was to assign one teacher to provide the services. It also recommended the establishment of courses at the University for training professional workers in guidance and counseling. Teachers undergoing training in education were to take one course in counselling.

The Kamunge Report (1988) recommended that schools should establish guidance and counseling services with senior teachers being responsible for them. The services were to be decentralized and moved from the Ministry's headquarters to the district level. The Kenya

Institute of Education (KIE) was charged with the responsibility of developing suitable and relevant guidance and counseling services.

The Koech Report (1999) recommended the following:

- Positive cultural practices such as counselling & guidance which go on during initiation ceremonies be encouraged and moderated to enhance the social development of the youth.
- Guidance and Counselling in schools & colleges be strengthened.
- Trained teacher counselors should work with other teachers, parents, NGO's and religious bodies where necessary.
- Students should be counseled against use of violence as a solution to counter problems.

2. The Kenya Development Plans over years have pointed to the importance of guidance and counselling services to schools. For example, the 1974-1976 development Plan recommended that Ministry of Education should allow the designated guidance teachers more time to attend to students' counseling needs. The 1979-1983 Development Plan recommended that Guidance & Counselling be incorporated into the teacher training curriculum at both the college and University levels.

3. The Government's sessional papers have underscored the importance of GCS in educational institutions. For instance, session paper No.6 of 1988 expressed the Government's interest in expanding the Guidance and Counseling program in Secondary Schools. It recommended the training of the school heads & senior teachers to supervise the G.S programs that had been established.

4. It was one of the major recommendations according to the report of the Presidential Committee on Students' Unrest and Indiscipline in Kenya Secondary School (Sept. 2001). It stated these recommendations:

- Recommendation 22: The Ministry of Education Science and Technology establishes a strong Guidance and Counseling division within the Ministry, which will coordinate all the activities of Guidance and Counseling in the country. This division will be equipped with the relevant personnel and resources to facilitate its functions.
- Recommendation 31: Training of Guidance and Counseling teachers should be given priority under a crash programme both by the public and private sectors.
- Recommendation 32: Teachers with qualifications in Guidance and Counseling be identified and deployed by the Teachers Service Commission (TSC) immediately.

- Recommendation 33: The number of teaching lessons given to G&C teacher should be reduced to allow them enough time to effectively carry out G& C activities.
- Recommendations 34: G&C teachers be given three increments above their present grade as an incentive.
- Recommendation 78 a: Knowledge and skills in G&C be imparted to all teacher trainees at all levels of training.
- Recommendation 78 b.: Heads of G &C be required to have postgraduate qualifications and experience in G &C.
- Recommendation 89: G&C in schools be strengthened at the teacher and peer level.
- Recommendation 141: The MOEST appoints teacher counselors for every public school. These teachers be trained so that they could have the required skills and knowledge in G& C.
- Recommendation 142: Peer counseling groups be set up in every school and peer counselors be given the necessary skills and knowledge.
- Recommendation 143: Parents be more involved in counseling services in schools.
- Recommendation 149: Students already on drugs be counseled by the teacher counselors or be referred to specialists for rehabilitation.
- Recommendation 155: G&C and pastoral care be strengthened in order to provide a strong foundation on moral values and spiritual growth.

5. The role performed by Guidance and Counselling in the lives of students can not be undertaken by any other department. According to Nasibi (2003) ,the importance of the named service to the students is discussed as follows.

- It contributes to the self knowledge, determination, realization, acceptance and self development of individuals by identifying their abilities, interests, aptitudes, values, potentialities and developing them to the full. The counselor specifies opportunities available to the students and the consequences of non-planning on their future possibilities. He/she helps the students to recognize that they do have some control over their future. As a consequence students learn to focus on themselves and what they can do to improve their lot instead of engaging in self destructive activities.
- It helps the students to make the best possible adjustments to the situations in the school as well as the home. The problems they attempt to cope with range from academic (how to study, prepare for exams and manage stress), to social (how to interact and adjust properly with peers, siblings, parents etc).Students resort to violence because they can not cope with the situation at school and at home.
- It enables an individual to adapt confidently to rapidly changing circumstances, making him/her capable of making decisions, thus developing solving and decision-making skills. Some students are unable to make their own decisions but follow the

decisions already made by others without thinking of the implications or the risks involved.

- It gives learners a sense of direction, purpose and fulfillment and by so doing, minimizes incidences of indiscipline among students. The riots are caused because students lack discipline. Therefore, addressing this would go a long way in solving the problem.
- It encourages diversity in talents, originality and creativity among learners. This leads to self awareness which is essential in understanding ones environment and meeting life's challenges.
- It minimizes wastage and frustrations in education and employment by making learning experiences interesting, equipping the learner with effective study skills, identifying students' characteristics and potentialities, and matching the right occupation with the right courses and employment. This leads to the efficient use of human power in the world of work and creation of goal oriented individuals in schools.
- It helps to identify and motivate students from disadvantaged homes that experience difficulties in adjusting to the school environment. These are students who cause problems in schools leading to violence.
- It assists the students to identify clearly cultural standards against which they can either question or reject completely, thus developing their own value system.
- It helps the learners to become aware of the needs of others and to establish positive relationship with them. This leads to the development of group learning experiences hence building good relationships.
- It aids students in establishing and attaining worthwhile goals, becoming self reliant and responsible for their behavior and the choices they make.
- It keeps students informed on educational and vocational choices and in exploring vocations that would be appropriate outlets for their abilities, interests and personalities.
- It aids the teacher in creating an atmosphere that fosters meaningful learning relationships.
- It facilitates co-operation between teachers, parents and administrators to develop positive leaning experiences.
- It seeks to compensate for the extended family ties that kept the traditional society together.

Given the above roles of guidance and counseling, the causes of violence would best be addressed by engaging the services of a counselor who will strategize on how to deal with all those involved whether they are students, teachers, head teachers or parents collectively or individually.

6. Post- election violence has been blamed partly for the students' destructive behaviour. Onger (2008) for instance argues that events following the flawed elections in 2007 caused negative effects on youths especially in areas that received displaced learners. Many youths were traumatized either physically or psychologically as they witnessed or participated in violence in person or viewed it on television. Such exposure is likely to generate anger, hopelessness and one is bound to react extremely at the most mundane of excuses. It is only through counselling that such students can be identified and necessary steps taken to redeem them. It could be possible that some are suffering from Post-Traumatic Disorder (PTSD). This disorder is characterized by re-experiencing (e.g nightmares and flashbacks), avoidance, numbing of general responsiveness, and hyper arousal (e.g. irritability and hyper vigilance) following a traumatic event (Bisson : 2007).

7. According to psychologists and psychoanalytic theorists like Freud, violence is a drive, a form of energy that persists until a goal is satisfied. Violence occurs when aggressive energy builds up until it has to find an outlet. Research shows that most people who commit aggressive acts have a history of aggressive behaviour. It is further argued that aggression can be learnt through observation or imitation and the more often it is reinforced, the more likely it is to occur. Studies conclude that observation of either live or filmed models of aggression increases the likelihood of aggression in the viewer.

Given that violence or aggression is experienced in Kenya on a daily basis, it is possible that the problems schools are going through could be addressed by focusing on aggression which is a learnt behaviour and could therefore be unlearned. The unlearning is only possible when the counsellor as a therapist applies behavioral theories to counseling.

Conclusions

Based on the above analysis it can be included that:

- Violence in schools is as a result of factors within the school, the family and the larger society.
- These factors range from management, classroom practices, curriculum, and government policy to parental practices.
- The main factor contributing to continued crisis is the failure of government to implement the recommendations by earlier task forces.

Recommendation

1. The government should implement all recommendations made by various past taskforces on the student unrest.

2. The government should provide professional counselors in schools because the schools that had counsellors did not bear the brunt of the country -wide student strikes. Schools should ensure that the department (Guidance & Counselling) is fully equipped with rooms and furniture for both group and individual counseling.
3. The dual relationship where counselors are also teachers should be avoided. This is because students find it difficult to confide in counselors who are also their teachers. At times, the teacher –counselors break the ethics of confidentiality and sever the relationship between them and the students
4. Disciplining of the students should be left to the principal, deputy principal and discipline master not teachers and prefects. However, teachers should be equipped with basic skills in counseling so that they will be able to interact with students harmoniously with little or no tension.
5. Students should be involved in management of the schools or governance by being:
 - Allowed to participate in setting of school rules so that they can own them.
 - Accepted to elect prefects democratically as a link between them and the administration.
 - Permitted to form students' councils as a vehicle of channeling their grievances to the administration. .
 - Authorised to use barazas as in the Starehe Boys model, where the students can air their views freely with the administration.
 - Involved in deciding on the meals they would like served at school.

This would give them confidence about the administration and themselves that they are important and part of what goes on in the institution. This approach would encourage upward communication channel from students to teachers instead of the reverse.

1. Students should be allowed to join various clubs of their choice as a recreational or leisure activity e.g. debating, Christian union, drama, choir, dancing and sporting.
2. The School ought to lay a lot of emphasis on extra-curricular activities especially sports. It was observed that students or schools at the heart of sports were hardly involved in destructive behaviour.
3. The parents are called upon to lay a strong foundation for discipline and value system among their children taking the responsibilities of parenthood more

seriously. There is need for them to attend courses in parenting to sharpen their parenting skills.

4. The administrators should be exposed to an intensive in-service course on management skills organized and managed by Kenya Education Staff Institute (KESI).
5. The head teachers should help cultivate a democratic atmosphere in schools by encouraging dialogue with both teachers and students and giving attention and acting on their grievances.
6. The adults in the lives of all students must provide good models. This includes administrators, teachers, parents, political leaders and the wider community because the youth imitate what they see their significant others doing. 10 Curriculum should be reviewed to inculcate national values and discipline ways of instilling in students. Subjects like Religious Studies and History & Government should be made compulsory. This will strengthen the students' value system and train them in morals and patriotism
7. There is need for new leadership at KNEC: It is believed that there would be more examination leakages unless there is a purge at the council. Failure to do this will encourage and strengthen a culture of impunity by a network of individuals working against handwork and merit.
8. The Kenya Government through the Minister of Education and Minister for Justice, National Cohesion and Constitutional Affairs should introduce laws which explicitly prohibit corporal punishment in schools.
9. Peace Education Networks (PEN0) should be started in all schools and among schools to quell violence among students. At school level lectures talks could be organized on importance of peace and harmony. This will teach the young the need of living harmoniously. Use of peace symbols in schools will go along way in addressing the issue.
10. The schools should be provided with a manual focusing on administration rules, code of conduct, disciplinary measures, inspection of schools and security or safety measures.

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USING RESEARCH-BASED GUIDING FRAMEWORKS FOR MAKING PRINCIPLED DECISIONS IN TEACHER PREPARATION

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Introduction

The results of research on student learning and best practices in teaching influence the design and implementation of curricula (Hiebert, Morris, Berk & Jansen, 2007; Hiebert, Morris & Glass, 2003). Similarly, teacher educators should draw on research studies providing insights into the preparation of teachers as they plan and work with pre-service teachers. In this paper, I discuss three guiding frameworks for mathematics education teacher preparation that my colleagues and I use at Syracuse University. We use these research-based frameworks to make decisions on what are the most important content and practices we should focus on having our pre-service teachers develop. We use these frameworks to help focus and support our pre-service teachers' attention on this key content and these critical practices in their emerging teaching practice.

Guiding Frameworks

One of these frameworks concerns mathematical proficiency (National Research Council [NRC], 2001). The NRC states that a person develops mathematical proficiency through the simultaneous and integrated acquisition of these five strands:

- *conceptual understanding*—comprehension of mathematical concepts, operations, and relations;
- *procedural fluency*—skill in carrying out procedures flexibly, accurately, efficiently, and appropriately;
- *strategic competence*—ability to formulate, represent, and solve mathematical problems;
- *adaptive reasoning*—capacity for logical thought, reflection, explanation, and justification;
- *productive disposition*—habitual inclination to see mathematics as sensible, useful, and worthwhile, coupled with a belief in diligence and one's own efficacy. (2001, p. 116)

We want our pre-service teachers to progress toward becoming mathematically proficient and know and articulate what it means to understand the mathematics taught in secondary schools. We support our pre-service teachers in progressing toward these goals through (a)

engaging them in mathematical activities, (b) discussing the mathematical ideas involved in these activities with explicit attention to the five strands of mathematical proficiency, and (c) having our pre-service teachers plan lessons with explicit attention to the five strands of mathematical proficiency.

The second guiding framework we use with our pre-service teachers is the Mathematics Task Framework (Smith & Stein, 1998; Stein & Smith, 1998). The Mathematics Task Framework (see Figure 1) engages teachers in looking at mathematical tasks from different perspectives.

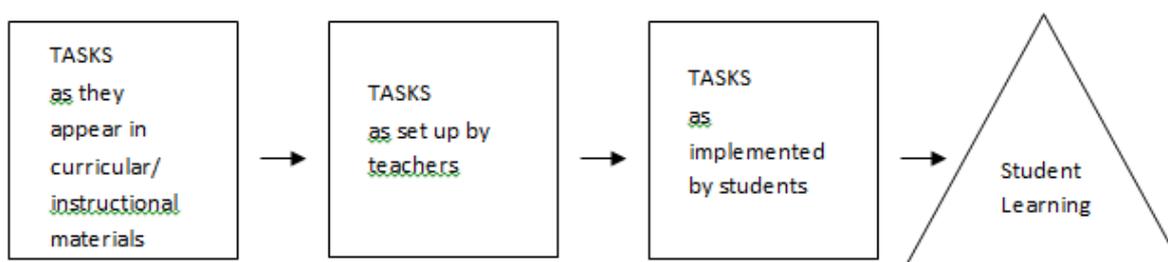


Figure 1. Mathematics Task Framework (Stein & Smith, 1998)

We engage our pre-service teachers in analyzing tasks in terms of their cognitive demands. Smith and Stein (1998) classify mathematical tasks involving students in memorization or procedures without connections as tasks with *lower-level cognitive demands*. They classify mathematical tasks involving students in procedures with connections or doing mathematics as tasks with *higher-level cognitive demands*. We expect our pre-service teachers to understand this framework for analyzing mathematical tasks, and be able to select tasks, critique them with the framework, and make appropriate modifications. We also expect them to understand factors that can maintain the level of cognitive demand of a task or cause the decline of the level of demand (Smith & Stein, 1998). We support them in doing this through assignments in our methods courses where they must select, critique and adapt mathematical tasks that could be used to teach important mathematical ideas to secondary students. Additionally, we ask them to critique the mathematical tasks they use in their teaching practicum when we observe them teach.

A third framework we use is one for analyzing teaching (Hiebert, Morris, Berk & Jansen, 2007). The Analysis of Teaching framework engages teachers in (a) specifying the learning goals (i.e., what are students supposed to learn?), (b) conducting empirical observations of teaching and learning (i.e., what did students learn?), (c) constructing hypotheses about the effects of the teaching on students' learning (i.e., how did the teaching help or not help students learn?), and (d) using their analysis to propose improvements in future teaching (i.e., how could teaching more effectively help students learn?) (Hiebert, Morris, Berk & Jansen, 2007).

We teach our pre-service teachers how to use this framework to analyze lessons from others' teaching (e.g., lessons in multimedia case studies) and have them write a teaching analysis paper based on the multimedia case study teacher's practice. We also expect our pre-service teachers to analyze specific lessons from their own teaching, and to learn from that analysis.

We find having guiding frameworks for our work with pre-service teachers valuable because they provide a research-based foundation and lens for our work in preparing teachers. These frameworks assist us in making decisions for what components to include in our teacher education program. Additionally, these frameworks provide our pre-service teachers with a research-based foundation for their work in planning and implementing instruction.

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A CRITICAL APPRAISAL OF HIV AND AIDS CURRICULUM IN SECONDARY SCHOOLS IN KENYA

DR Mary W. Were Nasibi

Abstract

“More than a half of those newly infected with HIV today are between 15 and 24 years old. Each day nearly 6,000 young people between the ages of 15-24 become infected.” (ICRAF, December, 2002).

AIDS epidemic has emerged as a major challenge facing Africa since its wars of liberation from European colonial rule in the last half of the 20th century. It is estimated that about 70% (23.3 million) of all the people in the world with HIV live in Africa. Literature shows that AIDS is the largest cause of death in Africa with over 50% of both genders becoming HIV positive before age 35 and with a similar percentage of these dying before they reach the age of 35. Kenya has tried to meet the challenge by addressing the youth through both formal and informal education. This presentation examines the content and objectives of Secondary School AIDS Curriculum which targets youth of ages 14 to 20 years. It also evaluates the appropriateness of the suggested methods, activities and learning resources used to implement the curriculum. The research constituted a survey where the content of the syllabus was analyzed using documentary evidence. The data was presented using descriptive statistics and evaluative discussions. The findings indicate that the course and specific objectives of the syllabus focus more on the cognitive domain of learning at the expense of the affective. The content transmitted is factual in nature covering lower levels of learning (knowledge and comprehension) instead of middle and higher levels of application, analysis, synthesis and evaluation. Content on values, attitudes, morals and skills are limited making expected behavioral changes elusive. The suggested teaching methods and learning activities for implementing the curriculum are inadequate. The infusion and integration approaches adopted instead of stand alone model are inappropriate. It is recommended that the whole syllabus be overhauled in terms of objectives, content and suggested activities to reflect the expected behavioural outcome among the learners.

Introduction

HIV and AIDS is one major challenge facing not only Africa but the entire world. At the onset of the 21st century about 36.1 million people were infected by HIV virus worldwide (NACC, 2002). The number of adults and children estimated to be living with HIV/ AIDS as of end of 2000 according to the above document were as follows:

North America 920,000	East Asia and Pacific 640,000
Latin America 1.4 million	South and South- East Asia 5.8 million
Caribbean 390,000	Australia and New Zealand 15,000
Western Europe 540,000	North Africa and Middle East 400,000
Eastern Europe and Central Asia 700,000	Sub-Saharan Africa 25.3 million

The global figure had moved to about 42 million by 2002 (ICRAF in Nasibi 2003). By 2005 over 3 million people had died of AIDS related illness and the rate of infection had increased except in Caribbean with additional 5 million new infections (WHO, 2009). Where as 14,000 new infections are reported every day, developing countries account for over 95% of those infected. It is estimated that about 70% (23.3 million) of those infected in the world live in Africa. It is also the largest cause of death in the continent with over 50% of both genders being infected before they reach the age of 35 (United Nations and World Health Organisation).The rate of infection in top African countries by 2003 is tabulated below:

Botswana 38.0%
Zimbabwe 33.7%
Swaziland 33.4%
Lesotho 31%
Namibia 22.5%
South Africa 20.1%
Malawi 15 %
Kenya 15%
Mozambique 13%
Central African Republic 12.9%

The situation has not changed significantly for these countries and many others in Africa. According to UN (2006) 2.8 million infections occurred in one single year in Sub- Saharan Africa. A total of 11million children have been orphaned by AIDS since the beginning of the epidemic ([http://www.avert.org/africa\(2009\).The](http://www.avert.org/africa(2009).The) same source gives the infection rate of South Africa, Zambia and Zimbabwe around 15-20% of adults with adult prevalence rate exceeding 20%. The drop is also reflected in the estimates of the following countries: Botswana 23.9%, Lesotho 23.2% and Swaziland 26.1%.

The Kenya's demographic and survey data (1995-2000) shows that HIV prevalence was highest among the young in the age bracket 10-25 years, standing at 14% (Lodiaga, 2000). A study by the Kenya demographic Health Survey in 2003 (<http://new.bbc.co.uk>) shows that 6.7% or 1.4 million Kenyans are infected with 8.7% being women and 4.5 % men. These

figures are more accurate because they are based on data not on estimates as had been the case. The infection rates ranged from less than 1% to 14% in Eastern and Nyanza provinces respectively (<http://news.bbc.co.uk>, 2004). By December 2005, there were 1.5 million Kenyans living with HIV virus (Daily Nation, December 1, 2005). The 2007 survey reflected the same infection rate of 2.4 million people. The national prevalence rate increased to 7.1% in 2008 from 6.7% in 2003 with the rates being higher in rural Kenya than in urban (Daily Nation, 25th September, 2009). The survey had shocking revelations with Nyanza, the Rift Valley and Nairobi provinces having 60% of people living with HIV with 3 out of 5 infected being women.

The Kenya government over the years has tried to come up with strategies to fight the epidemic and reverse the situation. Education both formal and informal has been singled out as a tool of fighting the virus. The target group are the youth because they are more vulnerable to the infection with a global figure of 5.4 million of them living with HIV and AIDS and 40% of new infection occurring among them by the end of 2007 (<http://www.kit.net/kit>). The youth must be equipped with knowledge, skills, values, self esteem and support for the current trend to be reversed.

In developed countries like United States of America formal education was seen as a vehicle of transmitting the desired change in behaviour. The Presidential Commission on HIV and AIDS recommended and endorsed integration of HIV and AIDS content in to a comprehensive programme of school health way back in 1990 (in Wandera, 2007). In Uganda education for the youth was recommended as a check to the spread of the diseases (Hyde et.al (2001).

In Kenya there was a recommendation to introduce HIV and AIDS education in schools in 1996 (NASCO, 1996). The publication of Sessional Paper No. 4 gave the ministry permission to introduce the subject in schools (Daily Nation, June 1999). This was strengthened by Koech report (1999) which recommended the incorporation of HIV and AIDS related content in secondary school Biology, Home Science and Social Ethics and Education (GoK, 1999). Following this HIV and AIDS curriculum for schools and colleges was launched in 2000 (NGOs Consortium: Kanco 2002). The implementation of the curriculum in schools was to be effected by 2001. The teaching / learning resources were to be prepared by K.I.E. but printed by United Nations Aids programme and the United Children Educational Fund.

Rationale for teaching aids in the Secondary School Curriculum

Teaching of Aids at Secondary School level is justified because of the following reasons:

1. The youth are the most vulnerable people in HIV infection. Statistics show that more than half of those newly infected are between 15-24 years old with about 6,000 new infections each day(ICRAF:Dec 2002).

2. Secondary education objectives can not be realized without teaching the subject. These objectives are supposed to enable the learner to:

- Acquire necessary knowledge, skills & attitudes for the development of the self and the nation.
- Develop mentally, socially, morally, physically and spiritually.
- Promote positive environmental and health practices
- Develop ability for enquiry, critical thinking and rational judgement.
- Develop into a responsible and socially well adjusted person
- Develop into a self disciplined individual who appreciates work and manage time properly.

The above objectives cannot be fully achieved if AIDS curriculum is ignored because 40% of the objectives revolve around morals, health and assertive skills which are the main domain of AIDS education.

3. The Secondary School Curriculum must lead to the realization of aims and goals of education. One aim of education is that it should respond to the challenges of national development and participation of national youth in development. AIDS is a major challenge facing both the young and the old and thus should be addressed if the country has to achieve her developmental goals. Out of eight goals of education the following cannot be achieved without teaching HIV&AIDS as a subject in the curriculum:

- National development (economic, social, technological and industrial)
- Individual development and self fulfillment.
- Moral and religious values
- Positive attitudes towards good health and environmental protection.

4. Integration/infusion of HIV & AIDS in the Secondary School Curriculum will be beneficial to an education system which has been focusing on the cognitive learning at the expense of the affective.

5. It could be one of the responses to the youth Action Plan (2004) whose concern is to involve the youth in national development. Teaching the youth ways of management and controlling HIV & AIDS will ensure that the youth are well equipped to address the challenges to national development.

6. The Secondary School students lack life skills that will help them to guard themselves and others against contracting HIV. Such skills include: self awareness, self esteem, assertiveness, inter personal relationship and its control maintained. Education in the subject will equip them with these skills.

7. Teaching of HIV&AIDS will contribute to the fulfillment of the functions of education which include:

- Bringing up individual development and self fulfillment.
- Preservative of societal culture & values
- Bringing about change in individual & society.
- Catering to specific needs of people

8. It will lead to the achievement of millennium development goals which have HIV/AIDS as one of its concerns.

Objectives

The study focusesd on these objectives:

1. Identifying, analysing and evaluating the content of AIDS syllabus.
2. Analysing and evaluating the course objectives of teaching AIDS subject and specific objectives in relation to goals of education, domains of learning and levels of learning.
3. Finding out if there is consistency between the syllabus content and the specific objectives of teaching each topic.
4. Determining the relationship between the syllabus content and objectives of teaching AIDS.
5. Evaluating the learning resources, teaching and learning activities, and assessment methods suggested for the implementation of the syllabus.
6. Discussing the challenges the teachers experience in teaching of the course.

Methodology

To achieve the above objectives, the methodology adopted was a survey research design. The AIDS syllabus used by Secondary Schools was taken as the sample of the study. The syllabus course objectives, topics, content, specific objectives, learning/teaching activities, learning/teaching resources and assessment methods were analysed. The research tool used

were mainly document analysis which took the form of evaluative discussions and descriptive statistics.

The results

The objectives of teaching AIDS curriculum were analyzed to find out if the teaching of the subject could contribute to national goals. The national goals of education state that education should:

1. Foster nationalism, patriotism and promote national unity.
2. Promote the social, economic, technological and industrial needs of national development.
3. Promote individual development and self fulfillment.
4. Promote sound moral and religious values.
5. Promote social equality and responsibility
6. Promote respect for and development of Kenya's rich and varied cultures.
7. Promote international consciousness and foster positive attitudes towards other nations.
8. Promote positive attitudes towards good health and environmental protection.

The objectives of teaching AIDS are that the learner should be able to:

Acquire necessary knowledge, skills and about HIV/AIDS,STDs

- Appreciate facts and issues related to HIV/AIDS and STDs
- Develop life skills that will lead to AIDS and STDs free life.
- Identify appropriate sources of information on HIV/AIDS related issues.
- Make decisions about personal and social behaviour that reduce the risk of HIV and STDs infection.
- Show compassion towards and concern for those infected and affected by HIV/AIDS.
- To be actively involved in schools and out of school activities aimed at prevention and control of HIV and STDs infection.
- Communicate effectively with peers and others, issues and concerns related to HIV/AIDS and STDs.

The analysis shows that 62.5%of the AIDS objectives are related to goals of education. One of them development of life skills corresponds to goal three; education should promote individual development and self fulfillment. There is therefore a direct relationship between goals of education and AIDS curriculum objectives.

The investigator analyzed the general course objectives of teaching the course to find out which areas of learning were emphasized. The results are summarized below:

Table 1: The domains of learning emphasized by the syllabus

General Objectives

Learning Domains	f	N	%
Cognitive	6	9	66.7
Affective	2	9	22.2
Social relating	1	9	11.1
Psychomotor skills	0	0	0

The table shows that most of the course objectives are cognitive in nature accounting for 66.7% of all the objectives. The objectives related to change of behaviour (affective and social relating) constitute 33.3%. None of the objectives focuses on acquisition of psychomotor skills.

Table 2 Specific objectives and levels of learning

Domains	Levels of learning	f	%
Cognitive	Knowledge	11	19.3
	Comprehension	23	40.4
	Application	07	12.3
	Analysis	08	14.0
	Synthesis	05	8.7
	Evaluation	01	1.8
Affective	Receiving	01	1.8
	Responding	01	1.8
	Valuing	0	0
	Organization	0	0
	Characterization	0	0

n = 57

Specific objectives and levels of learning

From the table above it can be deduced that specific objectives concentrate on lower levels of learning at 59.7% with 36.8%. The affective domain is covered by only 3.6%. This has serious implications because the course is concerned with change of attitude and behaviour among the youth. With such a small percentage of objectives addressing the issue, it is impossible to succeed in the noble task of behavioral change.

Consistency between the syllabus content and the syllabus objectives

The syllabus content was checked against the objectives to see if there is any relation.

Although the syllabus objectives are consistent with the content to be covered, there are however cases where inconsistencies exist. There are about 12.5% of such cases in the entire syllabus. For instance, in form 4, the 6th topic, the objective states that by the end of the topic, the learner should be able: ‘To counsel peers infected and affected with AIDS.’ The content matched with this is “Counseling of HIV/AIDS affected people.” These two are slightly different and this is likely to cause tw differs from the objective and it is likely that the teacher will be concerned with the content than with the objective.

Table 3: The relationship between the syllabus content and objectives of teaching HIV & AIDS

Objectives	Topic N(f)	N	%	Subtopics N(f)	N	%
1.Acquire i)knowledge ii)skills	14 2	22 22	63.6 9.1	54 4	58	93.1 6.9
2.Appreciate Facts and issues related to HIV/AIDS and STDs	–	–	–	–	–	–
3.Develop life skills for AIDS &STDs free life	1	22	4.5	2	58	3.44
4.Identify appropriate sources of HIV/AIDS infection	0	22	0	1	58	1.72
5.Make decisions about personal and social behavior to reduce HIV/AIDS infection	0	22	0	0	58	0.
6.Show compassion and concern for the infected &affected	1	22	4.5	2	58	3.44
7. Active involvement in and out of school activities to prevent and control HIV/AIDS.	1	22	4.5	3	58	5.17

There is very little relationship between the course objectives and the content which should help achieve the objectives. For instance, 93.1% of the contents’ sub-topics are related to the first course objective which requires learners to acquire knowledge with about 6.9% covering skills in the cognitive domain. Other course objectives have limited accompanying content ranging from 5.17% to 1.72%.This means that of all the seven course objectives, the first objective can be fully realized by teaching the specified content. The second objective is

attitudinal in nature, and is related to the first objective. Whether the students appreciate the facts about HIV& AIDS depends on the effectiveness of the teacher in transmitting the information.

Appropriateness of teaching methodology and learning activities

The methods of teaching are not explicitly stated but they can be inferred from the teaching and learning activities stated. About 77.7% of the methods are heuristic in nature with 22.2% being expository. This is important because the course requires a lot of interaction among the learners. It is actually through this approach that the required life skills can easily be acquired. Students also change attitudes when they are involved in both interactive and experiential learning. These two are represented in the methods suggested by the syllabus. The learners are supposed to be engaged in a variety of activities which are creative and stimulating in nature such as composing songs, participation in Aids prevention activities, writing poems, analyzing data among others.

However, both the teaching and learning activities are not content specific. They are general in nature with no specific content. It requires the creativity and initiative of the teacher to link it to the right content. It will suffice to mention that some important methods like question and answer were left out, yet they can be no effective teaching without questioning as one renowned educator remarked: "a teacher who never asks questions never teaches". Other collaborative methods like peer teaching, problem solving should have been part of these activities.

Experiential related activities dominated with 28.4%, followed by interactive activities at 27%, which was closely followed by transmission related activities at 26.2%.

Learning resources

Print media dominated the learning resources at 60.9%. There is only one textbook identified "Doom and Bloom by KIE and a teachers facilitating book by the same author. Other print media include journals, pamphlets, magazines and newsletters. The syllabus has failed to give titles neither of magazines nor of newsletters relevant to the course. This is likely to create a problem for the teachers who might not know which specific documents to look for. Graphic materials constitute 19.8% of the materials suggested for use in the classroom, while audio and audio visual comprise 10.8% and resource persons 6.8%. Just like media, these resources are not specific. To mention audio tapes and video tapes without stating the titles available in the market defeats the whole purpose of suggesting them.

Assessment methods

Like any good syllabus, Aids curriculum has suggested assessment methods to check on the learning outcomes. Although the course is unexaminable the following methods of assessment were identified: Written tests, assignments, essay writing, project work, quizzes, oral questioning and project work.

Written tests and assignments dominated the assessment methods with 22.8% and 21.5% respectively. These two with other related methods like essays and project work make a total of 59.5%. Oral questions are suggested in only 11.4% cases. It is commendable that project work (6.23%) and observation (16.43%) are some of the methods to be used. However, a survey of the topics suggested for projects shows their suitability. A topic like "Facts about STDs, Facts, Myths and Misconception" is not ideal for project work. In fact out of five (5) topics for projects, two (40%) are not appropriate for the method.

It would be better if other methods suitable for assessment of attitudes and behavioral change were stated in the curriculum.

Conclusion

The findings indicate that the course and specific objectives of the syllabus focus more on cognitive domain of learning at the expense of the affective. The content transmitted is factual in nature covering lower levels of learning (knowledge and comprehension) instead of middle and higher levels of application, analysis synthesis and evaluation. Content on values, attitudes, morals and skills are limited making expected behavioral changes elusive. The suggested teaching methods and learning activities for implementing the curriculum are inadequate. The infusion and integration approaches adopted instead of stand alone model are inappropriate

Recommendations

The following recommendations are suggested:

- The teachers of HIV & AIDS should be in-serviced in content and methods suitable for teaching morals, attitudes and values. Collaborative methods such as case studies, peer teaching, projects and problem solving should be encouraged. They should also be trained in utilization and management of resources for teaching the subject.
- The resources used in teaching and learning of HIV&AIDS should be those which engage all senses of learning from print media to graphics to audio and audio visual. The use of community resources and internet should be emphasized.

- HIV & AIDS should be taught as a separate subject in the curriculum based on stand alone model. This is because the infusion and integration approaches adopted are inappropriate. Teachers rarely incorporate AIDS messages in their lessons.
- The curriculum should be reviewed to include detailed content with focus on information on HIV & AIDS, morality and other social issues affecting the youth.
- Aspects of the content like counseling skills should be taught by Guarding and Counselling departments and by trained counselors.
- The methods of assessment should include those which are suitable for evaluating values and morals such as direct observation, questionnaires, interviews, rating scales.

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KENYAN EDUCATIONAL GOALS FOR SOCIAL TRANSFORMATION AND DEVELOPMENT IN THE 21ST CENTURY

Professor Henry Okello Ayot

1.0 Introduction

Kenyan Educational system has developed through different stages from traditional to modern education. Unlike formal education, traditional education was not confined to formal institutions such as schools. The major aim of education was to develop children to fit into their community and to teach them of love and respect for their families, clans religions and their tradition. As in the words of the former Tanzania president Julius K .Nyerere, there was equality and respect for human dignity and sharing of resources which are produced by the effort and work by everyone and exploitation by none¹.

Nyerere talked of education for self-reliance whose success was based on the closeness to the African society and way of life. The education was informal and ran throughout one's life. This is what was called indigenous education. Members of the society happily and willingly took an active part in its implementation².

With the coming of Europeans. First the missionaries, then the colonialists, the system and life the African was affected. The missionaries came with the new system of education. The Europeans come with formal education which was confined to institutions of learning such as schools.

According to Bayer in his book titled *African South of Sahara* emphasized that the world is undergoing drastic changes which have never been experienced before. Therefore, to cope with these changes, the African institutions will have to adapt to the innovations which are being proposed for the improvement of mankind. Hence our systems of education also need to keep pace with the proposed innovations if it is to continue to provide an adequate service for the society³.

The introduction of free primary education, the steady rising birth rate and parents' growing awareness of the need to educate their children are factors which have substantially

1 Julius, K. Nyerere, *Education for Self-Reliance*, Dar – es –Salaam: Government Printed, 1967, p.6

2 Ibid., p.10

3 James, R. Sheffield, *Education in the Republic of Kenya*, Washington, United States Government Printing Office, 1971, p.9

increased the number of school going children. When free primary education was introduced, it was looked upon as desirable for society, nobody thought that it would affect the quality of education in the country. As enrolment increased, the number of schools also increased to accommodate the new demand. As a result, many unqualified teachers were employed. It was hoped that in subsequent years they would be trained. However, they were expected to learn the new and necessary techniques on the job. There were also qualified teachers who were trained many years ago to teach literacy but who now find it difficult to adapt to new changes in methodology. They have to be given direction⁴.

To meet the new demand, the teachers, educational administrators and planners were expected to work out a well-defined educational aims and objectives which would help the countries educational systems to have a road map. This was meant to prepare teachers to cope with changes placed upon them by the society. Well stated aims and objectives have been felt necessary for teachers to identify their own professional shortcomings and needs. And when these have been identified, the knowledge gained may be used in developing and evaluating educational aims and objectives.

After independence, Kenya instated a National Education Commission chaired by Professor S. Ominde to chart out new policies and objectives. The Ominde Commission (1964) put National Educational aims and objectives into six categories namely; National Unity, National Development which was divided into Economics needs and Social needs; Individual Development, Social Equality; Respect and Development⁵. The National Educational Objectives in Kenya are meant to foster a sense nationhood of and promote national unity among Kenyans given the fact that we come from different ethnic backgrounds with different languages. It articulated national development which includes economic and social needs; individual and self-fulfillment, social equality, respect and development of cultural heritage and international consciousness. The aims and objectives formulated by Ominde were further articulated and expanded by Ndegwa to give more meaning⁶.

The Kenya educational aims and objectives have guided the process of education since independence time. These recommendations have been useful as the guidelines during the development of curriculum and have helped different panels to chart their way forward. Besides taking them as guidelines, these objectives have served as the terminal outcomes which the nation has used to achieve its educational systems. Since these aims and objectives have direct role in helping the country to attain desirable education system, it is necessary to analyse each them briefly⁷.

4 James, R. Sheffield, *Education in the Republic of Kenya*, Washington, United States Government Printing Office, 1971, p.9

5 Republic of Kenya *The Ominde Report*. Nairobi: Government Printer, 1964.

6 Ominde Report 1964. p25

7 Republic of Kenya. *The Ndegwa Report*. Nairobi: Government Printer, 1971.

2.1 National Unity

The top objective of education in Kenya is meant to promote national unity and integrate Kenya's diverse people; Kenya, is a country of many physical, social and political contrasts. Being a young country which attained independence in 1963, by 1964, Kenya had not had enough time to develop tradition that could effectively tie all the races and ethnic groups together to live as one nation.

Unity was necessary to be calculated in our system of education to bring the youth together to think and identify themselves with Kenya as a nation. Given the fact that when the British Government colonized the country, it showed no concern for the education for the African. The British government aims and objectives in Kenya were to establish schools for European settlers children modeled on elite British system.

The British left the education for the African children in the hands of missionaries who for a long time played significant role in determining the system of education that they felt was suitable for the Africans. Therefore, it was necessary to change the system and give the African youth a sense of unity and think like Kenyans.

The need to use education as a tool for fostering national unity and creating a sense of nationhood became priority when Kenya became independence from the British. A system was to be put through education in various subject areas. Through geography, education gave the physical contrasts of the country which ranges from temperate highlands with crops, such as pears, picots and grapes; to tropical grasslands with maize, millet and mangoes, marginal lowlands bordering on tropical climate.

History only taught European history but today African history is taught. The history of peoples who are inhabiting the diverse lands in Kenya is taught. There are the Nilotic group bordering the interlacustrine region, the plain and the highland nilotes, the north and north-eastern region and the migrants groups who came in from the Middle East, Asia and Europe. This means that Kenya, a land which is composed of different races, ethnic groups, cultures, creeds and tradition are today national history taught. Creative Arts education which also provides skill development in arts, physical education, home science, oral literature and music became relevant. These skills developed during lesson were to be used by students to participate in inter-school, regional and national festivals. All these activities contribute to the development of a sense of national consciousness in the learners⁸.

These activities through education in the 21st century make education to become an instrument of national and social unity in this diversity. The aims and objectives were meant that the Kenyan youth are brought up to understand their cultural offspring to help them

8 Gordon, S., Bassey, *A Study of Curriculum Development in Kenya*. Nairobi: Government Printer, 1971.

tolerate, and integrate with their neighbours; to develop cultural traditions which would promote social and economic development and suppress cultural aspects that breed alienation, conflict and dormancy.

The National goals of education in Kenya are expected to promote all processes of change at locals, national and international level and to transform the life of the youth. An understanding and appreciation of the social diversity, promotes attitudes of mutual respect for the various peoples and cultures and bring with it socio- political co-ordination necessary for the development of the country.

National unity, therefore, implies the spirit of national patriotism which can best be articulated in all subjects, for example in social studies, the teaching starts with the family where one has blood patriotism; then with one's immediate community, thereafter, environmental patriotism and finally with the nation as a whole thus, fostering the spirit of national patriotism. Social development of learners through co-ordinated national objectives of education may prepare the youth to become citizens who have respect for democratic institutions hence nationhood and national unity.

2.2 National Development.

Economic development has been a popular factor to politicians, economists, educators and the ordinary citizens for ages since the time of ancient Greeks and Romans. Human society has always been keen to discuss the contribution to social welfare of society and to allocate the contribution of education to actual economic development in statistical terms of human capital versus production output for economic growth. In early economic doctrines perhaps, the only person who considered human capital to be the centre of economic theory is Adam Smith⁹. Like Adam Smith, Von Thunen¹⁰ accepted human capital whole heartedly. That a nation with more educated citizenry "creates a much larger income than uneducated nation".

Kenya is a developing country and education is a vital element in the development of her economic growth, society needs the development and diversification of her traditional skills, technologies and competencies. Independent Kenya needed to depart from the economics of subsistence to modern economics of industry, international trade and commerce.

The traditional subsistence farmer needs to be elevated by education to acquire the skills of modern crops, animal husbandry; the use of fertilizers and chemical in farming; application and maintenance of agricultural engineering equipment; the use of commercial distribution network for marketing his produce etc. The same for the trader and local blacksmith if they

9 Adam Smith, "The Wealth of Nations", Encyclopaedia Britannica Inc., 1952.

10 Von Thunen, H., "Costs of Education as Formation of Productive Capital", in UNESCO, *Reading in the Economics of Education*, 1968.

are to develop into modern businessmen or industrialists. Education will promote the new skills, the modern attitudes to labour and commercial entrepreneurship. The Sessional Paper No 2 of 1986 from Economic Planning Department in the Ministry of Finance outlined education as primary tool for development between then and 21st century.

While emphasizing that 65% of the country development will be in the agricultural sector, the Ministry of Finance stresses the point that modernization of Kenyan agriculture to cater for population of 40,000,000 at the turn of 21st century would depend on new skills and our education system must provide the required skills. The children in 1986 of the planning period would be farmers in the 21st century. The skills and attitude inculcated by the education system during those years will be actively utilized and applied to the economic growth of Kenya. This is notwithstanding the fact that agriculture will be the main employer in the 21st century Kenya as well as the primary market for industrial materials and goods. Thus, educational outputs from our institutions will furnish the agricultural sector with entrepreneurs and employees and have an outflow for private enterprise in trade and industry. The role of education in these developments is crucial and cannot be over emphasized¹¹.

2.3 Social Development

Together with economic revolution to the 21st century, the country will experience a silent social revolution among the population in Kenya. Education will be a tool to foster and facilitate this social change towards acceptance by Kenyan society. The citizens will have new role and responsibility towards each other in the 21st century. Kenya may not have to repeat the mistakes of economic revolution in Europe in the eighteenth and nineteenth centuries and should be cautious in bringing about co-ordinated economic development for the whole country; building up social infrastructures to facilitate the transition; providing the social welfare of those caught up in the turmoil's of development; and maintaining the integrity and stability of man during the changes.

A society changing from subsistence to money economy has many facets to its social evolution. These changes affect people in different ways. For instance, changes from traditional culture centred on the extended family to an inter-ethnic society based on the national tradition, values and norms. Moral values holding different communities together are, moreover, disintegrating and these have been replaced by the national values. The family land unit which in the past provided cohesion among the people will, no doubt, change with the majority of the citizenry becoming urban dwellers.

The labour in 21st century will be surplus in contrast to avenues open for employment. For this reason education becomes an essential tool not merely for providing the necessary

11 Todaro, M., *Economic Development in the Third World*, Longmans, 1982

skills for employment, but also for equipping the citizenry with a sense of responsibility and individual framework necessary for utilization of manpower. Education must thus guide the youth in retaining the good aspects of the traditional cultures essential for their cultural integrity and succumbing to the needs of new society. By striking a compromise between the old and new forces, this will be blended fairly with economic norms of development for an international market system. This will give a new rise to the Kenyan culture in the 21st century, and education is essential tool in bringing about this change. Chief C. A. Adowole, the Executive Secretary of Social Studies programme emphasized in his paper delivered at a seminar in Nairobi that “Africa’s future in the 21st century depends on what kind of aims and objectives we formulate to guide our educational system”. The change from traditionally establish extended family to modern economic of the industrial age must be examined carefully through education¹².

2.4 Individual Development and Self-fulfillment

Personal development of the individual citizen – technical moral, religious, artistic, etc will be the hallmark of our national development in the 21st century. Education is expected to provide opportunities for the fullest development of individual talents and personality. Already the government has made several strides to facilitate universal free education for all Kenyans and educational institutions are increasing all over the country through the “harambee” effort to supplement the government effort. There are also programmes to assist the formerly neglected areas in the education effort for the whole country. Extension of educational institutions for all throughout, the country should continue as the years go by in the 21st century.

Hand in hand with the rise of institutions will be improvement of the quality of education being offered in these institutions. For special mention in this respect is the establishment of linkages with international institutions such as UNESCO, UNICEF and other universities abroad like the Syracuse and Kenyatta University linkage. These linkages will be able to transform our education system and hence social transformation of the people of Kenya.

Quality education will entail total development of school subjects through properly trained class teachers using appropriate technologies in teaching and learning. Textbooks should be provided in the school and following communication networks that impact maximum skills and knowledge in the pupils. The teachers will be expected to train their pupils in methods of inquiry to extract maximum information from observation; skill of recording and documentation; logical thinking to reach appropriate conclusions; skills of calculation,

12 African Social Studies Programme Report, The Fundamentals of Effective Teaching of Social Studies” Seminar held in Nairobi August 16th -23rd, 1960.

mathematics, etc which will assist him in his roles of daily living and for his total fulfillment¹³.

The pupils will develop his skill and knowledge and will realize his talents and vocations early in life. In this way, he will be able to utilize his resources for the maximum benefit of himself and his society. His potential abilities and interest will be utilized for his total fulfillment.

To supplement the role of a teacher and parent in shaping the moral integrity of the pupil- his responsibility towards immediate neighbours etc will be the society itself. A disciplined society of hardworking, creative and responsible citizenry will have positive contribution towards the type of students emerging from the educational institutions. The good morals of our general citizenry will therefore be reflected on our student population also. But this does not reduce the responsibility of both parents and teachers in bringing up children in good disciplined and appropriate religious values during their education. This will help the children to grow into self-reliant disciplined citizens, responsible to the nation and to the creator¹⁴.

2.5 Social Equality

A universal education for all in the country is meant to provide social equality among the citizenry. Economic opportunity should be narrowed between the citizens; the gap between the haves and have-nots should be narrowed. All would be equal before the law and political right to vote or be voted into political institution would be open to all interested in political leadership, not the educated alone. Society would extend social welfare facilities to all the populations and disparities between urban and rural development would disappear. Uneducated population would disappear and educated population would have a higher political consciousness and would not only be conscious of social rights but would also subscribe more to other responsibilities, to the neighbours, their community and their nations.

Social amenities such as schools hospitals roads and lands would be distributed equally to the whole nation. For the African nations, education is the most important economic development. The very poor family can suddenly become reach, through educating their children. With necessary health facilities which are reachable and affordable, the community would be able to live healthy life and produce their own food. They should have good access road which they may use to market their produce. Finally, a few people should not hold land while the majorities are living in slums which are overcrowded without basic amenities.

13 Coombs, P. *The World Educational Crisis*, O.U.P., 1968.

14 Bloom, B. *Stability and Change in Human Characteristics*, Wiley 1964.

2.6 Respect of Cultural Heritage

While promoting their social, political and economic growth as part of international group of nations, Kenyans would not lose sight of their need to foster their cultural heritage. Their rich cultural heritage would continue to develop and they would benefit from the cultures of their nation. An understanding of their history would enlighten them on the cultural heritage. They would learn to respect other cultures as their own. Properly designed social science education would help or assist them not only to learn their own culture but also to respect foreign culture.

Current Kenyan school syllabus seeks to achieve stated national objectives in the educational programme of the nation. Among these objectives are creating national unity, economic and social development of the country and promoting our cultural heritage. Some of these objectives have been explained elsewhere in this paper. These objectives are all spelt out in all syllabuses and our students have to learn among the school subjects. Subjects like Music and Dance, Arts and Crafts and Social Studies. Through these, they are deliberately educated into cultural heritage of our nation.

We have found that even among the different ethnic groups in Kenya, there are different cultures. For example, Kikuyus consider sisters-in-law as relatives and do not marry them as second wives. Among the Luo and the Luhya, the sister-in-law is the first one to consider when one is looking for a second wife. In Zimbabwe and other Southern African countries, caterpillar is a delicacy and served in a high class party. People from Eastern Africa cannot touch it. What is important is that one should not despise another person's culture; however cultures which pull back the community must be disregarded when transforming 21st century education.

2.7 International Consciousness

A political conscious nation would be aware of the nations around her and the world community of nations. An educated Kenyan citizenry would understand that Kenya is a part of Organization of African Unity now African Union, the United Nations, the Commonwealth, the Non-Aligned Nations, the Third World and has a positive role towards the peace and understanding of the international community. The citizenry would come to understand the complicated economic system of the nations; the trade patterns; sources of raw materials; marketing of manufactured goods; the plight of the "Third World" countries visa-a-vis the developed world; the role of international finance and credit system, etc. Properly stated education system would lead the citizens of the Third World to realize the need to improve their economic setup to create a fair relationship between them and the developed world. They would also appreciate the need for peace and unity to facilitate any meaningful development between themselves.

To achieve the stated objectives of education, history teacher would start with a family as a unit. The composition of a family and an extended family and move to the community and properly explain where they came from; the old values which are no longer there and why they were discarded. They should be made to understand that a number of communities make a location. These are the people who live in and around the same location and have common decent except in towns where they do not have to come from the same decent. A number of locations make a division; divisions make a district which in turn makes a province. And provinces make a country which is Kenya. Therefore, Kenya as a country is made of different provinces with different ethnic groups. The several ethnic groups should be made to fill as a family of one nation with democratic government. This democratic government should strive to form regional community. For example East African Community, which consists of Kenya, Uganda, Tanzania and Rwanda. These countries in future may make political and economic block which may transform lives of citizens in the 21st century. With the cooperation of various nations the citizens of these nations, automatically become members and citizens of international community.

2.8 Objectives of Primary Education in Kenya

In its national goals of education, the Ministry of Education had a coordinated way for providing primary education in Kenya. The then Ministry of Education, Science and Technology clearly spelled out the objectives that have to be fulfilled in the implementation of primary education syllabus. These objectives are in line with the policies of the nation in their development programmes.

The primary school national objectives in Kenya may be classified in four categories as follows. They are meant to develop knowledge and skills in student; development of desirable standards and attitudes; provision for growth of the student into a healthy morally strong citizen and development of aesthetic values in students to grow into citizens who not only respect their cultural heritage but also have respect for cultures of others¹⁵.

Kenyan educational objectives first and foremost, set out to develop knowledge and specific skills to its recipients. The knowledge is developed in continuous processes in the form of various school subjects such as History, Geography, Science, Mathematics etc. These subjects are themselves avenues of a variety of knowledge to the student and specifically in themselves tools of imparting the skills of numeracy and manipulative skills. The primary school syllabus has outlined the specific knowledge and skills to be driven from each subject under each heading in fair detail.

The syllabus makes provision for the development of sound moral standards and attitudes in the student. The following may be given as the good example: dignity of labour; social

15 Ministry of Education, *Primary School Syllabus*. Nairobi: Government Printer, 1967.

awareness of the environment; positive to other communities and nations; adaptive attitude of life based on moral and religious values. It is most evident from our educational syllabus that the government has a high regard for morality and ethics of our society. Hence, the need to develop the positive moral attitudes for our students who will be the leaders and bring about social transformation of the 21st century¹⁶.

The school syllabus also sets out for an objective the need for the student to grow into a strong and healthy person. There is no question why Ministry was concerned with issues relating to the health of the student because children can only learn well when they are healthy. Again when they are healthy, brain can grow faster. Education can not be meaningfully applied to unhealthy body and unsound mind. In emphasizing the importance of health the ministry went on to specifically outline the areas of healthy growth which would produce a student with the following characteristics: good self-expression; self-discipline; self-reliance; maturity of mind and total utilization of the senses. This type of student will be inquisitive, creative and hard working. This would be an ideal man for self-fulfillment in the utilization of his talents and his vocational calling.

The primary syllabuses, among other things, have placed strong emphasis on the aesthetic development of the student. It provides for the teacher to guide student in realizing his creative, artistic and aesthetic values and having an appreciation of the same. Once the student has been alerted to the aesthetic surroundings around him, he will, in turn, be guided in selecting the cultural heritage which is of value to himself and his society. He will also learn to respect his own cultural heritage.

The syllabus stipulates that the student will also be taught or guided to appreciate and respect the culture of the others. A student respecting his and foreign cultures is on the road towards being a good citizen. He will not only respect the aesthetic values of other people but he will also respect their institutions, their government, etc. In this respect, he will have acquired the attributes of an international citizen even from his own land of origin.

In conclusion, Kenyan National objectives of education are meant to provide knowledge and skills which would lead one to become an expert in a chosen field in life. The chosen field of education would enable one to become an expert on that field. The expertise would then allow one to join either paid employment or be self-employed. Thus making every citizen useful to the community in the 21st century and transforming the way of life in Kenya.

16 Ministry of Education *Syllabus for Kenya Primary Schools*. Nairobi: Jomo Kenyatta Foundation, 1966.

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THE ROLE OF RESEARCH IN TEACHING AND LEARNING PROCESSES IN KENYAN UNIVERSITIES

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Abstract:

Research in teaching and learning processes should be understood to mean digging deep into knowledge or existing issues so as to have enough knowledge and clear understanding of the subject area. In essence, research helps lecturers to interrogate aspects of their teaching practices and evaluate learning processes with a greater understanding of its relevance to their careers. It helps in assessment of particular situations in order to conform to the practices required in the pedagogical field. As a result of this, teaching/learning process becomes enjoyable and meaningful and in addition, it enhances symbiotic relationships between and among both the lecturers and the students. In this case, there should not be strains and tension in the teaching/learning process. In the long run, the quality of education in the universities is guaranteed. This paper is meant to explore ways in which the research is used to enhance training in universities in Kenya.

1.0 Introduction

The biggest challenge among classroom teachers is to understand the role of research in classroom teaching and learning. Essentially, researchers in this study define research as digging deep into knowledge or investigating an existing issue so as to know more and have a clear understanding of the content or the subject under investigation. Further, research can be defined as that knowledge which is negotiated and shared, that is, how is knowledge created and communicated across various contexts and disciplines under study in schools and institutions of learning as aimed at meeting the global challenges and labour market demands. It is assumed in this paper that knowledge is traditionally understood as justified true belief which is produced in an environment in which individual researchers commit themselves at least to a certain extent to the truth of a particular proposition or for work professionals to ascertain the truth about that knowledge (theories) or can be engaged in un-earthening new information through experimentation (Neapolitan, 2000; Pace, 1990 ;

Astin, 1993). This discourse of understanding the variations in thinking represents one of the important indicators of the dynamics of knowledge negotiation and creation as understood in research today.

2.0 The Use of Research in the Teaching and Learning Process

An educationist's understanding of research is how it can provide a theoretical bridge between the hidden side of educating and future successful classroom practices. Research in essence helps the lecturers to interrogate aspects of their own teaching practices and to evaluate research with a greater understanding of its relevance to their career particular situations in order to conform to the practices required in the pedagogical field of teaching and learning (Reeves, 2000; Ondigi, 2002; White, 2000). If engaged in research, the lecturer follows up observations and inquiries to better understand things and confirm content so as to be informed in the discipline. The learner demands to ascertain the facts and be well-informed in the discipline, that is, be knowledgeable and gain skills necessary in one's life time long after schooling. Several studies support the use of research work by students for it demystifies the students' attitudes and beliefs towards research (Bryman, 2001; Orsini-Jones & Cousin, 2001; Lincoln & Guba, 1985; Fontana & Frey, 1994).

Research works for teaching and learning offer a valuable teacher an educational tool to enable both the lecturers and the students to be well-grounded in their respective disciplines academically and as well as be able to the 21st century challenges in education and employment. As for the lecturers, research also helps them understand theory and critically appraise their classroom practices. For students engaged in classroom, research promotes structured and reasoned arguments backed by evidence and customized texts that exhibit and promote critical thinking and reasoning. Research studies have shown that:

When working in groups on an academic writing assignment, students did reflect on how to get started; how to achieve a single focus while grappling with multiple perspectives; and what writing strategies to employ given that there were 2 to 3 students in the group (Bereiter & Scardamalia, 1987, p. 300).

It is clear within the rims of academic field that research is an essential component for a well-rounded academic culture in any institution of learning for it contributes extensively to knowledge bases and is good for the individual researcher's profile, work satisfaction and career development. However, one area often seems neglected when we talk of research and that is the role of research in enhancing our ability to teach our own students in the classroom.

3.0 The Implications of the Use of Research in the Classroom Today

By understanding why we do research for classroom teaching, it will significantly impact on the professional development of the classroom teacher and the student for several insights in the process of carrying on the activities of research would be perfected, enhanced and both will gain the processes of carrying out research. Orsini-Jones (2007) argues that use of research helps in the syllabus being revised regularly according to a cycle of action research: a phase of 'reconnaissance' (or identification of a problematic issue or issues) normally precedes the start of the cycle, followed by planning, implementation/action(s), observation, reflection and re-planning, that is:

- A problematic issue is identified;
- change is planned collaboratively (staff and students) to address the issue;
- the change process is implemented - 'acted out';
- all agents involved in the change process reflect upon its outcomes, both while it is happening and at the end of the first phase of implementation;
- actions are taken to re-plan the changes and the second phase of the action-research cycle starts.

Apparently when teachers and students are involved in classroom research works as part of the teaching and learning processes, it creates a bond of involvement and commitment that results in classroom centred research studies for quality teaching and learning and also publications. Other accrued benefits of using research as a teaching and learning tool include:

- Affirmation of beliefs about teaching is basically supported by data,
- Acquisition of research habits and better record keeping of data,
- Creates confidence for making changes in instruction and assessment of the learners,
- Creation of better relationships with students by making them partners in the research process – in field works and assignments with supervised studies students are more willing to persist in difficult tasks because they have a better understanding of the processes involved,
- Gaining of professional insights into the needs of beginning and experienced teachers and how those needs connect with wider issues of curriculum, teaching, and reform, and
- Standards movement supports teacher research because it challenges teachers to change their mode of instruction

It is contended in this paper that once a classroom lecturer is involved in active/action research, it results in focused instruction in the classroom and students stand to gain useful

and meaningful knowledge and skills for the challenges and labour-market demands of the 21st century. Also, teachers should be engaged in direct and practical research for it contributes to their professional growth and could also be seen as ways in which the gaps that often exist between research and pedagogy can be bridged.

4.0 The Reasons for doing Research for Classroom Teaching

Professional experience and research works available indicate that both teachers and students who are engaged in research as part of their daily classroom practices would avoid questions like “Why can’t you understand that we don’t understand what you are talking about?” says, Timotijevic (2007) of the University of Brington. The researcher asks several questions that a classroom teacher engaged in research as a tool for teaching should focus on:

- Who benefits in class from exploring the research in my discipline; and who has most fun?
- Is the student experience ‘narrowed down’ as a result of research-focused modules?
- How does this impact on shaping their degrees? and
- If I am the researcher, should I be teaching? Or, should experiences similar to the one above, be put down to the growing skepticism to learning of successive generations of students?

Bereiter (2000) sees the culture of research as an evolution of ideas for he describes researchers as being "agents of reproduction" by spreading ideas within and without the environment in which ideas are evolved. Therefore, teachers and students can only be agents of knowledge reproduction if involved in action research. She posts that:

Intelligent selection requires, above all, seeing where a novel idea could lead, and that requires being close to the action, deeply involved in its problems and at the same time having the large view, the background knowledge, and the leisure to reflect, which are all needed in order to make something general out of something particular.

Recent scholarship has emphasized the importance of student effort and involvement in research in their academic and co-curricular activities as the decisive elements in promoting positive college outcomes (Davis & Murrell, 1993; Pascarella & Terenzini, 1991). According to Lopez & Alcarazo (2007), a close relationship between teaching and research can be realized if teachers will focus on the following aspects:

- How research topics are identified from first-hand experience in the classroom,

- How teaching practice is used to conduct research, and
- How research is used to enhance language teaching and learning.

Sainz, Sagasta & Barnes (2007) concede that:

... a process of change in the learners, and their training should also involve designing projects, and then learning how to implement them and how to continually improve upon them, which is where the role of research comes into play. We see such improvements as the outcome of reflection and the role of research, be it action research, or another type, as crucial to this process.

Ideally, the reasons for doing research for classroom teaching are many among which include:

- Understanding what resources are required for teaching a particular discipline
- Meeting the desired changes in pedagogy.
- Understanding strategies and methods to use in teaching a particular subject.
- Understanding the learners' attitudes towards the disciplines so as to identify the appropriate strategies.
- Understanding the market need knowledge and skills.
- Understanding the learning environment and be able to utilize it fully, establish existing problems and offer solutions for the wellbeing of the communities attached to the institution.
- Understanding the communities around for learning is not for the shake it.
- Understanding the diversity of the discipline in a globalized world.
- Researching not only for publication but professional growth, that is, to be well equipped in order to deliver in the classroom.
- For students to gain new knowledge and skills in doing both quantitative and qualitative research.
- To gain experiences in the field of knowledge creation and the opportunity to develop problem-solving techniques or team-working professionalism.

5.0 The Role of Research in Classroom Teaching and Learning

The field of teaching is one that is demanding and involving just like someone filling a puzzle word in a daily paper. This profession solicits a lot of questions as to how the teaching and learning can be effectively done with both the teacher and the learner making meaningful use of their time in the profession or at school. This paper explores the question of how lecturers perceive the relationship between teaching and research. We often ask whether the lecturers see teaching and research as complements or as substitutes and what the

implications of their answers are in the career of teaching and training. Lopez and Alcarazo (2007) argue that:

Whenever we try to improve our teaching practice, and consequently to enhance our students' performance, we find that research is the means by which we can achieve that, and at the same time, we discover that the research we are interested in can only be done by making use of our experiences in the classroom.

The relationship between teaching and research has been the subject of many conferences and papers published in UK, USA and Australia. The conclusions from those papers, however, are contradictory and no concrete way forward has been suggested.

The researchers of this paper wonder as to: Who is a good teacher? The role research should play in a modern university has dominated debate on whether classroom teachers are effectively engaged in using research as a teaching strategy for effecting learning. Changes in research funding and the consequent impact upon institutions' finances have led to a major rethinking about what sort of research can and should take place within this new culture. Research plays a key role in improving the teaching and learning in a classroom setting (Kuh et al, 1991; Clark & Estes, 1998; Ondigi, 1995; Alder, 1990). While our understanding of the processes of teaching, learning, and schooling has improved recently, more must be accomplished by engaging both teachers and learners in rigorous research works for classroom practices.

Classrooms form small-scale human environments in which students and faculty collectively can engage in the processes of teaching and learning. As learning is the process through which mental development occurs, it is crucial for students to be actively engaged in the research for classroom practices (Bonwell and Eison, 1991; Pace, 1990). The rapid societal changes are necessitating that we construct a new image of the process of schooling in general, and the process of teaching and learning in the classroom as it builds an infrastructure from which new themes for research in education are emerging. Our research agenda must embrace collaboration and relevancy around a vision that celebrates not what is, but—what can be as a focus into the future.

Essentially then, the role of research in classroom teaching and learning cannot be over emphasized as research may be focused on more than one perception of a 'good teacher and a good learner' when looking at the outcomes. There are diversified views as to how to judge good teachers based on their roles as academicians and how this impact on the performance of students after national examinations (KCPE, KCSE, classifications at the

university levels, or the performance of the learner once employed to perform a task in the industry).

The lecturers can effectively teach content and skills in their disciplines once aware what the learners require and what society needs, thus avoiding the human labor redundancy we are experiencing in the global labour market and the high unemployment rates due to outdated skills acquired in schools. In the modern field of teaching, a new image of the role of the teacher is emerging as focus is on those possessing discipline specific knowledge and knowledge about effective pedagogy. It is only through effective research practices that teachers can be afforded the time to share ideas with colleagues, participate in professional development, and inquire about teaching and learning so as to guide learners meaningfully. Therefore, teachers must be active, reflective practitioners who engage in constructing a curriculum to enhance the development of all students.

Research as used in education utilizes the full range of investigative methods, embracing quantitative and qualitative techniques or ethnographic / naturalistic approaches to address either basic or applied questions or issues in society. In practice, innovative ideas can and should be generated from such small scale research investigations focusing upon such issues as: new images of the nature of learning or characteristics of the learner, new ways of the nature of teaching and the role of the teacher/student in the process of teaching and learning, or ideas regarding the development and implementation of innovative curricular materials or instructional strategies, including the use of existing and emerging technologies. We are left to wonder how much efforts are put into research in the teaching and learning processes in our schools today. Apparently, there is need to rethink and reform the traditional practices in our classrooms and the conditions that have prevented teachers from assuming their full potential as active, reflective scholars and practitioners. Professionally, teachers have an obligation and must educate learners to be active, critical thinkers in a rapidly changing scientific and technological society. This is only possible by reflecting on the teaching and learning strategies and methods used in this 21st century era. The role of research in teaching is to increase our understandings of the teaching and learning processes to ensure that learners at all levels of learning acquire the knowledge and skills requisite for lifelong learning.

6.0 The Challenges Facing both Teachers and Students in Doing Research for Classroom Practices

There is a need for a shift in paradigm from the traditional teacher-centred approach (expository) to a more holistic, experiential approach to teaching and learning, incorporating reflection and analysis, and collaborative learning. This new concept for the 21st century

presents challenges both to traditional teaching and learning approaches, as well as to assessment practices, but both the teachers and learners ought to be proactive in their activities than being complacent with time. This paper discusses these challenges and implications of using research as a tool for teaching by reflecting on the initial evaluation of learning, teaching and assessment approaches advocated for in this 21st century. Effective teaching will call for: analysis of students' work showing development of the knowledge and skills (the entry behaviour in every discipline) so as to meet the learning outcomes, and discussion of emerging trends linking effectiveness of learning to teaching approaches and assessment tools used in the process.

The biggest challenge has been that of class sizes due to increased enrollment at all levels of schooling which is compounded by free primary and secondary education or expansion of school-based programs at the universities. Classes of over one hundred students are difficult to teach and even if the lecturer was to give a placement test and attend to each and every concern of the students will not be possible. Carrying out an investigation to attend to the varied concerns is not practical, hence results in the use of teacher-centred approaches. Secondly, is the overcrowding of the time-table whereby lecturers have to do more than 9 hours a week at the university level besides post graduate supervisions and other administrative duties. Compounding the problem of a crowded time-table is lack of lecturer halls / or classrooms which are either too small to accommodate the students or are never available due to double intakes.

The learning environment in our schools and more particularly at the local universities could not be meeting the standards of a world class learning institutions where the rooms are limited for group discussions, that is, places where students can meet to share their findings from research, do group assignments or practical in the science laboratories.

Lack of time due to a congested time-table, funding for fieldwork and the prevailing circumstances in the universities make it difficult for conducting research or attachments for practical learning. In addition, lack of motivation among some teachers and students spells doom in conducting effective research. At times lecturers do so much but their efforts are not recognized through promotions due to tribalism or nepotism, or their limited funds for research in the schools or departments or students are forced to do a unit because of the requirements for the degree.

7.0 Conclusion

This paper advocates for greater integration of research as a teaching and learning tool, that is, classroom research should not be taken lightly and as a way of having leisure or doing excursions. Both the teacher and the students need to know what's happening as they

design and chart their courses of teaching and learning activities so as to be able to act proactively in the face of changing technologies. On the other hand, a classroom teacher is better placed to integrate research activities and research findings into improving his/her teaching and course development, whereas the student gains meaningful knowledge and skills.

The environment must be conducive for the teacher or the learner to undertake meaningful research. Therefore, universities, communities and the industry should work hand- in-hand to share the resources and support research for classroom teaching and learning. The areas of investigation should be rich in content and practical for the learners to gain useful knowledge and to perfect their skills that are useful in the labour-market.

Equally important is the question of enrollment and expansion of the teaching and learning facilities to meet the desires of the users. Finally, the staffing of academic members should be addressed as the teacher-student ratio is important for interactive learning.

8.0 Recommendations

To increase our understandings of the role of research in teaching and learning, this paper offers the following recommendations:

[i] Research should be a Collaborative Endeavor

Research on teaching and learning should involve the collaboration between teachers and other stakeholders in the field of research to create knowledge and share insights. But teachers should play a special role in these collaborations because they have far more experience regarding educational principles and practices than others. Above all, teachers should be afforded opportunities to be active participants in identifying the key questions, establishing the research agenda, and interpreting the findings to the best of the interest of the learners in the classroom.

Partnerships between schools, communities, colleges, and universities should offer a mechanism for achieving more robust and cohesive research conclusions by means of investigations in environments that are likely to be credible to a broad range of individuals. The purpose of collaborative alliances is to achieve what could not otherwise be achieved through individual inquiry, knowledge constructed in different contexts and from different perspectives, perhaps with different goals in mind, can be synthesized and what emerges may be very unique and revealing.

[ii] Teachers should be Action-Researchers

Teachers and learners should be engaged in action-research which focuses upon the problem of understanding our own teaching strategies and methods, content to be covered, emerging issues or understanding of schooling, teaching, and society. Reflective thinking is the most central element in this process of inquiry for the goal is to improve classroom practice for relevant teaching. Action-research is dynamic and participatory, allowing the inquiry into one's own practice and subsequent reflection-in-action to become the basis for curricular and instructional reform for the 21st century. In essence, regular research will help teachers to perfect their research skills as they engage in action-research and learners will be trained in the research processes. The process of research also offers an opportunity to both teachers and learners to engage in critical thinking of a theoretical and practical nature as well as prospective teachers can combine theory, imagination, and techniques of teaching to perfect their teaching career. The process of schooling at all levels in our society can no longer afford the reproduction of critical illiteracy and in-competency if we are to catch up with the rest of the world in this 21st century.

[iii] Research has to be Close to the Classroom

Common knowledge has it that research close to classrooms has great potential for influencing teaching and learning. Teachers and learners should be engaged in regular research through organized collaborating teams to engender and encourage investigations involving much larger entities than has typified past research endeavors.

[iv] Working Society or Industry should be enhanced

Research is an on-going dynamic process and there is need for the creation of a culture of schooling in which educators and learners are much more inquiry-oriented than they are now. In the process of teaching and learning, both teachers and students should constantly be involved in community research / industrial attachments so that all members of society must enhance their attitude toward the value of doing research as part of everyday behaviour.

Studies show that use of research in teaching will be most likely to incorporate effectively curricular innovations and technological advances into the schooling process. The creation of such a society would serve as a good model for students as they acquire the skills for active, critical citizenry.

[v] Research should be in the Formulation of Policy

Research in education will improve the practices in the field of teacher education for the good of society. Thus, there is need for a research-driven rather than a market-driven approach educational curriculum design to help rejuvenate our education systems. Research should have an impact on state legislative directives and mandates, the development of curricular materials, as well as the assessment of student performance. In general, the efforts of policy makers, publishing companies, and evaluation specialists fail to integrate appropriate research findings regarding the processes of teaching and learning.

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CHALLENGES OF DISTANCE LEARNING IN THE 21ST CENTURY EDUCATION: HOW CAN KYAMBOGO UNIVERSITY PROVIDES LEARNER SUPPORT SYSTEMS TO ENHANCE THE DELIVERY OF DISTANCE LEARNING PROGRAMMES IN UGANDA?

Otto A. Yona, Prof. H.O. Ayot and Dr. Ndichu Gitau

Abstract

This paper discusses the student support system as a focus of concern to distance learning programmes at Kyambogo University (KYU). It goes on to suggest how the improvement of such support systems may assist in enhancing effective delivery of distance learning programmes at KYU.

It is important that learner's support system is made accessible to meet the needs of the distance learner. Lack of interaction between learners themselves and the Tutors are seen as a disadvantage because learners will not be able to share ideas, discoveries, successes and failures as well as providing mutual support in the learning process.

The Paper concludes by proposing the timely provision of a variety of learner support services to meet the varying needs of the distance learners at Kyambogo University and elsewhere in developing Countries in Africa.

1.0 Introduction

This paper is about the challenges of distance learning with particular reference to learner's support systems in enhancing the delivery of distance learning programmes at Kyambogo University (KYU). The Paper recognizes the challenges faced by Kambogo University in providing support for its distance learners. It proposes how these challenges may be addressed to enhance the delivery of distance learning programmes at Kyambogo University.

1.1 What then is Distance Education

Distance Education is that form of education where the teacher and the learner are separated in space and time (Aguti, (2008).

The challenges to distance Education is how best to bridge the gap. Technology can be used to bridge the gap. But how this gap is bridged will determine the type and quality of distance education on offer.

1.2 Why Distance Education

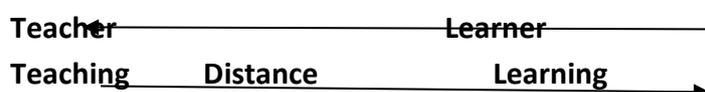
Distance Education has been introduced to respond to growing educational needs which are not easily met or which are impossible to meet through traditional forms of education.

Some of these needs are;

- To have courses for students to learn in scattered Communities covering sparsely populated, large geographical areas.
- The training of teachers and other professionals who are already working and can now be taken away for more than a few weeks.
- Provision of educational opportunities for adults who have been deprived of further education.
- Increasing the output of educational systems.
- Bringing into the classroom expert knowledge, rare experiences and stimulating personalities.
- To have a cost-effective programme for large number of students.

2.0 Distance Education at KYU

In 2003, the merger of Uganda Polytechnic, Kambogo (UPK), the Institute of Teacher Education Kyambogo (ITEK) and Uganda National Institute of Special Needs Education (UNISE) formed Kyambogo University. The Distance Units at ITEK and UNISE were also merged to become a Department of Distance Education which houses the two programmes of Diploma in Education Primary External (DEPE) and Diploma in Special Needs Education External (DSNEE). The programmes are decentralized and run in 15 primary Teachers Colleges and KYU Co-ordinates the Centres for face-to-face residential sessions which take place during term holidays in January, May and September of each year.



2.1 Challenges in the provision of learner support to Distance learners at KYU

The challenges in the provision of learner support services to the distance learners in Uganda vary from Institution to Institution practising distance learning. Kyambogo University provides its learners with self-study modules which are delivered at the co-ordinating centres in the Primary Teachers Colleges during face-to-face sessions which usually take place in January, May and September of each year for two weeks per session (Annual face-to-face Report 2007). Despite these provisions, it is still evident that KYU experiences some problems in processing and printing the modules in time for the learners to access. This was due to delay in procurement processes and also the delay by the printers to complete the printing work and deliver the materials to the university in time.

Kyambogo University is still experiencing challenges in the provision of adequate learner support services to its distance learners Such as media/ICT support. According to Kinyanjui, (1998) such gaps include the following; lack of organized study group that meet regularly to discuss their study plans, lack of timely and constructive feedback on assignments, limited or no access to sufficient learning materials including audio, video, CD-Rom, Cassettes/tapes, Mobile phones, Computer communication, photocopying facilities and laboratory for experiments. Other challenges include inadequate guidance and counseling services, lack of records keeping and management system, limited use of libraries as a student support and timely release of examinations results.

According to Perraton, (2000) the greatest challenges to Distance Teacher Education projects in Sub-Saharan Africa, and the first condition for success, is “to set in place effective arrangements to support the learners and, in particular, to supervise their classroom practice”. This view is in line with the objective of this paper. The distance education at KYU should not make assumptions on the technical skills of their learners. Support must be provided and the most successful avenues have been to call in help desk, structured and evaluated workbook and informed tutor’s support system, Keegan, (2002).

Furthermore, challenges in learner support at KYU arise from isolation of the learners from the institution which could mean among other things, that it might be harder for the distance learners to get information, to comply with the administrative procedures and rules and regulations of the institution. There will be no nearby Registrar’s office where distance learners can bring a course registration form that they can not understand or ask for advice on the payment of fees. Bradley, (2002) observed that

such procedures will have to be carried out by correspondence or by telephone. For example, asking for help in completing a form over the telephone might not be too easy. the distance learner might not feel as part of the institution at all, instead, they may not think of themselves as belonging to that institution, Bradley, (2002:6)

Another challenge is isolation from the tutors which might mean that every small problem or misunderstanding could have lengthy or obstructive consequences on their studies. A distance learner in Mathematics, for instance, would be denied the quick opportunity of calling on his or her tutor for further explanation of why $\sin(a+b)$ is not equal to $\sin(a) + \sin(b)$. Therefore immediacy of support is important to learners.

Literature on distance education programmes tends to suggest that distance education students encounter many challenges in their studies (Akinade, 1998). Kamran (2005) states that besides the usefulness of these distance learning options, distance learners still face different challenges and the dropout rate is high when compared to campus based learning. The challenges include lack of time, work pressures and responsibilities, domestic interruptions, isolation and shortage of finances. KYU as any other institution running distance education programmes faces such challenges.

Distance learners at KYU are adults who might have missed out or have had no earlier opportunities to advance themselves academically and professionally. Most of these learners have no post-school education and certain student's problems such as poor handwriting, fluent English language are acute. This is related to Purvis (1979)'s argument that distance learners reading and learning skills are poor. Some of these learners do not know how to read a unit in a study module or how to take notes. Some of the challenges of the distance learners fall into the following categories:

Organization of time, difficulty in concentration, motivation to study, personal or emotional difficulties (Gous et al, 1982)

Daniel and Maquins, (1983) argue that although distance education learners are usually highly motivated, family and professional obligations compete with their studies for the little spare time they have available. More to the shortage of time, the learners do not have access to the library facilities for the much needed resources for their assignments (Mapfumo, (1995); Molefi, 1998).

Mapfumo, (1995a) further argues that most distance learners are physically far away from the institutions that provide tuition. That is, they are isolated from lecturers and other students. They will therefore spend long hours working on their own with no one

to ask immediately for support. Further, they do not get the regular feedback from lecturers/facilitators that full-time students would normally get. This isolation results into frustration and poor performance in coursework and examinations. Bharati, (2004) observes that the isolated distance learners have little academic and psychological support from their families. More to isolation, distance learners may receive a raw deal from part-time tutors (Purvis, 1979). Pressure of work elsewhere and /or lack of motivation of part-time tutors, may prevent them from becoming academically competent in the areas they teach, thus disadvantaging the learners.

At KYU, it is observed that distance learners do not receive as much of the educational guidance as they need. There is no doubt that learners need services that enhance their problem solving skills in personal family and career –related matters. It has been observed that distance learning tutors, lack adequate training in guidance and counseling. Thus, the student’s challenges that need guidance and counseling are not always well looked after (Mapfumo, 1995).

2.2 Proposed Solutions to some of the challenges of the learner support systems at KYU.

Simpson, (2000) defines support as all activities beyond the production and delivery of course material that assist in the progress of the students in their studies. He suggests that this might fall into two broad areas, namely, academic (or tutorial) support which deals with supporting learner with the cognitive, intellectual and knowledge issues of specific courses or sets of courses for example developing general learning skills, numeracy and literacy. Other support is non-academic (or counseling) support- that is the support of learners in the affective and organizational aspects of their studies, Simpson, (2000:6).

Distance Education at KYU need to decide carefully what media or support systems and methods to use and what support to provide, in the light of the learners needs and the resources at their disposal. The very first essential task is to identify the learners’ needs and how these can be met during their studies.

According to Willis, (1994) meeting the instructional needs of students is the cornerstone of every effective distance education programme and the test by which all efforts in the field are judged. Regardless of the educational context, the primary role of the student is to learn. This is a daunting task under the best of circumstances, requiring motivation, planning and ability to analyze and apply the instructional content being taught when instruction is delivered at a distance, additional challenges result because

students are often separated from each other from sharing their background and interests, have few if any opportunities to interact with tutors outside the class and must rely on technical linkages to bridge the gap separating class participation.

Matton, (2004:38) supports this view because a distance learner is alone most of the time and has limited interactions with his/her tutors or peers. They need help most of the time to support their studies. It would therefore be important to provide wide varieties of support services for the distance learners to flexibly enhance their effective learning.

Mobile phone is becoming a very powerful support system for the learners if this is properly put to good use by KYU. This is because most of the learners in Uganda have mobile phones. This technology should therefore be used by KYU to provide communications to the distance learners. Tutoring the distance learners might be done by mobile phones, either one-to-one or one-to-many.

According to Perraton (2004), the experience of distance learning suggests that technology would be more effective if a variety of educational media were combined. A combination of print and broadcasting for example, are likely to be more effective. This observation is important because teachers and course designers often welcome the opportunity to teach in a variety of media, seizing the opportunity to use computer-based approaches or television, or to set up video link with their students. Computers offer many opportunities to the learners to access information through internet and conferencing. Mason, (1994), for example points out the advantages of computer conferencing as a support option for the distance learners. KYU needs to look into the possibility of acquiring and using these varieties of media to improve support services for the distance learners at the university.

3.0 Conclusion

This paper concludes by proposing the following to address the challenges of learner support system at Kyambogo University.

- There is need for improved quality of study materials for the learner. That is, it should be user-friendly to the distance learners.
- The face-face delivery session should engage committed facilitators/tutors with good knowledge of subject contents and conversant with distance learning mode of delivery

- Feedback on assignment should be helpful and encourages the learners to learn from it. It should also be returned to the learner in time.
- Distance Learners should be trained in study skills to enable them to read the study modules and understand them very well.
- Communication and information flow among the PTC co-coordinating centres, KYU learners and facilitators should be made available at all times.
- Peer group meetings should be formed by distance learners. Regular meeting of the groups should be encouraged to discuss issue related to their studies at a distance.
- Guidance and counseling should be encouraged by the facilitators/tutors to assist the distance learners in addressing their study, family and financial problems.
- KYU should make every effort to avail ICT/Media access to the distance learners to support their studies at a distance
- Library facilities should be improved and made accessible to the distance learners both at KYU and at the PTC co-ordinating centre for the distance learners and the tutors to use.

Above all, provision of varieties of support systems are a pre-requisite for effective distance learning programmes.

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EFFECTS OF CAPTIONED TELEVISION ON INSTRUCTION OF LEARNERS WITH HEARING IMPAIRMENT IN KAREN INSTITUTE FOR THE DEAF IN NAIROBI, KENYA

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Dr. Samson Rosana Ondigi*

THEME: “Innovative Teacher Education & Classroom Practice in the 21st Century”

Introduction

Background to the Study

Education takes very high proportion of the national budget and gross domestic product (GDP) expenditure in Kenya. In the present circumstances, it would be unnecessarily expensive, illogic and retrogressive to invest in an education system that does not realize its goals and objectives. Learners who do not acquire all the necessary skills and who fail to achieve the educational goals in the long run retrogress to illiteracy. The number of learners with HI accessing education is on the rise since the last decade and on the decline for graduands at every subsequent development (TIQET, 1999). Low literacy levels of graduates with HI constitute an element of educational wastage in terms of time, human and material resources. The literacy levels of learners with HI and high drop-out rates among them translates into significant wastage rates that are an important dimension of our schools inefficiency (TIQET, 1999).

TIQET, (1999) which is the Koech Report makes some very positive recommendations in relation to education and training for persons with Special Needs (SN). Some of the recommendations that have relevance to the promotion of Special Needs Education (SNE) and in particular to this study are: that KIE to develop learning and instructional materials for learners with SN and especially those with language difficulties and individualized designed systems for special learners to meet their SNE, among others. Thus, it is the researcher’s view that introducing captioned TV programmes as an instructional tool for learners with HI, no doubt compliments the present modes of instruction and increase learner comprehension and participation in class.

Statement of the Problem

It is pertinent to note that while the educational opportunities for learners with HI continue to be of great concern, sizeable percentage of them continue to graduate with very low grades in language. Kenya National Examinations Council (KNEC), technical series examination in Karen Technical Training Institute for the Deaf (KTTID) for the years, 2004, 2005 and 2006 indicate mass failure in the trade theory subjects and support subjects such as English, Science and General Studies. Analysis of the results indicated that the learners performed dismally poor as compared to their hearing counterparts. The performance in language acquisition subjects was poor (scores as low as 8) as compared to the trade practicals; computers, clothing and textiles, carpentry and joinery, agriculture and masonry where they score distinction 1, as indicated in the figure below.

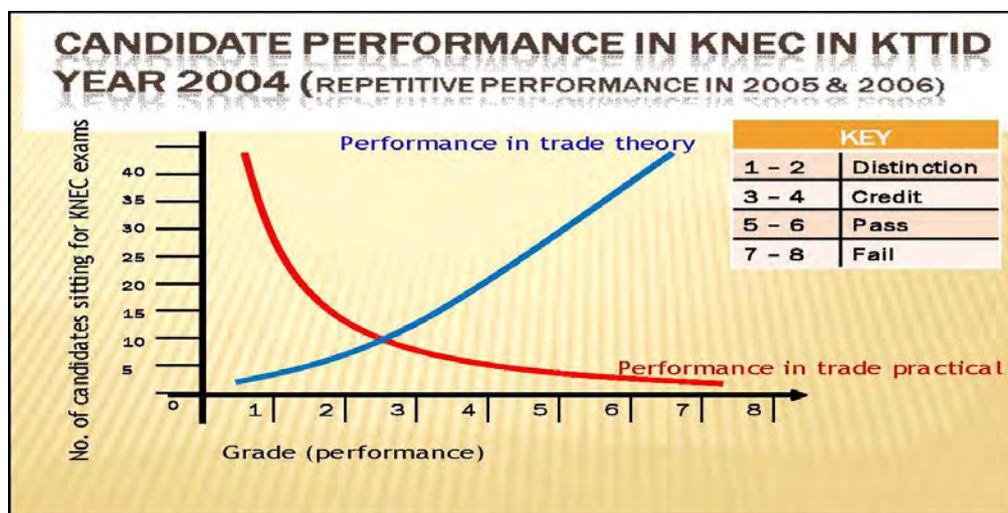


Figure 1: Candidate Performance in KNEC in KTTID in 2004

Source: KTTID, 2007

The feature of Kenya’s SE and training system has been the poor performance of learners with HI. Whatever the system offers has been unable to produce HI graduates who can favourably compete in the present systems for education and job related. Part of the reason for the poor performance is the lack of trained teachers in various fields to teach learners with HI, irrelevant curriculum and the lack of concrete special education policies in Kenya.

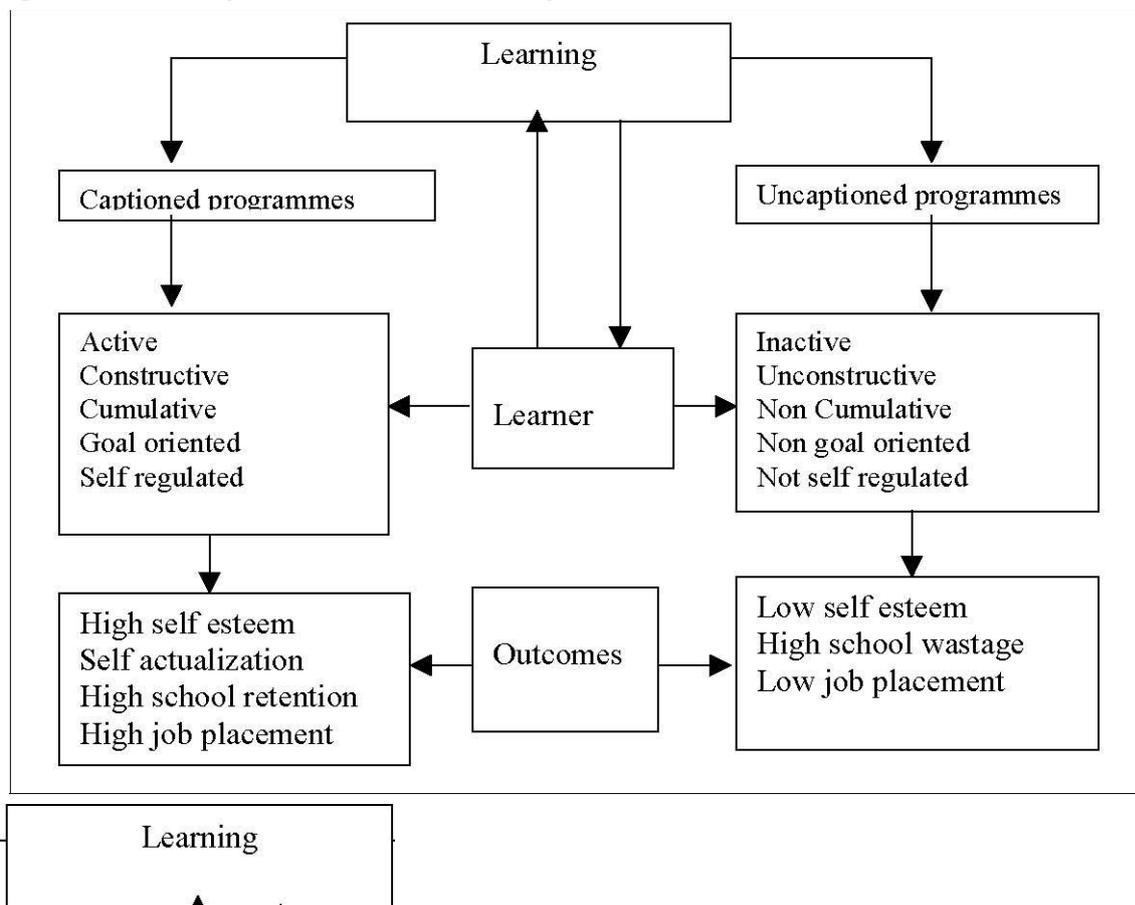
This study therefore focused on a complimentary instructional method that attempted to improve the literacy levels and language acquisition of learners with HI among others. Hitherto, no study has attempted to study this alternative as a mode of instruction and therefore this study looked into the effects of captioned TV programmes at KTTID, Nairobi Province.

Objectives of the Study

The following were the objectives of the study.

1. To establish the attitude of learners with HI towards captioning as an instructional tool at KTTID.
- Performance in trade practical 2. To investigate the effects of captioned Technology in the education of learners with HI, at KTTID.
3. To find out the relevance of captioned TV as an instructional tool on teaching learners with HI at KTTID.

Figure 2: A Conceptual Model of the Study



Source: Adapted from Husen's (1995) theory of meaningful learning.

Outcomes

Learner

Uncaptioned programmes

Low self esteem

High school wastage

Low job placement

Inactive

Unconstructive
Non Cumulative
Non goal oriented
Not self regulated
Captioned programmes
High self esteem
Self actualization
High school retention
High job placement
Active
Constructive
Cumulative
Goal oriented
Self regulated
Learning

LITERATURE REVIEW

Deaf education in Kenya has faced a downward trend in recent decades. Findings over the years (Ndurumo, 1993; Okombo, 1994; Adoyo, 1995) show that the deaf have consistently trailed behind their hearing counterparts in academic performances. Education achievement for persons with HI in Kenya stands in sharp contrast with hearing persons. Some deaf persons attain doctor of philosophy degree, but the average deaf person is grossly under educated. These gross under education is due to failure of the education system to develop the intellectual capacity of learners with HI and to some extent, is evidence of tremendous impediment to academic and other learning resulting from deafness. It is worth noting here that the education system and educational trends for the deaf have contributed to gross under education of the deaf in Kenya.

A survey carried out in Kenya by Adoyo (1995) also reveals that many teachers in schools for the deaf have great difficulties in communicating ideas to deaf pupils through SC and here, the failure of SC lays the whole problem. The paradoxical combination of teaching and processing a language is the central and perhaps the most difficult problem in the education of deaf children. Although deafness itself may have no effect on intellectual potential, the deafness may lead to impoverished communication skills that may limit development severely, unless the children are provided with compensatory tools, during their education. The specialized techniques that have been developed for teaching the deaf are many and varied. Some of them are lip reading, oralism through the use of other senses than hearing, manual communication including sign language and finger spelling, the use of hearing aids

to utilize residual hearing and many variations of these (Ysseldyke and Algozzine, 1995). Dedicated educators have struggled for years to improve the educational programmes and a variety of models has been developed, and in most cases, no single method has been used or recommended exclusively and they are extraordinarily dependent on their teachers for the exact delineation of their linguistic environment.

On Kenya, there is very limited literature available on this subject, however the Persons with Disability Act whose date of assent was 3rd Dec. 2003 with proposals that support this study, have not been implemented. It is also aggravated by lack of specially trained teachers in technology. A clear challenge then emerged of the need to investigate the effects of captioned TV on instruction of learners with HI. So far, there has not been any study related to these effects in Kenya and the results will be used as benchmarks for designing and implementing a new curriculum for learners with HI.

METHODOLOGY

Research Design

This study adopted an experimental design utilizing qualitative and quantitative approaches. This research used questionnaires and interview schedules. The questionnaires catered for mostly quantitative aspects while interviews formed the main thrust of the qualitative aspects. Qualitative strategy enabled the researcher to collect data in the actual context in which the phenomena occurred. As a result, it gave a more holistic picture.

On the other hand, quantitative method has the advantage of getting responses of the same questions from a large number of people and these responses can be quantified for conclusions to be drawn from them (Bell,1993). Quantitative approach was applied in this case to get information from learners and teachers. The quantified information summarized the results while at the same time complemented the qualitative data. The above reasons form the basis for which the experimental research design was used. As anticipated, the design was most appropriate for this study, to obtain exhaustive and accurate accounts of the effects of captioned television on instruction of learners with HI in Karen Institute for the Deaf in Nairobi, Kenya.

Table 1: Target population

Target Population	Female	Male	Totals
Learners	83	67	150
Teachers	28	23	51
Special Curriculum Developers	0	3	3

TOTAL	111	93	204
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Source: (KTTID, 2007 & KIE, 2006)

The Sampling Techniques and Sample Size

A total of 78 persons were sampled for this study. The sample size was determined based on a reasonable number that would yield statistically viable data rather than level of precision. This number represents 38% of the total number of the population which is adequate to constitute a sample in a study of this nature (Mugenda and Mugenda, 1999). In this study, KTTID was selected as a single unit and was thought to be typical in important respects and second year learners selected as a unit representative that corresponded to key population differences. The teachers, second year learners, institute principal, and KIE curriculum developer were chosen according to a certain specified criteria: female and male. The researcher sought out those respondents with maximum knowledge on captioning.

Sample Size

The sampling grid below summarises the sampling selection. The sample size for the study comprised 78 respondents.

Table 2: Sampling Grid

Type of Respondents	Sub-total %		Number sampled		% of total
	Male	Female	Male	Female	
Gender					
Learners with HI	40.58	59.42	28	41	88.46
Teachers	42.85	57.14	3	4	8.98
Principal				1	1.28
KIE curriculum developer			1		1.28
Total			32	46	100

Research Instruments

The researcher employed questionnaires, interview schedules, and observation checklists to collect data. The researcher used sets of questionnaires, interview schedules, and observation checklists as data collection tools that covered all research questions. Questionnaires were constructed for the learners, teachers and the KIE curriculum developer. An interview schedule was prepared to collect data from the principal and an observation checklist for learners.

Data Analysis

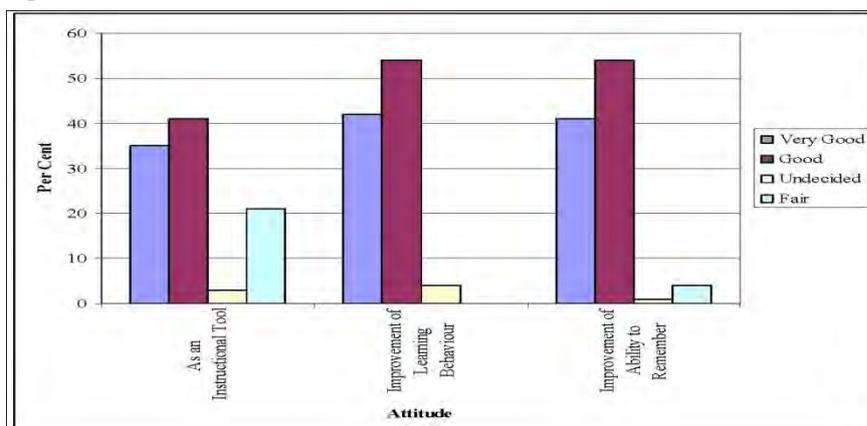
This research yielded data that required both qualitative and quantitative analysis. The data was analysed using SPSS programme which is normally used for such social science studies. The two types of questionnaires (for learners and teachers) yielded quantitative data and open ended responses generated from interview schedules yielded qualitative data. Quantitative data was analysed and tabulated using descriptive statistics such as frequencies, means, standard deviations, percentages and ratios.

RESULTS AND DISCUSSION OF THE FINDINGS

Attitudes of Learners with HI towards Captioning as an Instructional Tool

The study revealed that 35% of the respondents were of the opinion that Captioned technology was very good as an instructional tool, 41% thought it was good, and 21% of the respondents reporting that it was fair as an instructional tool while 3% disapproved the method. In general, over 76% supported the use of captioning in the education of learners with HI.

Figure 3



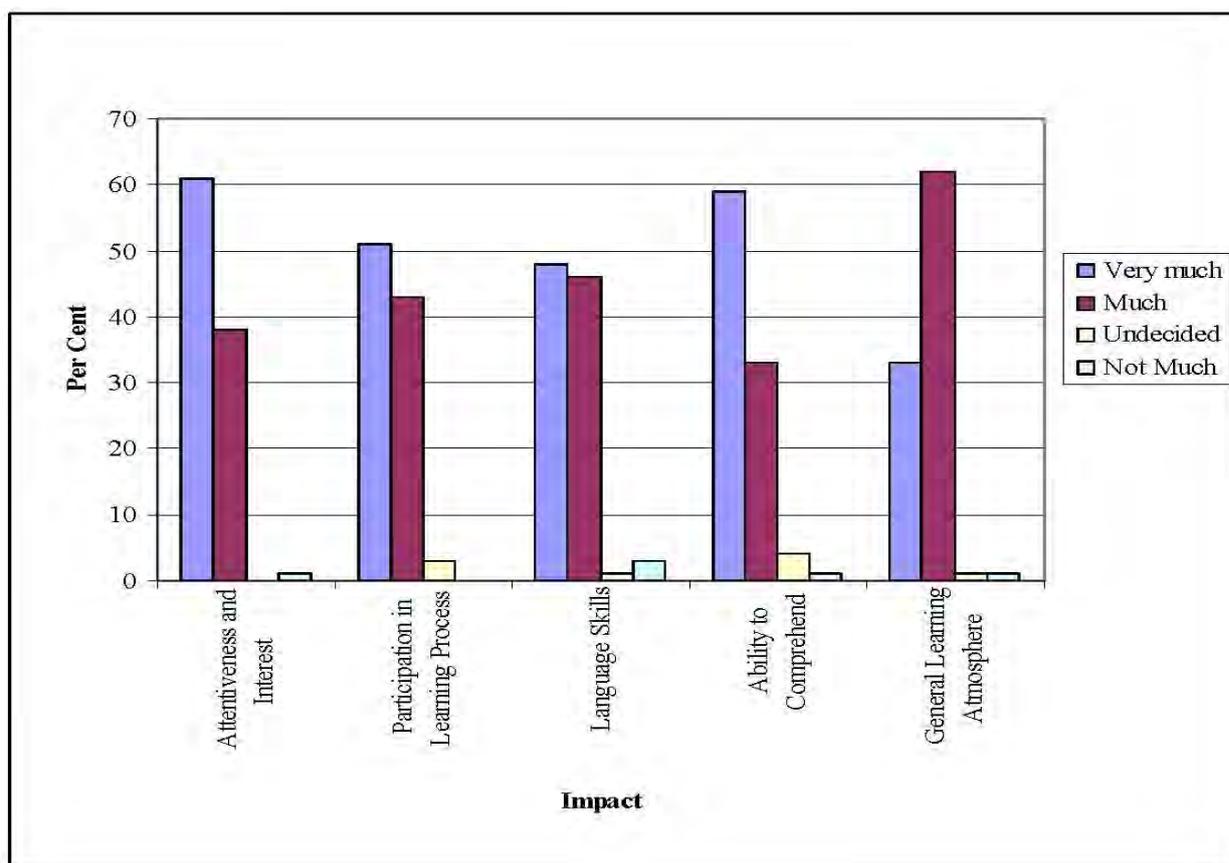
Attitudes of Learners towards Captioning as an Instructional Tool

With regards to improvement of learning behaviour up to 42% reported that Captioning was very good while 54% reported that it was good. Finally, regarding on the improvement on the ability to remember, up to 41% of the respondents reported that captioning was good while 54% reported that it was very good and only 4% reporting that it was fair. Respondents who were undecided on the use of captioning as an instructional tool were 3%, while on improvement of learning behaviour were 4% and those on improvement of ability to remember were 1%, as used to measure the attitudes of learners towards captioning as an instructional tool.

Effects of Captioned Technology in the Education of Learners with HI

With regards to effects of captioning technology in the education of learners with HI, respondents were asked how captioned TV programmes had improved their level of attentiveness and interest. Up to 99% indicated that the programmes had improved their attentiveness and interest either very much or much.

Figure 4.



Effects of Captioned Technology in the Education of Learners with HI

When asked how captioned TV programmes had improved their participation in the learning processes, majority of the students comprising 51% reported very much while 43% reported much with the remaining 3% being undecided. Captioned TV programmes had very much improved language skills in 48% of the respondents as compared to 46% who reported the positive influence to be much. With regards to the respondents' ability to comprehend, most learners indicated they were able to comprehend very much comprising 59% while 33% comprehended much. Finally, the respondents were asked about the effect of captioned TV Programmes on the general learning atmosphere which 33% of the respondents rated as very much while 62% rated it at much.

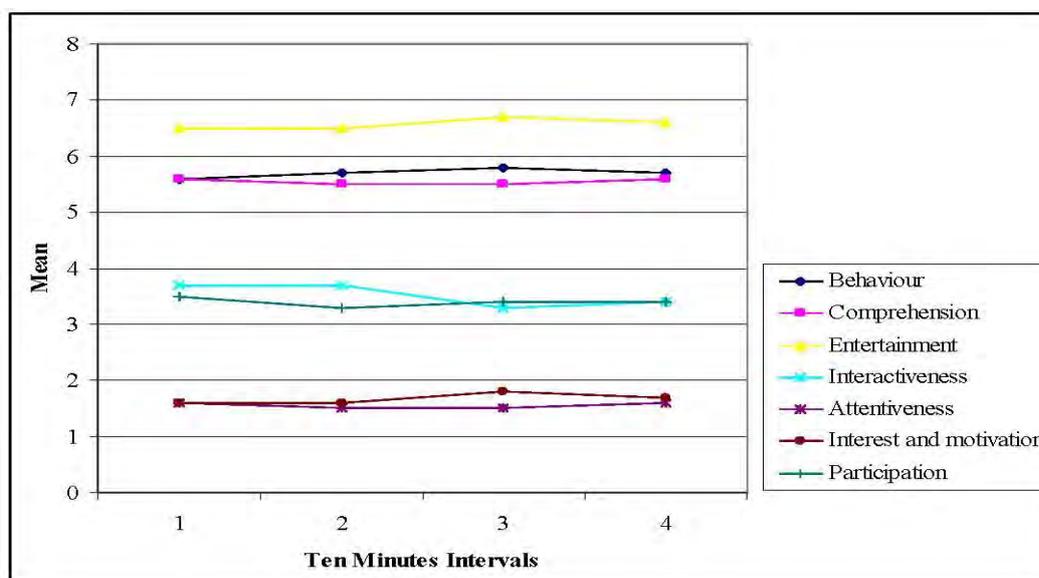
Learners with HI, particularly those deaf from birth, were profoundly hampered in the way they learned. They often did not have ample opportunities to learn normally as compared to other hard of hearing counterparts. As a result, these students often had poor skills, usually

below that of their peers who were hard of hearing. From these results, it was clear that technological advances especially in captioning did much to compensate for the student's hearing and enhanced their learning experience.

Relevance of Captioned TV as an Instructional Tool on teaching Learners with HI

Time intervals of ten minutes were plotted against aggregated mean ranks as observed by the researcher.

Figure 5



Relevance of Captioned TV on teaching Learners with HI

Behaviour of learners such as self regulation and association with characters on the screen improved to the third interval and then declined after the learners became used to the captioned material. Comprehension of the plot or theme of captioned material was more or less constant throughout the session with only a slight variation around an aggregated mean rank of 5.5. Entertainment like jokes and laughter from the captioned material shown to the learners tended to be constant in the first two intervals only to increase in the third interval. The same trend was exhibited by interest and motivation though at a lower aggregated mean rank of about 1.5. This was possibly because the first two quarters were spent trying to understand the captioned material before learners could comprehend and appreciate the jokes or get interested in the subject matter.

On instruction of learners, learners were absorbed in the learning process and relevancy of comments by students were constant for the first two intervals at an aggregated mean of 3.7 but declined in the third and fourth quarters as the learners became more absorbed in the lesson. On the other hand, attentiveness, interest, and motivation were more or less

constant at an aggregated mean of 1.5 showing that this mode of instruction was capable of catching learners' attention over a long period of time. Participation in the learning process through asking relevant, intelligent questions reduced in the first interval intervals to an aggregated mean of 3.3 but remained constant in the third and fourth quarters as the learners became more absorbed in to the learning process.

In general, the findings of this study indicate that the use of captioned TV programmes with learners with HI increased the students' motivation, and resulted in an improvement in their learning behavior, comprehension of the subject matter, entertainment, instructiveness, attentiveness in learning, interest, motivation and participation in the learning process.

Conclusion from the findings

Further results from the study reveal that, captioning of audio-visual material is essential for learners with HI to gain equal access to the curriculum and other elements of learning which supports the wellbeing of all students and the life skills necessary for healthy human development, which is supported by De Villiers and Pomerantz, (1992) that captioning is particularly effective in accelerating language competency for deaf children because it enables them to learn language better and faster.

Findings from the study indicate that, captioned TV programmes had improved learners level of attentiveness and interest in learning very much. Captioned TV programmes had improved their participation in the learning processes particularly those deaf from birth, who often did not have ample opportunities to learn normally like other students. Frazier & Ryan (2005) confirm that, technological advances especially in captioning do much to compensate for the student's hearing and enhance their learning experience.

Recommendations

- i. With the increase of information technology, it is possible to produce captioned material in an accessible way for learners with HI.
- ii. There is need to review the current SE curricula and begin the task of appropriate curriculum development available for learners with HI.
- iii. The GOK should enhance easy access to material required for captioned TV programmes for learners with HI through KIE so that they are readily available for use.
- iv. Supportive infrastructure like electricity and more schools for learners with HI should be put in place to enhance and access learning opportunities.

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SOCIO-ECONOMIC DETERMINANTS OF COHABITATION AMONG KENYATTA UNIVERSITY STUDENTS: TOWARDS NEW DIRECTIONS IN STUDENTS' MENTORSHIP

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Abstract

Studies indicate that about 70 percent of Kenyatta University students were sexually active in 1991. It is believed that there has been a rise in the number of students cohabiting. Cohabitation generally refers to living with a person of the other sex and maintaining a sexual relationship without being legally married. Cohabitation amongst students has been associated with many problems including sexually transmitted diseases and HIV/AIDS, abortions, sexual abuse and violence, low academic performance, increased cost of Medicare and unwanted pregnancies. Very little is understood about cohabitation among university students. This study sought to investigate factors that are associated with the prevalence and practice of cohabitation among Kenyatta university students. The study employed a cross-sectional study design and a stratified random sampling technique to identify 176 respondents. Data was collected using questionnaires, Key Informant Interviews, and Focus Group Discussions. Quantitative data analysis employed both descriptive and inferential statistics using the Statistical Package for Social Sciences (SPSS). Qualitative data was analyzed by means of content analysis. The results showed that there was a prevalence of cohabitation of 27% with 53% of those who had ever cohabited still cohabiting at the time of the study. The Chi-Square results showed that cohabitation was significantly associated parent's or guardian's income $p=0.000$, parents residence $p=0.000$, and peer pressure $p=0.000$. The study concluded that cohabitation exists within the university student's populations at considerably high levels and that this practice is mainly determined by economic forces and peer pressure. It therefore recommended that urgent measures need to be taken to address the problem through effective mechanisms that would incorporate strategies that include strengthening lecturer-student mentorship programs to help tackle economic hardships among the students population. An effective peer to peer approach to discourage the practice should also be used.

Introduction

Cohabitation is living with a person of the opposite sex and maintaining a sexual relationship on a regular basis without being legally married. Anecdotal evidence indicate that, more than half of the 12,000 female students in Kenyan Public Universities cohabit with their

male counterparts in mock-marriage arrangements aimed at sharing costs of living (Siringi and Waihenya, 2000, p. 19). The situation is no better in other countries for example Macklin (1988) found that about four out of five college students in the United States of America (USA) would cohabit if the opportunity arose. According to a report by the Vice-Chancellors' Committee on Causes of University Riots in Kenya, economic hardships have been cited as a reason why students live together and pool resources in order to overcome the economic burden of living on campus. (Standa, 2000).

This paper is based on results of a study that sought to investigate factors that lead to the prevalence and practice of cohabitation by Kenyatta university students in the year 2003. It outlines the implications of cohabitation on student mentoring by lecturers. Mentoring is a sustained "one-to-one relationship between a caring adult and a child who needs support to achieve academic, career, social, or personal goals" (McPartland & Nettles, 1991). Focus is placed on planned mentoring relationships, in which a young person-the "mentee" is matched with a mentor through a structured program with specific objectives and goals in mind (Floyd, 1993).

According to Floyd, (1993) planned mentoring programs can be broken down into three general types. The first type identified is **educational or academic mentoring** which focuses on improving students' overall academic achievement. The second type is **career mentoring which** helps the youth to develop skills needed to enter or continue on a career path. Lastly, **personal development mentoring** supports youth during times of personal or social stress and provides guidance for decision making. Academic, career, and personal development mentoring frequently overlap. However there is a general tendency by most lecturers to overemphasize on career and academic mentorship at the expense of personal development mentoring. There are indications that, the little attention paid to personal development mentorship could be as a result of lack of adequate knowledge on students personal problems. This paper therefore explores the socio economic determinants of cohabitation with a view of providing guidelines for a holistic mentorship of university students by the lecturers.

Statement of the Problem

Studies show that there has been a rise in the levels of cohabitation in Kenyan Universities (Siringi and Waihenya, 2000, p. 19). The increase in the levels of cohabitation has been widely attributed to peer pressure and poor socio-economic status of parents or guardians (Siringi and Waihenya, 2000, p. 19). Kilonzo (1991) reported that 70 percent of Kenyatta University Students were sexually active implying that the levels of cohabitation could be equally high. Available literature indicate that cohabitation has been associated with a

number of problems including sexually transmitted diseases and HIV/AIDS, abortions, sexual abuse and violence, low academic performance, increased cost of Medicare and unwanted pregnancies among University students (Mativu et al, 1995). As a result, many universities have adopted a number of strategies to help address the problem. These strategies include Counseling Services, Co-curricular Activities, Health Services, Chaplaincy, Students welfare, Clubs and Societies, and more recently, mentoring services. Experience shows that the mentoring services have tended to overemphasize on academic and career development at the expense of personal development. (Floyd, 1993). The little attention given to personal development mentoring could be as a result of lack of adequate information relating mentorship and students personal and social problems. Similarly, very little is known on how lecturer mentoring can be used to reduce the incidents of cohabitation by students on campus. This is particularly critical because of the growing number of students and the increase in the incidents of cohabitation among university students (Mwiria et al, 2007). This paper, drawing from findings of the socio economic determinants of cohabitation presents options that can help edify lecturer-student mentorship.

Objectives of the Study

Objectives of the study were to:

1. Establish the prevalence of cohabitation among the university students.
2. Determine university students' attitudes toward cohabitation
3. Identify socio-economic factors influencing the prevalence and practice of cohabitation.
4. Identify the role of lecturer-student mentoring on reducing incidents of cohabitation.

Methodology

A survey design was used. The population of the study included all undergraduate students who resided in the University's halls of residence. The population was stratified into three (3) categories based on the schools. School of Education and Human Resource Development was purposively selected because it was the largest in the university and had a higher representation of females than in the other schools. The sub population was then divided into four (4) more strata on the basis of year of study from these 4 strata, second and fourth years were purposively chosen for the study because second years have had some experience on campus while fourth years are the senior most undergraduates.

Using systematic random sampling, a sample of one hundred and seventy six (176) students was drawn from the list of second and fourth years registered in the school of Education and Human Resource Development. This represented ten percent (10%) of the total number of students in the sub population.

Table 1: Frequency Distribution of Population and Sample.

Year of Study	Population	Sample
Year 2	756	76
Year 4	999	100
Total	1746	176

Source: Students Registry Kenyatta University (2003).

The study used a self-administered questionnaire, interview schedule, focus group discussion and literature review. Face-to-face interviews of about one hour were conducted in order to understand the students' lifestyle and factors that influence cohabitation. Focus group discussions were also used in the study. The quantitative and qualitative data obtained from the study were coded in a standard format and entered into a computer sheet. This was done to allow for the generation of frequencies and percentages to establish the trends and nature of issues under investigation. The analysis of quantitative data generated for the study was done with the use of Statistical Package for Social Sciences (SPSS). The significance of the relationship between variables was established by use of chi-square test of significance and Contingency coefficient was used to establish the extent of association between the variables. Content analysis was used for qualitative data obtained from in depth interview.

Results and Discussion

This section presents the results of the socio-economic determinants of cohabitation and its implications on students' mentorship. Specifically, it presents the prevalence of cohabitation, attitudes towards cohabitation, socio - economic determinants and the role of lecturer-student mentoring on reducing incidents of cohabitation

Prevalence of Cohabitation.

The results indicated that 27.4 percent had cohabited before while 72.6 percent had not cohabited at all.

Table 2: Prevalence of Cohabitation

Status	Frequency	Percent
Ever cohabited	45	27.4
Never cohabited	119	72.6
Total	164	100.0

Further analysis to determine the proportion of those who had ever cohabited and were still doing so at the time of the study indicated that more than half (53.3 percent) of those who indicated ever having cohabited before were still cohabiting. The results also showed that 46.7 percent of cohabitation relationships within the university lasted for a shorter period of time. This trend is worrying as the students are more likely to move from one sexual partner to another. This puts them at risk of contracting *HIV AIDS, STI's, unwanted pregnancies, abortion, dropping out of University and poor performance in their studies* (Kilonzo, 1991). This therefore highlights the need for proper mentorship.

Table 3: Proportion of Respondents Still Cohabiting

Status	Frequency	Percentage
Still cohabiting	24	53.3
No longer cohabiting	21	46.7
Total	45	100.0

Attitudes toward Cohabitation.

The students' attitudes toward selected elements of cohabitation were assessed using a 5-point likert scale. When rated, the Respondents' Attitude towards Cohabitation showed that, majority of the students (46 %) had a negative attitude towards cohabitation meaning they were less likely to cohabit. Thirty four percent of the respondents were neutral while twenty percent of the respondents had a positive attitude towards cohabitation. The results thus indicate that there is a pool of students who can be used as peer mentors with regard to cohabitation. This would be particularly important in holding back the nearly one third of the students who had a neutral view towards cohabitation from engaging in cohabitation. It is also probable that with an effective peer approach, the number of those already cohabiting could be reduced including cases of serial cohabitation.

Table 4: Rating of Attitude towards Cohabitation

Attitude	Frequency	Percentage
Positive Attitude	31	19.7
Neutral	53	33.8
Negative Attitude	73	46.5
Total	157	100.0

Parents'/Guardians' Income and Cohabitation

The largest proportion of those who had not cohabited before was registered among those whose parents/guardians **were high income earners**. A chi-square test of significance indicated that there is a significant relationship between parents/guardians average monthly income and cohabitation at 0.05 level of significance. This is related to previous findings in this study, which show that low socio-economic status of parents is a very strong determinant of cohabitation. Studies have also shown that as much as students' cohabiting in University halls of residence is contrary to University rules and regulations, one of the reasons for students engaging in this habit could be to reduce living expenses, amongst the students (Mwinzi, 2002).

Parents' Residence and Cohabitation

Students whose parents had been living in the rural areas for at least 2 years before the study had the largest frequency of those cohabiting than those whose parents had been living in urban areas. The chi-square test of significance indicated that there was a significant relationship between cohabitation and parents' residence. This has significant implications for mentorship as the lecturers should find out more about the students background in order to identify those more at risk of cohabitation.

Table 5: Chi-square Results Showing Relationship between Cohabitation and Parents' Residence

Residence	Cohabited before		Total
	Yes	No	
Urban area	5 3.0%	47 28.7%	52 31.7%
Rural area	40 24.4%	72 43.9%	112 68.3%
Total	45 27.4%	119 72.6%	164 100.0%

Contingency Coefficient=0.26; $X^2 = 12.15$ $df=1$; $p=0.000$ $n=164$

Results from the focus group discussions showed that students who attended religious services regularly were less likely to cohabit. The largest proportion of cohabiters was recorded among Protestants category followed by Catholics.

Peer Pressure and Cohabitation.

The results showed that all students who indicated that their friends were not cohabiting were also not cohabiting (**72.6%**). The chi-square test of significance indicated that there

was a significant relationship between cohabitation and peer pressure. This therefore shows that cohabitation is largely a peer pressure phenomenon. As indicated earlier it is probable that a strong peer to peer mentorship alongside lecturer-student mentorship can significantly reduce cases of cohabitation.

Table 6: Chi-square Results Showing Relationship between Cohabitation and Peer Pressure

Friends who are cohabiting	Cohabited before		Total
	Yes	No	
Cohabiting	45 27.4%	86 52.4%	131 79.9%
Not cohabiting	00 0%	33 20.1%	33 20.1%
Total	45 27.4%	119 72.6%	164 100.0%

Contingency Coefficient=0.30; $X^2 = 15.6$; $df=1$; $p=0.000$; $n=164$

The results also showed that more females were negatively affected academically by cohabitation more than their male counterparts. On enquiring further the respondents said it was because the female students remained behind in the hostels washing clothes and cooking for their boyfriends, who never missed their lectures. The results further indicated a break-up rate of 47 percent among the couples cohabiting in the university.

The results of the study showed that socio - economic factors including occupation, income and residence of parents or guardians were among the significant factors influencing cohabitation alongside peer pressure.

Other factors and cohabitation

Gender and Cohabitation

The results presented below indicated that more male students (25) engaged in cohabitation than female students (20).

Table 7: Chi-square Results Showing Relationship between Gender and Cohabitation

Sex	Cohabited before		Total
	Yes	No	

Male	25	61	86
	15.2%	37.2%	52.4%
Females	20	58	78
	12.2%	35.4%	47.6%
Total	45	119	164
	27.4%	72.6%	100.0%

Contingency Coefficient= 0.038; $\chi^2 = 0.242$; df=1; p=0.623; n=164

A chi-square test of significance yielded a value of 0.242 (df=1, p=0.623, n=164), which was not significant at 0.05 level of significance. This therefore indicates that variations in cohabitation did not depend on sex. However, the general trend where males tended to cohabit more than females has significant implications for mentorship. In most cases, it is the males who are socialized to be the final decision makers in matters of sex. This therefore implies that cases of cohabitation if not checked could rise beyond the current levels. The in-depth interview indicated that the partners for cohabitation are usually fellow students bringing an almost equal representation for both sexes. There was also a tendency for the males to bring in partners from other middle level colleges.

Age and cohabitation

The results also showed that cohabitation was almost **evenly spread out** across the different ages though there were more fourth years that were more likely to have cohabited than second years.

REDUCING INCIDENTS OF COHABITATION THROUGH LECTURER-STUDENT MENTORSHIP

Students face barriers to academic and social success for many different reasons throughout the course of their education. One of the challenges facing University students is cohabitation. It is believed that cases of cohabitation in the universities are on the rise mainly as a result of higher education reforms mounted in the 1990's (Njonjo, 2000). Due to the increase in fees, pay –as- you- eat, accommodation costs and general upkeep expenses the rates of cohabitation are likely to go higher. One strategy that can be used to address the issue is lecturer - student mentoring. This provides support as students navigate new and ever more challenging circumstances including cohabitation. This strategy is relatively low in cost to implement when compared to other school improvement efforts.

The results of the study showed that economic factors including occupation, income and residence of parents or guardians were among the significant factors influencing

cohabitation alongside peer pressure. This clearly indicates that for mentoring to be effective, the lecturer mentor needs to establish the background of the student carefully. This will enable them to address some of the parent related factors that put them at risk of cohabiting.

1. Students from low socio - economic backgrounds need to be encouraged to come up with innovative ways of generating income for their upkeep. They should also be assisted to reach a balance between the business and academics. The mentor can link them to the youth and women funds, scholarships and work study program within and outside the University.
2. Results showed that students from rural backgrounds were more likely to cohabit. This may have been because of the variations in the socio-economic status between the urban and rural areas. The socio-economic status in urban areas is expected to be higher than in rural areas. The level of enlightenment in urban areas is usually higher than in rural areas. According to employment structure in Kenya, the urban setting is usually expected to have more high-income earners than in the rural setting. These students need to be gradually inducted into the urban life and University life specifically by the mentors.
3. Young adults are known to emulate the behavior of their peers. The results showed that students who had friends who were cohabiting were more likely to cohabit than those who did not. Peer pressure is therefore a contributing factor to cohabitation. Students need to be encouraged to keep good friends, be independent, and have good decision making skills. Student role models should also be identified in order for the others to emulate them. The mentors should work with peer counselors in order for the students to have a reference on which they can model their behavior. Since peers tend to emulate each other, the presence of good student role models will help reduce cohabitation. The peer counselors will encourage them and hold them accountable for going to class and getting their work done. The lecturers can spear head the peer group activities.
4. The mentors need to pair students with professionals who can familiarize them with the world of work, so that they are confident, independent, focused and are not easily lured into cohabiting.
5. It is important for the mentors to include students of all ages and from all segments of the student population. Cohabitation cuts across all segments of the student population and mentoring should address all of them.
6. The students should get mentors immediately they report to the University. This will help them (especially students from rural areas) to have somebody to identify with and to help them adapt to the new environment.

7. Religion impacts negatively on cohabitation. Religious teachings stress on the importance of sex and children within marriage, the sanctity of life and high moral standards. Cohabitation is stressed as a vice not acceptable before God which helps to deter the practice of cohabitation by students. The mentors need to encourage their protégés to establish strong religious ties and encourage students to attend these services. This will help instill the respective religious values on sexuality and marriage thus reducing their likelihood of cohabitation and strengthen friendships with non cohabiting peers.

Conclusion

Although mentoring is often considered to be primarily for students with low grades and limited opportunities, it is also useful for gifted and mainstream students as well, providing them with opportunities to develop communication skills, and practice decision-making at the University.

The decrease in adult involvement in children's lives has been linked to numerous consequences for youth, from low achievement or grades, to lowered career aspirations, to truancy and crime (Freedman, 1993; Smink, 1990). The mentoring program can help to strengthen students' chances for success by providing them with greater access to caring adults and the wealth of resources those adults possess.

Mentoring programs foster improved academic performance, improve student self esteem, behavior, and decision-making ability; reducing high risk behaviors such as gang involvement, premature sexual activity, criminal activity, and drug and alcohol abuse; and introduce students to social, cultural, and recreational activities they may not previously have experienced.

Mentoring can also help the lecturer to form Friendships with young people, and is also an opportunity to enhance personal strengths and develop new skills.

The actual role of the lecturer mentor is one of nurturing and providing support for a student during their life at campus. The mentor must also serve as a resource who will answer many questions, trivial or complex, that the student might pose. Most important, the mentor must serve as a positive role model, teacher, encourager, counselor, and friend to the students with the end goal of promoting the latter's professional and personal development. Each of these functions must be carried out within a context of a continuing, caring relationship between the mentor and protégé (Kartje, 1996).

However, while mentoring has been shown to have numerous positive impacts for students, and mentors, it is important to remember that mentoring is not a “fix -it-all” strategy. Mentoring alone cannot remedy all of the social – economic and environmental factors which contribute to poor student attendance, performance, self esteem, and behavior (Smink, 1990).

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LEARNERS' MISCONCEPTIONS IN SCIENCE THEIR IMPLICATIONS FOR CLASSROOM PRACTICE

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Abstract

The paper reports the findings of a research on children's misconceptions in science as applied to the methods of food preservation, both traditional and modern. Information about children's misconceptions in science were sought through a written survey using a representative sample of 988 children drawn from three different districts of Kenya; one urban and two rural. In addition, misconceptions in science were obtained through individual interviews with a sub-sample of 127 children. The children were selected from school years 5 and 8 in primary, and 10 and 12 in secondary schools in Kenya, who were at the average age of 11, 14/15, 16 and 18/19 year respectively. In both the survey tests and interviews, children were required to make predictions and give explanations of phenomena presented.

The study found that many children still hang onto their naïve conceptions despite being taught formal science. In most cases they kept naïve science knowledge alongside formal science, even when the two appeared contradictory. It was also found that children tend to use naïve science in solving everyday problems, and 'keep' formal school science for formal school science problems. Finally, educational implications of the findings are discussed and suggestions made for teaching methods.

Introduction

This paper sites part of a research carried out by the author in Kenya to find out the children's conceptions and understanding in some aspects of science. Research shows that children hold ideas and beliefs most of which are incorrect science, therefore referred to as misconceptions. They use these ideas to explain every scientific phenomenon they experience in their everyday life. The main question is: does the science they learn in school effectively replace the naïve science they bring to our classrooms?

To find out answers to this question, this study used the area of science the learners are familiar with and they apply it in their everyday life. The study used the science of food storage and preservation. The experience in this area is very familiar in every home in Africa, both in rural and urban homes. The science of food storage and preservation is taught in both primary and secondary schools in Kenya. Traditional and modern food storage and preservation methods is one of the topics taught in primary school science and secondary school biology in Kenya. Children are familiar with food such as meat, fish, milk and grains going bad in their homes if not well treated and preserved. Their parents involve them in the food storage and preservation practices such as boiling milk, drying fish and salting meat.

Children have traditional/cultural explanations for some of these phenomena. The main question is does the school science they learn regarding decomposition, food storage and preservation enable them develop acceptable science cognitive conceptions? This paper highlights some of the findings with regard to food preservation and storage. It finally discussed the implications for science teaching.

Method

Two instruments were used: questionnaire and interview schedule. Questionnaires were administered to 998 students at four school levels. A sub-sample of 127 were interviewed. The sample size was as shown in tables 1 and 2 respectively.

Table 1. Distribution of survey test sample children according to level of schooling, gender and age.

Year of schooling	Mean age in years	District			Total
		Nairobi	Bungoma		Kakamega
5	12	112	54	43	209
8	15	79	53	67	199
10	16	96	105	91	292
12	19	111	88	89	288
Total		398	300	290	988

The sample was distributed in three districts: Nairobi, Bungoma and Kakamega. A sub-sample of 127 students were interviewed to get details and clear conceptions. Their distribution is as shown in table 2.

Table 2. Distribution of interview children by year of schooling, age and district.

Year of schooling	Mean age in years	District			Total
		Nairobi	Bungoma		Kakamega
5	12	12	9	13	34
8	15	13	13	10	36
10	16	11	7	8	26
12	19	9	14	8	31
Total		45	43	39	127

A large sample of children (988) drawn from a wide variety of backgrounds was used. The sample was drawn from urban and rural areas and all categories of schools. The urban children were drawn from high, middle and low class areas of the city. The rural children were chosen from the regions with high population density; moderate population density; mixed, medium to large scale farming and subsistence farming. Therefore the sample is a fair representation of Kenyan children which permits generalizations of the findings of the study. The paper and pencil survey was in English, but the interviews were conducted in English, Kiswahili or vernacular, whichever language the learner felt most comfortable in.

The probes.

The eliciting probes were set in children’s everyday life experiences, away from formal school science setting. The following probes were used to elicit children’s ideas on food preservation.

1. Nekesa noticed that fresh meat kept in the kitchen food store is not fit to eat after a few days.
 - a) What has happened to the meat?
 - b) What causes the meat to change like this?

2. Nekesa again noticed that fish or meat is fit to eat for longer time if kept in the refrigerator than if kept under ordinary conditions in the kitchen.

What do you think are the reasons for this?

3. Nanjekho told Nafula, Nekesa and Akinyi that fresh meat is kept fit to eat for much longer if it is salted. How does salting make meat keep for long?

4. (a) Why is it that milk which has been boiled keeps fresh longer than that which has not been boiled?

- b) i. Besides refrigeration and boiling, describe any other method of keeping milk longer.
 - ii. How does the method you have described help keep milk longer?
5. In Akinyi's home there is no refrigerator. They always smoke and dry fish or meat so that it is fit to eat even if kept for several months.
- (c) How does smoking make fish or meat keep for long
 - (d) How does drying make fish or meat keep for long?
6. Kamau said that if harvested maize is store before it is dry, it will get spoiled more quickly.
- How does drying make stored maize keep longer?

Findings and discussion

In reporting the findings some students' transcribed responses are quoted. The identity of the student is given in the following format: 863.G.12.5. This is child serial number 863, a girl, 12 years old and is in 5th year of schooling. On the other hand 946.B.19.12 refers to child serial number 946, a boy, 19 years old and is in 12th year of schooling.

R = Researcher

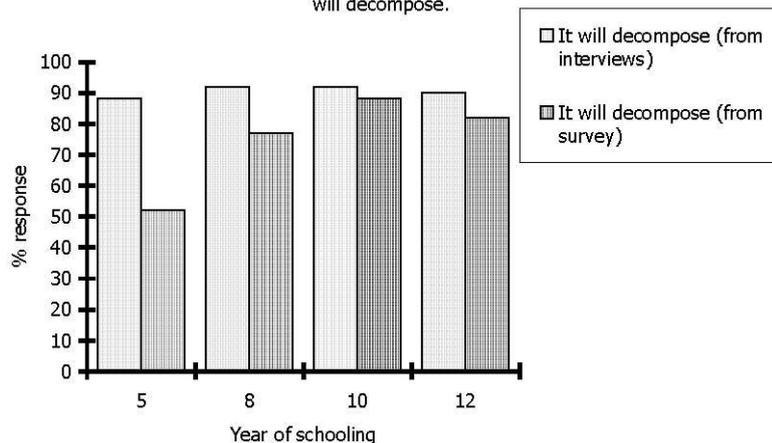
S = Student.

The discussion of children's ideas on food preservation is presented, according to the method of food preservation.

Probe 1: Fresh meat left in the kitchen store for some days.

Most children said the meat will decompose (Fig. 1).

Fig. 1 Proportion of children at different school levels who said themeat will decompose.

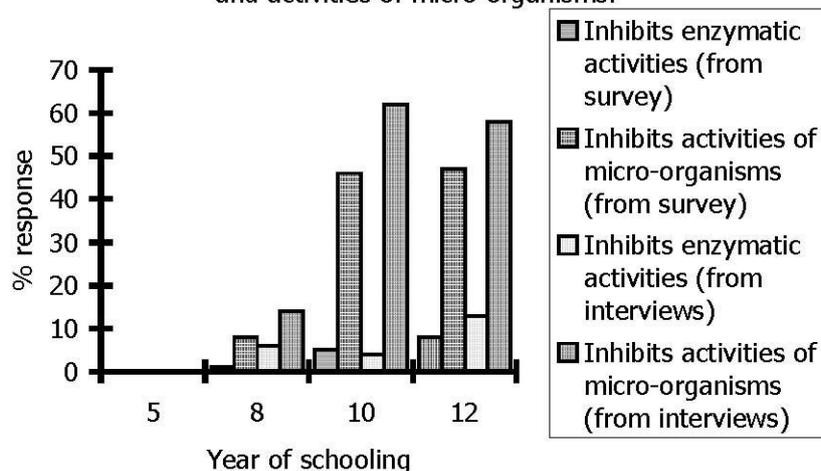


Most of the children at all school levels know that the meat will decompose after some days. This is common every day experience which every child is aware of.

Probe 2: Refrigeration.

The refrigerator preserves food by mainly inhibiting physiological activities of enzymes and micro-organisms. The proportion of children who held these views are as shown in Fig. 2.

Fig. 2 % who said the fridge inhibits enzymatic activities and activities of micro-organisms.



The results of the Refrigeration probe showed that the majority of children in lower levels of schooling were aware that a refrigerator keeps food fresh for some time. But they had not constructed a model to explain this phenomenon. The farthest some went was to explain that because the refrigerator keeps food cold, it is the coldness that preserves food, but they did not appear to be aware of the underlying reasons. As they progressed through school, more children replaced this naive conception with a more scientific explanation involving micro-organisms.

1. Children unfamiliar with refrigeration.

From the responses, it appears that some children were not aware of what a refrigerator is and how it works. Refrigerators are owned by a relatively small percentage of the Kenyan population, most of whom are concentrated in large urban centres. Refrigerators that use other forms of energy such as paraffin are rare in the country. Refrigerators are not a basic necessity in Kenya, particularly in rural areas, because nearly every family has one or more cows from which they get fresh milk every morning and evening. So there is no real pressing need to keep milk fresh for more than one day. Fresh meats, vegetables and fruits are easily available in the villages.

It seems some of the incorrect responses given by children originated with their teachers. The following transcript with child 863.G.12.5 tends to support this.

R Why is it that if you keep meat in a refrigerator it does not get spoiled quickly?

S Because the ice in the refrigerator is cold so if you put meat in the refrigerator water will come from the ice and pours on the meat removing dirt

R What type of dirt is it?

S Such as blood

R Who told you water pours in the refrigerator?

S The teacher taught us so. It was difficult to ascertain whether the teacher really taught them that way. Several other children gave similar responses. It is possible since some primary school teachers are untrained and grew up in rural areas themselves and thus have never seen or used a refrigerator and do not know how it works to preserve food. Even some secondary school children who had been taught about food storage did not appear to know how a refrigerator works as exemplified by an extract of an interview with student 093.G.18.12.

R I wonder how a refrigerator keeps food fresh for a long time.

S Eh, what, I think it is because of, OK, it will be frozen and meat can stay fresh for as long as you like, because of the temperature, thus, *yaani* (because), ahmm, the temperature is the one that will keep it the same because, it wouldn't be at heat, then kind of expands and contracts, or will just be frozen intact, and it wouldn't allow any of these, hmm, these worms, it wouldn't allow any outside parasite but it will be frozen.

2. Refrigerator does not allow micro-organisms to be formed.

Some children thought refrigeration does not facilitate the formation of micro-organisms. For example, *“The reason for this is that bacteria which makes the meat to spoil is not formed, i.e. the meat lacks decaying bacteria. Low temperature prevents the formation of bacteria”*. (946.B.19.12). The boy thinks the meat lacks decaying bacteria because they have not been formed due to low temperature in the refrigerator. Student 620.B.14.5 held a similar idea on how a refrigerator keeps food fresh as the following part of interview transcript shows.

R Why is it that meat kept in a refrigerator does not get spoiled quickly?

S Because it makes the meat cold.

R Why is it that cold meat does not go bad quickly?

S Because maggots cannot develop in it.

R Why not, I wonder?

S Because it is cold.

3. Refrigerator kills micro-organisms

Some children thought the refrigerator preserves food by killing micro-organisms. The refrigerator does not kill micro-organisms. In low temperature their activities are drastically reduced, but when the temperature becomes favourable, they become active again. Such children may be operating from everyday knowledge, that if organisms such as humans are subjected to low temperatures for a long time they will die. From school science knowledge they should be aware that there are some organisms which change their behaviour patterns when environmental conditions such as temperature become adverse, and micro-organisms are among such organisms. In such low temperatures they become less active. It is interesting to note that over 20% of secondary school children who had learnt the biology of micro-organisms, and their role in food storage believed that a refrigerator preserves food by killing the micro-organisms as the transcript of student 205.G.16.10 stated:

“...the micro-organisms which might cause the meet to rot cannot survive in the refrigerator because the micro-organisms cannot withstand the cold and so they are killed by the cold” (31% of year 10 students said this).

4. Barrier to the entry of organisms.

A small percentage of children at all school levels thought that a refrigerator preserves food by barring flies and other insects: *“A refrigerator is cool and free from insects and this helps the meet to remain fresh”* (205.G.16.10). Such children were applying everyday science

knowledge in which it is believed that it is flies which, when they land on food make it go bad. Cut off the flies and the food will remain fresh.

Probe 3: Boiling milk.

Boiling preserves milk by killing micro-organism present in the milk. Children gave various responses to this probe. Some children, especially young ones thought that boiling drives out germs from the milk as the following transcript with student 399.B.13.5 illustrates.

R Why is it that boiled milk cannot go bad quickly?

S Because if it has just come from the cow and you boil, the germs will escape.

R Will escape to where?

S When you are boiling it, the germs will go up.

R Can we see the germs going up?

S No.

R Why Not?

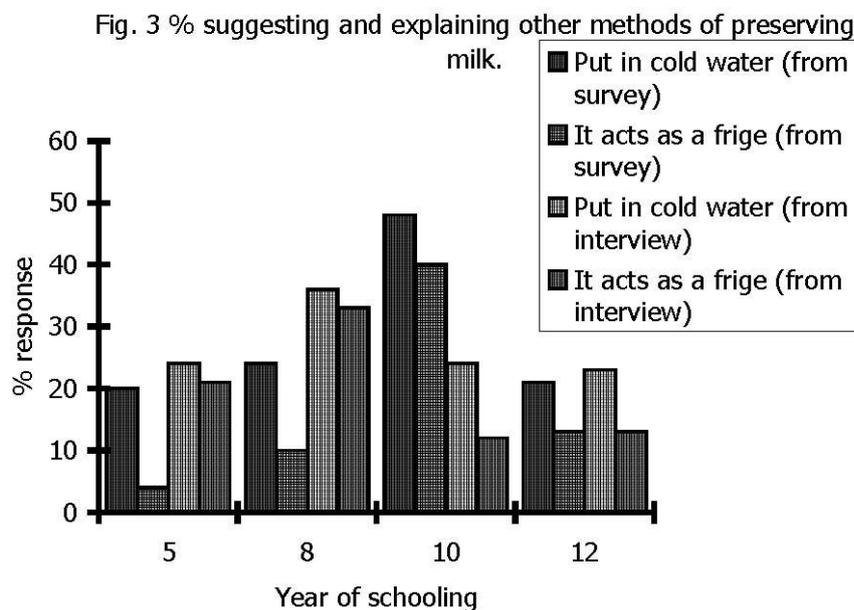
S It will be going up in the form of smoke.

By saying 'smoke' the child was probably referring to steam that comes off when boiling liquids such as water and milk. Since there is no specific term for steam in vernacular, the general term smoke is commonly applied widely to include steam. This could be because most rural homes use firewood for cooking and warming houses. The firewood generally gives off a lot of smoke which mixes with the steam coming off from whatever is being boiled or heated. Since children have been told by parents and teachers that milk should be boiled **to remove germs** which might otherwise make them sick, they appear to have intuitively constructed their own idea that the germs must be escaping in the steam which they refer to as smoke. This naive view is cultivated by the folklore and myths. For instance, in the tropics, often on a very hot day, it may rain briefly and then stop. After the rains, on a relatively calm day, steam can be seen coming from rocks or bare ground such as roads. The traditional explanation is that the dead or ghosts (*bimakombe*) are cooking, and what is being seen is smoke from their cooking. In traditional African culture the dead are not gone forever, they are always around. They see us but we cannot see them, although occasionally, if one is unlucky, a person can see them, which is a bad omen.

Some children thought that viruses are involved in the spoilage of milk as student 789.G.16.10 explained "... is boiled, the viruses that make it go bad quickly are destroyed".

Other suggested methods of preserving milk.

When children were asked to suggest other methods of preserving milk besides refrigeration and boiling, the most common suggestion was putting the milk in cold water (Fig. 3)



1. Cold water.

Many children at all school levels suggested the milk can be preserved by putting in cold water. This is because this is a method widely used in those homes in Kenya where there are no refrigerators, and so the children appear to be most familiar with it. It is part of their everyday lives. However, in such everyday practices, the reasons underlying the activity are not commonly talked about. So younger children use their own intuition to suggest that cold water acts as a refrigerator. Meanwhile the older secondary school children use both everyday science and formal science to suggest a range of alternatives and explain them.

Although many children suggested the use of cold water as an alternative method of keeping milk fresh, they had varied explanations as to how cold water facilitates this. For example:

- “... cold water will be acting as a germ destroyer.” (157.G.19.12)
- “By keeping it (milk) in a bucket of water, i.e. it should be deeply immersed in water. Because when the bacteria enters they will not find its way to reach the milk so they’ll just float on water.” (232.G.19.12).

- *“Milk can be kept longer if it is kept in a cool wet place, i.e. in water. This makes the milk to remain in the same state as when in the animal”* [meaning the cow]. (256.B.20.12).
- *“Putting the milk in cold water prevents bacteria because they fear cold places”*. (284.B.19.12).

Some children appeared to hold and use some science knowledge without understanding it. For instance, in an interview with student 215.G.14.10, when she was asked to suggest any other method of keeping milk longer, she said:

S Put it in cold water and cover on the top with a muslin cloth.

R Why?

S This is another method of keeping milk fresh for long.

R Why should you put it in cold water?

S We were just taught that way.

Thus this student appeared to have no idea why the milk should be put in cold water and was unwilling to think beyond the action.

It is worth noting that whereas most year 5 and 8 children suggested putting the milk in cold water as the only alternative to refrigeration, secondary school children suggested other options such as pasteurisation, making milk powder and skimmed milk.

2. Pasteurisation.

It is interesting to note that although some children suggested pasteurisation as another method of preserving milk, they appeared to attach different meanings to the process from that accepted by scientists as the following quotations illustrate:

- *“Pasteurisation - milk is treated with antibiotics and so it can stay longer”*. (184.B.19.12).
- *“Pasteurisation; milk is removed the cream and chemicals are added so that it stays longer”*. (186.B.19.12).
- *“Pasteurisation. The milk is kept in powder form and so no bacteria can exist in that type of milk”*. (308.B.19.12).
- *“Pasteurisation. A chemical is inserted and kills bacteria”*. (476.B.15.10).

3. Powder milk.

Preserving milk in powder form is another method suggested by children. But their reason for converting it into powder form differs from accepted science, as the following example illustrates: *“Processing it to powder milk. If milk is converted into powder form, there is no likelihood that the bacteria can infect because already the milk particles are strongly held together such that it can’t allow any foreign body.”* (248.B.19.12). This reveals the children’s confused understanding of a scientific principle that in solids the molecules are more strongly held together than in liquids. Such children did not appear to be aware that bacteria need water to be active and that is why milk powder can last longer than liquid milk.

4. Traditional methods.

Some children suggested traditional methods of keeping milk longer as illustrated by the following example: *“By traditional method of keeping in a guard [gourd]. By guard one pours in it and look for a certain plant called “kumwimbi” [a certain herb], burns it, crash it with a cooking stick until is like flour, then you pour [milk] in the gourd and close it with a lid”.* (211.G.16.10). This is a prevalent method in some communities of Kenya. As was mostly the case, this student did not attempt to explain how the method preserves milk. Explanations were seldom given, and some of those attempted to penetrate the scientific basis of the method. The glowing splint of the herb crushed in the gourd will kill any micro-organisms present.

5. Using a Sieve.

Another method suggested by children for preserving milk is using a sieve as student 790.G.19.10 explained: *“Sieving. Sieving helps as one is able to see milk is in good condition by removing any impurities that may have entered the milk”.* The student referred to the use of a fine sieve which the government public health inspectors instruct farmers to use after milking the cows. This was meant to remove objects such as hair and ticks from the milk. Children appeared to think the sieve would remove micro-organisms as well. Indeed student 807.G.16.10 showed that this was in fact the case when she suggested *“Sieving or filtering. It will remove the bacteria that may have dropped in milk which can make milk decompose”.* Such children may not be aware that bacteria would go through a sieve or an ordinary filter, perhaps not conceptualising the relative sizes of the bacteria and the mesh of the sieve.

Student 800.G.17.10 said *“Another method of keeping milk for a long period is by tying a clean table cloth at the top of sufuria [a cooking pot] or any container having milk”.* Again the public health inspectors, in order to reduce communicable diseases in the country go

round villages educating farmers that after milking, the milk should not be left exposed as flies may land on it and infect the milk with germs. This may cause diseases such as diarrhoea. Consequently, they are advised to cover milk containers with clean piece of cloth because normally the cooking pots do not have lids. It would appear that the children, through their own intuition, believe that such a table cloth is meant to protect the milk against the microbes. They appeared to be unaware that a clean table cloth does not mean it is sterile, and therefore may still harbour microbes. An interview with student 304.B.18.12 illustrates this:

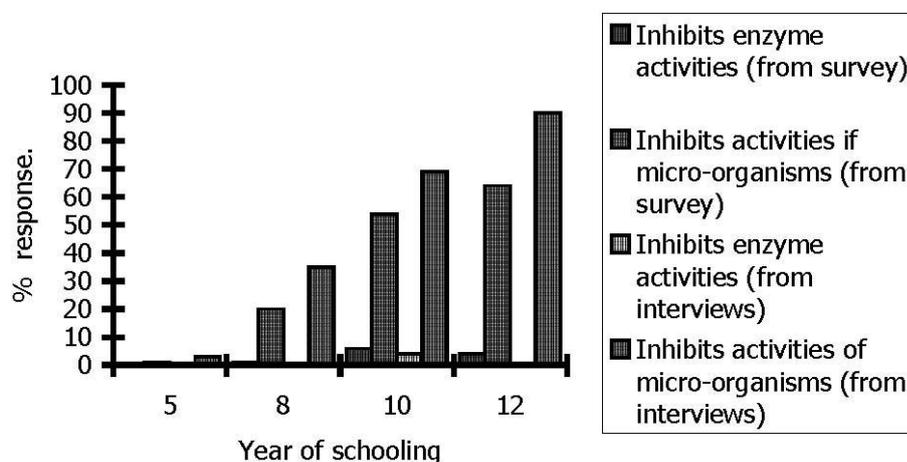
R Is there any other method of keeping milk fresh that you can think of?

S You keep it in cool places. And also you can cover it with, ahh, a clean cloth to prevent bacteria from entering.

Probe 4: Smoking and drying.

Micro-organisms can only carry out their physiological activities in moist environment. Enzymatic activities take place in a moist environment. The children who held these views are as shown in Fig.4.

Fig. 4 % explaining how smoking and drying preserves meat or fish.



The findings of this study show that the physiological explanation of the scientific reasons underlying smoking and drying as a method of preserving food are not in the domain of everyday science. They are a preserve of formal school science, and the children learn them as they progress through school.

Children displayed various naive concepts on this probe as the following examples illustrate: “... the smoke removes the carbon dioxide on the fish which the micro-organisms require for Anaerobic respiration” (178.B.18.12). Two naive conceptions were revealed here. First, the

children seemed to think that micro-organisms use oxygen for aerobic respiration and use carbon dioxide for anaerobic respiration. Secondly, they believed that smoke takes away carbon dioxide, when the converse could be the case.

Some children at all school levels seem to hold the view that the cells in fresh meat or fish are still alive as explained by student 208.G.16.10 *“When smoking you will be killing all the living cells in the fish or meat...”* Similarly student 909.B.?.12 believed *“On drying the cells in fish or meat are destroyed by high temperature. Once the cells dies the meat can stay for a long time.* Student 216.G.17.10 explained that *“Smoking can be done on fire where all the liquid in meat is removed keeping it dry. As there are different bacteria, harmful and useful. Harmful bacteria are lost and the useful are left which do not allow food to rot”.* Such children’s idea of useful and harmful bacteria appeared confused. They believed that the useful bacteria do not allow food to rot.

Some children thought that once the meat is dry, bacteria can never get to it at all. This point can be illustrated by the transcript of an interview with student 502.B.16.10:

R I wonder why dried fish doesn’t get spoiled quickly?

S Amm, is think it I because, bacteria live in damp places and a place where it is damp, there is some water, but when you dry the fish you remove all the water in it, so bacteria can’t, can’t be there when the fish is dry.

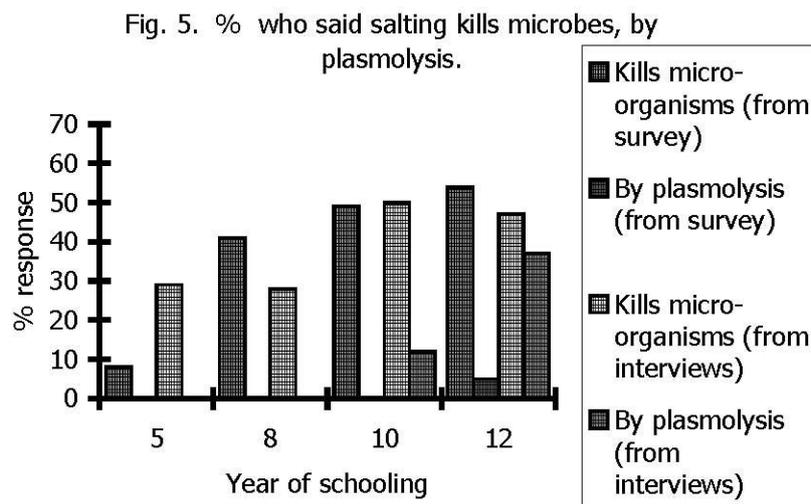
R Why can’t they be there?

S OK, bacteria, they live in damp places. So if there is no water there is no way they can come.

He did not appear to be aware that bacteria will still land on the dried meat, but not being able to carry out their physiological activities without water. However, his meaning is not crystal clear - he may be closer to understanding the role of water in the life of bacteria than the words he chose convey.

Probe 5: Salting.

Salting preserves meat of fish by killing micro-organisms by plasmolysis. The children who held this view are as shown in Fig.5.



Some children believed that salt dries the meat as exemplified by student (171.B.20.12): *“Because salt absorbs water so when salt is sprinkled on the meat it will absorb the water in meat and the meat will be dry.”* Many year 5 children understood that salted meat cannot rot but they lacked the knowledge of the underlying reason for this. At this level they mainly rely on everyday science knowledge to explain their answer. In everyday life, the scientific explanation of how salt helps to preserve meat is not given, perhaps it is not needed to make sense of the world. Children are only told to put salt on the meat so that it does not rot, and they are satisfied with the explanation. On the other hand, year 10 and 12 children had experienced more formal science allowing them to give more sophisticated physiological explanations.

Children had many naive ideas to explain how salt preserves meat as the following quotes illustrate.

- *“Salt will act like a shield coz micro-organisms are allergic to salt. They won’t have the chance to decay”.* (161.B.20.12).
- *“Salting makes meat keep for long because the salt ... causes a kind of corrosive activity to the bacterial’s making their activities reduced...”* (178.B.18.12).
- *“Salting will tend to neutralise the toxins produced by the bacteria, leading them useless”.* (188.G.19.12).
- *“Salt ... prevents the activities of viruses ... which are capable for meat decaying”.* (255.B.19.12).
- *Salting “... stops breathing of bacteria”.* (942.B.20.12).
- *“The salt made meat bitter and the bacteria when tasted the meat it became sour and bacteria leave the meat to be and it does not decay”.* (682.B.15.8)
- *“By making the meat bitter thus causing the bacteria not to like it...”* (410.B.20.12).

- *“Salting keeps meat for long because sodium chloride has enzymes that are strong enough to kill bacteria that cause decaying”.* (421.B.17.10)
- *“It is because salt acts as an antiseptic and thus kill germs and parasites.”* (496.B.15.10).

Most responses demonstrate the sort of confusion children showed when trying to give explanations. The later response was quite common, or at least the medicinal properties of salt underpinned many explanations. In rural communities in Kenya, when a child or any other person has a cut inflicting a wound in the skin, the practice is to put salt in the wound. This point is illustrated by the response of student 474.B.15.10 although he has not used the term antibiotic, when he explained, *“Salt is a common compound know to heal wounds if some one’s cut becoz it kills germs during healing and the same process is applied on fish to keep them fresh”*. The reason they are given is that the wound would then heal faster. Older children are likely to have learnt about antibiotics in the school science then confronted the properties of salt with those of antibiotics:

- *“To some extent it [salt] acts as an antibiotic to the micro-organisms therefore they are killed”.* (248.B.19.12).

Probe 6: Dry maize

Dry maize can be stored for a very long time because the low moisture content will not permit physiological activities of micro-organisms. The enzymatic activities will be impaired. Most children appeared to be aware that drying removes moisture from the maize. Although this would seem to be everyday knowledge, it appears the explanations of the way it works in preservation depends on the level of schooling. Some children said dry maize cannot support the activities of micro-organisms and therefore will not decompose. Some primary school children appeared to have the idea that moulds are involved in the decomposition of maize, although they did not know the term mould. The following transcript of part of an interview with student 759.B.16.8 exemplifies this point:

R Why is it that when you store maize before it is very dry it gets spoiled quickly?

S when it is not dry and you store it, things grow on it looking like powder.

R Like powder?

S Yes, whitish.

R I see. What are they called?

S (Long pause) Shakes his head to signify he does not know.

R Ok, this whitish powder, how does it make maize go bad?

S When they attack maize, and you don't put it out on the sun, moisture makes the maize to change colour.

He appears to have seen moulds and the damage they cause only that in year 8 he has not yet learnt the biology of moulds in school. In everyday life, if the stored grains grow mouldy, it is normally put out in the sun to dry and destroy the moulds. That is what this child referred to.

Children gave various other responses which displayed their naive ideas. For instance, student 169.B.19.12 said drying makes stored maize keep longer *"Because it does not contain milks liquid which makes it go bad quickly"*. If a green maize grain is cut or pricked, a milky liquid comes out. This liquid is mainly water mixed with starch and other substances in the grain. Children thought it is this liquid which makes the stored maize rot. Another student (202.G.17.10) had a similar idea but went further to state that the water contained in the maize grain has micro-organisms which will make the maize rot if it is not dried out before storage. This is shown in an interview with her, part of which went as follows:

R If you harvest maize and put it in a granary before it is very dry, it gets spoiled more quickly. I wonder why?

S I think this maize sometimes, if you harvest you will find that, it has some water inside. And therefore this water will have to make the maize to rot. And if it is dry, the water will be removed and therefore it will not have to rot because there is no water inside.

R How does water make maize rot?

S Water, may be it has some bacteria inside.

Her confusion is understandable, associating bacteria with damp conditions, but not knowing enough to attribute cause and effect.

Student 267.B.19.12 explained that drying *"makes the maize impermeable to any bacteria, germs and any other destructive organism"*. He seemed to attach a different meaning to the term permeability which is not strictly in line with the views of scientists. Student 710.G.16.8 said *"Unwell dried maize will have to get spoiled quickly because the coldness causes weevil and the maize to rot"*. By saying 'coldness' this girl is translating vernacular directly into English. In vernacular (Luhya) the term is *bunyifu* which could mean wetness or coldness depending on the context of its usage. In this case, it should mean wetness. Thus, this girl thinks weevils only attack maize which is moist or wet, which is incorrect because

even dry maize can be attacked by weevils. Student 493.B.16.10 seemed to have the same idea when he explained *“Drying of maize reduces moisture and prevents attack from weevils...”* Student 216.G.17.10 said *When it [maize] is dried the viruses which help in rotting are killed”*. Student 479.B.16.10 said *“drying maize evaporates all the water from it and makes it resistant to any pests which will attack it”*. Resistance is a biological term with a specific genetic meaning, but this student may be referring to the physical hardness of dry maize grains.

DISCUSSION AND CONCLUSIONS.

Decomposition is part of the everyday biology we observe around us. Inagaki (1990) defines everyday biology as:

“informal biology acquired through everyday life experience including raising animals and plants, reading picture books, watching TV programmes and so on. In other words, everyday biology means a body of biological knowledge acquired without systematic teaching.”(p.281).

One of the aims of this study was to find out how children use their knowledge in everyday biological reasoning. The probes were presented in novel yet everyday life contexts as opposed to text book or formal school science contexts. This was partly influenced by research which claimed that children solve problems in a novel situation based on their conceptual knowledge rather than on rote memory execution of knowledge (Novak, 1977). The probes solicited science knowledge which children may have acquired through informal discourse and formal knowledge acquired through school. Some children generated ideas acceptable to formal science while others generated ideas inconsistent with accepted scientific ideas. In coding the responses to written tests, it was sometimes difficult to infer what exactly the child meant to say. The interviews which were conducted after the survey tests revealed more of children’s naive ideas about decomposition and its importance in food storage and spoilage. Interviews also gave confidence and encouraged the children to express their ideas more freely, especially among the children in the lower levels of schooling (years 5 and 8) and allowed the interviewer to check the interpretation of what was being said. A child needs correct scientific concepts to apply meaningfully the knowledge to solve problems. But it is equally true that some of those who solve a given problem may have inaccurate conceptions. In other words, in the survey test, an acceptable response is not necessarily an indication of the child having developed an acceptable concept. The converse is also true, i.e. if a naive explanation is given it does not necessarily mean that a more acceptable scientific explanation is not possessed by the student.

From the analysis of responses, children could be divided into three categories. Firstly the group of children who used scientifically acceptable understandings of concepts to make correct predictions and explanations. Secondly, there was a group with unacceptable conceptions that led to inaccurate predictions and explanations. The third category consisted of a group of children who gave correct responses which might have concealed their naive conceptions.

Children in years 10 and 12 had been exposed to more formal science than those in years 5 and 8. Whereas younger children relied mainly on informal everyday biological knowledge, the older children drew on both informal knowledge and formal biology in solving problems. Studies have reported that students cannot spontaneously apply a solution strategy they had learned to a novel problem that had a different context. They are lost when faced with a novel problem (Inagaki, 1990). This study confirmed this.

Other researchers report that young children cannot solve a new problem by making an analogy without being given explicit hints (Brown, Kane & Echols, 1986). For example, in this study more younger children (school year 8) attributed the spoilage of milk, meat and fish to micro-organisms (including the term germs) as compared to the decomposition of maize grains in the granary.

Every home in Kenya uses milk to drink when it is either fresh or sour. The majority of families who happen to live in rural areas have at least one cow for milk. Those who do not have either buy from neighbours or from shops. The milk is also fed to babies and small children. Fresh milk is used in the preparation of tea and vegetables. Sour milk is either prepared commercially by dairy firms or in homes in gourds in which it will be kept for a time ranging between two days and a week or weeks, and indeed in some communities, for months. Then it is used for meals such as ugali (maize meal), sweet potatoes, cassava, and cooked bananas.

Milk requires stringent hygienic handling, otherwise it very easily gets contaminated and may cause stomach upsets and diarrhoea in both children and adults. With the presence of numerous house flies in the environment, children are brought up with strict hygienic rules pertaining to milk handling and use such as, not allowing house flies to get to milk and contaminate it with microbes (germs) which may cause sickness. Such rules include covering milk at all times because the wind may blow microbes (germs) into it. Before milking the cow, persons doing the milking should wash their hands clean so that they do not contaminate the milk. Children therefore grow up with the knowledge that anytime milk goes bad, it is because of germs. In fact the term germ has been integrated into the vernacular, and there is no other term rivalling it.

The percentage of responses associating microbes with decomposition was low for maize because in everyday life, the belief is that harvested maize should be completely dry before storing, because moisture will make the maize rot, or simply dry maize cannot rot. In fact 31% of year 8 children said dry maize cannot decompose, which is an incomplete explanation of the ideas because they did not state why water would increase the likelihood of harvested maize decomposing, or why dry maize does not decompose.

Inagaki (1990) claimed that “everyday cognition, especially everyday biological reasoning, is characterised as generative, or by making of maximal use of available knowledge in novel situations” (p283). The results of this study support the idea that younger children’s scientific ideas tend not to be generalised, but how they are applied depends largely on the context in which the problem is presented.

Most children held the view that refrigeration method of preserving food works on the basis that it kills micro-organisms. It is interesting to note that about 60% of years 10 and 12 children held this naive concept, which is not an acceptable idea to scientists. A much lower percentage of the same group of children from the two levels attributed to salting the killing of micro-organisms. One possible explanation for this is that most of the children in this study came from rural areas of Kenya, and therefore from homes which have no refrigerators. Thus, although they had learned about refrigeration as a method of preserving food, most of them had confused understanding of the principle underlying its operation. Children in years 5 and 8 on the other hand, lacked the abstract physiological foundation to explain how the different methods preserve food. They relied on concrete everyday science that food preservation is all to do with killing of germs. Thus the highest percentage of them held onto the commonest method used in the homes: and that is boiling followed by salting of food.

One point stands out from the analysis of children’s responses: a higher percentage of year 10 children gave scientifically acceptable responses than did year 12 children. This may be due to three possible reasons. First, the topic “*Micro-organisms, viruses and their economic importance*” is taught during school year 10 throughout the Republic. At the time of the data collection for this study, the year 10 children were learning, or had just completed learning this part of the syllabus. The year 12 children had learnt this material two years earlier, so it seems a considerable proportion were not conversant with it as they had been.

Secondly at the time of data collection, the year 12 children were preparing for their Kenya Certificate of Secondary Education examinations (KCSE) which starts in October and ends in late November annually. So they may have been expecting the kind of formal tests or

examination with formal textbook kinds of content, rather than the informal probes on everyday science such as those used in this study.

Thirdly, the year 10 children are normally not as nervous as year 12 children who would be usually worried about their national (KCSE) examination and its crucial determinant role for the future. The free and uninhibited responses of year 10 children may have contributed to their giving responses with more acceptable science than those of year 12. The year 5 and 8 children were mainly relying on their everyday biology knowledge only, and in addition they had to overcome the language problems compared to years 10 and 12 pupils who could draw upon both intuitive and formal school science, besides having a stronger language command.

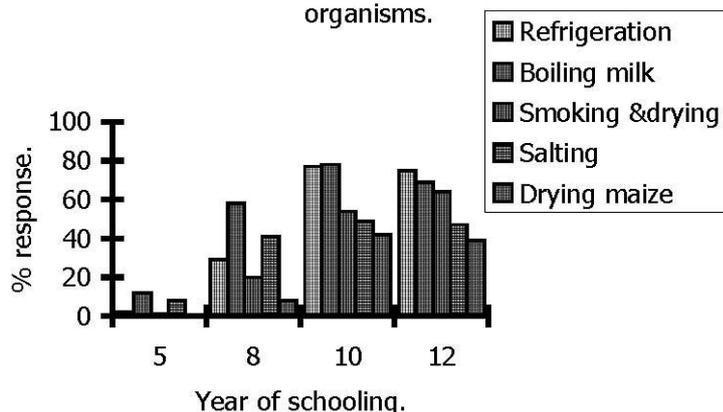
None of the primary school children mentioned that heat denatures enzymes or impairs their physiological activities thereby halting the process of decay. On the other hand, only about 15% of secondary school children mentioned this idea.

In response to salt probe, many children explained that salting helps to preserve meat because the salt dehydrates or dries the meat. What is of much interest here is that the children only referred to the meat losing water to the salt, which is acceptable science. But they did not talk about the same salt dehydrating or drying the micro-organisms which may be found on the meat. It could well be that although they know that fresh meat contains water, they may not know that micro-organisms contain water which can be lost to the concentrated salt solution. No child in the entire sample mentioned this. Many children said the salt kills micro-organisms, without explaining that this is through the effect of osmosis.

Many children were aware that salting is a method that preserves food temporarily for a couple of days. Since it is sprinkled on the surface of the meat, it protects the meat against activities of micro-organisms and maggots and possibly the autolytic activities due to high salinity. However, autolytic activities will still take place in the inner parts of the meat where the effects of salt are absent.

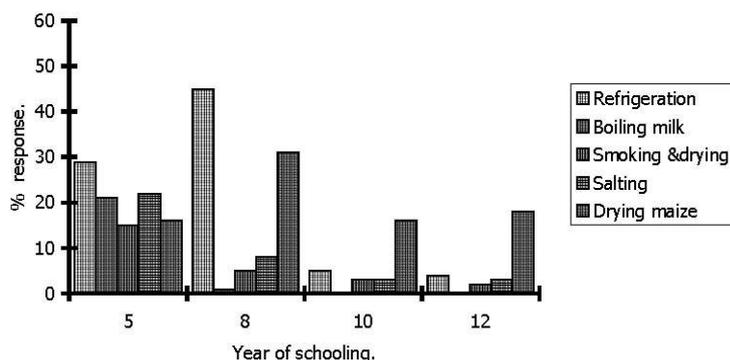
Figure 6 showed the trends of the percentage of children at different school levels who held the view that each of the 5 methods preserve food by inhibiting or killing micro-organisms.

Fig. 6. % who said the method will inhibit /kill micro-organisms.



Another common response by the children was that each of the 5 methods of preserving food simply did not allow food to decompose, without offering any explanation. The trends are shown in figure 7.

Fig. 7. % who simply said the food will not rot under each method.



As can be seen from this graph, it appears that many younger children (years 5 and 8) did not know how each of the method works as compared to years 10 and 12 children, although many of the latter seemed not to know how drying preserves maize. Of the five methods, refrigeration and drying of maize are the two methods whose underlying scientific explanation most children at years 5 and 8 of schooling appeared not to know. This could be because, as far as the refrigerator is concerned, many children have never see it, they only learn about it in school, where they are simply told it keeps food fresh, free from decomposition. As far as maize is concerned, they only learn from adults and daily practice that maize should be dry before storage to stop it from rotting.

Only a very small percentage of children held the view that each of the five methods of food preservation inhibits the activities of enzymes or denatures the enzymes. Younger children tended to give superficial explanations such as the refrigerator makes food not to be spoiled, smoked or dried meat fish does not go bad, or salted meat cannot go bad or boiled

milk cannot get spoiled without giving the underlying explanations. The findings are as shown in table 3. Only results for the survey data are shown.

Table 3 The percentage of children at different school levels holding the idea that the 5 different methods of food preservation inhibit enzymatic activities/ denature enzymes.

Year of Schooling	Percentage responses per method of preservation				
	Refrigeration.	Boiling milk	Smoking & drying.	Salting	Drying maize
5	0	0	0	0	0
8	1	2	1	0	0
10	5	6	6	2	0
12	8	5	4	3	1

It has already been pointed out that the concept of enzymes is not everyday knowledge; it is a formal science concept, mainly taught in secondary schools in Kenya. And even in secondary schools, the teachers tend to teach about enzymes in connection with digestive roles in the organism. Many teachers do not point out that virtually all physiological processes in living organisms are mediated by enzymes, hence the low percentage response across the board.

Generally children in higher classes offered more and deeper explanation of how each of the method works in food preservation than younger ones. This could be because children are told in the home simply that each of these methods prevents food from rotting, and that is the knowledge they have. Secondly, the reasons are abstract and physiological, which tend to be beyond young children's cognition, while older children use both their everyday science and school science to explain how each method works.

IMPLICATIONS FOR SCIENCE TEACHING.

A significant outcome of this study has been the identification of various ideas and understandings that children hold about decomposition and food storage and spoilage. These have revealed the naive conceptions and misconceptions regarding various aspects of decomposition. These findings should prove useful to the curriculum developer and the science teacher in terms of structure, sequence, presentation and evaluation of the learning process with a view of bringing about conceptual change in the learner.

This study also found that children are limited in their ability to generalize and apply scientific ideas and concepts in different contexts. For instance, most children at all school levels appeared not to be aware that enzymes are involved in virtually all physiological processes of living systems including decomposition. The term enzyme is not used in

everyday discourse, it is a formal school science term. It appears teachers teach it mainly in the context of digestion, but they do not generalize it to other physiological processes and contexts.

One of the strategies which can be used in teaching children so that the desired outcome of bringing about conceptual change is to create a conflict between the child's naive ideas and the accepted scientific ideas (Nussbaun and Novick, 1982; Rowell and Dawson, 1985). An experiment such as suggested in 11.3.2 is based on such a strategy. In this strategy the child is exposed to a situation his/ her naive ideas are pitted against the scientific concepts which are backed up by evidence through experimentation. The child is put in a situation where he/ she has to justify his/ her ideas against the conflicting scientific observation. Another strategy involves the use of analogies between children's naive conceptions and the accepted science ideas (Brown and Clement, 1989). In this strategy, the teacher establishes the children's naive conceptions in a given concept area. Then s/he introduces analogies of the accepted scientific concept so that children compare their naive conception with the scientifically accepted concept. This may lead them to modify or replace their naive ideas.

This study has found that everyday conceptions interfere with children's learning in science. It now suggests that curriculum developers and science teachers should incorporate and integrate diagnostic classroom tests into the teaching/ learning process. This will facilitate effective teaching by the teacher and effective learning on the part of the children (Mehrens and Lehmann, 1984). Such tests should not be confined to paper and pencil alone, because this study has shown that such a test is unlikely to reveal the true nature of the children's naive conceptions. This study suggests that the teacher should in addition use verbal probing questions to ascertain the real naive idea or misconception the children hold. The researcher is not suggesting that the teacher interviews each child individually in the ways this research was conducted. That is not feasible in a teaching situation. What is being suggested here is that in addition to pencil and paper diagnostic tests, the teacher should pose probing questions in group or whole class discussions and during normal teaching/ learning discourse. A thorough probing will enable the teacher to start a new topic or concept from where the children are using appropriate strategies to bring about the desired concept change and learning..

One of the goals of education is to increase the learners ability to solve problems. To be able to achieve this goal the process of education should foster knowledge of subject matter and 'general skills' (Simon, 1980 cited in Lavoie, 1993). The teaching strategies should "nurture a positive interdependence between process and product knowledge ..." (Lavoie, page 779). One of the fundamental goals of science education is the improvement of students ability to think critically, reason logically, and ultimately to solve problems (Lavoie, 1993, Driver, 1988).

Children's incorrect identification and application of facts and relationships are often recognized as pre-scientific conceptions or misconceptions (Lavoie, 1993). Past research findings suggest that children should make predictions and explanations, then follow this by "hands-on experiments" (Lavoie, 1993) to verify or refute their predictions and explanations. This "can be an effective conceptual-change leading strategy" (Watson & Konice, 1990, cited by Lavoie, 1993). Predictions and explanations can be used as instruments to reveal prior knowledge, to motivate, and to establish mental readiness for conceptual change. Predictions and explanations in problem solving as described and used in the probes in this study satisfy some conditions considered to be important in children's conceptual change. This is because a) they identify children's conceptions/ preconceptions or prior knowledge (Cosgrove & Osborne, 1985; Nussbaum & Novick, 1982). For this strategy to be effective in conceptual change, children must give their reasoning explicitly and freely, followed by hands-on experimentation. b) In the teaching situation, these children's predictions and explanations could provide the motivation to seek evidence in support of personal predictions (Lavoie, 1993). c) After the children have done the experiments, the results they get and the evidence they find would set the stage "for dissatisfaction or disequilibrium with personal knowledge as a result of evidence refuting a prediction or an explanation (Posner et al, 1982; Champagne et al, 1983).

It is a challenging educational goal to change children's preconceptions and improve their problem solving skills. Predictions and explanations are important scientific processes as are problem solving skills. They deserve greater attention from science teachers and science education researchers. Improving predictions and explanations and problem solving skills may lead students towards greater understanding, application ability and appreciation of science and the scientific processes.

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THE ROLE OF EDUCATION IN KENYA IN THE 21ST CENTURY

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Abstract

The beginning of the 21st Century is increasingly characterized by social, economic and political challenges that affect all spheres of our lives. Such challenges include diseases, corruption, gender parity, drug abuse, hunger, unemployment, environmental degradation, crime, terrorism, violence, violation of human rights, conflicts and war. These challenges have spawned threats to the world order. The potential impact of these threats has and continues to shape to our thinking in the way we view ourselves, our neighbours and the environment in which we live. Problems which affect us today are not isolated from one another and neither are they local as they may appear. For example, e acts of terrorism in one country are likely to spark a chain of reaction in other countries far and wide. If the world today is going to handle the challenges it is facing with confidence, formal education, more than any other institution, is to play a major role. The youth of our society are better suited as agents of change, capable of transforming the society since they are more receptive to new ideas and change unlike the older folks who are rather conservative. This paper discusses the role of education in Kenya in the 21st Century. It views education as an essential tool for equipping the learners with relevant knowledge, skills and attitudes which in turn will empower them to respond to the challenges of the 21st Century proactively and positively. This involves accepting their membership to their country as well as the international community with an obligation, responsibility, rights and benefits that this membership entails.

1.0 Introduction

Education has emerged at the forefront of the world's concern over its survival in this era of global challenges. The challenges of this century: to eliminate poverty, diseases, crime, terrorism, violence, corruption, war and ensure sustainable and lasting peace falls in the hands of the youth. That is why Moi (1997) feels that education is the greatest investment a nation can offer to its youth. The same view is held by UNESCO (1998) which maintains that world's hopes for future rests with today's young people and their readiness to take up the challenges that face them.

Educating the youth to meet the challenges of this century has become a priority objective for every society in the world. The youth are in a world which is changing in all spheres:

social, economic, political and technological. Therefore formal education more than any other institution is seen as a factor of combating the challenges the world is facing.

According to UNESCO (2007) education is key to development issue that is indispensable for human capacity and poverty eradication. It is needed to: promote economic development; create employment; foster civic participation and foster personal development. Education enables individuals in their respective environment to recognize their potential for survival. 'Education can enhance adaptability with the view of improving the quality of life, protecting the environment and affording some command over technology' (MOEST 1992:13).

For a country to offer the right knowledge, goals of education should act as guiding principles. UNESCO has set goals of education which give the general direction of the type of education each country should adopt (Twoli et al 2007). According to some of these goals, education, besides improving the standards of living should foster international consciousness and also solve continuing problems affecting humanity such as war, hunger, disease and unemployment. From these broad goals each country comes up with its own national goals of education which generally express broad values of the society. The goals are supposed to equip and empower the youth to participate in individual and national development.

2.0 Education in Kenya at independence

The government of Kenya is committed to providing relevant and quality education in order to enable the learners to play an effective role in the society. Since independence, the government has from time to time appointed commissions, committees and task forces to examine the status of education and to make recommendations with a view of improving access, relevance and quality.

At independence, Kenya inherited a diverse and fragmented system of education based on racial lines. Therefore the first commission led by Simeon Ominde was appointed within a month after independence to review the existing system and advise the new government on the formulation and implementation of educational policies. This would help to transform Kenya's education into a cohesive national system, responding to national aspirations, economic progress and technological development. The Ominde report was released in 1964 stating six national goals of education. In its effort to emphasize the national goals of education the report states that education in Kenya should promote: national unity, national development; individual development and self-fulfillment; social equality; respect for and development of cultural heritage and international consciousness (Republic of Kenya

1964). The whole report has strongly influenced the national policy of education in Kenya to date.

The Ominde report was followed by other reports of commissions and committees which were set by the government from time to time to review the goals and policies of the education system due to the recurring needs of the society. Other major commissions which have been appointed to address the issue of quality education in Kenya since independence are the National Committee on Educational objectives and policies or Gachathi Report of 1976 (Republic of Kenya 1976) the Presidential Working Party on Education and Manpower Training in the Next Decade and Beyond or Kamunge Report of 1988 (Republic of Kenya 1988) and the Totally Integrated Quality Education and Training (TIQET) Report of the inquiry into Education System of Kenya or Koech Report of 1999 (Republic of Kenya). The developments that have taken place in Kenya's system of education can be traced through these commissions.

Generally, the goals of education were intended to empower and equip the youth with necessary knowledge, skills, attitudes and values to participate effectively in individual and national development. In addition, the youth were to be sensitive on the importance of membership to the international community in order to foster positive attitudes towards other nations.

During the periodic review of Kenya's educational system by various study teams, the goals of education have been redefined each time. However, over the years the redefined goals have revolved around the same issues addressed at independence. These are: promotion of national unity, national development; individual development; social equality, respect for culture and international consciousness.

One of the major events in the changing scene of Kenya's education system was experienced at the beginning of this century following the recommendations of the Koech Report (1999). The recommendations necessitated the restating of the goals of education formulated by the Ominde Commission of 1964 to accommodate pertinent issues which had never been effectively tackled since independence and also address emerging issues and nurture an all round individual. According to the redefined goals of education in Kenya, education should:

1. foster nationalism, patriotism and promote national unity.
2. promote the social-economic, technological and industrial needs for national development.
3. promote individual development and self-fulfillment.

4. promote sound moral and religious values.
5. promote social equality and responsibility.
6. promote respect for and development of Kenya's rich and varied cultures.
7. promote international consciousness and foster positive attitudes towards other nations.
8. promote positive attitudes towards good health and environmental protection.

It is important to note that the national goals of education cannot be achieved without evoking interplay of knowledge obtained from various disciplines throughout the school system (Kio, 1999). In this respect the Kenya government has been involved in the educational process, renovating its system of education in order to produce youth with the desired knowledge, skills, attitudes and values which will enable them to face the challenges of the 21st Century. This explains why the Kenyan curriculum has been reviewed from time to time in order to provide relevant and quality education.

3.0 The Role of education in handling emerging issues – local and global

Apart from addressing the original goals of education, education in Kenya today is supposed to sensitize the youth on emerging issues and prepare them to play an active role in tackling these issues. The curriculum has been revised at all levels including teacher training colleges to accommodate contemporary issues. In addition, the government has facilitated production of materials in form of print, audio and audio-visual to support curriculum implementation.

Kenya is facing numerous challenges which are affecting all the spheres of our lives. These challenges have also shaped people's thinking and their reaction to the environment in which they live. Some of the challenges which the education system in Kenya has attempted to address are emerging issues such as HIV and AIDS pandemic, corruption, gender parity, drugs and drug abuse, hunger, unemployment, environmental degradation, crime, terrorism, violence, human rights, conflicts, war, information and communication technology and ethics.

Some of the above issues have been tackled in various disciplines in curriculum planning at various levels through integration or infusion where applicable. A few are examples are discussed below.

3.1 Promotion of good health

One of the areas which education in Kenya has targeted is the promotion of good health. The youth are exposed to risky behaviours with devastating results. The behaviours threaten self-esteem, they harm health and increase likelihood of illness, injury and premature death. Some of the risky behaviours include drug abuse and premarital sex which could result into HIV and AIDS and other sexually transmitted diseases. One way of preventing these risky behaviours is to educate the youth and help them to develop skills of good health. 'Education should inculcate in the youth the value of good health in order to avoid indulging in activities that will lead to physical or mental ill health' (K.I.E 2002, Secondary Syllabus Vol. 3 p.ix).

3.2 Promotion of essentials of good citizenship

Education should sensitize learners about essentials of good citizenship. They should learn to practice virtues like honesty, hard work, patriotism, loyalty and respect for those in authority. They should also learn to shun corruption. 'Education in Kenya should foster nationalism, patriotism and promote national unity' (K.I.E 2002 ibid p. ix). In Kenya the key elements of essentials of good citizenship are covered in several courses at Primary, Secondary and tertiary levels. Such courses include Social Studies, Religious Education, History, Political science and Environmental Studies.

3.3 Protection of the environment

Environmental degradation is a cross-cutting issue in the world, posing a big threat to both living and non-living things. According to Anspaugh and Ezell (2001) the youth need to learn about the importance of healthy environment as this will enable them to develop a sense of appreciation for life and natural resources and also encourage practices that will help ensure confirmed preservation of the ecosphere. Kenya's concern for environmental issues is commendable as reflected in one of the goals of education. 'It should foster positive attitude towards environmental development and conservation. It should lead the youth to appreciate the need for a healthy environment' (K.I.E 2002 ibid).

In order to address this issue, environmental education is taught at primary school, secondary school and tertiary levels. In addition caring and responsible attitude in learners, principles such as conservation, re-use, recycling and alternative sources of fuel are encouraged.

3.4 Eradication of poverty

Unemployment is a major problem in Kenya. This leads to poverty and starvation. As a way of addressing this issue, the government has made a continuous effort to focus its educational system in order to improve the quality efficiency. One of the arguments in favour of quality education is that it leads to production of manpower for economic development. This is advanced by national goal of education number 2 (b) '*Education in Kenya should produce citizens with skills, knowledge, expertise and personal skills that are required to support a growing economy*' (K.I.E ibid p.viii). To fuse information concerning ways of eradicating poverty, the teacher is advised to 'give practical hints, including going to school to remove illiteracy,, vocational training, farming activities and starting up jua kali businesses and industries' (Kiio etal 2005 p. xxv).

3.5 Gender parity

Over the years, gender disparity has been notable in Kenya's education system especially at tertiary level where women were marginalized. For example, according to some report, in 2001, only 60,612 of the 188,175 citizens who attained university education were women (Daily Nation, Monday, 26th February 2001). The same report adds that only 0.7% of girls who enroll in standard one reach university compared to 1.6% boys. To reduce this gap the government has made effort to sensitize gender equality through formal education by providing equal educational opportunities for both men and women. Effort has also been made to promote gender parity through instruction. '*In clas,s gender parity means equal participation in class discussions for boys and girls...*' (Kiio etal ibid xxvi). In addition, men and women are given equal opportunity in career choice, employment opportunities and general social respect.

3.6 Promotion of Social equality

Education is a very important instrument for promoting social equality among people irrespective of their gender, ethnic or racial background. In some countries, certain disparities are notable among different groups of citizens. This was also true of Kenya during the colonial rule. Racial segregation was evident in workplace and schools. However, it was abolished after independence allowing learners of different racial, ethnic, economic and social backgrounds to learn together in public schools. Education in Kenya today should 'promote social equality and foster a sense of social responsibility within an education system which provides equal opportunities for all' (K.I.E 2002, op.cit p.ix).

3.7 Promotion of respect for cultural diversities

The 21st Century is an age of international multi-culturalism. Most of the nations in the world have become multicultural society. The diversity in many countries can be seen in cities, towns, schools, businesses, community groups and places of worship. If the current trends continue some countries will become universal nations, accommodating people of all cultures.

One of the national goals of education in Kenya is to promote respect for and development of Kenya's rich and varied cultures. Through education, children should be able to 'blend the best of traditional values with the changed requirements that must follow rapid development in order to build a stable and modern society'. (K.I.E 2002, *ibid*) Promotion of respect for cultural diversities according to Linda et al (1996) will be made possible through adaptation of teaching strategy to include ideas that promote an awareness and appreciation of the cultures and background of different people.

3.8 Promotion of economic co-operation

The world today is becoming closely unified under one world economy with about 60,000 transnational corporations, which account for more than a quarter of the world's economic output (Stephen, 2001). This means that the survival of the human race in this competitive world will call for solidarity and unity. Therefore education is an important tool in economic development as it prepares the youth of each country to develop necessary knowledge, skills and expertise. It also inculcates the development of global citizens with positive attitude and commitment towards principles of hard work. 'We can only be part of the development if our education system deliberately focused on knowledge, skills and attitudes that will prepare the youth for the changing global trends' (K.I.E *op.cit* p.viii).

3.9 Conflict resolution

Education should enable learners to develop positive values and attitudes towards other people to avoid conflict. The common causes of conflict in a country according to Kiio et al (*op.cit*) include poor leadership, problems of communication, tribalism, scarcity of resources, selfishness and lack of proper understanding of the need for peaceful co-existence. 'It is a paramount duty of education to help the youth to acquire this sense of nationhood by removing conflicts and promoting positive attitudes of mutual respect which enable people to live together in harmony and foster patriotism in order to make positive contributions to the life of the nation' (K.I.E *ibid*).

3.10 Information and communication technology

The world of the 21st Century has become what is known as 'global village'. This is as a result of rapid advances in Communication and Information Technology. The use of computers, email and internet has made it possible for people to communicate across the world. According to national goal no. 2(b) 'Kenya recognizes the rapid and technological changes taking place especially in the developed world (K.I.E ibid p. xviii). Kiio etal (op.cit) point that there is need for educators to 'encourage students to embrace technology and technology education (p. xxvii). This will enable them to access information which will empower them to face the challenges with confidence.

3.11 Promotion of international consciousness

The biggest challenge confronting education is to prepare the youth to function effectively and responsibly in an interdependent world. In order to sensitize them on the importance of membership to the international community, every system of education should include aspects which help the youth to understand their country and its relationship with the wider world. According to Makau (1985) education should work towards sensitization of global problems and inter-dependence of people. This will help curb international conflicts and war which are plaguing the world today. In Kenya, one of the goals of education is to 'promote international consciousness and foster positive attitudes towards other nations' (K.I.E op.cit p. ix).

In order to achieve this goal, the Kenya curricula at various levels expose learners to essentials of civics and government, covering areas such as international co-operation (K.I.E 2002 Primary Education syllabus Vol 2 page 129) and International Relations and Co-operation in Africa (K.I.E 2002 op.cit pages 16-17).

From the foregoing it is evident that Kenya has put systems in place through education to handle challenges of this country. Whether the country has succeeded in tackling emerging issues is the question. This will be handled in the next session.

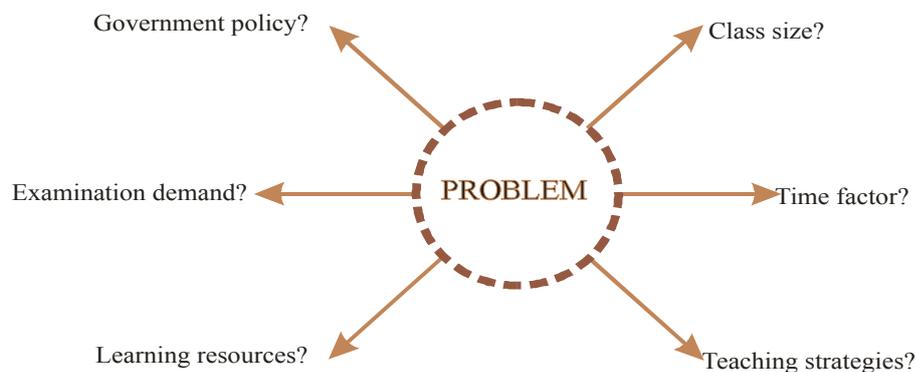
4.0 Challenges undermining government's effort to provide quality education in Kenya

Although a lot of effort and resources have been devoted to provide quality education in Kenya, the system of education has been ineffective in addressing some of the challenges. These include HIV and AIDS, drug abuse and trafficking, crime, environmental degradation, unemployment, poverty, conflicts, violence, corruption and inequality.

This raises concern about the role of education in enabling the youth to cultivate dispositions and attitudes that dispose them to act in desirable ways. In any case, one of the goals of education is to '...provide for the development of knowledge, skills and attitudes

that will enhance acquisition of sound moral values and help children to grow up into self-reliant integrated citizens' (K.I.E op.cit p. ix).

When most of the goals of education remain unfilled, many questions have to be asked concerning the root cause of the problem as illustrated.



It is important to point out that the teacher should create an enabling environment to be able to assist the learners to develop the necessary competencies that would enable them to play their role effectively. This has not been the case in Kenya because of the following factors:

Class size

One of the problems which seems to be affecting quality education is the issue of class size in all the level of education in Kenya. According to the latest economic Survey Report, the number of teachers at Primary school level fell by more than 3,000 from 173,157 in 2007 to 170,059 in 2008. At secondary school level, the number declined by 2.9% from 44,305 in 2007 to 43,016 in 2008. The survey further gives the ratio of pupils to teachers in primary school during the same period as 44:1 in 2007 to 45:1 in 2008 meaning that the teacher was handling 45 pupils in 2008 as opposed to 44 pupils in 2007. At secondary school level, pupil-teacher ratio went up from 23:1 in 2007 to 28:1 in 2008. However, the ratio varied from district to district ranging from 24:1 to 94:1 (Daily Nation, Friday, May 22, 2009). Learner – teacher ratio in some of the universities is also alarming as it can be 400:1 or higher. With large class size, it becomes difficult for the teacher to meet the needs of each learner.

Time

Many scholars have expressed concern about the amount of time set for covering the curriculum. According to Eshiwani (1993) and Getao (1996) inadequate time can affect the quality of education. In Primary and Secondary schools, most of the teachers complain of wide syllabi which cannot be covered within the stipulated time. The same thing applies to

most of the publication universities where semester dates seem to be shortening to pave way for Institutional Based Programmes (IBP).

Teaching strategies and methods

With large class size and inadequate time, the teacher is forced to use expository oriented methods in order to cover a lot of content within the limited time. This approach reduces learners to mere recipients of information without internalizing it. It also denies learners the opportunity of developing problem-solving skills. This view is held by Getao (ibid) and Ward and MacCotter (2004) who maintain that poor quality of instruction undermines effective learning as learners are not given opportunity to discover, explore and generate knowledge on their own.

Learning resources

Use of instructional resources is important because it promotes learning. According to (Twoli et al op.cit) the teacher needs to select and use a wide variety of resources in teaching to take care of individual differences in the classroom. It is common knowledge that it is not humanly possible to use a variety of resources in most of the institutions of learning in Kenya because of class size and limited time.

Demands of examinations

The education system in Kenya is examination oriented where a lot of emphasis is on passing formal examinations. This, according to Eshiwani (op.cit) makes it impossible for schools to teach values of the society. Leat (1999) also blames inability of education systems to address contemporary issues because of placing emphasis on attainment of good grades and certificates as opposed to transforming learners into effective agents of change.

Government policy

According to Douglass (2006) ineffective government policy can affect the quality of education by putting emphasis on some subjects at the expense of others. This has been the case in Kenya where the emphasis is laid more on some subjects downplaying the importance of social science subjects such as History and Government, Religious Education and Geography which are suitable for transmitting attitudes and moral values.

Overload curriculum

Although the 8.4.4 system of education is said to offer a wide curriculum comprising academic and practical subjects thus giving the beneficiaries variety, the programme has been a subject, of emotive debate. Critics of this system say that it is rigid with limited choices to individual interests and talents (Sunday Nation, July 5, 2009). It also leads to wastage as only a few make it to the university while the majority waste away because

there are few opportunities for those who do not make it. 'This mass wastage is manifested in high unemployment rates and runaway crime' (Daily Nation, Friday 3, July 2009, p.10).

In view of the above challenges facing the system of education in Kenya, the following recommendations are made for the way forward:

1. The ratio of teachers to learners should be increased at all levels of learning so that teachers can have enough time to develop innovative approaches to teaching and learning. It will also enable them to attend to individual learning needs.
2. Teachers should use teaching approaches suitable for transforming the values of young people. Use of expository teaching approach which leads to rote learning should be avoided. Instead, teachers should use problem-solving methods which have a bearing on real life situations.
3. Institutions of learning should create a learning environment in which learners are motivated to participate actively. The environment should be enriched with a variety of learning resources which will enable learners to utilize all their senses.
4. Education of the 21st Century should depart significantly from focusing on examinations but rather on instilling values such as patriotism, love, peace, equality, honesty, humility, tolerance, respect, democracy and co-operation.
5. The government should give equal treatment to all the subjects in the curriculum because each subject has its own contribution to make in nation building.
6. There is need to review the content of the curriculum at various levels of education with the view of improving it to meet the demands of the 21st Century.
7. The current curriculum should be made responsive to the needs of the society. It should also be made sensitive to individual interests and talents.

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FACTORS CONTRIBUTING TO VIOLENCE IN SECONDARY SCHOOLS: THE ROLE OF GUIDANCE AND COUNSELING IN KENYA

Dr Mary W. Were Nasibi

Abstract

At the close of the 20th century and the onset of the first decade of this century, Kenya has witnessed unprecedented unrest and violence in secondary schools. This has been taken the form of property destruction, assaults, sexual abuses, deaths and arsons. Although the Kenya government over the years has appointed various committees to investigate possible causes of the problem and solutions, the issue still persists. The findings by various presidential committees indicate that violence in schools is a manifestation of violence in the wider society. Students imitate what they see in the media, family, government and the society at large. Unrest and associated violence have also been attributed to an overloaded curriculum which gives little room for extra-curricular activities, lack of motivation in learning, abusive and incompetent teachers, autocratic leadership and poor parenting. This paper argues that guidance and counseling at family and school level would go along way in addressing the problem of violence. The parents are called upon to change their parenting practices by opening communication with their children and acting as their role models. The school administrators and teachers are to open dialogue with their students and view them as young adults to be listened to and understood. There is also need to have guidance and counselling departments in schools well equipped and manned by professional counsellors whose task would be not only to give guidance and counselling to students but also to counsel teachers, administrators, and even parents. This will lead to self awareness and the development of emotionally adjusted individuals who will shun violence and strive to meet the demands of the schools and the society at large.

Introduction

Violence in institutions of learning is one of the challenges facing education system in Kenya. Both private and public secondary schools have participated in school strikes which have caused untold suffering (physically and psychologically) to the students, their teachers, administrators and even parents. Property worthy millions of shillings has been reduced to rubble and students arrested and judged for arson:

“Nine Kabarnet High School students were yesterday arrested after fire razed a shs. 20 million dormitory

(Nation: July24, 2008)”

School violence has taken the form of burning down dormitories, classrooms, science and computer laboratories, administration blocks, staff rooms and teachers’ houses. It has also been manifested in physical assaults to individual students, teachers and administrators. There are cases where school prefects have been burnt to death as in the Nyeri High School case of 1999 where four prefects died. This was the cry of one Anthony Kariuki (1999) during the rescue operation:

Nipeni maji, nipeni maji, (Give me water! Give me water)...
Kwa nini wametuchoma? (Why have they burnt us?)

In Nyahururu High school a student was stabbed by colleagues three times. During the operation in one of the hospitals a nail cutter was removed from his stomach (Nation, July 24, 2008). One student by the name Noor Abdi was burnt to death in the 2008 riots: “A Form three student at Upper Hill School died in a dormitory fire believed to have been sparked by unrest.” (Aluanga in Nation July 26,7, 2008)

The issue of school unrest is not a new phenomenon in Kenya. It is older than the Kenya education system which has been in operation since 1964. The first case of students’ unrest goes back to 1908 in Maseno. However, it is in the 1970’s, mid 1980’s, 1990’s and now the first decade of the 21st Century, that its impact has been felt.

In the seventies the unrest not only affected secondary schools but also middle level colleges and tertiary institutions. What featured in these disturbances was violence and destruction of property. The schools involved numbered 22 (0.9%). The number moved to 187 (7.2 %) in the period between 1980 and 1990 (MOEST, 2001). In the period between 1986-1991, the incidents of unrest and indiscipline per province in the country were as follows:

Table : Unrest in Schools per province 1986-1991

Province	Percentage
Coast	23
Nyanza Province	10
Western Province	11
North Eastern	7
Rift Valley	11
Eastern	11
Central	17

Nairobi	6
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Source: MOEST, 1

In the 1990's the strikes took a new dimension. Violence was no longer limited to buildings but to individuals as well. For instance, on 13th July 1991 boys of St. Kizito attacked girls in the same institution and raped a number. This led to the death of nineteen (19) girls. The end of the 1999 witnessed the death of four school prefects whose cubicle was set on fire by other students in Nyeri High School, Central province.

In the period of 1999 – 2001, Central province alone had 106 reported cases of students unrest .These disturbances ranged from murder, destruction of the school property and harassment of teachers and fellow students. The state of affairs continued to 21st century as the table below shows:

Province	Existing number of secondary schools	Number of schools the experienced students unrest	Percentage of schools going on strike	Gravity
Central	630	85	13.5	Violence and destruction
Coast	151	04	2.6	Destruction of school property
Nyanza	680	07	1.0	Destruction of school
Eastern	626	76	12.4	Destruction of school property and loss of human life
Rift Valley	626	50	8.0	Violence and destruction
Western	408	19	4.7	Minor destruction of school property
Nairobi	93	02	0.02	Minor damages to school property
North Eastern	21	07	33.3	Destruction of school property.

Source: Ministry of Education and Technology

The latest wave of unrest June- July 2008 reported over 300 schools (5.4%) having been involved in strikes in the month of June alone. This gives an average of 10 cases per a day. In both months the number was estimated at 500 schools (8.9%) with over 90% of the cases involving district schools. In central province about 50 schools participated in strikes within a period of two weeks with one single school losing nine (9) buildings to fire (Njagi in Nation,

July 21, 2008). At Coast province 15 schools were affected in just one month (The month of July 2008). The minister of education Sam Ongeru had this comment:

The youth have gone beyond the limits ... A culture of impunity is creeping in to our society and we must nip it.

The schools affected range from academic giants to little known schools cutting a cross national, provincial and district levels.

The Government has appointed task forces to look into the issue since 1990. For instance in 1991 after the Kizito incident, the then President, Daniel Arap Moi, appointed a committee to look in to students unrest. In 2001 Henry Kosgey the then Minister of Education appointed a task force led by director of education Naomi Wangai to investigate the causes of unrest. The later task force came up with useful recommendations it had one shortcoming. It failed to establish a protocol for stopping future strikes. Subsequently the country faced another wave in 2008.

In 2008, Professor Sam Ongeru the Kenya minister of education appointed another commission following unprecedented wave of riots. It consisted of top education experts who were to investigate the cases and make recommendations on how the problem could be alleviated.

Factors Contributing to violence in schools.

The above task forces and researchers have come up with many explanations concerning the causes of violence among the youth. What follows are the possible factors contributing to the problem.

1. The Government failure to implement most of the recommendations made by the appointed task forces on students' unrest. The Presidential Taskforce in 2001 for instance recommended the following among others:
 - To put an end to the ranking of schools by Kenya National Examination Council (KNEC).
 - Establishment of a comprehensive system of examination that could accommodate and recognise individual talents through continuous assessment tests.
 - Scrapping of district mock exams and replacing them with school based mocks during 2nd term of the year.
 - Banning of holiday, weekend and after school tuition.
 - Rating of movies and confiscation of pornographic materials in schools.

- Organizing talks for parents on issues related to discipline
- Streamlining of admission criteria to address students' social backgrounds and avoiding bias.
- Residing of head teachers and their deputies on the school premise in cases of boarding schools.
- Adhering to the Government regulations on class size of 40 and decongestion of dormitories.
- Establishment of guidance and counseling services in schools

A few of the foregoing recommendations were implemented. They include scrapping of school's ranking in national exams and; organisation of talks for parents by some schools. However, with free primary and subsidized secondary education, it has been difficult to have class size of 40. This is worse in secondary district schools where classes have about 60 students. It has also been difficult to establish guidance and counseling departments in most schools and in cases where they exist a few are manned by professionals. Thus, the government's failure to implement the above recommendations and many others has led to continuous unrests.

2. Examination oriented curriculum: Kenya education system puts a lot of emphasis on learning in the cognitive domain with examination as a determinant of certification and career placements. The parents, teachers and the school pressurise students for good results leading to stress. It is significant to note that riots occur second term when students are preparing for Kenya Certificate of Secondary Education (KSEC) mocks. The examination is seen as the main cause of tension, anxiety and fear among students. They use strikes as a way of venting this tension. During the 2008 riots for instance several schools refused to sit for mocks because of fear of failure. In the last wave of strikes, over 50% of the cases were because of this fear in provinces like Coast, Eastern, Nairobi and Central.
3. Over- loaded curriculum: A broad curriculum has been a main feature of 8.4.4 system of education. Although some subjects were removed from the curriculum and the content of some reduced, the curriculum remains broad. The teachers rarely cover the syllabus within the stipulated time. This forces them to look for extra time outside the established timetable to cover the content. Thus, the students are in class when they should be relaxing, this leads to stress.

Besides, the students are examined on content covered for a period of four years. This makes retention difficult due to interference of both new and old material in learning. Interference as a forgetting theory is of two types: proactive and

retroactive. In proactive the old material interferes with the new material being learnt while in retroactive new material interferes with the old one.

4. Corruption and inefficiency at Kenya National Examination Council (KNEC): The council has been accused of examination leakages for years. These leakages and open cheatings in many schools have gone unpunished and at times undetected. Accusations by KNEC officials have ranged from selling examination papers to parents, schools and students or middlemen / women). It seems the council has institutionalized cheating.

KNEC is using school mocks as a yardstick for leakages. Whenever cheating has been dictated, the council has resorted to mock scores to moderate the grades. Owing to this both the students and teachers are attaching a lot of importance on mocks. Given a chance, students would prefer rather to avoid it or sit for a less demanding examination. Some would even find satisfaction in cheating. This was evident when during the 2008 mocks, candidates in some schools demanded that they be allowed to carry their notes, textbooks and mobiles to the exam rooms. Thus, frustrations over the fading confidence in KNEC's competence and capacity to oversee an open and fair competition in schools and is one factor affecting management of schools leading to unrest.

5. Subsidized secondary education which has raised transition level of primary to secondary schools to 70%: This has overstretched facilities in public secondary schools. Most of the strikes (over 90%) occurred in public secondary districts schools, low cost private and provincial schools that had admitted students without injection of extra learning resources or facilities.

A delay in releasing funds for secondary education has been a source of tension in some schools in Western province.

6. Poor role modeling at home, in schools and the society in general: Students come from families where domestic violence thrives. At school, teachers react to them violently when they find them at fault. There are schools still using caning as a form of discipline even after corporal punishment was banned in 2001.

The post –election violence of early 2008 demonstrated to young people that authority can be defied with no consequences and that violence is a means of communication and attention seeking. They learned that personal demands are more important than other people's lives and property.

7. The role of the media: It is argued that strikes are fueled by the media which report the schools which have defied authority. These striking schools pose as heroes to other schools causing the former to do the same.
8. Emerging issues in education: These include the rights of children and the role of each player in education. Section 13, 18, and 23 of the Act when denied teachers power to punish wayward students. Students are aware that any form of assault is a crime under section 25 of the penal code and is punishable by five years in jail. This has led senior education officials and the courts interfering with discipline cases and overruling certain issues unconditionally. There are cases where Board of Governors expel students but are later confronted by senior ministry of education officers to readmit the students unconditionally (Nation, July, 23, 2008). Such a scenario makes students big headed and disobedient to the school authorities and rules, causing chaos.
9. Lack of discipline among students: Both teachers and parents have failed to instill discipline among their children and students respectively. Decrying this Balala remarked: "Parents have failed to discipline their children because of foreign ideology which is detrimental to African form of disciplining children "(Najib in Nation, July 21, 2008)

For a long time the use of the cane was the only form of discipline known to teachers and parents. With the passing of children Act in 2001, which banned corporal punishment and made it criminal, teachers and parents have not found alternative methods of discipline. There were no in-service courses which were carried out to equip teachers with basic skills of dealing with the problem. The students have taken advantage of this unpreparedness and disobey authority at will. They know they cannot be caned nor given manual work and that they are at liberty to sue either their parents or teachers in case they subject them to physical and psychological abuse.

8. Poor parenting has emerged as a major factor in schools violence. Research by Obuto (2005) indicate that 99.9% of students and teachers cited poor parental upbringing as a factor contributing to school strikes. In another study by Mwikali(2005) ,poor parenting scored 100% among head teachers with 96% of students asserting that their parents are poor role models. The psychologists argue that although the child is born with the potential of becoming healthy and successful, the way he/she is brought up will determine whether the individual will grow into an emotionally healthy individual or not. Varkey (1997)

contends that: "The parents can be princes charming that turn the children to princes or princesses or the witches that turn him them into frogs". This responsibility is not an easy one because "it is easier to rule a nation than to bring up a child" (Chinese proverb in Varkey (1997:68.)

Many parents have been found lacking in this area. They have neglected their parental duties in pursue of their careers. They have also embraced a foreign child rearing practices which are destructive to the children. For instance, a study by Africa Mental Health Foundation found out that "many children who abuse drugs came from families where one of the parents or other members of the family are abusing drugs."

9. Alcohol and drug abuse: A recent study showed that alcohol abuse among students has gone up by 71% over the last four months. The drugs' influence during the unrest was unearthed when among the items found in the burnt dormitories were "condoms, diesel, cigarettes and alcohol." A study in 2002 in 17 public schools indicated that students took the following drugs; beer, wine, sprits and cigarettes, bhang, cocaine, alcohol, petroleum products and among other drugs. This constituted about 18.1%.both in urban and rural schools. A study by Orifa (2004) in Kiambu, Central province showed that about 62% of secondary school students admitted having ever abused drugs in their lives with 23% still abusing them. In the same document 16% of indiscipline cases in the year 2001 in Central province were from this district.

Research shows that when one is under the influence of drugs, a sense of responsibility diminishes leading to perpetuation of acts which the individual might not have engaged in had he or she been sober. This explains why the students lose control of their instincts and destroy lives and property without a second thought.

10. Poor management skills by the administration: The school leadership has been accused of failing to have an open dialogue with students. It applies authoritative approach to discipline and autocratic management style closing the door to dialogue. For example in Lenana School which is an old national school of high standing , the cause of the strike was because of administration's failure to address the students grievances , the deputy principal's highhandedness and bullying by senior students (Nation ,July, 23rd 2008). In the same paper, the causes of unrest in Pumwani Secondary, a provincial School in Nairobi was poor food and congestion of dormitories. In Godama the students and parents complained of mismanagement of donated funds by the principal. Wachanga (2003) established that 66.7% of students viewed their headteachers as being autocratic and 86% as being inaccessible. All these are administrative related issues which could have been solved with a more responsible administration.

Inadequate management skills have led the administration investing a lot of power in prefects who harass and punish other students. Some of them set up kangaroo courts,

which they preside over and mete corporal punishment on fellow students. Some students have reacted to these abuses with tragic consequences. The cases in mind are those of Nyeri High School already cited and that of Thomas Oguya and Allan Odaga both of Nyando Otieno Oyoo Secondary School who were assaulted by prefects at mid- night leading to dire consequences (Standard, July 23, 2009) .

11. Unbalanced curriculum which emphasises on cognitive development of the learners at the expense of the moral. It overlooks the religious element in teaching and the role of pastoral care programmes. The wave of unrest can be attributed to spiritual vacuum among students which if not checked, could destroy the fabric of nationhood (Eshiwani : 2001). The moral decay among the youth is so serious that some of them sneak out of school to engage in sex with either boy friends or adult members of their parental home. Such students would like to cause chaos so that they can be send home and have an opportunity to be involved in pre -marital sex.

12. Teacher related problems: These include poor teaching strategies which do not meet the needs of the students and lack of commitment displayed by non- planning for their lessons or absconding from duties. Some have been accused of uncalled for strictness or highhandedness or even humiliation of students by abuses and slaps. All these cause discontentment and dissatisfaction among the students' body. For instance, a study by Wachanga in 2003 indicates that 84% of students viewed their teachers as dictators who hardly listened to them nor involved them in anything. Similarly, Obuto (2005) found out that 70.8% of students did not like their teachers' authoritative behaviour, while 90.9% complained of harshness and dictatorial tendencies from both teachers and head teachers.

13. Political interferences: These were the causes in Eastern, Rift Valley, Western, Nairobi, Coast and Nyanza provinces. It is alleged that politicians have been influencing field officers to transfer either teachers or head teachers and replace them with the locals in the region where the schools are located and who are mainly their supporters. Some of the politicians had pledged to do this once elected. The transfers are affected regardless of the performance of those concerned.

14. Inadequate or lack of Guidance and Counseling services in schools: Although the services have been recommended over and over for every school, a number have yet to achieve this.

The justification of guidance and counseling as an intervening strategy

The problem of violence in schools can be addressed by using Guidance and Counselling Services (GCS) as an intervention strategy at school level. Below are reasons why it is the best option.

- a) Guidance and counselling services have been recommended in schools by all commissioners of education since 1964. The Ominde Report in 1964 for instance, suggested that schools should provide some guidance to the students. This led to the Ministry of Education starting a sub-section within the inspectorate to deal with the implementation of guidance in schools in 1971. The emphasis however, was more on career advising than on counselling.

The Gachathi Commission of 1976 recommended that the Ministry of Education should expand its services to include guidance and counselling in each school. The head teacher was to assign one teacher to provide the services. It also recommended the establishment of courses at the University for training professional workers in guidance and counseling. Teachers undergoing training in education were to take one course in counselling.

The Kamunge Report (1988) recommended that schools should establish guidance and counseling services with senior teachers being responsible for them. The services were to be decentralized and moved from the Ministry's headquarters to the district level. The Kenya Institute of Education (KIE) was charged with the responsibility of developing suitable and relevant guidance and counseling services.

The Koech Report (1999) recommended the following:

- Positive cultural practices such as counselling & guidance which go on during initiation ceremonies be encouraged and moderated to enhance the social development of the youth.
- Guidance and Counselling in schools & colleges be strengthened.
- Trained teacher counselors should work with other teachers, parents, NGO's and religious bodies where necessary.
- Students should be counseled against use of violence as a solution to counter problems.

- b) The Kenya Development Plans over years have pointed to the importance of guidance and counselling services to schools. For example, the 1974-1976 development Plan recommended that Ministry of Education should allow the designated guidance teachers more time to attend to students' counseling needs. The 1979-1983 Development Plan recommended that Guidance & Counselling be incorporated into the teacher training curriculum at both the college and University levels.

- c) The Government's sessional papers have underscored the importance of GCS in educational institutions. For instance, session paper No.6 of 1988 expressed the

Government's interest in expanding the Guidance and Counseling program in Secondary Schools. It recommended the training of the school heads & senior teachers to supervise the G.S programs that had been established.

d) It was one of the major recommendations according to the report of the Presidential Committee on Students' Unrest and Indiscipline in Kenya Secondary School (Sept. 2001). It stated these recommendations:

- Recommendation 22: The Ministry of Education Science and Technology establishes a strong Guidance and Counseling division within the Ministry, which will coordinate all the activities of Guidance and Counseling in the country. This division will be equipped with the relevant personnel and resources to facilitate its functions.
- Recommendation 31: Training of Guidance and Counseling teachers should be given priority under a crash programme both by the public and private sectors.
- Recommendation 32: Teachers with qualifications in Guidance and Counseling be identified and deployed by the Teachers Service Commission (TSC) immediately.
- Recommendation 33: The number of teaching lessons given to G&C teacher should be reduced to allow them enough time to effectively carry out G& C activities.
- Recommendations 34: G&C teachers be given three increments above their present grade as an incentive.
- Recommendation 78 a: Knowledge and skills in G&C be imparted to all teacher trainees at all levels of training.
- Recommendation 78 b.: Heads of G &C be required to have postgraduate qualifications and experience in G &C.
- Recommendation 89: G&C in schools be strengthened at the teacher and peer level.
- Recommendation 141: The MOEST appoints teacher counselors for every public school. These teachers be trained so that they could have the required skills and knowledge in G& C.
- Recommendation 142: Peer counseling groups be set up in every school and peer counselors be given the necessary skills and knowledge.
- Recommendation 143: Parents be more involved in counseling services in schools.
- Recommendation 149: Students already on drugs be counseled by the teacher counselors or be referred to specialists for rehabilitation.
- Recommendation 155: G & C and pastoral care be strengthened in order to provide a strong foundation on moral values and spiritual growth.

e) The role performed by Guidance and Counselling in the lives of students cannot be undertaken by any other department. According to Nasibi (2003), the importance of the named service to the students is discussed as follows.

- It contributes to the self knowledge, determination, realization, acceptance and self development of individuals by identifying their abilities, interests, aptitudes, values, potentialities and developing them to the full. The counselor specifies opportunities available to the students and the consequences of non-planning on their future possibilities. He/she helps the students to recognize that they do have some control over their future. As a consequence students learn to focus on themselves and what they can do to improve their lot instead of engaging in self destructive activities.
- It helps the students to make the best possible adjustments to the situations in the school as well as the home. The problems they attempt to cope with range from academic (how to study, prepare for exams and manage stress), to social (how to interact and adjust properly with peers, siblings, parents etc).Students resort to violence because they cannot cope with the situation at school and at home.
- It enables an individual to adapt confidently to rapidly changing circumstances, making him/her capable of making decisions, thus developing solving and decision-making skills. Some students are unable to make their own decisions but follow the decisions already made by others without thinking of the implications or the risks involved.
- It gives learners a sense of direction, purpose and fulfillment and by so doing, minimizes incidences of indiscipline among students. The riots are caused because students lack discipline. Therefore, addressing this would go a long way in solving the problem.
- It encourages diversity in talents, originality and creativity among learners. This leads to self awareness which is essential in understanding ones environment and meeting life's challenges.
- It minimizes wastage and frustrations in education and employment by making learning experiences interesting, equipping the learner with effective study skills, identifying students' characteristics and potentialities, and matching the right occupation with the right courses and employment. This leads to the efficient use of human power in the world of work and creation of goal oriented individuals in schools.
- It helps to identify and motivate students from disadvantaged homes that experience difficulties in adjusting to the school environment. These are students who cause problems in schools leading to violence.
- It assists the students to identify clearly cultural standards against which they can either question or reject completely, thus developing their own value system.
- It helps the learners to become aware of the needs of others and to establish positive relationship with them. This leads to the development of group learning experiences hence building good relationships.

- It aids students in establishing and attaining worthwhile goals, becoming self reliant and responsible for their behavior and the choices they make.
- It keeps students informed on educational and vocational choices and in exploring vocations that would be appropriate outlets for their abilities, interests and personalities.
- It aids the teacher in creating an atmosphere that fosters meaningful learning relationships.
- It facilitates co-operation between teachers, parents and administrators to develop positive leaning experiences.
- It seeks to compensate for the extended family ties that kept the traditional society together.

Given the above roles of guidance and counseling, the causes of violence would best be addressed by engaging the services of a counselor who will strategize on how to deal with all those involved whether they are students, teachers, head teachers or parents collectively or individually.

10. Post- election violence has been blamed partly for the students' destructive behaviour. Ongeru (2008) for instance argues that events following the flawed elections in 2007 caused negative effects on youths especially in areas that received displaced learners. Many youths were traumatized either physically or psychologically as they witnessed or participated in violence in person or viewed it on television. Such exposure is likely to generate anger, hopelessness and one is bound to react extremely at the most mundane of excuses. It is only through counselling that such students can be identified and necessary steps taken to redeem them. It could be possible that some are suffering from Post-Traumatic Disorder (PTSD). This disorder is characterized by re-experiencing (e.g nightmares and flashbacks), avoidance, numbing of general responsiveness, and hyper arousal (e.g. irritability and hyper vigilance) following a traumatic event (Bisson: 2007).
11. According to psychologists and psychoanalytic theorists like Freud, violence is a drive, a form of energy that persists until a goal is satisfied. Violence occurs when aggressive energy builds up until it has to find an outlet. Research shows that most people who commit aggressive acts have a history of aggressive behaviour. It is further argued that aggression can be learnt through observation or imitation and the more often it is reinforced, the more likely it is to occur. Studies conclude that observation of either live or filmed models of aggression increases the likelihood of aggression in the viewer.

Given that violence or aggression is experienced in Kenya on a daily basis, it is possible that the problems schools are going through could be addressed by focusing on aggression

which is a learnt behaviour and could therefore be unlearnt. The unlearning is only possible when the counsellor as a therapist applies behavioral theories to counseling.

Conclusions

Based on the above analysis it can be included that:

- Violence in schools is as a result of factors within the school, the family and the larger society.
- These factors range from management, classroom practices, curriculum, and government policy to parental practices.
- The main factor contributing to continued crisis is the failure of government to implement the recommendations by earlier task forces.

Recommendation

1. The government should implement all recommendations made by various past taskforces on the student unrest.
2. The government should provide professional counselors in schools because the schools that had counsellors did not bear the brunt of the country -wide student strikes. Schools should ensure that the department (Guidance & Counselling) is fully equipped with rooms and furniture for both group and individual counseling.
3. The dual relationship where counselors are also teachers should be avoided. This is because students find it difficult to confide in counselors who are also their teachers. At times, the teacher –counselors break the ethics of confidentiality and sever the relationship between them and the students
4. Disciplining of the students should be left to the principal, deputy principal and discipline master not teachers and prefects. However, teachers should be equipped with basic skills in counseling so that they will be able to interact with students harmoniously with little or no tension.
5. Students should be involved in management of the schools or governance by being:
 - Allowed to participate in setting of school rules so that they can own them.
 - Accepted to elect prefects democratically as a link between them and the administration.
 - Permitted to form students' councils as a vehicle of channeling their grievances to the administration. .
 - Authorised to use *barazas* as in the Starehe Boys model, where the students can air their views freely with the administration.

- Involved in deciding on the meals they would like served at school.

This would give them confidence about the administration and themselves that they are important and part of what goes on in the institution. This approach would encourage upward communication channel from students to teachers instead of the reverse.

6. Students should be allowed to join various clubs of their choice as a recreational or leisure activity e.g. debating, Christian union, drama, choir, dancing and sporting.
7. The School ought to lay a lot of emphasis on extra-curricular activities especially sports. It was observed that students or schools at the heart of sports were hardly involved in destructive behaviour.
8. The parents are called upon to lay a strong foundation for discipline and value system among their children taking the responsibilities of parenthood more seriously. There is need for them to attend courses in parenting to sharpen their parenting skills.
9. The administrators should be exposed to an intensive in-service course on management skills organized and managed by Kenya Education Staff Institute (KESI).
10. The head teachers should help cultivate a democratic atmosphere in schools by encouraging dialogue with both teachers and students and giving attention and acting on their grievances.
11. The adults in the lives of all students must provide good role models. This includes administrators, teachers, parents, political leaders and the wider community because the youth imitate what they see their significant others doing. Curriculum should be reviewed to inculcate national values and discipline ways of instilling in students. Subjects like Religious Studies and History & Government should be made compulsory. This will strengthen the students' value system and train them in morals and patriotism.
12. There is need for new leadership at KNEC: It is believed that there would be more examination leakages unless there is a purge at the council. Failure to do this will encourage and strengthen a culture of impunity by a network of individuals working against hardwork and merit.
13. The Kenya Government through the Minister of Education and Minister for Justice, National Cohesion and Constitutional Affairs should introduce laws which explicitly prohibit corporal punishment in schools.

14. Peace Education Networks (PEN0) should be started in all schools and among schools to quell violence among students .At school level lectures talks could be organized on importance of peace and harmony. This will teach the young the need of living harmoniously. Use of peace symbols in schools will go along way in addressing the issue.
15. The schools should be provided with a manual focusing on administration rules, code of conduct, disciplinary measures, inspection of schools and security or safety measures.

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CONCEPTS AND CONCEPT DIFFICULTY IN SCHOOL CHEMISTRY

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Abstract

At the secondary school level, the concept domain is perhaps the most obvious and dominant when viewed from the syllabus content perspective. Concepts are central when it comes to teaching science and chemistry in particular. It has been observed that not all chemistry concepts are at the same level of difficulty during instruction. This paper explores the main characteristics that teachers use to label some concepts as difficult or simple by their learners. A number of chemistry teachers were used to categorize selected concepts (in terms of topics) as difficult or simple, giving reasons for their categorization and suggestions to the instructional strategies used for very difficult concepts. The agreement in the categorization was very close, citing mathematical ability, concept map size and theoretical nature as the main indicators of difficult concepts. The mathematical aspect was very pronounced in the girls' than in the boys' schools. Teachers use various techniques to teach difficult concepts which include adjusting instructional pace, working on wider tasks (examples) to remedial measures.

Introduction

Secondary school science instruction considers multiple domains, the main ones being the *concept domain*, which forms the bulk of the syllabus, the *process domain* which emphasizes process and manipulative skills, the *application domain* which involves use of learned knowledge. Lastly, the *attitude domain*, which considers the motivational orientation of learning school science (Weld, 2004). The concept domain forms most of the content in secondary schools in Kenya and in most syllabuses around the world at this level. According to Weld (2004) and Kauchak *et al*; (1993), concepts comprise facts, principles, theories, laws and other accepted scientific constructs. The concept domain is central to science and chemistry in particular when it comes to instruction. It is central and crucial because it represents the real crust and knowledge base that determines the development of other domains of science. The knowledge base gained from the concept domain, therefore, guides the future scientific activities. Student understanding of science and chemistry concepts is crucial in the formation of the foundation of science around them. It is considered that without understanding of science concepts students would find it almost impossible to follow much of the public discussions of scientific nature or to understand public policy issues pertaining to science, chemistry and technology (Millar, 1989; Twoli, 2006).

The concept domain in chemistry has been addressed in school syllabuses and in instructional modes. In most cases students at secondary school typically encounter chemistry concepts in isolation as discrete pieces of information. They learn the concepts mostly through rote learning methods and usually have no reason for learning them other than for the fact that the concepts exist and will be tested in various examinations. Such situations arise where the basic learning resources are limited and where the instruction is therefore through the expository approach. In such a case, rarely do students learn chemical concepts within a context that establishes their importance beyond the class tests or examinations, nor do they develop meaningful connection between the concepts themselves. As a result, most students are not able to develop a fundamental, comprehensive understanding of basic chemical concepts. This problem is vividly demonstrated in the inability of candidates to respond to some questions which demand relationships in concepts (KNEC, 2006-8).

The Kenya National Curriculum body led by the Kenya Institute of Education (KIE) and KNEC have been reviewing and putting emphasis on *understanding* of concepts rather than the short term learning for examinations. These directions are presented in table 1 showing the changing emphasis in concept domain.

Table 1: Changing emphases related to chemistry concept domain in Kenya syllabus.

Less emphasis on	More emphasis on
Knowing chemical facts and information	Understanding chemical concepts and developing abilities of inquiry
Studying chemistry subject matter for its own sake (less application to e.g. real life and industries)	Learning chemistry content in the context of inquiry (practical way)
Separating chemical knowledge and chemistry processes	Integrating all aspects of chemistry content
Covering many chemistry topics (large content)	Studying a few (the main) chemistry concepts

Concept and concept mapping

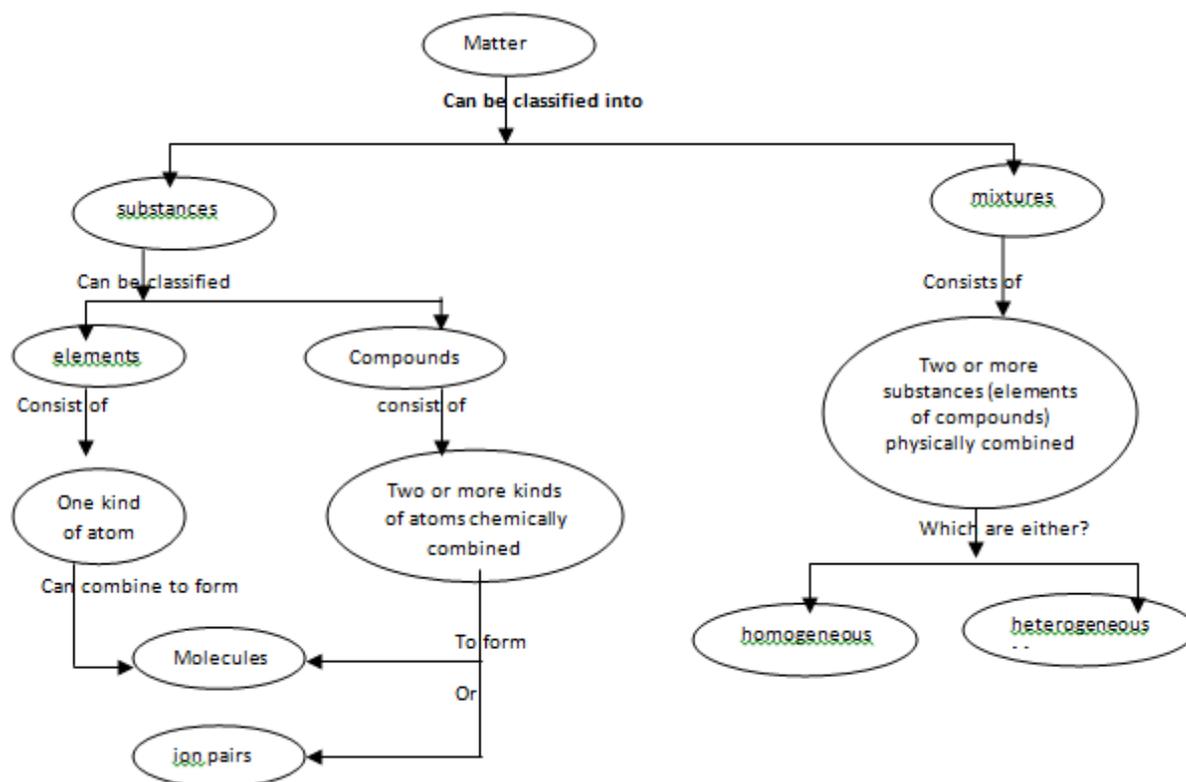
Concepts represent a major portion of the chemistry school curriculum (syllabus) and much of teachers' efforts are directed at teaching them. But what is a concept? A concept has been defined or given meaning in a number of ways. One description of a concept has been given by Farmer and Farrell (1979) as *a classification of ideas, objects, events, or facts into a set by mentally abstracting the common essential characteristics or attribute which define the set*. So, a concept has characteristics that can be recognized with. Many concepts have

well defined characteristics. Take an example of the concept, *atom*. An atom has clearly defined characteristics which include a central nucleus, containing neutrons and protons with the electrons revolving around it. One can go into smaller characteristics (subordinates) of an atom such as the masses and charges of each of the particles.

The ease of learning a concept is directly related to the number of characteristics it has and how tangible and concrete they are (Tennyson and Cocciarella, 1986). So we expect concepts with less characteristics to be easier to learn as opposed to those with more characteristics. This is expected since a learner finds it easier to relate the few characteristics than that with many characteristics.

Concept mapping is a strategy which has been used by teachers in instruction to determine the relationships of a concept and its subordinates. It requires learners to organize a set of related sub-concepts that make up a concept. Usually a concept map is divided into *nodes* and *links*. Nodes (often circles or boxes) represent key sub-concepts while links (lines) represent relationships (proportions) between concepts (Lanzing, 1997). The links are represented by an arrow or at times just with a line. If an arrow is used the direction of the link is indicated. Words are used to label the links in order to clarify the relationships (figure 1).

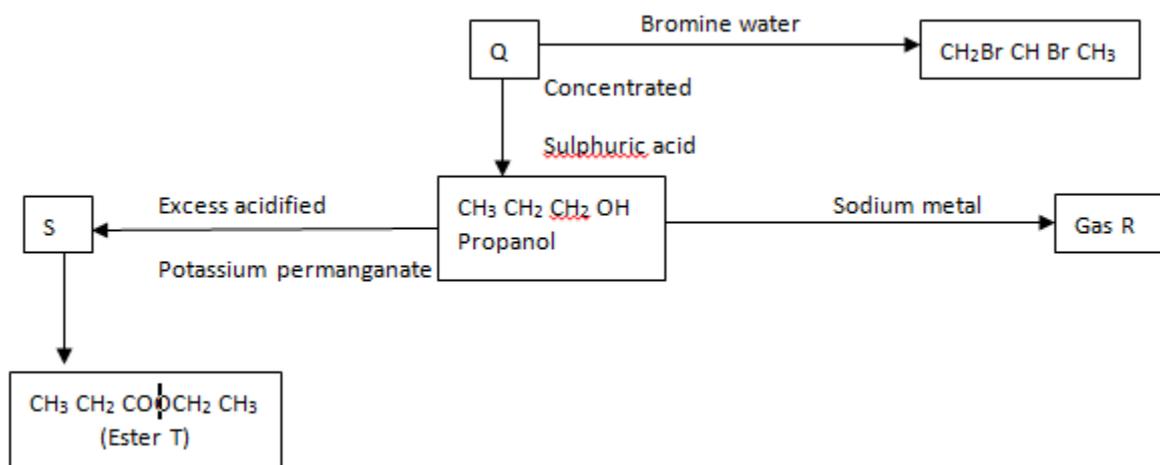
Figure 1: An example of a concept map of matter



To introduce students to concept mapping, they must first be shown the connections or relationships within the concept. At elementary level, a practical way of generating a concept map is to write each term or subordinate concept on a piece of paper. The pieces of papers can then be re-arranged to form the links right from the main concept to the subordinate concepts, thus forming a hierarchy. A concept map demonstrates the potential for students of chemistry to graphically demonstrate their understanding of a concept at any given time. Matter mixtures substances can be classified into two or more kinds of atoms chemically combined compounds heterogeneous homogeneous ion pairs molecules. One kind of atom two or more substances (elements of compounds) physically combined elements can be classified into Consist o can combine to form Consist which are either to form or Concept maps do serve a lot of purposes in chemistry instruction. The following are perhaps the key roles of concept maps in chemistry instruction:

- It can serve as a diagnostic tool, since it can provide information about the learners' prior views or knowledge which can be used in planning and preparing learning experiences. Most teachers can find concept maps useful at planning stage especially when writing schemes of work.
- Concept maps can be used to assess conceptual change or understanding of a learner. Structured questions have been used by many Examining Boards to apply the concept map technique.

Figure 2: A question using a concept map



- Concept maps have found useful use in revision by learners. The maps are skeleton in form, giving only key sub-concepts and therefore serving as a suitable form for a quick revision. It is found most suitable for learners who have language problem e.g. those who use a second language for instruction.

- The last important application of concept maps is found in their role as a source of questions during instruction. They provide a stimulus for both teachers and learners to generate questions and possible solutions. Such questions may include: What if? Why does? How would?

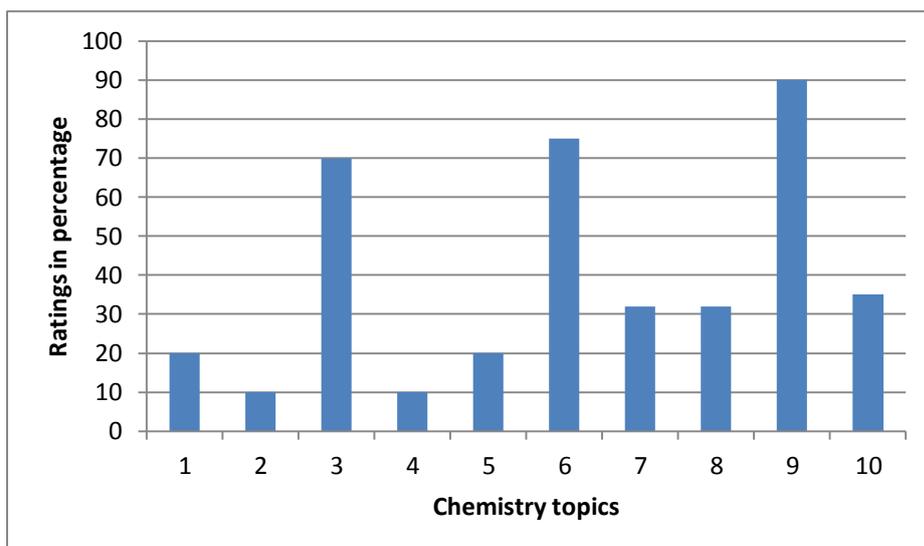
Concept Learning

The ease or difficulty of learning a concept can be dependent on many factors. This was the focus of a **study** among chemistry teachers on a school-based programme. These are experienced teachers who have taught for several years and are seeking a higher qualification in the profession. A total of one hundred and twenty teachers were given a *topic difficulty rating scale (Appendix 1)*. Each teacher administered the scale to ten teachers making the total number of respondents to one thousand two hundred (1200). On a wider consideration, these topics serve as concepts and this was also one way of getting teachers to easily interpret the scale. The main task was to:

- Determine what the learners consider as the difficult and easy topics (concepts).
- Give reasons or characteristics of the topics labeled as difficult or easy (what makes these topics to be regarded as difficult or easy).
- To indicate instructional strategies teachers use when teaching difficult topics.

The results about which chemistry concepts or topics are difficult and easy were very definite (Figure 3).

Figure 3: A bar graph showing difficulty ratings in percentage against some chemistry topics



Key

No.	Chemistry topics
1..	Atomic structure and the periodic table
2.	Acids, bases and salts
3.	Electrochemistry
4.	Nitrogen and its compounds
5.	Metals
6.	Energy changes
7.	Gas laws and pressure
8.	Hydrocarbons (Organic Chemistry I)
9.	The mole concept
10.	Reaction rates and reversible reactions

Ratings in Percentage
Chemistry topics

Three topics emerged as most difficult led by the *Mole concept (No. 9)*, followed by number six (No. 6) which is *Energy changes* and then number three (No. 3) which is *Electrochemistry*. What are some of the reasons or characteristics that make chemistry students find these three topics or concepts difficult? The responses are outlined in table 2.

Table 2: Topics (concepts) and attributes to their difficulty

Topic	Attributes
The mole	<ul style="list-style-type: none"> • Calculations: mathematics • Large concept map (too many ideas) • Many formulae and equations
Energy changes	<ul style="list-style-type: none"> • Calculations • Lack of simple experiments • Many equations
Electrochemistry	<ul style="list-style-type: none"> • Many mathematical calculations • Writing equations especially half-equations • Many ideas (large concept map)

A number of specific attributes emerge from the responses and the main ones are

- **Calculations:** Mathematics seems to be a factor in learning some chemistry topics (concepts) and because of this; such topics are found or labelled difficult.
- **The size of the concept map:** The concepts with large concept maps or with many ideas as most teachers referred to it will present learners with some difficulty of relating the many ideas or sub-concepts. The mole in particular has a large map and no doubt this is responsible for the difficulties learners encounter in learning. It may also be mentioned here that writing *formulae* or many *equations* was given as a common attribute. While this is regarded as separate, this attribute can be subsumed under the mole concept.
- **Lack of simple experiments:** Practical's assist conceptualization and this highlights the need for resources in schools and the use of inductive approach in teaching chemistry and science in general.

The majority of the topics in the scale were classified as average or simple for chemistry students. Such topics had attributes such as: simple ideas: requiring few mathematical skills; supported by simple practicals; easy to get and use examples.

Instructional strategies for difficult concepts (topics)

Using their experience in the field as chemistry teachers, they were asked to give some of the general and innovative strategies they use to teach difficult concepts (topics). A range of instructional strategies were given (Table 3).

Table 3: Strategies for teaching difficult concepts

<p><i>Instructional strategies for teaching difficult concepts (topics)</i></p>	<ul style="list-style-type: none"> • <i>use of a slow or moderate pace when teaching</i> • <i>use of many (worked) examples</i> • <i>give many assignments to learners (for purpose of feedback)</i> • <i>arrange and encourage group discussions</i> • <i>plan for practicals</i> • <i>use of visual aids</i>
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Among the many instructional concerns of science and chemistry teachers in particular include the following: What is the best way to convey the many chemistry concepts so that all learners can retain and use information? This challenge can be partially met by using contextual approach to the teaching and learning of chemistry and science in general. According to contextual learning theory, learning occurs only when learners process new information using their own frame of reference, experiences and responses in a way that

makes sense to them. Teachers have the responsibility to ensure that this is accomplished through proper preparations, use of suitable examples and giving learners proper motivational orientation. Instruction based on contextual learning strategy emphasize *relating* (examples), *experiencing* (practicals), *co-operating* (group discussions), *applying* (relating to everyday experiences) and *transferring* (applying to new situations).

Most of these strategies listed by the chemistry teachers are those used in teaching difficult concepts. Many of them, however, go beyond the conventional practice or application of these strategies. Let us consider one or two examples. Let us first take the case of *group discussions*. These are arranged in normal lessons in a school. Many teachers consider this as not enough and so they arrange for *integrated group discussions* with students in another school, usually a school of a higher status and one that posts better performance in National Examinations. Such exposure is likely to lift learners as they are likely to gain knowledge and experiences that can benefit the students. The other area where teachers of chemistry make initiative is when it comes to arranging for practicals. There are some schools that lack basic resources for practicals in chemistry. Teachers in such schools are faced with a challenge on how to arrange for key practical lessons. Many teachers suggested that they often request for practical slots from nearby established schools. Where a neighbouring and established school is distant or too congested in their timetable, then teachers would borrow basic chemicals and apparatus for practicals. So long as there is the trust and the will to promote chemistry and science in general such an arrangement goes a long way to make use of the limited resources to improve science in the country.

Conclusion

Concepts are abstract categories that we use to classify objects, events and ideas. New concepts are learned by emphasizing some instructional modes or practices. One way of learning a new concept is by encountering relevant examples, both *positive* and *negative* (Tennyson and Cocciarella, 1986). Positive examples tell the learner what the concept is while negative (non examples) illustrate what the concept is not. For example, if a teacher wants chemistry students to understand the concept *isomerism* he/she should consider a number of molecules which are isomeric and others (as non-examples) which are not isomeric, so that students do not confuse isomeric structures and non-isomeric structures.

To assist learners to manage the difficult concepts such as the *mole*, *electrochemistry* and *energy changes*, teachers of chemistry have to engage additional initiative. One effective approach is the inductive approach which introduces a topic in a practical way. Carrying out practicals requires resources in schools and laboratories. Innovative teachers in schools with

limited resources reach out to neighbouring schools to request for laboratory slots or borrow chemicals and apparatus to arrange for practicals in their schools.

From teachers' reports, the mathematical component is a major contributing factor towards a concept being labelled or interpreted as difficult. Most students of chemistry would usually understand the general mathematics-how to add, multiply and take square roots. But the mathematical application required in chemistry is the contextual mathematics, which is a blend of understanding of the concept and then determining the mathematical operations to fit in the concept. For learners to be able to carry out such operations, teachers of chemistry should guide them first into meaningful understanding of the concept, then the related mathematical operations. The problem of mathematics in chemistry and science in general is not a new observation. It infact persists as one goes to higher levels in education. This explains why there is an arrangement for students at higher education like university to do some form of mathematics. You are likely to get many books with titles as '*Mathematics for chemists*'. This is out of realization that mathematics has a role to play in the learning of chemistry.

Teachers who perform well in a lesson usually prepare well. When teachers prepare before hand, they get to know exactly what their students want to know and will therefore prepare for suitable resources, examples and so on. It becomes important, therefore, that teachers get to have a clear objective in mind as this guides lesson preparation and delivery. Concepts form the core of the content for most chemistry syllabuses and if any chemistry is to be meaningfully learned in developing countries, then most effort should be directed towards the use of conventional and innovative instructional modes.

Appendix 1: School Chemistry Topics Difficulty Rating Scale

Introduction

I am interested in finding out your perception about how easy or difficult some chemistry topics (topic difficulty) are from the learners' perspective. Please rate the following topics by ticking only in one box for each topic, and follow up with a brief explanation (or statement) in support of the ticked option.

Rating scale for chemistry topics					
S/No.	Topic	Easy	Average	Difficult	Reasons (for ticked option)
1.	Atomic structure and the periodic table				
2.	Acids, bases and salts				
3.	Electrochemistry				
4.	Nitrogen and its compounds				

5.	Metals				
6.	Energy changes				
7.	Gas laws and pressure				
8.	Hydrocarbons (Organic Chemistry I)				
9.	The mole concept				
10.	Reaction rates and reversible reactions				

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LEARNING PROCESS SKILLS IN A SCHOOL CHEMISTRY LABORATORY AND PERFORMANCE IN PRACTICAL WORK

Grace Orado & Dr. Twoli N. W

Abstract

The high investment in practical work in terms of resources has raised questions by stakeholders whether this investment is worthwhile. Such questions include: What are the benefits of practical work? and can science be learned without practical work? Despite these questions, there seems to be consensus that practical work is beneficial to learners of science especially in developing a range of scientific skills, facilitating understanding of concepts and motivating learners. The performance of learners in chemistry practical work has been dismal. This prompted a study in one of the science subjects namely chemistry, using a population of learners and teachers in Nairobi Province Schools. The main findings indicated that the chemistry laboratories are well equipped to carry out practical work and, therefore, teachers were able to guide the learners in a range of skills- manipulative and scientific (process) skills. On scientific skills, it was noted that nearly all emphasised basic process skills such as observation, interpretation, and inferring etc but fell short of integrated process skills which include experimental design and hypothesis formulation. This is seen as a serious limitation to the learners especially when they face a new situation like in examination or move to higher training in science.

Purpose of Study

This study sought to determine factors contributing to poor performance in practical work in chemistry. This was done with a view of giving recommendations that would guide practice leading to effective teaching and learning and consequently enhanced performance of practical work in chemistry.

Research Questions

A number of questions were sought to be answered by this study however the following were key questions for this study.

- i) What skills are emphasised in teaching practical work in secondary school chemistry?
- ii) What skills are assessed by teachers in practical work in secondary school chemistry?

Definition of Terms

Performance in chemistry	The mean scores learners obtain in Kenya Certificate of Secondary Education (KCSE) chemistry examinations
Practical work	Any teaching/learning activity devoted to the study of a particular subject for example chemistry through experimentation and observation

Methodology

Design

This study adopted a descriptive survey design. Since the study sought to determine problems that are associated with the teaching and learning of practical work in chemistry, survey design was best suited to achieve this. Surveys are applied to investigate phenomenon in their natural settings (Koul, 1984). They utilise a variety of data collecting instruments such as questionnaires and observation schedules which can comprehensively gather data ranging from facts to opinions.

Variables

The independent variable in this study was **practical work** with intervening variables as follows:

- **School factors** that include: school type i.e. boys only, girl's only or mixed school and resources for teaching practical work in chemistry such as laboratory, apparatus and chemicals.
- **Teacher factors** that include: teachers' attitudes, professional qualification and teaching experience and teaching style.
- **Learner factors** that include: learners' attitudes, entry behaviour and learning styles.

The choice of practical work activities and the way they were presented to learners was presumed to be influenced by some or all of these intervening variables.

The independent variable in this study was **performance in practical work in chemistry**. Performance in chemistry practical work was presumed to be dependent on the choice of practical work activities and the way the practical activities were presented to learners.

Population, Sampling procedures and Sample size

The population for this study comprised all the 47 public secondary schools (as at the time of study) in Nairobi province basically because of the common curricula used in all public

secondary schools. The study targeted a total of 6111 Form Three chemistry learners and 205 chemistry teachers. A total of 9 schools representing the sample units were selected using a combination of stratified, systematic and purposive sampling procedures. All these methods were used mainly to capture the different school categories; national and provincial schools and different school types; boys only, girls only and mixed or co educational schools. The number of schools selected to participate in the study represented 19% of the total population of the secondary schools in Nairobi. According to Ary et al (1972), 10-20% of the population is adequate sample for descriptive studies.

Of the nine schools in the study sample, two were national schools; one for boys only, the other for girls only (the only girls' national school in Nairobi province). The rest of the schools were provincial schools, three of which were for boys only, two for girls only and two mixed schools. For lesson observation, 6 schools were selected from the sample units of 9 schools. The selection was done in a manner that enabled the researcher to capture the different school categories and types and varied performance in chemistry by the different schools. It was therefore not necessary to observe lessons in all the 9 schools in the study sample. The schools for lesson observation included one national school for boys only, one provincial school for boys only, two provincial schools for girls only and two mixed schools.

Instruments

The main instruments used in this study were:

- Chemistry Teachers' Questionnaires (CTQ) adapted from Iraki (1994) and Musoko (1983),
- Chemistry Students Questionnaires (CSQ) adapted from Iraki (1994) and
- Lesson Observation Schedules (LOS) adapted from Musoko (1983). The LOS was content free as such it could be used to observe any practical lesson

A back up instrument also used in this study was the Document Analysis Guide (DAG) which was the researcher's own design. The DAG was used to compare skills assessed by chemistry teachers and those assessed by the Kenya National Examinations Council (KNEC).

Data collection techniques

Data collection was preceded by a pilot study mainly to determine the reliability of the instruments. The method of split half was employed to determine the reliability of the instrument and calculated using the Pearson product moment correlation formula. The reliability of the CTQ and the CSQ was found to be 0.81 and 0.81 respectively. The validity of the instruments was determined after seeking the opinions of the researcher's supervisors and chemistry teachers drawn in a locality different from where the study was conducted

who assured the researcher that the instruments were valid. Piloting also helped in determining the appropriateness of the one minute timing between recorded categories. The CTQ were administered to 29 chemistry teachers comprising 22 females and 7 males. These were all the chemistry teachers in the schools in the study sample. The researcher personally requested the chemistry teachers to complete the questionnaires on the day of visit of which most of them did. There were however situations where completing the questionnaire on the day of visit was not possible. In such situations, the researcher left the questionnaires with the teachers to be completed in their own time. The completed questionnaires were then picked by the researcher on agreed dates and time.

The CSQ were administered to one stream of form three learners. For schools which had more than one streams in their form three class, the stream to which the questionnaires was administered was selected randomly. The questionnaires were administered after seeking permission from the schools' authorities. A total of 309 form three chemistry learners comprising 170 boys and 139 girls responded to the CSQ.

Regarding the lesson observation, one teacher selected randomly from each of the 6 schools for lesson observation was observed on two different occasions teaching practical work in chemistry. Each observation was two consecutive lessons of 40 minutes each. This gave a total of 24 lessons of practical work observed.

Data analysis techniques

For purposes of skills emphasised in teaching and assessment, only data from the CTQ and LOS was considered. The data gathered using the CTQ was coded appropriately and analysed utilising Statistical Package for Social Studies (SPSS). The main statistics yielded were frequencies. From the LOS, frequency counts of each behaviour or skill for every teacher observed were worked out and the total frequency of each behaviour or skill calculated for all the teachers. From these total frequencies and mean frequencies for each behaviour or skill together with their respective percentage occurrence were worked out. Results were presented using tables mainly.

Findings

From the CTQ, the researcher captured among other data, the chemistry teachers' opinions regarding levels of achievement of various aims of practical work in chemistry. The teachers were supplied with various aims in chemistry practical work and asked to rate the level of achievement of those aims during practical work in chemistry as follows: 1 = not at all, 2 = to

a small extent, 3 = to a satisfactory extent, 4 = to a large extent and 5 = to a very large extent. Table 1 gives the teachers' ratings

Table 1: Level of attainment of aims of practical work in chemistry

	Aim	Frequency at each level of achievement						
		1	2	3	4	5	Blank	
i)	To teach basic practical skills	0	0		6	11	11	1
ii)	To familiarise learners with standard apparatus and measuring techniques	0	0		2	16	10	1
iii)	To train learners in making observations	0	0		3	14	11	1
iv)	To train learners on recording observations	0	0		3	14	11	1
v)	To train learners in making deductions and interpretations of experimental data	0	0		9	11	8	1
vi)	To use experimental data to solve specific problems	0	0		8	12	8	1
vii)	To train learners in writing reports on experiments	0	4		12	10	2	1
viii)	To train learners in simple aspects of experimental design	0	6		12	7	3	1
ix)	To arouse and maintain learners' interest in the subject	0	2		4	11	10	2
x)	To show the use of practical work as a process of discovery	0	4		7	12	5	1
xi)	To verify scientific facts	0	5		9	7	7	1
xii)	To help bridge theory and practice	0	1		4	11	12	1
xiii)	To train learners on how to raise and answer questions concerning scientific phenomena	0	5		9	9	5	1
xiv)	To train learners on hypothesis formulation	5	7		9	6	1	1

When the levels of achievement of aims in chemistry practical work were multiplied by the frequencies (f), the totals worked and each aim ranked the results in table 2 was obtained.

Table 2: Aims of practical work in chemistry and their rankings

Aim	ii), iii) and iv)	xii)	i)	vi)	v)	ix)	x)	xi)	xiii)	vii)	viii)	xiv)
Rank	1	4	5	6	7	8	9	10	11	12	13	14

From table 2, aims ii), iii) and iv) were rated highest while aims vii) viii) and xiv) were rated lowest by the chemistry teachers.

The LOS captured the skills or behaviour during practical work in chemistry. For purposes of presentation, the skills were coded according to the key in table 3.

Table 3: Behaviour/skills during practical work in chemistry and their codes

Behaviour/skill	Code
Teacher introduces lesson	A ₁
Teacher demonstration	A ₂
Teacher asks learners to design experiment	A ₃
Teacher assists learners in working with apparatus/materials	A ₄
Teacher asks questions, answers learners questions and acknowledges learners responses	A ₅
Learners assist teacher during demonstration	B ₁
Learners ask and answer questions	B ₂
Learners give experimental reports	B ₃
Learners design investigations or experiments	C ₁
Learners follow instructions and carry out experiment	C ₂
Learners make and record observations	C ₃
Learners analyse data, discuss any trends with each other and draw conclusions	D ₁
Noise/ confusion	E ₁

Table 3 shows total frequencies, mean frequencies and their respective percentage occurrence for each coded skill or behaviour.

Table 4: % occurrence of behaviour/skills during practical work in chemistry

Code	Total frequency	Mean frequency	% occurrence
A ₁	64.5	10.75	6.1
A ₂	20.0	3.33	1.9
A ₃	0.0	0.00	0.0
A ₄	178.0	29.66	16.8
A ₅	140.0	23.33	13.2
B ₁	15.0	2.50	1.4
B ₂	122.5	20.41	11.6
B ₃	57.0	9.50	5.4
C ₁	0.0	0.00	0.0
C ₂	195.0	32.5	18.4
C ₃	181.5	30.25	17.2
D ₁	69.5	11.53	6.6

E ₁	14.0	2.33	1.3
Total	1057.0	176.09	100.0

From table 4, the most frequently occurring behaviour/skill was manipulation of apparatus and materials (C₂) where learners followed the step by step instructions from the worksheets or chalkboard to carry out the experiments or activities. Also predominant during practical work in chemistry were learners making and recording observations (C₃). These two skills were followed closely by A₄ (the teacher assisting learners to work with apparatus and materials/chemicals. Notably absent during practical work in chemistry were learners designing own investigations (C₁). This is mainly because they were not asked or encouraged to do so by teachers (A₃)

The CTQ also gave information regarding skills assessed during continuous assessment in chemistry practical work. Table 5 shows the skills assessed by the teachers and the respective percentages of teachers who assessed them

Table 5: Skills assessed by teachers in practical work in chemistry

Skill	Number of teachers	%
Observation	23	79
Manipulation of apparatus and materials	19	66
Interpretation of data	15	52
Recording of data	9	31
Infering	9	31
Reading of instruments	2	10

Past KCSE examination papers in practical work were analysed in terms of skills assessed. It was found that the skills assessed by teachers in practical work were exactly the same as those assessed by KNEC.

Research Question 1: What skills were emphasised during practical work in chemistry?

The results of this study show that skills mainly emphasised by teachers in teaching practical work in chemistry were those that belonged to the basics process skills category such as observation, manipulation of apparatus and materials and data recording. Skills belonging to the integrated skills category were not being emphasised during practical work in chemistry.

Research Question 2: What skills were assessed by teachers in practical work in chemistry?

The results of this study show that skills assessed by teachers in continuous assessment were the same as those emphasised in teaching. Thus the skills emphasised in assessment also belonged to the basic process skills category

Discussion of findings

The chemistry teachers' biodata as generated from the CTQ indicated that chemistry teachers in schools in the study sample were well placed to plan and present activities in chemistry practical work that could enable learners to acquire a variety of skills. The teachers were among other things: qualified, had long teaching experience, had teaching loads that were within specified limits (TSC, 2005) and were aware of the role of practical in chemistry teaching and learning.

Just like Tamir and Lunetta (1981), the results of this study revealed that opportunities were indeed offered to learners that enabled them to engage in a variety of practical work activities. However the skills emphasised in teaching and assessment of practical work in chemistry were mainly basic process skills. The skills emphasised included observation and manipulation of apparatus and materials. Skills in the integrated category such as hypothesis formulation and experimenting were found to be absent during practical work sessions in chemistry. Lack of emphasis of integrated process skills in during practical work in chemistry denies learners vital opportunities to take control of their own learning which could result in enhanced understanding (Gunstone and Champagne, 1990).

Emphasis of basic process skills encourages learners to follow instructions in worksheets without thinking about them. By the time learners got to the national practical examination in chemistry, they would probably have forgotten such procedures. For those who can be able to carry out the procedures, may not be able to attach meaning to the results obtained hence the observation by KNEC (2004) that "some learners were unable to make correct inferences even after making correct observations".

This therefore calls for ingenuity on the part of the teachers in providing opportunities that encourage learners to suggest hypotheses and design investigations. As the learners do that, they need also to be encouraged to ask scientifically sound questions such as what? Why? What if not? This according to Cuccio-Schirripa and Steiner (2000) helps in cultivating critical thinking, creative thinking and problem solving skills in learners. Such skills are a requisite for enhancing understanding of scientific concepts.

Implication for instruction

As seen from the results of this study emphasis of basic skills process skills does not help the learners to learn science in general and chemistry in particular in any meaningful way. This is because such skills can be acquired through following of the step by step procedures in

worksheets to carry out activities without much thinking about the steps and procedures. Unless learners are encouraged to think about practical activities they engage, suggest hypotheses and design experiments, then their ability to understand scientific knowledge will be hampered. This is also likely to affect their further learning and training in science. Therefore if truly learners' understanding of scientific concepts has to be enhanced, then the teaching during practical work must be designed deliberately to include activities involving simple aspects of experimental design, carrying out the activities according to the design, collection of data and writing of experimental reports. This will not only enable the learners to acquire skills in the integrated process category but will also enhance their understanding of scientific concepts.

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THE LISTENING ABILITY IN ENGLISH OF LEARNERS JOINING SECONDARY EDUCATION IN KENYA – A CASE STUDY OF MUTONGUNI SECONDARY SCHOOL, KITUI DISTRICT.

Wangungu Lydiah Wambui

Abstract

According to Groenwegen (2008), a research conducted by Kenyatta University staff in conjunction with the Ministry of Education came up with English Literacy Norms (ELNs). These are the benchmarks or levels of competence in English language skills that are expected in a learner at finishing primary school. One of these language skills is listening. English language is the medium of instruction in Kenya from class four upwards. Competence in English language skills is therefore fundamental for good performance not only in English but also in other subjects taught in English. The study in this paper was conducted with the aim of establishing the levels of competence in listening in English of learners joining secondary education in Kenya since they had just graduated from primary school and had not started interacting with the secondary school syllabus.

i) Introduction

Most people sincerely believe that they listen effectively. Consequently, they do not see the need to develop their listening skills. However, listening effectively is something that very few of us do. It is not that listening effectively is difficult, but rather, most of us just never develop the skill.

Effective listening is a process that involves actively absorbing the information given by a speaker, showing that you are attentive and providing feedback to the speaker so that he/she knows that the message has been received. Effective listeners show speakers that they have been heard and understood by responding effectively.

There is a difference between listening and hearing. Whereas hearing is a physical activity, listening is a mental process. We do not learn how to hear but we must learn how to listen. As expressed by Roach and Wyatt (1999), “far from being a natural process, listening is a consciously purposive activity for which we need systematic training and supervision to learn to do well” (Roach and Wyatt, 1999:197). This is because it involves psychological skills such as recognizing words, parsing speech into constituent parts and processing the discourse in terms of cohesion, logic and relevant underlying skills. It also involves social

skills such as giving back – channeling signals and making improvements when misunderstandings occur.

ii) Importance of Listening

Listening is the first language skill that a child acquires. “It produces a foundation for all aspects of language and cognitive development and plays a lifelong role in the process of learning and communication essential to productive participation in life.” (Hyslop and Bruce, 1988: 1).

Studies have shown that infants begin to respond to a new word by hearing and listening. Wilding et al (2000) illustrated how neonates are able to discriminate between their fathers’ voice and that of a male stranger. They showed how babies rapidly develop the ability to combine visual and auditory stimuli at the age of six to twelve weeks. They become distressed when showed a video of their mother in which the speech and visual content are discrepant.

During the period of rapid language growth, listening contributes enormously to the child’s acquisition of speech. It can therefore be termed as a pre-requisite skill on which all other interactive skills are predicated. As aptly expressed by Robbins and Hunsaker (1996), “if you are not an effective listener, you are going to have consistent trouble developing other interpersonal skill.” (Robbins and Hunsaker, 1996:35).

Listening is at therefore the heart of communicative development since the child has to learn to: listen before learning to speak, speak before learning to read and read before learning to write.

According to Littlewood (1981), most learners will spend considerably more time listening to language than in producing it themselves. It is not only that they must understand what is said to them during face-to-face interaction; there is also a vast range of situations where they will be silent receivers of messages directed to them from radio, television announcements and a multitude of other sources.

Byrne (1996) also argues that learners’ ability to understand (comprehend what they listen to) needs to be considerably more than their ability to speak if they are to be “comfortable” in a foreign or second language and therefore be able to communicate effectively.

When speaking, it is the learners who select the language that is used. To some extent, therefore, they can compensate for deficiencies in their repertoire, through communicative strategies such as using paraphrases or simplifying messages. When listening, however, they

do not normally have any control over the language that is used. They must be prepared to extract meaning as best as they can from whatever language that is directed at them. It is therefore not enough that they should merely be able to understand the same range of language that they can speak. Their receptive repertoire must be matched not against their own productive repertoire but against the productive repertoire of the speakers they will need to understand. In addition, they must be prepared to cope with a wide range of situational and performance factors which are outside their control.

Listening is perceived as being parallel to, and the social equivalent to reading. When we read, we attempt to understand and assimilate the written word; when we listen, we attempt to understand and assimilate the spoken word. Both are seen as cognitive linguistic abilities. However, listening skills are not given prominence in formal training as seen in the table below

Table 1: Comparison of Communicative Activities

	Listening	Speaking	Reading	Writing
Learned/ acquired	First	Second	Third	Fourth
Used	Most	Next to most	Next to least	Least
Taught	Least	Next to least	Next to most	Most

Adapted from Adler and Brown, (2003: 115).

Adler and Brown’s observations corroborate earlier findings by Burley – Allen (1982), who found the classroom emphasis on language modes to be inversely related to the time people use them. He asserted that students get twelve years of formal writing, 6-8 years in reading, 1-2 years in speaking and from 0-1/2 years in listening. Swanson (1984) calls this the “inverted curriculum”.

iii) The Place of English in Education in Kenya

English is the language of education and the civil service (Mbaabu, 1996). Moreover, it is the language of both intra and inter-ethnic communication. English is also used as the language of the media, parliament, legal system, judiciary, publications, military and diplomacy (Njoroge, 2006).

Learners therefore need the ability to listen attentively and the ability to respond in English in the classroom and during day-to-day interaction. When learners lack listening and speaking skills in English, they shy away from the needful participation in class and out-of-class activities. Therefore, the main objective for teaching English should be the ‘acquisition

of communicative competence and not simply on the passing of examinations.....becoming proficient in the language is a lifelong goal' (K.I.E 2002, English syllabus: 2).

The current language policy in Kenya states that English be taught as a compulsory subject from standard one to form four and be used as a medium of instruction from standard four upwards. The language of instruction from standard one to three is mother tongue or the language of the catchment area. (Report of the Working Committee on the Second University, 1985).

The revised K.C.S.E syllabus re-emphasises the importance of English as the official language of communication in Kenya as well as the medium of instruction in schools, colleges and universities. It is also the pre-eminent language of interactional communication. It states that 'those who master English reap many academic, social and professional benefits'. (Revised Integrated English syllabus 2002: v). To enable learners reap these benefits, their listening skills needed to be ascertained.

iv) Methodology

This study was conducted as a case study in which Mutonguni Secondary School in Kitui District was sampled through stratified random sampling. The school was ideal as it is a mixed provincial school hence offering the needed variable of sex.

Mutonguni secondary school is a three-streamed mixed school with two boys' classes and one girls' class. Through simple random sampling, ten boys from class A, ten from class B and twenty girls from the girls' class were selected. The study sample therefore comprised of forty form one students who had just joined secondary school.

In carrying out the study, the researcher administered a test comprising three sub-tests to the forty form one students. The sub – tests were in the form of:

a) Listening comprehension

Listening comprehension was also used as a sub – test to elicit data. The data elicited from the listening comprehension was in the form of sentences. The respondents listened to a comprehension being read to them twice and then answered oral comprehension questions from it. The respondents here used their listening skills as well as their schemata to answer the questions.

b) Cloze test

In cloze test, the researcher collected data in the form of words. A passage was read to the respondents and later on, the same passage re – read but with some words left out. The respondents were expected to fill in the missing words using listening skills such as inferences and memorization.

c) Dictation

Using dictation, the researcher collected data in the form of written sounds. This was as a result of the respondents being given minimal pairs to fill in slots in sentences. The focus here was on sounds /f/ and /v/ as well as sounds /p/ and /b/. This was done because the geographical area in which the research was carried out has a population that has problems differentiating the said sounds. So apart from the researcher testing the respondents’ listening competencies, the respondents would have a chance to evaluate their ability to differentiate these problematic sounds.

v) Findings

After administering the sub-tests, the sub-tests were marked and given a percentage mark. To establish the listening ability in English of each respondent, the mean score of the three sub-tests per student was calculated. To establish the influence of sex on the listening ability in English of learners joining secondary education, the mean score of all male respondents in the three sub-tests was calculated versus the mean score of all female respondents in the three sub-tests. The results are shown below:

Table 2: Scores by the male respondents in the sub – tests

Respondent	% mark in sub-test A	% mark in sub-test B	% mark in sub-test C	% average mark in all sub-tests
M1	40	90	80	70
M2	100	20	80	67
M3	80	70	60	70
M4	70	30	80	60
M5	80	30	50	53
M6	90	60	70	73
M7	80	60	70	70
M8	80	50	60	63
M9	30	60	60	50
M10	20	50	60	43
M11	80	60	70	70
M12	30	50	40	40
M13	100	60	70	77

M14	80	50	80	73
M15	80	60	70	70
M16	70	60	20	50
M17	90	80	90	87
M18	60	40	70	57
M19	80	40	60	60
M20	100	50	90	80

Table 3: Scores by the female respondents in the sub – tests

Respondent	% mark in sub-test A	% mark in sub-test B	% mark in sub-test C	% average mark in all sub-tests
F1	70	50	70	63
F2	90	30	60	60
F3	80	60	70	70
F4	100	60	70	77
F5	80	60	80	73
F6	90	30	50	57
F7	90	40	70	67
F8	80	50	60	63
F9	80	40	80	67
F10	80	70	80	77
F11	80	60	50	63
F12	60	80	50	63
F13	80	60	80	73
F14	80	70	30	60
F15	100	60	60	73
F16	100	70	30	67
F17	90	50	70	70
F18	80	70	90	80
F19	80	60	50	63
F20	90	60	70	73

Table 4: Average Performance of Male Respondents versus Female Respondents in the Sub-Tests

Sub-test	Average % mark by male	Average % mark by female
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	respondents	respondents
A	72	84
B	54	57
C	67	64
Average of all	64	68

Table 5: Average Marks for all Respondents

Sub-test	Average % mark
A	78
B	56
C	66
All	67

From the above findings, it is evident that over all, girls performed better than boys by scoring an average percentage mark of 68 against 64. However, in different sub-tests, the performance varied. In sub-test A, which was in the form of a listening comprehension, both male and female respondents performed well but the girls performed better than boys by scoring 84% against 72%. Seventy eight percent of the sample population attained the desired competence level. The good performance was seen as a result of the listening comprehension being a skill that almost all teachers of all the subjects engage in evaluating their learners understanding at the end of the lesson.

In sub-test B which was in the form of a cloze test, the two groups performed dismally. The average mark for the respondents was 56%. The girls however performed slightly better than the boys with the average marks of 57% and 54% respectively. Although the average mark of the sample population was slightly above the minimum competence level only 8% of the sample population attained the desired competence level. In performing this sub-test, the learners needed high-order listening sub-skills such as organization of thoughts, sequential ordering and relating one idea to another. More so, the sub-test was in the form of a narration unlike sub-test A which was in the form of a spontaneous monologue. Since we listen to spontaneous monologue than narration in day-to-day life, this may have contributed to the poor performance in sub-test B.

In sub-test C which was in the form of dictation, the performance of the whole group was fairly good as the average mark was 66%. The boys however performed slightly better than the girls with the average marks of 67% and 64% respectively. Though this performance was fairly above the minimum competence level only 15% of the sample population attained the desired competence level. The fair performance was attributed to the fact that learners

usually listen to and take dictation in many subjects. Any subject can be used by the teacher to dictate information, facts, direction and instructions. Test questions can also be dictated in class.

The researcher also used chi-square to establish whether the sex of the respondents and their performance were related. The results were as follows:

Chi-Square Test

Table 6: Sex and overall performance

	Observed N	Expected N	Residual
male	20	20.0	.0
female	20	20.0	.0
Total	40		

Table 7: Average % mark in all subtests

	Observed N	Expected N	Residual
40	1	3.1	-2.1
43	1	3.1	-2.1
50	2	3.1	-1.1
53	1	3.1	-2.1
57	2	3.1	-1.1
60	4	3.1	.9
63	6	3.1	2.9
67	4	3.1	.9
70	7	3.1	3.9
73	6	3.1	2.9
77	3	3.1	-.1
80	2	3.1	-1.1
87	1	3.1	-2.1
Total	40		

Table 8: Test Statistics

	gender	average % mark in all
Chi-Square(a,b)	.000	17.850
df	1	12
Asymp. Sig.	1.000	.120

13 cells (100.0%) have expected frequencies less than 5. The minimum expected cell frequency is 3.1.

vi) Recommendations

From the findings, the researcher came up with following recommendations:

- a) The respondents performed quite well in sub – test A managing a mean score of 78 %. Sub – test A was a listening comprehension in the form of a spontaneous monologue. Learners therefore need to listen to ideal spoken language which has all the characteristics of natural language use.

- b) Sterick (1980) and Shar – wood Smith (1981) claim that ‘learnt’ or explicit knowledge can turn into ‘acquired’ or implicit knowledge if there is enough practice. The skill therefore becomes over-learnt and completely automatic. The findings of this study corroborated with the above views. The listening comprehension was performed better than the other sub – tests. This is because the procedure used in evaluating listening comprehension is commonly employed in evaluation in all the other subjects. The practice has therefore become over – learnt and completely automatic. Learners should therefore be made to appreciate that work in other subjects provides opportunities for practising oral English and hence be encouraged to exploit this in full.

vii) Conclusion

All the respondents managed to reach the minimum level of competence in all the sub-tests. However only female respondents managed to reach the desired competence level in sub-test A only. Since the researcher suggested strategies that can be put in place by the learners, instructors and curriculum developers to improve on these learners’ listening ability it is hoped that the information will be useful in raising the competence levels to the desired levels. It is also hoped that the study’s findings will enhance the listening ability in general and the listening ability of learners joining secondary school in Kenya in particular.

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Appendices.

Ai: Sub - Tests

a) Listening comprehension.

Listen carefully to the following spontaneous monologue and answer the questions that follow.

I want to tell you, er, about some friends of mine, um, the Jones family, that’s Jim and, el, Ann Jones. Now they, they live in a flat, on the third floor. Well, you know, I think they’re crazy. I don’t know why they live in a third floor flat because it’s very, very noisy and its right in the el, in the centre of London. It’s really rather silly, because, well, they’ve got three children, there’s David, he’s ten; John, he’s eight and Sue, she’s only two. And well, David, is got two dogs and Sue’s got a kitten.

(Adapted from Practical Techniques in Language Teaching pg 68)

Questions.

1. Where does Jones’ family live? (1 mark)
2. What kind of a home do they have? (1 mark)
3. Give the names of their children and their ages. (6 marks)
4. What pets do their children keep? (2 marks)

b) Cloze Test.

Listen carefully to this passage. It will be read twice. In the first reading, no word will be omitted but in the second reading, some words will be omitted. Supply the missing words to complete the passage.

When I saw **my friend** last night, she **gave** me a present. I **first** met Anne in a workshop in Nanyuki and we have been great friends **since** then. Anne used to work in Nyeri but she left **last year**. She acts **very** maturely. I really **approve** of that type of behavior. I also like her **sense** of humor. Her **daughter** is equally humorous. **What** a great family she has!

c) Dictation.

Listen to the following sentences carefully and choose one of the words given to fill in the gaps.

1. The boy cut a ----- in the garden (vine, fine).
2. He bought a ----- of wheat flour (pale, bale)
3. The child was accused of----- sickness (feigning, veining)
4. The thieves hid in the----- (push, bush).
5. The lost child was found by the ----- bearers (pall, ball).
6. The ----- are ploughing (bulls, pulls).
7. They boarded the ----- (very, ferry).
8. He threw the dirt in the (pit, bit).
9. In my----- the students are to blame (few, view)
10. Football ----- were excited (vans, fans).

ATTITUDES OF STUDENTS TOWARD STUDYING HISTORY AND GOVERNMENT IN SOME SELECTED SECONDARY SCHOOLS IN MOSOCHO DIVISION, KISII CENTRAL DISTRICT.

Osoro E N, Dr. S Ondigi and Dr. M.Kiio

Abstract

The teacher is out to understand the learners so as to adopt the most appropriate means of helping them to learn. He/she is to observe the learners' reaction to the learning environment including the ease or the difficulty with which the learners are confronting the learning situation and attitudes to school subjects. The purpose of this study was to investigate students' attitudes towards studying History and Government in selected secondary schools of Mosocho division, Kisii Central District, Nyanza Province, Kenya. The study was conducted in both purposively and simple random sampled private and public secondary schools in Mosocho division, Kisii Central District. Mosocho division was purposively chosen because it was the only division in the District that is comprised of categories chosen by the researcher. The target population was form two (2) students and their respective History and Government teachers. Data were collected using teachers and students questionnaires. The teachers' questionnaire comprised of both open ended and closed items. The students' questionnaire used a 5 point-likert scale ranging from strongly agrees to strongly disagree. The data collected was analyzed by use of descriptive statistics and presented with the aid of tables, percentage and, graphs. From the analyzed data major discussions were made and reported. Most of the students were found to be having negative attitude towards studying History and Government.

Introduction: Background to the Study

H/G is a distinct discipline in the school curriculum. It has been given a lot of prominence since the attainment of Kenya's independence in 1963. According to the Kenya Commission of Education (1964), History is not just an object of human curiosity, but a source of emotional security that gives maturity, stability and self confidence. Ayot, (1979) explains generally that, history is the memory of human experience. He further argues that if human experience is ignored and forgotten we would cease to realize our responsibility. He further states that, without history of our past we would not be able to know who we are' who our

relatives are, where we came from and how we came to be what we are today. We would be in darkness about our own identity.

Ominde, (1964) observed that under the colonial leadership system, specifically Christian missions, much that was good in our African indigenous cultures was lost or buried. Report of the National Committee on Educational Objectives and Policies, (1976) commonly referred as Gachathi concurred with Ominde by observing that the value of African traditions had done great by guiding the development of our society. It stated that a society that cannot define, uphold and teach its values would inevitably be subject to invasion by other values that may have no real survival value in the long run. Gachathi, (1976) passed a recommendation commonly known as recommendation 142 which emphasized the teaching of cultural subjects giving emphasis to local culture and history and exposing the pupil to the best of other traditions.

The Presidential Working Party on the establishment of a Second University in Kenya commonly known as the Mackay report, (1981) recommended for a practical and vocational approach of the curriculum. As a result of that, attention was now drawn towards vocational subjects in terms of choice, preference, provision of facilities and staff. This already meant that very little attention was being paid to the humanities and languages. Due to Mackay report, vocational education was now accorded more emphasis. This changed the minds of parents, teachers and students towards non-vocational subjects in the curriculum. A lot of investment was swayed towards practical subjects. This has contributed to the development of different attitudes among teachers and learners. Blyth, (1988) supports this view by pointing out that the emphasis on technical and vocational training in secondary schools in Britain adversely influenced the popularity of History in secondary schools.

According to Kiio, (1999) H/G is not a popular subject amongst the learners today in some secondary schools worldwide because it does not give the learners job security. Hence there may be a serious exodus of the learners from H/G to other school subjects that guarantee job security. This indicates that the students have already developed different attitudes towards the subject. The strong bias in science has pushed H/G to a corner; hence it is not given prominence by policy makers and employers.

KNEC (2002) Observes that the candidate overall enrolment for History and Government between the years 1997-2002 compared with Geography which is considered a science shows a big disparity. Students have always sort to pursue subjects that are considered to be sciences in nature as shown in

Table 1: The candidates overall enrolment in History and Government and Geography over a period of six years.

YEAR	1997	1998	1999	2000	2001	2002
History	83,019	86,720	87,076	87,987	81,945	84,848
Geography	106,744	111,264	116,487	121,275	126,550	131,510

Source: KNEC Performance report 2000 and 2002

The political, social and economic growth of a country entirely relies on the knowledge that is gained from the social sciences, social studies and the natural sciences. The three areas mentioned play rather different roles but it is important for the people to appreciate their importance. In the development of an all round person, one area cannot be overlooked at the expense of the other.

In Kenya there has been relatively little research into attitudes of students towards school subjects. There seems to be little interest in attitude research. One problem of this is the difficulty of constructing a reliable measure of attitudes (Ogula, 1994). Students' attitude towards H/G has hardly been looked into. The fluctuation in H/G enrolment, the emphasis put on sciences and technical oriented subjects in the current system of education, the overloaded and wide H/G syllabus, and lack of research on students attitudes towards school subjects in Kenya have combined jointly to form the basis of this study.

Objectives of the Study

- a) The underlying objectives of this study were to:
- b) establish the attitudes held by secondary school students towards studying H/G,
- c) establish the readiness of secondary school students to learn H/G,
- d) determine the secondary school teachers' opinions in relation to the teaching and learning of H/G,
- e) establish the factors influencing secondary schools students' attitudes towards studying H/G.

Methodology

The main purpose of this study was to investigate the attitudes of students towards studying H/G in the selected secondary schools in Mosoch division, Central Kisii District. This study was a descriptive survey. A descriptive survey attempts to describe characteristics of phenomena, opinions, subjects, preference, attitudes and perceptions of people of interest to the investigation (Borg and Gall, 1983). The research used both qualitative and quantitative paradigms in collecting and analyzing data. The human phenomena that cannot be investigated by direct observation such as attitudes and other emotions are best studied using the qualitative method.

The study was conducted in Mosocho division of Central Kisii District, Nyanza province, Kenya. It focused on the secondary schools drawn from Mosocho division. This study targeted secondary schools of Mosocho division in Central Kisii District. Mosocho division has a total of 14 secondary schools. There are 2 private secondary schools and 12 public secondary schools. The respondents of this study comprised a total of 150 form two students. All current form two (2) H/G teachers were purposively selected from each sampled school.

Sampling Procedures

In order to achieve sample representativeness, purposive sampling was used (Entwistle and Nisbet, 1973). The researcher purposively selected the private girls' secondary school, the public boys' and girls' secondary schools. This is because they were the only schools of such category that were found in Mosocho division. The mixed private secondary school was also selected through purposive sampling. According to Patton, (1990), purposive sampling is used when there exist reasons to limit the sample to the cases that are likely to be "information rich" with respect to the purpose of the study. In addition, the other three schools were selected using simple random sampling technique. The three schools were chosen through the lottery method. This sample is more than $\frac{1}{3}$ which is an acceptable representation of the target population to participate in a study (Bell, 1993). The sample of H/G teachers was achieved through purposive selection. Data was collected using the students' and teachers' questionnaires. The two questionnaires were used as supporting pillars because they were used to complement each other and bridge the gap that could be left using any one of them alone.

Data Analysis

Data was analyzed both qualitatively and quantitatively. Qualitative data was obtained from the open-ended items in both the students' and teachers' questionnaires. Through the use of the Statistical Package for Social Sciences (SPSS) program the data were analyzed using descriptive statistics such as percentage, mean and frequencies.

DISCUSSION

The students were to indicate whether they strongly agree (SA), agree (A), undecided (U), disagree (D) and strongly disagree (SD). Table 2 provides a summary of the results that were arrived at.

Table 2: The Students responses on the Negative Items Related to H/G as Subject

Items		SA		A		U		D		SD	
		f	%	f	%	f	%	f	%	f	%
1	I don't like learning H/G.	78	52	30	20	2	1.3	20	13.3	20	13.3
2	H/G lessons are not interesting.	94	62.6	29	19.3	3	2	24	16	0	-
3	Learning H/G is a waste of time.	57	38	53	35.3	1	0.6	7	4.7	32	21.3
4	I find H/G too difficult.	6	4	1	0.7	0	-	23	15.3	120	80
5	Learning H/G is just remembering what the teacher says.	90	60	6	4	2	1.3	24	16	28	18.7
6	H/G lessons are very boring	118	88.7	0	-	0	0	17	11.3	15	10
7	H/G will not help me in any way to secure a job in future.	70	46.6	35	23.3	1	0.6	24	16	20	13.3
8	I have no interest in increasing my knowledge in H/G.	69	46	35	23.3	0	-	16	10.7	30	20
9	H/G is a very useless subject to me.	51	34	58	38.7	2	1.3	32	21.3	7	4.7
10	I have a negative attitude towards studying H/G	110	73.3	20	13.3	0	-	0	-	20	13.3
11	I do H/G for the sake of it	85	58	28	18.7	2	1.3	3	2	32	21.3
12	I rarely do my H/G assignments	120	80	1	0.7	1	0.7	26	17.3	2	1.3

Items		SD		A		U		D		SD	
		f	%	f	%	f	%	f	%	f	%
1	I like H/G.	20	13.3	20	13.3	0	-	30	20	80	53.3
2	I think H/G should be made compulsory.	28	18.7	28	18.7	1	0.6	64	42.7	29	19.3
3	I want to go on learning H/G.	30	20	29	19.3	0	-	0	-	91	60.7
4	I understand most of the things in H/G	117	78	28	18.7	4	2.7	1	0.7	0	-
5	I work hard in H/G because it is a very important subject.	30	20	26	17.3	2	1.3	0	-	92	61.3
6	H/G is useful as it helps me in everyday life.	30	20	1	0.7	0	-	53	35.3	66	44
7	H/G is a very easy subject	100	66.7	43	28.7	0	-	1	0.7	6	4

8	I have a positive attitude towards studying H/G.	14	9.3	0	-	1	0.6	23	15.3	112	81.3
9	H/G is an important subject.	32	21.3	26	17.3	0	-	0	-	92	61.3
10	H/G is more important than Sciences.	20	13.3	0	-	3	2	7	4.7	120	80

The findings of Table 2 revealed that the general attitude towards H/G was quite negative as about 86.6% of the students indicated in item 10. From the total items in Table 6, majority (88.7%) of the students indicated that H/G lessons were boring. Majority (81.9%) of the students also indicated that the H/G lessons were not interesting. About 73.3% of the respondents also pointed out that they pursued H/G for the sake of it. While 72% of the respondents admitted that they never liked H/G as a discipline in schools.

Table 3: The Student’s responses on positive items related to H/G as a subject.

From Table 3 the students’ attitudes can be described to be unfavorable since they have expressed positive items negatively. Majority (73.3%) of the students said that they never like H/G while 84.7% pointed out that H/G is not more important than sciences. This meant that they had a lot of value for the sciences than H/G. A high percentage of the respondents (60.7%) said that they are not ready to continue learning H/G. About 61.3% of the respondents indicated also that H/G was not an important discipline to them. However as majority of the respondents were having unfavorable responses. A majority (95.4%) of them admitted that H/G was a very easy subject to them. The instrument also sought to establish how students felt about attitudes of their colleagues in school towards H/G. The results they gave are shown in Figure 1.

Figure 1: What the respondents thought about their colleagues’ attitude towards H/G

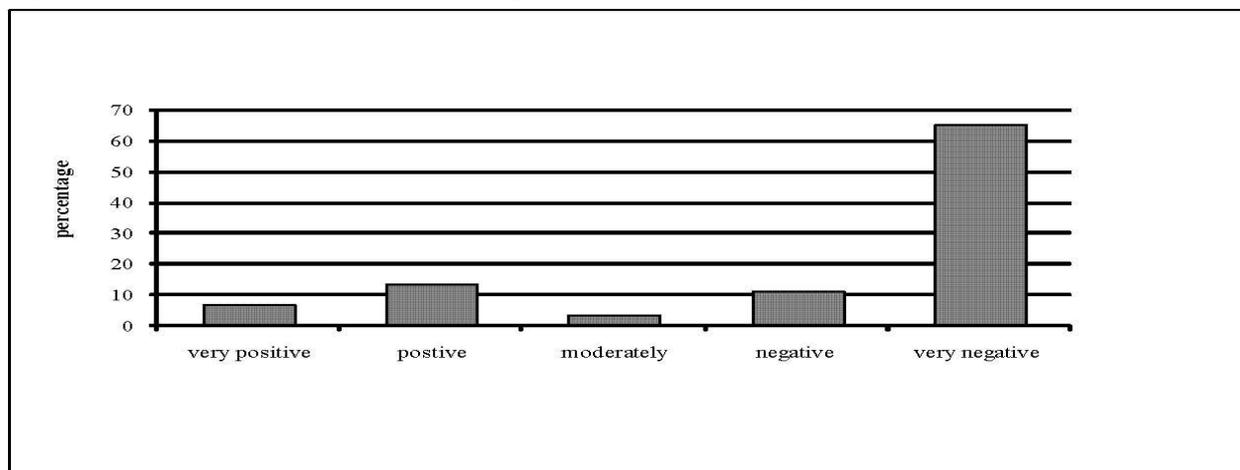


Figure 1 shows that 65.3% of the respondents acknowledged that their colleagues had very negative attitudes towards H/G, while 13.3% of them admitted that they had positive attitudes. Close to 11.3% said that they had negative attitudes, while 6.67% said their colleagues had very positive attitudes and only 3.33% said that their colleagues had moderate attitudes. Generally these results compared to Table 2 and 3 show similar results. Hence the students' attitudes towards H/G can be described as negative. The students were required to rank some listed school disciplines according to their interest in them. The students were to indicate whether it was first, second, third, fourth, fifth and sixth choices. The summary is shown in Table 4.

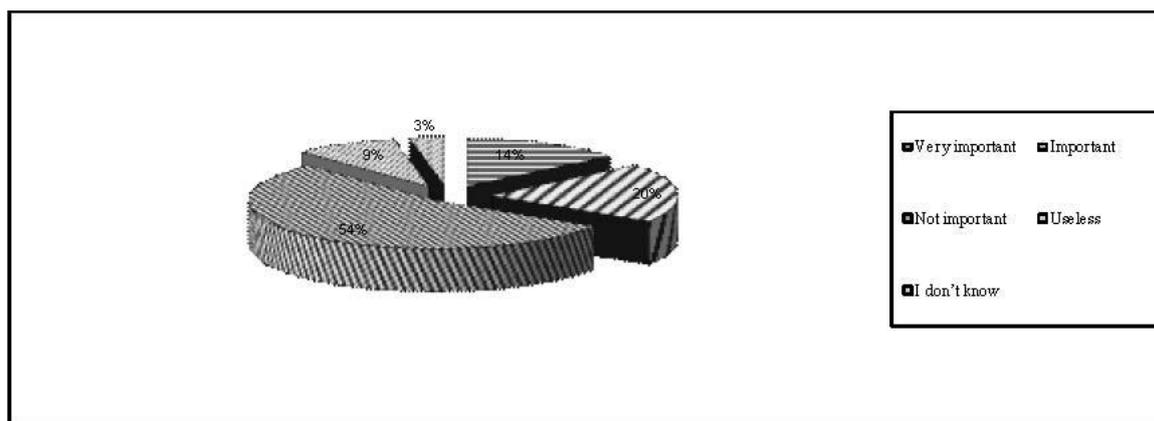
Table 4: Frequency and percentage distributions of the disciplines orders of preference.

Position	Biology		English		Kiswahili		H/G		CRE		Geography	
	F	%	F	%	F	%	F	%	F	%	F	%
1 st	30	20	65	43.3	2	1.3	25	16.7	0	-	2	1.3
2 nd	87	58.	28	18.7	57	38.0	2	1.3	66	44.0	94	62.7
3 rd	32	21.3	7	4.7	43	28.7	1	0.7	27	18.0	24	16.0
4 th	0	-	21	14.0	19	12.7	64	42.7	27	18.0	18	12.0
5 th	1	0.7	29	19.3	29	19.3	58	38.7	30	20.0	12	8.0
TOTAL	150	100										

By using the first and the second positioning the students ranked subjects starting with Biology 78% as the first preferred, second, Geography 64%, third, English 62% fourth, CRE 44% fifth Kiswahili 39.3% and lastly sixth, H/G 18%. By using fourth and fifth positioning H/G was ranked by a majority (81.4%) in the third and fourth positions (see Table 4). That is a clear indication that the students never liked the subject irrespective of them admitting that it is not a difficult discipline to them.

The respondents were to indicate how H/G was important to them. They were to indicate whether very important, important, not important, useless or I don't know. Figure 2 gives a summary of the responses.

Figure2: Importance of H/G to the students



Fifty four percent of the students said that H/G was not important, 20% indicated that H/G was an important subject to them. Fourteen percent of the students said that H/G was a very important subject, 9% said that it was useless and a minority of 3% didn't know where to grade H/G. Therefore the majority of the students perceived History to be a subject without importance.

The respondents were asked to indicate why they liked H/G. Table 5 shows the summary of the findings.

Table 5: Frequency and percentage distributions of reasons as to why the students like H/G

Responses	Frequency	Percentage (%)
It is a very easy subject	140	93.3
It is interesting	50	33.3
Because the teacher is good	30	20
It will help me get a good mean score	136	90.7
It will help me get job	20	13.3

About 93.3% of the respondents indicated that they liked H/G because it was a very easy subject, while 90.7% agreed that they like it because it will help them to secure a good mean score at the end of their 4 year secondary course in the secondary school. It was only 13.3% who said that they like H/G because it will help them in securing a job in future. This clearly showed that very few students were pursuing H/G in the hope that it would help them get good jobs in future.

Conclusion

First, the students' attitude towards the subject is negative. This was very clearly expressed by responses given by the respondents to questions such as how they liked the subject, how

they valued the subject. Many of the teachers also said that the students did not value the subject so much. There is need for the students to be active members in the classroom rather than being passive participants. That way H/G will be very interesting and motivating for the learners and the teachers. According to Crookall (1972) students learn well when they are interested. They learn best when they are active. Though interest is very essential, it is not enough they must be active in the process of learning. According to Obunga, (1988) in his study most respondents agreed that H/G would be more interesting if there were provisions for project teaching and field excursions. The training of teachers should emphasize teaching techniques as an important factor in motivating learners in learning.

There is also need to relate H/G to the present life experiences. H/G becomes a very dull subject which is neither related to the present or the future. Hence teachers should be at the forefront in relating the present to the future. Such a relationship helps to make the students see the importance of H/G. The teaching strategies used in the teaching of H/G should be heuristic or student centered and not expository or teacher centered. This will help to develop some interest in the students towards H/G. Such methods will help in the development of inquisitive and criticism skills.

According to Stearns (2000) the key to developing historical habits of mind is through having a repeated experience in historical inquiry. Inquiry approaches have been shown by various students to have a distinct advantage from the suggestions they gave. Brown (1965) and Burston (1972) hold common views that the discovery methods of teaching such as group discussions and debates are superior in students' achievement, development of problem solving skills and above all help in breaking the monotony that is exhibited by teachers in our classrooms.

Recommendations

- 1) The teachers should take the initiative to sensitize the students that all the subjects in one way or the other contribute to different training careers in the future.
- 2) Teachers need to take time and interpret the historical words and concepts that they use. The schools play a key role in developing the students' English language skills, new words illustrate the sophistication of vocabulary which History fosters, and which is an integral element in developing historical understanding.
- 3) The students should always be well prepared in learning all the school disciplines they pursue. They should avoid biasness. Let them know that all the disciplines they do in school contribute wholesomely to what they will be in their future life careers hence they should allocate enough time for each discipline in their personal timetables. (Phenix, 1964).

- 4) Teachers should always avoid expository methods of teaching H/G. Such methods make the students to sit, passive and inactive (Crookall 1972). The students should be offered an opportunity to become researchers of history.
- 5) The parents should be the right people who advice their children concerning school disciplines. They should buy their children textbooks evenly be it for the sciences, languages or humanities.

Areas for Further Research.

Given the study objectives, constraints in terms of time, funds and the nature of the problem under study, it was not possible to explore certain related areas. Therefore the following areas are suggested for further research. Similar studies to be carried in other districts or divisions with a view to establishing the extent to which the present findings can be generalizable. A similar study could be carried out in other disciplines offered in the current Kenyan secondary school curriculum for comparisons with these findings.

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DEPTH AND BREADTH OF VOCABULARY KNOWLEDGE AND ENGLISH LANGUAGE READING COMPREHENSION AMONG STARNDARD EIGHT PUPILS IN MERU CENTRAL DISTRICT, KENYA

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Abstract

In Kenyan education context, it is imperative that pupils learn English language, as it is the medium of instruction and testing from class four upwards. Inability to comprehend what is heard or read would inadvertently affect pupils' performance in classroom and in examinations. Good vocabulary knowledge of the pupils would lead to better reading comprehension ability. Vocabulary acquisition therefore is a key component to successfully developing communication and reading skills. The need to do this research occurred after the realisation that a lot of resources are used in the teaching and learning of English language, yet the pupils continue to perform dismally in English language. One area of interest was the pupils' breadth and depth of vocabulary knowledge an area that has not been addressed in research in Kenya .There was, therefore, need to investigate these two variables to show the important role they play in reading comprehension .Specifically, the study focused on possible contributions made by vocabulary knowledge in reading comprehension. The study adopted a descriptive survey design and was carried out in Meru Central District in Kenya. A sample of 216 class eight pupils from six schools was randomly selected from a target population of 22 public primary schools. In each school, a total of 36pupils were selected for the study using simple random sampling procedure. Test data were analysed both quantitatively and qualitatively, using basic statistics. This paper presents the findings of the study, together with a discussion of the results. Conclusions and recommendations are also made.

Introduction

English language is the medium of instruction and testing in Kenyan schools from class 4 upwards. It is also used across the curriculum, meaning that if pupils are not able to

understand the language of instruction they will fail in almost or all the subjects. Learners' needs to comprehend what they are reading and hearing for good performance in examinations. Vocabulary knowledge and acquisition is key in enhancing reading comprehension and many scholars have acknowledged its importance in reading comprehension. Although vocabulary knowledge is broad and encompasses many other factors, this paper examines only the contributions made by depth and breadth of vocabulary knowledge in reading comprehension ability of standard eight pupils in Meru Central District Kenya and how the three variables correlates.

Background

Vocabulary as "the building block of language" (Schmitt, Schmitt, & Clapham, 2001, p.53, as cited by Maryam and Yamini 2007), is considered by some to be the single most important aspect of foreign language learning. Learners also regard learning vocabulary as one of the most important and at the same time difficult aspects of learning a language (Laufer, 1986). Yet, for a long time, this aspect of language research was largely neglected (Harlech-Jones, 1983; Laufer, 1986; Read, 1988). According to Laufer (1986), the majority of researchers studied grammar and phonology as these were more amenable to making generalizations in contrast with vocabulary, which does not lend itself so easily to making abstractions and generalizations.

Vocabulary acquisition is a key component to successfully developing communication and literacy skills. Developing a rich vocabulary is a top priority and an ongoing challenge for both first language (L₁) and second language (L₂) instruction. Teresea (1997) attests, that whereas L₁ pupils arrive at preschool with a command of 2,000 to 6,000 words, most L₂ pupils begin their academic experience at zero. Once in the academic setting, L₂ pupils are exposed to a great amount of vocabulary in a myriad of subject areas and are required to use a fair amount of vocabulary throughout the day, acquiring a much larger vocabulary in the target language than pupils in traditional L₂ learning settings.

It has long been accepted that vocabulary knowledge is instrumental in reading comprehension, (Anderson, 2000; Anderson and Freebody, 1981; Read, 2000) and adds that both vocabulary breadth and depth are important for reading comprehension. Research on vocabulary acquisition involves having an understanding of what 'knowing a word' means, and then based on the definition of the concept of word; one can use appropriate tools and procedures to measure vocabulary knowledge (Bogaard, 2000 cited in). Vocabulary knowledge is not "an all-or-nothing phenomenon" (Laufer, 1998; Laufer & Paribakht, 1998), but involves degrees of knowledge (Meara, 1990).

Breadth of Vocabulary Knowledge

In research on vocabulary learning, a distinction has often been made between two dimensions of vocabulary knowledge: depth of vocabulary knowledge and size, or breadth, of knowledge (Haastrup & Henriksen, 2000; Read, 2000). Breadth of vocabulary knowledge has been taken to refer to the quantity or number of words pupils know at a particular level of language proficiency (Nation, 2001).

Depth of Vocabulary Knowledge

A second dimensional facet to vocabulary acquisition, which is key to quality language development, is depth of vocabulary knowledge. Depth of vocabulary deals not only with meaning, but also with morphology, phonology, syntax, sociolinguistic aspects, differences between written and spoken uses, and strategies for approaching unknown words. According to Nassaji (2004), depth of vocabulary knowledge facilitates inferencing, thus enhancing vocabulary acquisition through reading. Qian (1999) also argues for the superiority of depth over breadth of L2 vocabulary knowledge in predicting reading comprehension ability. Depth of vocabulary knowledge has also been used to refer to the quality of lexical knowledge, or how well the pupil knows a word (Read, 1993, 2000). Researchers have noted the complexity and multidimensionality of word knowledge and have suggested that knowing a word well should mean more than knowing its individual meanings in particular contexts. Various kinds of knowledge are associated with a word that a pupil must know, ranging from knowledge related to its pronunciation, spelling, register, stylistic, and morphological features (Haastrup & Henriksen, 2000; Nation, 1990; Richards, 1976) to knowledge of the words syntactic and semantic relationships with other words in the language. This includes collocational meanings and knowledge of antonymy, synonymy, and hyponymy (Chapelle, 1998; Henriksen, 1999; Read, 2000).

Vocabulary Knowledge

Haastrup and Henriksen (2000:2002) define vocabulary knowledge as mainly involving “the knowledge of a word’s different sense relations to other words in the lexicon, for instance, paradigmatic (antonymy, synonymy, hyponymy, gradation) and syntagmatic (collocational restrictions)”. In discussing the construct of vocabulary knowledge, Chapelle (1998) argued that a trait definition of vocabulary would have four dimensions; (a) vocabulary size, (b) knowledge of word characteristics, which is compatible to the depth dimension of the vocabulary knowledge (Qian, 1998, 1999); (c) lexicon organization; and (d) fundamental processes of lexical access. Carroll (1971) argues that it is not merely the knowledge of single words and their meanings that is important, but also the knowledge of the multiple meanings of words and their grammatical functions.

Reading comprehension

Reading comprehension involves several things including the ability to recognize words, word knowledge (also referred to as schema) and vocabulary knowledge. **Vocabulary knowledge** refers to the knowledge of a word's different sense relations to other words in the lexicon, while **word knowledge** involves knowing a word's form and meaning. When one says that there is a word in English that takes the form of a "boy", he cannot claim to know what "boy" means since the form of the word does not tell anything about its meaning. "Knowing" a word also involves knowing its grammatical function. In other words, knowing the meaning of a word does not just mean knowing its dictionary meaning or meanings, it also means knowing the words commonly associated with it (its collocations), as well as its connotations including its register and its cultural accretions. Sentences and passages are made up of words and good stock of word knowledge is required for comprehending sentences. The relationship between vocabulary knowledge and reading comprehension is indicated by the high degree of correlation between the two.

As for the assessment of vocabulary knowledge, different vocabulary tests have been devised, each tapping a specific aspect of lexical knowledge (Meara & Buxton, 1987; Schmitt, 1998). Some tests are more concerned with measuring the learners' breadth of knowledge, that is, the size of their vocabulary, while other tests try to address the learners' depth of knowledge, which is the quality of their vocabulary knowledge or how well they know particular words (Greidanus & Nienhuis, 2001; Hunt, 1998; Laufer & Nation, 1995; Read, 1988; Read, 1993; Wesch & Paribakht, 1996; Vermeer, 2001; Wolter, 2001). The two types of word knowledge, however, have been found to be highly correlated (Schmitt & Meara, 1997).

English language is the medium of instruction and testing in Kenyan schools from class 4 upwards, therefore it is pertinent that pupils are able to handle the language of instruction and testing, as lack of this skill would inadvertently affect the performance in examinations. Studies by Jayanthi and Vimala (1991), and Dalton et al. (1966), indicate that the better the reading ability, the higher the academic performance. It is, therefore, possible that some of the poor performance in examinations displayed by pupils in our primary schools reflects to a large extent a deeper problem of inadequately developed vocabularies and reading skills in English, the language of assessment. Therefore, it is on this background that this study aimed at assessing the relationship between depth and breadth of vocabulary knowledge and English language reading comprehension.

Therefore, it is against this background that this paper aimed at assessing the relationship between depth and breadth of vocabulary knowledge and English language reading comprehension.

Study Objectives

The objectives of the study were to investigate:

- 1) Pupils' breadth of vocabulary knowledge level.
- 2) The pupils' depth of vocabulary knowledge
- 3) The relationship between breadth of vocabulary knowledge and reading comprehension.
- 4) The relationship between depth of vocabulary knowledge and reading comprehension
- 5) The effects of vocabulary knowledge on reading comprehension.

Research Questions

The following questions were used in data collection and analyses,

- a) What is the relationship between vocabulary knowledge and reading comprehension?
- b) Do scores on depth of vocabulary knowledge predict the scores on reading tasks of basic comprehension exercises?
- c) Do scores on breadth of vocabulary knowledge predict the pupils' scores in reading comprehension test?

Methodology

The research findings upon which this paper is based are part of a postgraduate study conducted by the researcher in selected Kenyan public primary school pupils in standard eight on the relationship between Depth and Breadth of vocabulary knowledge and English language reading comprehension and a review of literature on the importance of vocabulary knowledge in reading comprehension. The study used the descriptive survey research design and aimed at describing in correlative terms, the relationship, if any, between pupils' breadth and depth of vocabulary knowledge and reading comprehension in English language. The study had both dependent and independent variables. Reading comprehension was considered as the dependent variable while depth and breadth of vocabulary knowledge were classified as independent variables. The researcher utilized both primary data was obtained using a reading comprehension passage and cloze tests as methods of data collection.

The study was conducted in Miriga Mieru East Division, Meru central, Eastern Province, Kenya. Miriga Mieru East division was chosen as the location of study due to the existing

data that depicts poor performance in English language according to the end of second term's English language examination 2007 results. Many public day primary schools scored below 50% which was considered to be below average as compared to their counterparts' private boarding primary schools.

The respondents in the study comprised of both girls and boys in standard eight classes. For the purpose of this study, subjects needed to be from selected public day primary schools with similar geographical, social and economic set up. This was a natural control for otherwise confounding factors like different language experiences and different exposure to English. The study was confined to six public day primary schools in Miriga Mieru East Division namely, Giaki, Kathirune, Ngiine, Kithoka, Gichunge and Clothirai primary schools and random sampling was used to select the 6 listed primary schools from the 21 schools that scored below 50% in the English examination results as mentioned above. Pupils in standard eight were found suitable for this study since the researcher assumed that these subjects had mastered the basic reading skills and learnt how to apply these in any given test.

In each school, a total of 36 pupils were selected for the study and simple random sampling was used to get the 36 pupils in the selected six primary schools making a total of 216 pupils. Data was gathered using three instruments; Depth of Vocabulary Test (Cloze test), A matching word exercise and a Reading comprehension passage. The cloze test was used for data collection because it is a form of Vocabulary Knowledge Tests (VKT) that intended to contribute to inferences about the test takers depth of receptive English vocabulary knowledge. This test is a technique developed by Taylor (1990) adapted from Chege (1993) in which words are deleted systematically from a passage, and the reader was expected to replace the deleted word while reading.

A matching test was used to correct data on breadth of vocabulary knowledge. In this test a number of concrete words are to be linked with a number of places and or contexts. This would produce evident that subjects know something about the meaning of a word without necessarily knowing how to use the words in a sentence of their own.

To gather data about pupils reading comprehension ability, the pupils were presented with a reading passage adopted from Chege (1993) and asked to read the text for comprehension and answer the questions asked in the context of the passage. Ten questions testing strictly only comprehension of the passage (interpretation, translation, saying what it means and implies) but without questions directly depending on knowledge of any of other tests.

The researcher conducted a pilot study at Kambereu Primary school in Giaki sub location, Miriga Mieru East division. The research instruments were administered on twenty pupils comprising of ten boys and ten girls selected randomly. The study made use of content validity. Expert opinion from the researcher's department was sought to establish the validity of the instruments. The pilot stage also assisted in validating these instruments and in ascertaining whether the methodology and instruments provided the required data.

To maximize on reliability of the research instruments, the researcher tried as much as much as possible to minimize the random error. Factors that leads to this were adequately addressed for instance, instructions to the test subjects were clear, and simple language was used. This study made use of the Pearson Product- Moment (PMCC) correlation technique to acquire the correlation coefficient between reading comprehension and breadth of vocabulary test scores and depth of vocabulary knowledge scores. A correlation coefficient of .50 or above obtained means the instruments were reliable.

During the administration of the tests, a matching test was administered first. The students were given 1hour to complete the cloze tests. After a short break of 20 minutes, the cloze test was administered for 1hour followed by a recess of 30minutes .Comprehension passage (completed cloze test) was allocated 1hour and 30minutes minutes was administered last. This is because the researcher wanted to reduce the pupils' likelihood of using the clues from one test to answer the other. Assurance on confidentiality was given at this stage. The data obtained from this study was analyzed quantitatively and qualitatively using basic statistics using SPSS software. The relationship between the depth of vocabulary knowledge and reading comprehension and the relationship between breadth of vocabulary knowledge and reading comprehension was subjected to Pearson Product- Moment Correlation to obtain the Correlation Co-efficient.

Findings

In order to determine the pupils, breadth and depth of vocabulary knowledge, relationship between depth and breadth of vocabulary knowledge and reading comprehension, a variety of statistical procedures were employed as discussed below.

Breadth of Vocabulary Knowledge (Passive Vocabulary)

The pupils' test was marked out of 22, and so the total score for the matching test was 22marks and the scores were divided into six groups: **fail**, **poor**, **average**, **good**, **very good and excellent**. The groups were as follows: (0 to 3) representing **fail**, (4 to7) **poor**, (8 to11) **average**, (12 to15) **good**, and (16-19) **very good** and (20-22) **excellent**.

The results of this analysis are presented in **Table1**. As the table shows, out of 216 test subjects, 36 (14.8 %) of the participants performed fairly, 23(10.6%) were poor, 28 (13%) were average, 38(17.6 %) performed “good”, while 35 (16.2%) had a very good mark and only 60 (27.8) pupils performed excellent. From the percentages shown above, out of the total number of (216) participants, it seems that the largest group of respondents attained an excellent score of (27.8%) which shows that out 216 many of them (60) had an excellent breadth of vocabulary knowledge. As for the other groups a good number of pupils had a fairly good score of vocabulary with 17.6 %(38) and 35 (16.2%) pupils at good and very good respectively. The last three groups of fail, poor and average attracted many students because the sum of the three 36(14.8%), 23(10.65%) and 28(13%) are slightly higher than their counterparts in good and very good but are slightly lower than the first group that scored excellent. The above “good and very good” groups were the least in number as compared to the other two groups.

BREADTH

Table1 Ranks for Breadth of Vocabulary Knowledge; fail, poor, average, good, very good, excellent

	Frequency	Percentage	Valid Percentage	Cumulative Percentage
Fail	32	14.8	14.8	14.8
Poor	23	10.6	10.6	10.6
Average	28	13.0	13.0	13.0
Good	38	17.6	17.6	17.6
Very Good	35	16.2	16.2	16.2
Excellent	60	27.8	27.8	27.8
Total	216	100	100	100

Depth of Vocabulary Knowledge

Cloze Test (Fill in the Blank Space Test) Measuring the Depth of Vocabulary Knowledge

The cloze test had 22 blank spaces where the pupils were asked to fill in the blanks with the most appropriate word according to the context. The test was administered to 216 pupils in primary schools in standard eight. It was marked out of 22 with the most correct word receiving a full mark and half a mark for other words. Presumably some blank spaces could be meaningfully filled in by means of several different words.

The participants scores were classified into (0 to 3) representing **fail marks**, (4 to7) **poor** marks, (8 to11) **average**, (12 to15) **Good**, (16-19) **very good** and (20-22) **excellent**.

The results of this analysis are presented in **Table 2**. As the table shows, a total of 216 participants, 42 (19.4%) of the participants attained a fail mark, 43(19.9%) had a poor mark, only 39 (18.1%) were at average score, 47 (21.8%) performed “good” while 40(18.5%) had a very good score and 5(2.3 %) attained an excellent mark.

From the percentages shown above, out of the total number of (216) participants, it seems that most of the respondents attained a score between fair, poor and average score (19.4%, 19.9%, 18.1%) respectively. Which shows that the majority had a below average depth of vocabulary knowledge as compared to the good and very good score (21.8%, 18.5%), which shown that a slightly lower number had a sizeable depth of vocabulary knowledge, while the least number of pupils 5(2.3) had an excellent depth of vocabulary knowledge.

Table 2 Ranks for Depth of Vocabulary Knowledge; fail, poor, average, good, very good, excellent

	Frequency	Percent	Valid percentage%
Fail	42	19.4	19.4
Poor	43	19.9	19.9
Average	39	18.1	18.1
Good	47	21.8	21.8
Very Excellent	40	18.5	18.5
Excellent	5	2.3	2.3
Total	216	100	100.0

Reading Comprehension Test

The reading comprehension test was used to test the pupils reading comprehension ability. This test had eleven questions testing strictly only comprehension of the passage i.e. interpretation, translation, saying what the passage means or implies but without questions directly depending on knowledge of any of the words in the other tests. The test was too marked out of 22 where every correct response scored two marks each. The marking scheme was formulated by the researcher herself. The participant’s scores were divided into six groups according the range of their scores. (0 to 3) represented **Fail** marks, (4 to7) **Poor** marks, (8 to11) **Average mark**, (12 to15) **Good**, (16-19) **Very Good** and (20-22) **Excellent**.

Table 3 below shows the pupils scores and their percentages. The results shows out of the 216 pupils who sat for the reading comprehension test, a large number of pupils scored below average as they fell between fail ,poor and average scores (49,26,41) while a slightly lower number of pupils attain a very good and good score(39,45) and the lowest number of pupils had an excellent score (16).

Table3

Rank for Reading Comprehension scores; Fail, Poor, Average, Good, Very Good, Excellent

	Frequency	Percentage	Valid Percentage	Cumulative Percentage
Fair	49	22.7	22.7	22.7
Poor	26	12.0	12.0	34.7
Average	41	19.0	19.0	53.7
Good	45	20.8	20.8	74.5
Very Good	39	18.1	18.1	92.6
Excellent	16	7.4	7.4	92.6
Total	216	100	100	100

4.4 Breadth Vs Comprehension Cross Tabulation

A cross tabulation count between the ranks for breadth of vocabulary scores and reading comprehension test scores was carried out to establish the relationship between the two tests results. The results in **Table 4** and **Figure I** shows that a large number of pupils (60) who were in excellent class in breadth of vocabulary test were distributed in other groups where only 12 retained their excellent score in reading comprehension test, 33 pupils were placed in very good class, 13 went down further to good class and 2 were at average whereas no students were at poor and fail class. The second class of very good also indicates that out of the 35 pupils who attained a very good score in breadth of vocabulary test only 4 improved to excellent performance, 2 retained their score while the rest dropped down their performance to good and average class as shown in the table below. As shown in the table the good class of pupils score shown almost the same trend as those of excellent and very good. Out of the 38 pupils who were in good group, only 4 improved to very good class, 9 retained their initial class score while the rest deteriorated to average, poor and fail. The last three classes, average, poor and fail shown the same trend of pupils' deterioration but the fail class was not affected much in terms of performance with almost all (30) the pupils retaining their fail group and only two improved to poor class.

This implies that despite a high performance in breadth of vocabulary test which saw more than half (N=133) of the target population falling in the class of good, very good and excellent, as compared to (N=83) pupils who attained a fail, poor and an average class, there is little contribution made by breadth of vocabulary towards improving reading comprehension since many students deteriorated in reading comprehension test scores which shows a significant positive relationship between the two tests.

Table 4

Rank for Reading Comprehension Test * Ranks for Breadth of Vocabulary Knowledge Cross Tabulation Count

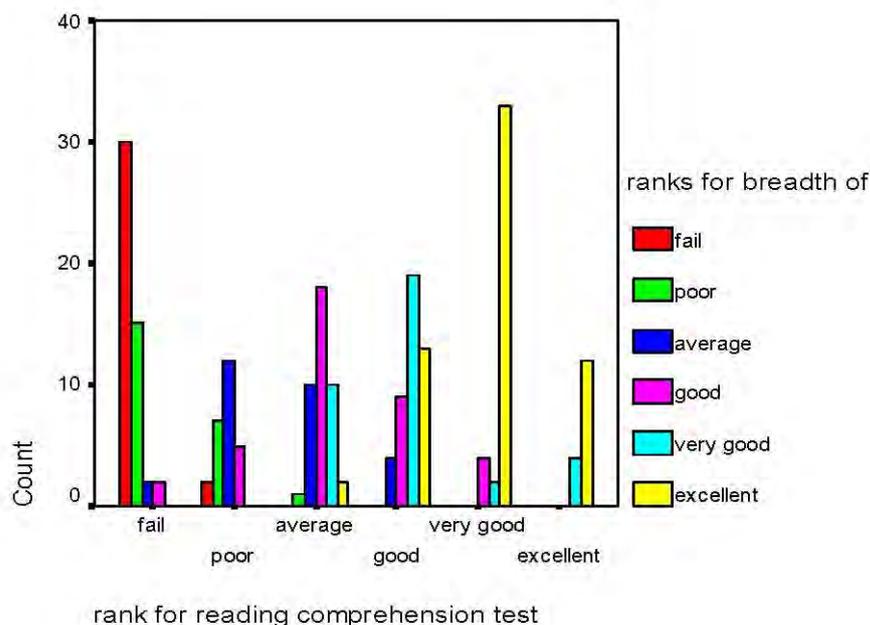
	Breadth of vocabulary knowledge						Total
Reading comprehension	Fail	Poor	Average	Good	Very good	Excellent	
Fail	30	15	2	2			49
Poor	2	7	12	5			26
Average		1	10	18	10	2	41
Good			4	9	19	13	45
Very Good				4	2	33	39
Excellent					4	2	16
Total	32	23	28	38	35	60	216

Symmetric Measures Between Breadth and Reading Comprehension

		Value	Asymp. Std Error	Approx. T	Approx sig
Interval by interval	Pearson's r	.877	.015	26.671	.000
Ordinal by Ordinal	Spearman correlation	.877	.017	26.696	.000
N of valid cases	216				

- Not assuming the null hypothesis
- Using the asymptotic standard error assuming the null hypothesis
- Based on normal approximation

Figure 1 Bar graph showings cross tabulation between Reading comprehension and Breadth of vocabulary knowledge.



Depth of Vocabulary Knowledge Ranks Vs Reading Comprehension Ranks Cross Tabulation

A cross tabulation count between the ranks for depth of vocabulary scores and reading comprehension test scores was carried out to establish the performance of pupils across the two tests. The results in **Table 5** indicates that all the pupils (5) who had an excellent score in depth of vocabulary test retain their excellent score class in the reading comprehension test score. Looking at the very good class the majority of the pupils (11) improved their scores and was ranked at excellent in reading comprehension test while only 9 attained a good rank. At good rank, the trend was almost the same with the majority of the pupils (19) improving their performance from good in depth of vocabulary to very good in the reading comprehension rank score. The last three classes, average, poor and fail shown the same trend of pupils' improving their performance but the fail class was not affected much in terms of performance with (37) pupils remaining in their fail group and only 5 improved to poor class.

Generally this analysis shows that there is a high contribution being made by depth of vocabulary knowledge towards improving the reading comprehension. This is evident in the two scores rank where an improvement in depth of vocabulary score lead to a noticeable increase in reading comprehension scores. This is a positive relationship as shown below in the Pearson Moment Correlation Coefficient.

Table 5

Rank for Reading Comprehension Test * Ranks for Depth of Vocabulary Knowledge Cross Tabulation Count

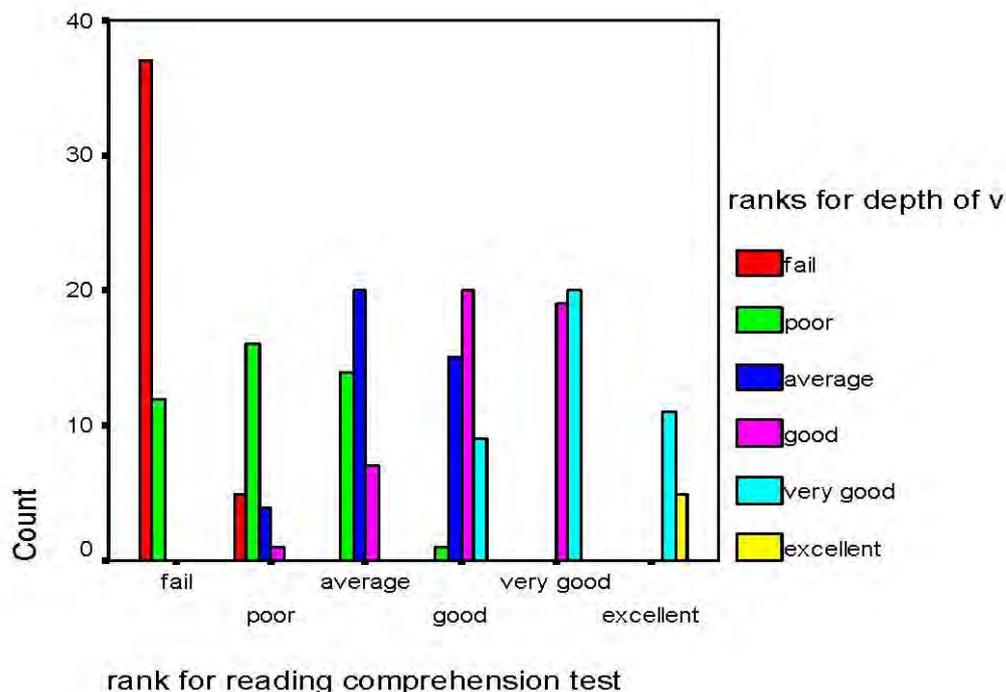
	Depth of vocabulary knowledge						Total
Reading comprehension	Fail	Poor	Average	Good	Very good	Excellent	
Fail	37	12					49
Poor	5	16	4	1			26
Average		14	20	7			41
Good		1	15	20	9		45
Very Good				19	20		39
Excellent					11	5	16
Total	42	43	39	47	40	5	216

Symmetric Measures Between Depth and reading comprehension

		Value	Asymp. Std Error	Approx. T	Approx Sig
Interval by interval	Pearson's r	.907	.011	31.409	.000
Ordinal by Ordinal	Spearman correlation	.906	.011	31.301	.000
N of valid cases	216				

- Not assuming the null hypothesis.
- Using the asymptotic standard error assuming the null hypothesis.
- Based on normal approximation.

Figure 2 Bar graph showings cross tabulation between Reading comprehension and depth of vocabulary knowledge



Correlation between Breadth of Vocabulary Knowledge and English Reading Comprehension.

Pearson’s correlation coefficient was used to determine the relationship between breadth of vocabulary knowledge and reading comprehension. The data are presented in table **table 6**. From the table below, it is evident that there is high significant correlation between the breadth of vocabulary scores and reading comprehension performance ($r=.877$). Basing my argument on the below **table 6** it is evident that the correlation between breadth and of vocabulary knowledge and reading comprehension is a positive correlation since pupils breadth correlated highly with reading comprehension scores.

Correlation between Depth of Vocabulary Knowledge and English Comprehension.

Pearson’s correlation coefficient was used to determine the relationship between depth of vocabulary knowledge and reading comprehension. The results are presented in table **table 7**. From the table below, it is evident that there is high positive significant between the depth of vocabulary scores and reading comprehension performance ($r=.907$). As shown in the **table 7** below, it is evident that the correlation between depth of vocabulary knowledge and reading comprehension is a positive one since pupils depth of vocabulary improved their scores in reading comprehension as compared to scores in breadth of vocabulary scores which raised as scores in reading comprehension dropped down.

Correlations Coefficient between Breadth of Vocabulary Knowledge and Reading Comprehension.

Table 6

Correlations			
		ranks for breth of vocabulary; fail, poor, average, good, verygood, excellent	rank for comprehension; fail, poor, average, good, verygood, excellent
ranks for breth of vocabulary; fail, poor, average, good, verygood, excellent	Pearson Correlation	1	.877**
	Sig. (1-tailed)	.	.000
	N	216	216
rank for comprehension; fail, poor, average, good, verygood, excellent	Pearson Correlation	.877**	1
	Sig. (1-tailed)	.000	.
	N	216	216

** Correlation is significant at the 0.01 level (1-tailed).

Correlations

		rank for comprehension; fail, poor, average, good, verygood, excellent	ranks for depth of vocabulary; fail, poor, average, good, verygood, excellent
rank for comprehension; fail, poor, average, good, verygood, excellent	Pearson Correlation	1	.907 (**)
	Sig. (1-tailed)	.	.000
	N	216	216
ranks for depth of vocabulary; fail, poor, average, good, verygood, excellent	Pearson Correlation	.907 (**)	1
	Sig. (1-tailed)	.000	.
	N	216	216

** Correlation is significant at the 0.01 level (1-tailed).

Table 7 Correlations

DISCUSSIONS

The discussion presented in this section is based on the general objectives of the study, the first of which was to investigate pupil's breadth of vocabulary knowledge levels. The findings of this study indicate that's the pupils had a high breadth of vocabulary knowledge as compared to their depth of vocabulary. The literature review in chapter two indicated that both breadth and depth of vocabulary knowledge are important in reading comprehension, but depth of vocabulary knowledge plays a significant role in reading comprehension. The results of the present study show that a high pupil's score in breadth of vocabulary knowledge did not translate to a high score in reading comprehension. A large number of pupils who had a high score in breadth of vocabulary test did not attain such large score in their reading comprehension. From this finding, it is evident that the students sampled for the study have a large number of breadths of vocabularies.

The second objective was to find out the pupils' depth of vocabulary levels. Results from the study indicate that the pupils had a relatively low score in depth of vocabulary test as compared to the scores in breadth of vocabulary knowledge. A cross tabulation between depth of vocabulary knowledge shown that a high depth of vocabulary translated to a high score in reading comprehension test scores. A large number of pupils who had a low score in cloze test attained a high score in reading comprehension and there was much improvement from cloze test to reading comprehension. A number of possible reasons could be given to explain this low score in depth of vocabulary which could be the pupils have a challenge to turn breadth of vocabulary (passive vocabulary)into depth of vocabulary(active vocabulary), it would also mean the counterpart of passive vocabulary would appear to be active vocabulary.

These results affirms the studies investigating the role of vocabulary knowledge in reading which have found that while measures of size of vocabulary knowledge are strongly related to the reader's understanding of texts (Laufer, 1997; Qian, 1998, 1999), measures examining aspects of depth of vocabulary knowledge make a stronger contribution to reading comprehension, than those that simply measure a single definition of a word. .Qian (1999), found out that depth of vocabulary knowledge, conceptualized as receptive knowledge of word meanings and collocations, was not only a better predictor of L2 reading comprehension but also made a unique contribution to L2 reading comprehension, over and above the contribution made by size of vocabulary knowledge.

The third objective was to find out the relationship between breadth of vocabulary knowledge and reading comprehension. The results from the study indicate that there is a significant relationship between depth of vocabulary knowledge test (cloze test) and reading comprehension test. A number of reasons could be given for this positive correlation between the two tests. That better breadth of vocabulary (passive vocabulary) is usually encouraged by comprehension exercises, and for reading comprehension one need passive vocabulary.

The fourth objective was to find out the relationship between depth of vocabulary knowledge and reading comprehension. The results of the study showed a high significant relationship between the two test score at .907 which is quite higher as compared to that of breadth of vocabulary knowledge and reading comprehension. This would mean that for text writing the pupils use depth of vocabulary (active vocabulary) and that the counterpart to reading comprehension would appear to be text writing(use of active vocabulary).

These analyses indicates that, both depth and breadth of vocabulary knowledge are key elements in improving reading comprehension ability but breadth of vocabulary knowledge had a low significance on reading comprehension as compared to depth of vocabulary that had a higher contribution. Finally the extent to which the respondent were able to infer word meaning successfully from the context was much attributed by their depth of vocabulary knowledge as compared to their breadth of vocabulary knowledge.

5.1 Conclusion

From the discussion in chapter four and the summary given in section five, of this chapter, the following conclusion were made, these are some of the old assumptions;

1. The study findings contribute to understanding the relationship between vocabulary knowledge and reading comprehension, especially in the context of reading comprehension assessment.
2. All scores, depth and breadth of vocabulary knowledge have been statistically significant, which suggests that using any combination of two variables depth and breadth of vocabulary knowledge and reading comprehension will yield better results than using one of them alone.
3. Although there appears to be a fairly strong correlation between depth of vocabulary knowledge ($r=.907$), breadth of vocabulary knowledge($r=.807$) and reading comprehension, it is evident that depth of vocabulary knowledge test and reading comprehension test tap different aspects of vocabulary knowledge.
4. Summarizing the answers from the answers for the research questions, the researcher have found out that with a sample of L2 background, scores on depth of

vocabulary knowledge, breadth of vocabulary knowledge and reading comprehension are highly intercorrelated.

5. The dimension of vocabulary knowledge as operationalized in the depth of vocabulary knowledge is important as that of vocabulary size(breadth of vocabulary) as operationalized by vocabulary size .The two dimensions are closely related to each other and with reading comprehension , we can therefore proceed to state that depth of vocabulary knowledge and breadth of vocabulary knowledge are closely and positively associated not only with each other but also with the performance on reading comprehension.
6. In determining the values of depth of vocabulary knowledge and breadth of vocabulary knowledge in predicting performance on reading comprehension, the results obtained from this present study correlate those from Oian (1998,1999),.We can thus assume that vocabulary is as important factor in reading comprehension assessment.
7. Since scores of on depth and breadth of vocabulary knowledge measures are both capable of explaining a considerable portion of the variance of reading comprehension scores, we can now suggest that well designed measures of depth of vocabulary knowledge receive due recognition as useful predictors of reading comprehension.
8. Because the vocabulary depth and size measures are equally valid in predictive sense, using them in combination results in a greater ability to predict reading comprehension than using either one alone.
9. This argument is supported by a high correlation coefficient between the three variables under study.
10. The counterpart to reading comprehension would appear to be text writing which is the use of active vocabulary.
11. The counterpart to breadth of vocabulary knowledge (passive vocabulary) would appear to be active vocabulary.
12. For comprehension one needs passive vocabulary and for text writing one needs active vocabulary.
13. The challenge faced by the learners is to turn passive vocabulary into active vocabulary and the challenge is also to move from ability to comprehend to ability to compose text.
14. The results have showed that the ability to comprehend correlates more highly with active vocabulary than with passive vocabulary.
15. Both active and passive vocabularies are useful in enhancing reading comprehension but active vocabulary is more useful then the counterpart.
16. Active vocabulary correlates more with reading comprehension than with passive vocabulary then it means both reading comprehension and active vocabulary

enhance each other in a way that active vocabulary leads to better reading comprehension and vice versa.

17. That better passive vocabulary is usually encouraged by more test writing practice and better passive vocabulary encouraged by comprehension exercises.
18. The findings of this study and that of (Laufer,1992,1996,Liu and Nation,1985), research on the relationship between vocabulary size and reading comprehension has produced

5.2 Recommendations

Based on the finding of the study, the following are the recommendations:

1. It must be reiterated that although the study presented here compared the predictive values of vocabulary size and depth of vocabulary measures, the depth of vocabulary knowledge covers only a few components of vocabulary knowledge, synonymy, polysemy, and collocation. Recalling that the dimension of depth of vocabulary knowledge includes, phonemic, graphemic, morphemic, syntactic, semantic, collocational and phraseological features, it is obvious that the concept of vocabulary knowledge was only partially operationalized in the study and therefore caution should be exercised in generalizing the findings from this study.
2. In exploring the role of vocabulary knowledge in reading comprehension, both dimensions deserve equal attention .For this reason measures capable of assessing depth of vocabulary knowledge effectively are urgently needed in our Kenyan English examinations.
3. From the findings of this study and the findings of Qian (1998),it is evident that certain aspects of depth of vocabulary knowledge play an integral role in reading comprehension and that a depth of vocabulary knowledge test (read 1993,1995),designed to measure some paradigmatic and syntagmatic aspects of vocabulary knowledge has shown its capability of being reliable measure. The Kenya national examination council should adopt such kind of a test instrument in testing the pupil's depth of vocabulary knowledge.
4. Teachers should note that both breadth of vocabulary knowledge and depth of vocabulary knowledge are important in reading comprehension .This implies that both dimensions of vocabulary knowledge should be emphasized while teaching other English language skills and should be examined as language skills if English language has to continue being the language across the curriculum.
5. Teachers should also lay emphasis on enhancing pupils' vocabulary acquisition since vocabulary is acquired in an incremental fashion. So words acquired at the beginning of the learning process are likely to have much more depth than words learnt more recently. The teachers should ensure that there is a repeated word exposure to

pupils to that they do not forget the words learnt earlier as well as the recent learnt ones.

6. Learners should lay emphasize in acquiring more words for research has shown that the more words a learner knows, the more likely it is that he or she will have a greater depth of knowledge for those words.
7. Learners should also not forget that, although having a larger vocabulary size will give the learner a larger database from which to guess the meaning of newly learned words, having deeper vocabulary knowledge will likely improve the results of guessing work. Presumably these two dimensions operate interactively and interdependently.
8. Schools should strive to equip libraries with relevant reading materials .This will lead to enhancement of language skills especially one on breadth and depth of vocabulary knowledge.
9. Teachers should encourage the learners to learn word meaning in it context rather than mere rote learning of words. When word meaning is learnt from the context the pupils will improve on their reading comprehension ability because words have been learnt in their meaningful context.
10. Writing skills like letter writing and composition writing should be encouraged among pupils because there is the use of vocabularies and different word to spice up the letter. Also through letter writing there is use of imaginary situations and creative writing which will help the pupils to put in use the already learnt vocabularies which will in turn improve on reading comprehension and mastery of old and new learnt words.
11. To improve on both breadth and depth of vocabulary knowledge, teachers should ensure that after teaching any new vocabularies or words, there should be a follow up exercise asking the pupils to construct sentences using the newly learnt words.
12. The teachers should encourage the pupils to read as many story books as possible so that they can have a rich encounter with as many words as possible and learn there correct usage and finally improve their reading comprehension ability
13. Teachers could also use different cards with different words and another card with different phrases containing meaning of those words in a jumbled manner and ask the pupils to match the card with the correct word with the card with the correct phrase.

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VERBAL INTERACTION PATTERN IN PHYSICS CLASSROOMS AMONG SOME SCHOOLS IN KENYA.

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Abstract

Mode of instruction used in teaching is key to the understanding of the concepts and skills to be learned. Instruction in classrooms is controlled to a larger extent by the interaction patterns involving teachers, learners and resources. Some interaction patterns seem to promote learning especially science subjects. Kenya has been recording very low performance in Physics lessons with the aim of determining the common patterns that can aid in drawing possible inferences on the effects of instruction in science subjects. The study was descriptive in nature and used six boys and girls schools in one district. The main instrument was modified Flander's Interaction. Analysis categories (FIAC) which was used in Physics lessons. The data was analysed using ratios, percentages and chi-square. It was observed that there exists a significant difference in the teachers' verbal behavior patterns in the boys' and girls' schools. Teachers in girls' schools used patterns related to 'direct' methods which created autocratic climate in class and hence limited participation in girls during lessons. On the other hand, patterns in the boys' schools related to 'indirect' methods which encouraged boys to ask questions and interact with resources more, thus creating a more democratic learning climate. On the overall, most teachers leaned towards patterns that created autocratic climate which may not be suitable for learning physics and science subjects in general.

Introduction

Performance in Physics is determined by many factors. Some of these factors include teacher characteristics, resources available for the teaching and learning process, ability of the learners among others.

One factor which may be very important is what exactly goes on in the classroom. This is determined by the teacher-learner behaviour or interaction. In the classroom, teaching may not take place effectively if there is no verbal interaction. If in a doubt concerning this, imagine a silent teacher and a quiet learner in a classroom. Verbal interaction in the classroom takes at least three dimensions 'teacher to learner', 'learner to learner' or 'learner to teacher'. The above three dimensions have to be balanced while the teaching

and learning process is taking place for effective teaching and learning to take place. However, it should be noted that 'teacher-learner interaction' should be minimal to avoid the creation of an autocratic climate which hinders effective teaching and learning.

Teachers should aim at creating a democratic climate which is manifested through increased learner-teacher interaction. Learner-teacher interaction occurs when learners are responding to the teacher's questions (student response) and also when learners are asking questions directed to the teacher and expressing their own ideas (student-talk initiation).

Instruction to sciences should lean more on the student directed kind of learning with the teacher acting as a facilitator as opposed to direct methods of teaching where the teacher acts as the only 'source' of knowledge. This study was designed to look at the type of interaction that goes on in physics classrooms.

Objectives

The main objectives of the study were:

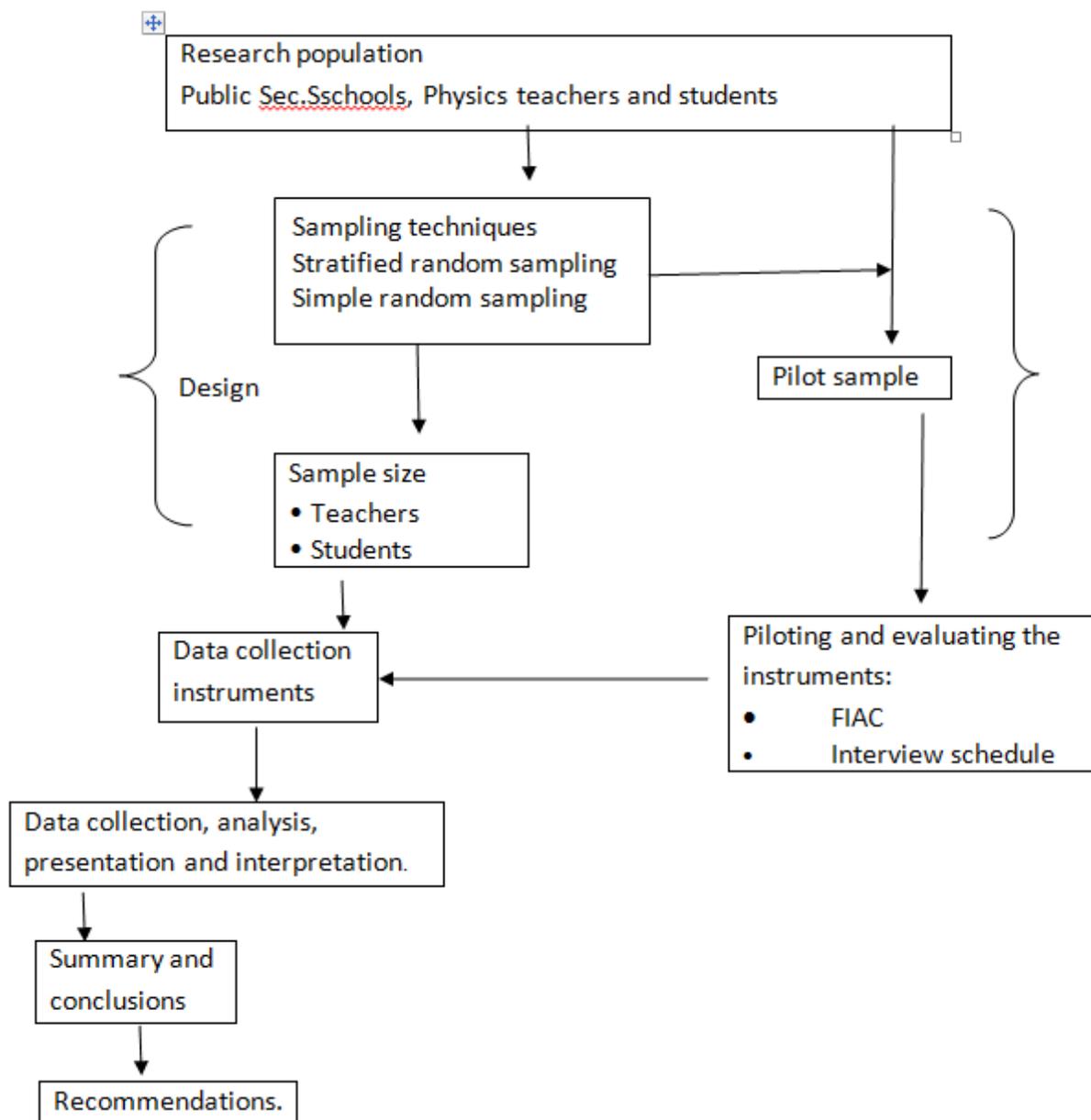
1. To find out the kind of classroom atmosphere created by the teacher's verbal Interaction patterns.
2. To find out which between the direct and indirect methods of teaching elicits most responses from the learner.
3. To find out whether there is any significance difference in classroom verbal interaction among mixed, girls' and boys' schools.

Observations were made in some Physics classes while the teaching learning process was taking place using a modified Flanders' Interaction Analysis Categories (FIAC).

Methodology

Descriptive survey research design was used for this study since the researcher was to observe the verbal interactions taking place in Physics classrooms.

Figure 1 A survey research design process for the study.



Source: Adapted from Kwaka (2003).

Figure 1. Shows the population from which the research sample was selected and the methods of sampling. It also shows the research instruments used and the process of the entire research study is outlined.

The target population was form 2 Physics teachers and their students. Several schools were selected using stratified random sampling and simple random sampling. A modified FIAC and an interview schedule were used to collect data. A 13 x 13 matrix observation checklist was designed, based on the modified FIAC. This was then used for coding the observations

made in the classroom after every three seconds. To determine the reliability and validity of this instrument the lessons were tape-recorded using a tape-recorder for another observer to have a chance of coding his/her own observations from the lessons observed by the researcher.

An interview schedule was also designed to provide more information pertaining to teaching and learning of Physics in Kenyan secondary schools. The sampled schools were observed four times and the data collected was processed, presented and analysed using frequency tables, ratios and the chi-square.

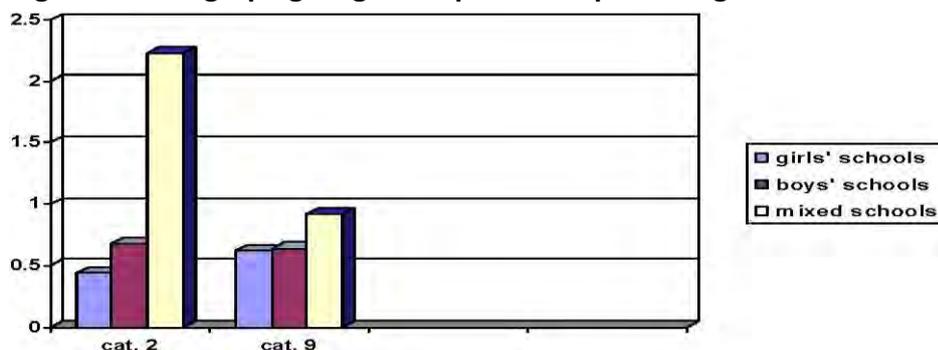
Main Results

The above mentioned instruments enabled the researcher to attain the set objectives. It was found out that 'direct' methods of teaching create an autocratic climate in the classroom where the learners are not free to participate in the lesson. This was manifested through low levels of student initiation. Categories 8 and 9 recorded the lowest frequencies while coding in the 13 x 13 observation checklist. From the frequency tables, it was observed that whenever categories 5a, 5b, & 5c (numbers used to code direct methods) had high percentages, categories 8 and 9 (numbers used for coding student-talk initiation) recorded the lowest percentages.

Use of indirect methods of teaching creates a democratic climate where learners are free to express their ideas. This was proved from the frequency tables where high percentages in categories 1, 2, 3 & 4 (numbers used in the coding of the indirect methods of teaching) always matched with high frequencies in categories 8 & 9.

Moreover, it was observed that praising the learners while teaching leads to a higher student initiation (learners participate more in the lesson by asking questions. Figure 2 below shows this.

Figure 1 A bar graph giving a comparison in percentages between categories 2 and 9.



FIAC categories 2 and 9 for different schools

Hence we can conclude that the level of reinforcement is directly proportional to the level of students-talk initiation. Use of categories 6 & 7 (giving directions) discourages the learners from participating in the lesson hence low levels in students-talk initiation.

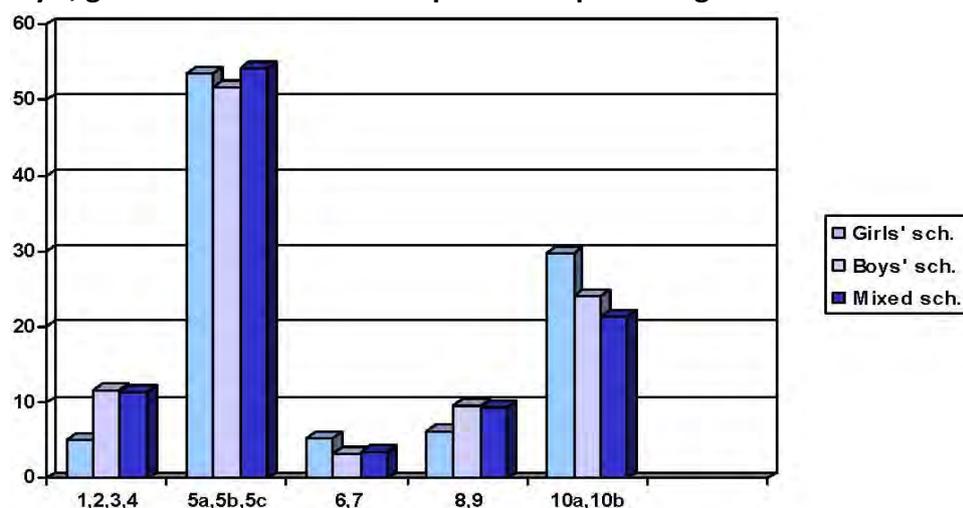
The i/d ratios (ratio of the use of indirect methods to the direct methods of teaching) were calculated for teachers teaching in boys', girls' and mixed schools and they were 0.56, 0.10 and 0.34 respectively. Table 1. below shows this.

Table 1: I / d ratios of physics teachers in boys' girls' and mixed schools.

FIAC categories	Categories 1,2,3 &4	Categories 6 & 7	i / d ratios
Type of school			
Boys'	92	163	0.56
Girls'	24	230	0.10
mixed	79	235	0.34

It was further observed that teachers teaching in Girls' schools used more of the direct methods of teaching than their counterparts teaching in Boys' and Mixed schools. (see the bar graph in figure 3

Figure 3: A bar graph showing the verbal classroom interaction patterns of teachers in boys', girls and mixed schools expressed in percentages.



Modified FIAC categories.

The calculated chi-square values obtained revealed that there exists a significant difference in the teaching behaviour patterns displayed by Physics teachers and their learners

depending on the gender of the students they are teaching. Male teachers teaching girls schools use the lecture method (telling method) most of the times. This lowers curiosity of the learners and reduces their ability to discover on their own hence lowering the learners creativity.

Conclusion

In general, the findings of this study have revealed that most Physics teachers use direct methods of teaching where they serve as a source of knowledge. Learners are not given a lot of opportunity to think, explore and discover on their own. This denies them important opportunity to do meaningful learning. This lowers creativity and curiosity among the learners hence lack of understanding of key concepts in Physics. As a result, many students do not perform well in examinations.

Although changes are not easily accepted, teachers of science in general should struggle to have a shift in the approaches and strategies they use while teaching. This should be seen through a shift from the direct methods to indirect methods of teaching. In addition, teachers should give the teaching of Physics and science in general, a more practical approach where use of teaching aids and resources play the key role. When it comes to the practical approach, emphasis put by the project going on in secondary schools (SMASSE - Strengthening Mathematics and Science in Secondary Education) on the use of the ASEI/PDSI approach while teaching Sciences should not be downplayed. While learners are exposed to this kind of approach, verbal interaction is enhanced and more learning is likely to take place.

It is worth noting that teachers should mind how the content has been delivered but not how much has been delivered. Drilling of concepts to the learners for the matters of passing in their exams should be discouraged and instead encourage Physics teachers and Science teachers in general to concentrate in laying a firm foundation of Science within the learners. One way of achieving this is through the use of practical approach which imparts science process skills into the learner while increasing the verbal interactions hence more learning taking place in the classroom.

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PEDAGOGIC STRATEGIES FOR UNLOCKING THINKING POTENTIAL.

John N. Kimemia

Introduction

The quality of life in Kenyan and other peoples in the world is dependent upon the abilities of individuals in that society to provide solutions to problems affecting its social units such as the family, the community and the nation at large. The mass of individuals able to produce new products, new processes, new machines and other new devices determine whether a country is poor or wealthy. The rich developed countries may not be well endowed with natural resources, but those countries have individuals who are able to use their intellectual potential to create wealth. On the other hand, the poor developing countries do not have adequate number of people able to use their thinking potential more effectively. Such people in the so called Third world countries end up becoming sources of cheap labor force for others and also consumers of expensive finished products including new ideas and new technologies. Education is the main key input that can help the poor developing countries emancipate themselves through new approaches to solving their myriad problems by unlocking their thinking potential. There are many benefits that accrue from education. However, the most crucial benefit that will be achieved from education must include creative and effective thinking that will make the learners initiators and innovators of new technologies for national development. All stakeholders in education including the teachers must focus on developing in their learners the ability to create new processes and new products that will solve the many problems we are experiencing such as human, social and economic ones. We must explore new ways and strategies that we may and should use in the teaching in order to unlock the thinking potential of the learners to become initiators and developers of appropriate and relevant technologies to create wealth necessary for our national development. In addition to unlocking the thinking potential of the learners' education will also contribute in:

- I. Improving the productive capacities of these countries including the social and scientific institutions.
- II. Helping in poverty reduction as well as its elimination.
- III. Increasing the value and efficiency of the labor force in making the human resource more productive.
- IV. Providing the pool of well-trained and intellectually more flexible personnel that is able to harness technology for national industrial transformation.

- V. Maintaining and sustaining a promising cadre of human capital that will serve these countries as both consumption and investment commodities.

However, it must be pointed out that these benefits from education cannot be achieved unless we teach our learners how to think more effectively and productively than they are doing today. It is evident that some countries, communities and nations appear to have assisted their people to realize more readily their creative and thinking potential more effectively and initiatives are portrayed in the way they are developing new processes and new products in solving the social, human and economic problems facing their communities through better utilization of their thinking potential and capabilities.

We shall need to devise new ways and strategies in our teaching (pedagogy) to develop and prepare the learners into problem solvers and initiators of activities and social programs that will make our nations to create wealth and develop. The guiding philosophy in this endeavor will have to be **education for development** as opposed to **education for transfer of technology and development** from the developed rich nations. The emphasis in this development concept will have to be confined to home grown development or what we may call national transformation in terms of social, political and economic transformation to benefit our nation directly and to improve the lot of our well being.

The education programmes anticipated in the search for unlocking thinking potential must seek to develop and encourage public spirited initiatives and creativity to produce problem solving skills that are life long skills which will be used at home, school, leisure and at workplaces. This education programmes must place more emphasis on imparting the knowledge techniques and skills necessary for development. The education programmes should be designed to help Kenyan youth to operate within their socio-cultural settings and to develop the critical skills and attitudes necessary for unlocking the thinking potential of the individuals while developing their initiatives and creative abilities.

Definition of Thinking Potential

For the purpose of this discussion thinking potential embraces two but interrelated concepts known as 'initiatives' and 'creativity'. There are no definite or agreed definitions of these terms but our working definition focuses on thinking as a 'cognitive ability' that has place for development giving rise to divergent thinking within an individual and within the wider community served by that education. However, the concept of thinking potential in this discussion is not static but a dynamic phenomenon that is ready to change, adopt and adjust to the changing technological and developmental aspects.

Thinking is an intellectual problem-solving faculty, endowed in human beings. Thinking is an aspect of intellectual activity involved mainly in solving problems. It may also involve reasoning, categorising and solving problems. Thinking is an internal dialogue that accompanies actions such as performing a task, observing an event or expressing an opinion. Thinking may also be defined as a set of advanced skills that govern a person's mental processes. The skills utilized in these processes consists of knowledge, dispositions, cognitive and metacognitive operations (cf: Cotton: 1997). It is observed that thinking can be inferred from learners behaviours as they perceive, classify manipulate and combine information. Thinking is not observable directly because it takes place inside an individual's head and mind and cannot be seen.

Creativity may defined in terms of the product of a process and in terms of the process itself. Creativity is the ability to think up alternatives (cf: Woods: 1982). This definition does not include evaluation or judgement of the product. But creativity in development must take account not only about the available alternatives but also must evaluate the outcomes of these alternatives. Creativity in education must involve an approach to problem-solving as well as confronting situations that do not require direct application of knowledge that we have learnt in schools, as part of our profession or in our training. Creativity must embrace approaches that will solve problems easily and efficiently without much reference to the learnt skills or the home-grown skills but a combination of these skills in what we may call life-long problem solving skills.

In the realization of creativity there is a central concept that comes into play known as 'initiative'. This is a necessary condition in building up and maintaining creativity as a pillar in innovation and development. Initiative is the ability to take the first step or move that leads the way to making decisions. Initiative involves mental and emotional readiness to think and come up with alternatives. Initiative is a central concept in creativity. It is a necessary but not sufficient condition for creativity (cf: Omwa: 1990: 131).

Creativity and initiatives are necessary requirements whenever we may need to make decisions or alternative choices in education as well as in development matters. We need creativity and initiatives when we are trying to decide about what to do or when to identify the factors that affect and influence the various circumstances and situations we find ourselves in. We need creativity and initiative for problem solving in all situations at home, school, in industries, in offices and in any other situation where we require to generate alternatives and to make correct choices from these alternatives. Creativity and initiatives are what will be called thinking potential or critical thinking skills that are necessary and needed by all of us in making bold decisions that form the basis of well-informed decisions that are necessary for development in all spheres of our lives. The centrality of 'creativity

and initiatives for the development of the African continent is summed up by (Onwa:1990: Ibid) when he remarks that:

‘The survival of the African society depends to a large extent on the readiness and ability of her children of today (adults and experts of tomorrow) to come up with ideas that would lead to the full utilization of the available resources to develop technology, improve social relations, provide food, shelter, education, effective communication, medical services and other social amenities (Omwa: 1990:130).

Creativity and initiative in individuals groups and community that make up the society should be collectively seen as the survival kit or the life-saving strategy for that community. It is advocated that we all have the potential to be creative and initiative in all our endeavors at home, school at work places and at leisure. Our creativity and initiative will be exhibited in certain ways or characteristics including:

- I. Intellectual thoroughness
- II. Curiosity in action
- III. Openness to relevant experience
- IV. High observance in new situations
- V. Originality
- VI. Independence
- VII. Fluency
- VIII. Diligence
- IX. Total commitment
- X. Playfulness and sense of destiny

It is asserted that creative people are usually of ‘average’ and ‘above average’ intelligence. The intellectual performance of creative people is influenced by their emotions, their way of seeing themselves and the world, and their expectations and beliefs of the world’s reaction to them. (cf: Onwa: 1990: 132).

Generally, creative and initiative people are not bothered about what others think about them. They are free from conventional constraints. They have a wide scope for flexibility and tolerance to strange situations and a high degree of watchfulness and taking stock of new development. For further development and improvement of creativity and initiative that is: developing the thinking potential, these characteristics such as flexibility and tolerance should be reinforced in various ways and contexts in which they are manifested. In particular, in school or through education the development of creativity and initiative should be encouraged and not frustrated physically or mentally. The social, cultural and

educational barriers to the development of 'thinking potential' should be identified, minimized and where possible eliminated altogether to the positive emancipation of the individuals to develop these potentialities.

Can Thinking Skills be taught?

Maritim (2001) observes that any country that has an agenda for advancement must develop a sound policy on human capital development through relevant, effective and well planned education and training programmes (cf: Maritim: 2001). Initially, Thinking skills were thought as genetically inherited. However, research has confirmed that direct teaching (pedagogy) can develop skills and attitudes of effective thinking (cf: Ristow:1988 & Presseine: 1986).

Robinson (1978) contends that the goals of education should be teaching students to become effective thinkers. Learners must be equipped with life long learning habits and thinking skills which are important tools or devices for acquiring and using information in today's dynamic environment. Thinking skills are an important requirement increasingly sought in many types of jobs today. These skills include a high capacity for abstract thinking, conceptual thinking ability to apply that capacity effectively to complex real-world problems that may change as jobs evolve, the ability to work well with others and independently with little supervision (cf: Stasz: 1997). In today's information technology age, learning of specific knowledge in schools may not be what is important as making sense of new information and development of thinking skills in order to produce people capable of coping with the rapidly changing world (Gough: 1991).

Students who are unable to think of ideas, or use ideas to provide solutions to problems are unlikely to cope effectively with world inside and outside the classroom. Nevertheless, most educational institutions continue to emphasize the acquisition of factual information rather than thinking (cf: Siegel: 1990).

Life is about finding solutions to problems human beings face. Education should not only focus on providing knowledge to students but should endeavour to make learners into thinkers because knowledge is a tool and thinking make the tool useful (Stage: 1987). Students should be made to appreciate the practical relevance of what they learn in schools to the real world. In this connection school knowledge and common sense (practical knowledge) are becoming mutually inclusive.

Learning in schools (school knowledge) is increasingly viewed as something that merely exists for the mastery of answering examination questions. The emphasis is placed on

learning the correct answers and memorization rather than exploration of questions, critical thinking and understanding within context. Students are provided with very little opportunities to interpret and criticize questions. The learning goal for the majority of students is to recite back to the teacher the acceptable explanation and methodology as expostulated (cf: Caprio: 1994).

Traditionally, teaching was seen as a process of presenting subject matter to be learnt, with reinforcement being dispensed for correct response given by the students. Contemporary teaching should go beyond learning factual information. Students should be encouraged to question the ideas and information presented in class by identifying the underlying assumptions forming and defending opinion and seeing the relationship between events and ideas as well as distinguishing between facts and opinions. The traditional teacher as a giver of information and textbook guided classroom has failed to bring about the desired outcome of productive thinking. The students need to be provided with opportunities to interpret and criticize questions, think independently and interact with the others.

Traditional teaching methods largely stifle openness of mind, flexibility and imagination and other aspects of intellectual vigour. The effect on the learners mind when teaching is merely the transmission of factual information to be committed to memory may be likened to a sickness that is made worse by those doctors seeking to treat it. This is because such teaching is antithesis to the development of real thinking and is merely dry pedagogy, manipulation and propaganda. It is contended that such prescriptive methods can lead to social control because they produce acquiescent and unquestioning individual rather than independent thinkers. (cf: Mead: 1973).

People who have gone through such teaching and learning methods are likely to have what is called dependent capability i.e. having received knowledge and skills rather than having taken initiative in learning them. The students who have been actively involved in the acquisition of the same competences have independent capability because they have confidence in their ability rather than relying on qualifications given by others. (Stephen: 1991).

Critics of our education claim that schooling for our children is extremely boring because teachers are poorly trained ill-motivated and have little opportunity to improve their skills through in-service education. Learning for the child is extremely boring because it involves drilling and memorization of sometimes decontextualised information (cf: Bishop:1994). These critics then conclude that the African child enters school ignorant and curious, but leaves the school ignorant but no longer curious (cf: Bishop: 1994:/Ibid).

Barriers that inhibit the Development of Thinking potential.

It is observed that certain social cultural and even educational practices constitute barriers to creative thinking and hinder the development of thinking potential. According to Shore (1978) the following cultural blocks inhibit creative thinking and initiatives;

- I. Desire to conform to societal norms. This implies the attempt by the older members to instill in the youths and children the need to be accepted by the others through 'compliance' to the set social norms.
- II. The drilling and training the young to respond negatively either by saying 'no' to new ideas or new demands. The stereotyping in most cultures breeds youths who do not want to 'question' but 'instead they 'reject' or say 'no' to any new situations whether such situations would be prospective or enterprising for them at a later stage.
- III. An attempt by groups, communities or society to take wholesome issues rather than to analyse or structure such ideas or issues before giving up the 'wholesome view'. The training either formally or informally to the youths and others to follow 'all' or 'nothing' points of view by the members of the society.
- IV. In the decision-making processes there are concepts that could be relevant and appropriate. These are consensus, compromises and conflicts. In our everyday cultural and educational approaches we are inclined to take consensus ideas avoid or ignore the place for compromises and conflicts. It is this ability to compromise ideas that become barriers to thinking potentiality. It is appropriately advocated that those barriers should be eliminated. Consensus, compromises and conflicts are strategies in making alternate decisions and accommodating others ideas in the decision making processes (cf: Kimemia:1989:132)
- V. Currently, there is an overemphasis to quantitative indicators(numbers) in the process of decision making and making alternatives. This overemphasis on statistics become a hindrance to thinking potential. It is possible to use qualitative approaches or simply illuminative indicators as evidence of our thoughts and ideas. Excessive faith in statistics is a barrier to creativity and critical thinking.
- VI. Customary, the youths are reared to be less inquisitive and complacent to situations particularly those situations that do not concern them directly as children. For example, the issues of adolescent, sexuality and reproductivity. It is viewed as impolite for the youths to engage themselves in spheres that are culturally seen as a prologue of the adults. Consequently, this cultural or social blocks act as hindrances to creative and critical thinking abilities to these under age groups.
- VII. Due to scarcity of resources, there is a tendency to emphasize to youths and students in schools the need for practicability and economy in whatever they may

want to experiment on. Consequently, because of such considerations there is no room for encouragement and experimentation leading to discouraging creativity and initiative thus critical thinking and its potentiality.

- VIII. In education and other fields of training, students and other recruits are drilled into using 'logic' and reason to do whatever they may want to do. Too much faith in 'logic' and reason lead to curtaining creativity as well as unlocking the thinking potential.
- IX. We are taught and trained to be co-operative with our colleagues to the extent that team work rather than individual efforts are encouraged and rewarded in many institutions. Indirectly reliance on team work and co-operative performance of most activities will curtail creative thinking or even hinder unlocking the thinking potential of our learners.
- X. Similarly, in many homes, parents and adults in general adopt a rejection attitude where children are subjected to more 'Nos' than 'yeses' in their early ages. In schools at all levels the 'negative' restrictions make pupils and students not to ask questions and not to volunteer ideas or to give their opinions. Pressures to conform to cultural and social norms begin at early ages at home and continue to the school environment. This discourages creativity and instills more a sense of conformity and complacency in given unproven knowledge by teachers and other educators.
- XI. Change even in this era of technological advancement and transfer is resisted. The teachers and other adults prefer to see a 'status quo' maintained between them and the learners (pupils and students). This is a belief that things have to be done in the same old ways so that results may come out perfectly right. Alternative view points from established principles are totally unacceptable. Authority cannot be challenged. Consequently; hypothesis testing is rendered irrelevant as a way of advancing knowledge. There is no emphasis on establishing links between causes and effects as a means of gaining knowledge. This kind of educational or pedagogical approach inhibits the awareness in showing linkages or networking in the learners at home and at school. This is a cultural as well as an educational block to creativity and the wider unlocking of the thinking potential.

Educational programmes may inhibit or foster creativity. For example, if educational values of the society are related to self-reliance, research, divergent thinking, innovativeness and independence, then the school would become a powerful agent in encouraging creativity and critical thinking. However, as evidence has shown education particularly in Africa remains largely conservative, formal, stereotyped and lacking in elements that are likely to foster innovation and creativity.

(cf: Fafunwa: 1983).

Dore (1976) argues that in Africa and the developing countries in general, the examinations dominate the curriculum with the result that all learning is ritualized and curiosity is devalued, the relevance or interestingness of what is learnt remains largely unquestioned (cf: Dore: 1976).

In most educational institutions the habit patterns of thought and life including fear of failure and the difficulty in directing mental efforts to new venture and innovativeness inhibit the development of creativity and initiatives hence hindering the thinking potentialities (cf: Akinboye: 1987).

It has also been observed that, 'The prevalence of rote-learning, dependency upon the authority of the book and the teacher are not simple hangovers from an outdated educational tradition but have roots in the society which are not easily affected by devising new school syllabuses techniques of instruction and improved training of teachers. (cf: Thompson: 1981). It is therefore argued that if young people in Africa are to escape the passivity of unquestioningly following the paths marked but by others one thing is certain. They will have to accept the challenge to creativity and public spirited initiatives which have always characterized major breakthroughs in science, technology and creative arts (cf: Onwa: 1990: 135). It is also underscored that 'Transfer of technology and 'Imported technology' are political perpetuation of blocking creativity and initiatives and thus never unlocking the thinking potential. Traditionally, most African cultures de-emphasized creative processes which could promote awareness, curiosity, initiative, independence, willingness to question, to reconsider established views as alien to the established cultural norms and practices.

However, these features are the essential traits that offer a potential for the development of creativity and initiatives. Cultural differences like performances differences are largely context-dependent. In no culture would we find creativity and initiatives written on a tabula rasa. The skills have to be cultivated, encouraged and improved and should be appropriately established in all cultures and their traits will be found in all cultures in one form or another. These educational programmes, the curriculum both the written and the unwritten have an important role to play in instilling creativity and initiatives as well as encouraging and maintaining these skills and in fostering creativity and initiatives in all learning and teaching environments.

Teaching Strategies for Developing and Fostering Creativity, Initiative and Critical Thinking

Piaget (1969) argues that in order to help the society of tomorrow to progress schools should seek to produce non-conformist or creative individuals by providing learners with

capability to actively explore reality in pursuit of knowledge rather than passively receiving ready-made answers. (cf.Piaget: 1969).

There are basic assumptions that will guide our strategies in developing and fostering creativity and initiatives as well as critical thinking.

These are:

- I. That creativity and initiatives are normally well endowed and distributed traits or skills that most people including students can be creative and initiative.
- II. That the creativity processes can be learnt studied and observed in the same way that methods of fostering creativity can be developed.
- III. That the psychological processes associated with creativity and initiatives are similar both in the arts and the sciences hence their development need not be differentiated in the formative stages.
- IV. That the development of creativity and initiatives are not culture bound such that whereas there are no cultural blocks, there are no cultural inhibitions to foster creativity and initiatives. The emphasis is that in unlocking the thinking potential we shall be fostering curiosity, innovativeness and avoiding making premature judgments in problem-solving exercises.

The main problem solving strategy can be drawn from a conceptual theory called '**synectics**' (cf:Osborn:1957 & Gordon: 1961). Synectics means joining together of diverse elements. The theory emphasizes the setting up mechanisms that would trigger up thinking processes in individuals or groups that would utilize rational and non-rational elements of thought to generate alternatives. The synectics process uses two basic operations which entails:

- I. Making the strange familiar and**
- II. Making the familiar strange.**

The first operation of making the strange familiar involves defining or understanding the problem to be solved. The second operation, that is, making the familiar strange involves a radical departure from the norm or routine in which we are prepared to see a problem in a new way to achieve a new look at the same old world people, ideas, feelings and things. An attempt is made by the individual or groups to gain more or new insights in order to suggest more elaborate problem solutions.

In order to develop creativity and initiatives in the educational system we may set up environments in which the learners, pupils, students and other trainees are allowed to present freely their ideas and suggestions without immediate criticism or ready-made

answers and accepting the learners responses as initially acceptable and satisfactory. The objective of this approach is to overcome the evident initial inhibitions, which cripple further thinking on the topic or subject. The initial opportunities given to learners will have to be treated as 'brainstorming' where no judgment/evaluation of the ideas is made but the focus is on increasing the chances for quantitative approaches to gain more alternative ideas or more opportunities for making more choices in the decision making processes. The strategy attempts to remove individual barriers that make them feel deficient in their confidence and ability to give more ideas. The drills into widening acceptances of ideas rather than focusing on 'correctness' or 'appropriateness' of these ideas is to allow individuals or groups to see the problem in question from different points of view and to avoid settling on single mental processes or one way of solving the many problems we encounter. The activities that would be appropriate in developing this open-ended and 'divergent' thinking as opposed to 'convergent' thinking will involve activities that will widen personal imagination, role playing, problem restructuring or fragmenting, using checklists using analogies etc. Other strategies that would help in making the strange familiar and making the familiar strange will involve activities that will act as 'triggers' in helping the individual think around the problem (also known as lateral thinking) so as to generate more ideas about the problem and its problem solving alternatives.

The qualities of teachers capable of developing creativity and initiatives in their learners (pupils and students)

The characteristics of teachers who are likely to instill and develop creativity and initiatives and to unlock the thinking potential will include the following:

- I. The teacher must be open-minded, flexible, tolerant, not authoritarian and one who does not give the impression that he/she has the answers to all questions.
- II. The teacher must create a learning/teaching atmosphere that encourages questioning and problem solving of the open-ended type but not the closed types.
- III. The ideal teaching approach that would develop and promote creativity and critical thinking potential would be through peer-group teaching. At high levels, that is, College and University levels the 'tutorials' would be most suited and would adequately replace peer-group teaching applicable at lower levels.
- IV. Peer-group teaching and 'tutorials' would be appropriate because the students are willing to provide their ideas and to make guesses in the absence of their teachers and lecturers.
- V. Members of the peer-groups should be given ample chance to record their ideas and to learn from experience.

- VI. With practice, the learners will move away from fixed way thinking and move to other new ways of view points and arguing perspectives.
- VII. The peer-group teaching as a method has also the advantage of providing motivation and of developing confidence among the learners. An example of an exercise where the students would generate their ideas would include group work within a specific topic. The members of the group would be guided by a student leader to generate possible alternatives to solving the identified problem. The emphasis should be quantitative production of more ideas rather than making judgment or evaluation about the solutions and where possible trying to limit any emphasis on elaboration or expansion of the problem towards its solution.
- VIII. The initial steps would be trying to decide what topics would be appropriate for thinking up ideas and then moving into extensive 'brainstorming' sessions. Topics should be drawn from the environment in which the learner has satisfactory knowledge about. It is appropriate to begin with familiar topics and then to move to more complex situations. The student leader should always act as the facilitator.
- IX. Over a reasonable period the learners will be able to appreciate the need for giving more ideas, which can later be evaluated for their practicality in problem solving.
- X. The learners should be drilled into understanding the need for creativity and the importance of the thinking skills but more importantly the learners should understand that critical thinking and developing their thinking potential is an integral part of the contemporary world as well as a pre-requisite in making advances in knowledge and technology from a home-grown premises as opposed to either depending on '**transfer of technology**' or '**imported technology**' for our own national and international development aspects.
- XI. Teachers can develop creative thinking in the classroom by the way they encourage these skills in their day to day action and the specific things they do to develop them.

Active learning is the term that denotes active learner participation in the learning process rather than passive listening. It should cover a broad spectrum of teaching methods like Students – centered learning, Enquiry learning, Experimental learning, Progressive and Participatory learning. This will involve an examination of the curriculum in terms of activity and experience rather than the factual information to be stored by the learners (Cf. Ndirangu: 1991). This new approach will lead to dissatisfaction with the traditional practice of expounding subjects to the whole class at once (cf: Darling: 1990) and will involve a move towards methods in which the teacher deliberately leaves materials in the path of the students and lets them make inferences within the problem solving situations. These methods will create challenges requiring experimentation and exploration in order to identify the linkages between and within ideas and objects which are likely to create greater and new awareness on the part of the learners. These educational approaches are not

synonymous, but are linked by a common ideology based on shared perception of what learning is and what the learner should know. Students who merely receive knowledge rather than taking initiative in learning it, have dependent capability. However, those who are actively involved in self-directed learning develop confidence in their own ability rather than relying on qualifications given by others. (cf: Stephen: 1991).

It is important to underscore the fact that there are many differences between the kinds of environments the learners find themselves as well as within the respective environment itself. For example, in Africa the political, social and economic conditions differ from one country to another. Some of these conditions may inhibit creativity, initiative and the critical thinking. But, similarly other conditions may facilitate the unlocking of our thinking potential. But, generally the African aspirations are ideally the same in that we would want to evolve an education that will produce people who can feel, think and act in the context of trying to solve the myriad of African's problems. Similarly, we all would want to evolve a socio-political system that will eradicate diseases, ignorance and poverty in our continent. The development and unlocking of thinking potential and becoming creative thinkers, problems-solvers and initiators of development would be attested as a crucial step in the right direction towards the economic and social emancipation of the African population.

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MATHEMATICS KNOWLEDGE FOR TEACHING. EXPERIENCES FROM MATHEMATICS CLASSROOMS IN KENYA.

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Teacher education is a multi-layered domain of practice. It includes a wide range of sites; pre- and in-service education (elsewhere described as preparation and professional development). With its ultimate concern being learning in schools, it attends to teachers fostering that learning and the teacher educators fostering the learning of teachers. Teacher education is enabled by its socio-cultural and political context leading to varying policies and practices. Although the implementation strategies for teacher education vary by nation, each program aims at providing effective teachers to facilitate quality learning.

Mathematics teacher education is one of the teacher education programs that is aimed at developing an effective teacher for the classroom. Effective mathematics teaching according to NCTM (2000) requires understanding what students know and need to learn and then challenging and supporting them to learn it well. It requires knowing and understanding mathematics, students as learners and pedagogical strategies. The effective teacher is expected to provide a challenging and supportive classroom learning environment. This teacher requires to continually seeking improvement at both personal and collective levels. This level of expectation makes mathematics teacher education not only layered but also a complex domain of practice.

In Kenya, prospective teachers are exposed to both subject matter content and general pedagogy as pre-requisites for teacher qualification. General pedagogy and subject matter content knowledge is offered concurrently for; Primary teacher education certificate (P1), Diploma in Education (Dip. Ed) and Bachelor of Education degree certificate (BEd). Additionally, Bachelor of Arts (BA) or Bachelor of Science (B Sc) graduates can access the teacher education program as a post graduate diploma course. In-service development programs are carried out to support teachers implement new curriculum demands. The impact of these educational programs in the country is not evaluated at teacher knowledge level but by the teachers' ability to support students gain high scores in the national examination. Learning mathematics is a personal empowering process whose evaluation cannot be measured by national examinations alone. The empowering or disempowering process is visible at classroom level during mathematics lessons. Teachers effectiveness is reflected through their ability to transform subject matter content into comprehensible

forms for their students. Variation in effectiveness is dependent on teachers proficiency in mathematical knowledge for teaching. (MKfT, Adler 2004, Shulman 1987)

Mathematical knowledge for teaching (MKfT) is specialized pedagogical knowledge for teaching that is necessary for implementing present reforms in mathematics education. Competency in MKfT among teachers of mathematics in Kenya is assumed to improve with years of teaching practice. MKfT requires committed reflection of lessons and involves elaborate lesson studies at individual and collegial level. To be able to be reflective about their teaching, mathematics teachers require a supportive teaching environment to be able to implement what they know into practice. Today, teachers of mathematics in Kenyan school continue to face a variety of implementation constraints of the subject content. These include; scarcity of reference textbooks, students' attitude towards the subject, large classrooms, an overloaded syllabus and an ineffective feedback system that can address their classroom needs.

Interventions to enable teachers be more reflective about their teaching of the subject indicate that mathematical knowledge for teaching is not given professional attention. This knowledge assumed to be acquired through practice is the point of inquiry. This also implies that this knowledge base is not catered for during teacher preparation courses. Besides, it has been established by studies (Ball 2005) that the number of course units taken by prospective teachers do not add value to teacher effectiveness at classroom level. These studies have shown that teachers who have been trained with varying depth of content knowledge show little difference in their level of learning facilitation. This finding has profound implications for pedagogical knowledge for teaching mathematics as an important component for teacher education. The assumption that pedagogical content knowledge is shaped by experience, was the motivation for the study whose findings on proficiency among mathematics is shared through this paper. The findings are discussed alongside observations of primary teachers of mathematics whose preparation deviates significantly from those of secondary schools.

The study

The study on pedagogical content knowledge (PCK) in mathematics was carried out among secondary school mathematics teachers' in Kenya. This assessment of teachers' proficiency levels was based on their interpretations of students' problem solving strategies using everyday classroom problems. A prescribed rubric was developed using a competence scale of **0** to **4** and adapted for each item to measure performance on written pedagogical mathematics items. Consolidation of findings was described using continuum of proficiency benchmarks of *fluent, mediocre and insufficient*. Levels of teacher's pedagogical

competency in the knowledge for teaching mathematics was analyzed in accordance with the following five PCK categories;

- Mathematically situated pedagogical knowledge,
- Content Knowledge,
- Specialized content Knowledge
- Knowledge of content and students
- Knowledge of content and teaching. .

The general proficiency level of MKfT findings in this study was found to be mediocre among the secondary level teachers and insufficient among primary level mathematics teachers. It was also observed that teachers adapted a procedural rather than a conceptual approach when teaching mathematics even when using practical activity to explain a concept. The general conclusion was that teachers of mathematics do not seem to have appropriate opportunities that support them present mathematics content at a conceptual level. As a result mathematics in the country is taught procedurally and the students only have an opportunity to learn instrumental mathematics, this is the mathematics of algorithms, rules without reason and low order thinking outcome lessons as described by R. Skemp (1978) in his works on the psychology of learning mathematics.

Mathematics Teacher Education in Kenya

The assumption that advanced knowledge in mathematics content is sufficient for the purpose of teaching is a point of inquiry. But this assumption indicates that those with satisfactory secondary school content knowledge can teach in primary schools, those with under graduate level university mathematics exposure can teach secondary school mathematics while those with mathematics exposure at the masters level can teach university mathematics. This belief is entrenched in the education system so that primary of mathematics can become secondary teachers in the subject by reading more advanced courses in the subject matter content. Initial training of primary mathematics teachers is done from primary teacher training colleges. All teachers in these colleges are expected to teach mathematics at all elementary grades. The entry requirement into these colleges is lower than those who are prepared to manage secondary school level mathematics. The Primary teacher preparation program is centralized and follows a sequential procedural development of mathematical concepts .Primary mathematics textbooks also in corporate this sequel for classroom use. If a mistake is made at training level or in the text book, this is replicated across all classrooms in the country.

Secondary school mathematics teachers are prepared at two levels. (1) Diploma and (2) Graduate level. Teacher preparation at this level is more flexible. There are variations in the number of units of advanced mathematics courses taken by students during the preparation course as well as variations in emphasis on teaching methodology format by institutions. These means that secondary school teachers of mathematics vary in knowledge acquisition within the institutions and between institutions for classroom use. Subject content knowledge varies in units taken by the prospective teachers such that while some students major in the subject (Advanced mathematics) graduating with 24 units over a period of 4 years, others take a minor course graduating with 8 units over the same period of time. For purpose of employment, the prospective teachers take on a second teaching subject of their choice to qualify to teach mathematics at secondary school level. However, variation in general pedagogical knowledge is non existence at acquisition point.

By allowing teachers with varying levels of mathematics subject matter knowledge to manage the same students for the same outcome at the end of the secondary school course, the policy makers belief that the subject matter content knowledge does not play a significant role in the teaching of the subject.. This assumption may suffice insofar as conventional absolutist teaching method is concerned. However, conceptual understanding of mathematics which includes teaching mathematics for understanding demands that an in-depth exposure to the subject matter knowledge must be a prerequisite. Despite this fact, little is known about the minimum requirement of advanced units that are sufficient for a secondary school teacher of mathematics. Two preconceived notions that more advanced units make a better mathematics teacher or that teachers knowledge for teaching any subject improves with time has yet to be established and may be true conditionally.

Teacher preparation programs are expected to enable teachers to transform content knowledge into comprehensible content for learners. While this can be achieved to some level in other subjects, mathematics requires specialized knowledge for teaching. As a cognitive subject and with the advent of constructivism as the preferred learning experience, conceptual understanding of mathematics content for all levels of learning becomes a mandatory expectation of teachers. This is the pedagogical knowledge necessary for the required reflective teaching expected from teachers and can be provided through pre- and in – service teacher education programs. Findings on the teaching of school mathematics indicated that conceptual representation of mathematics content is not as fluent as is expected. Under presentation of mathematical concepts was found to be caused by poor mastery of content.

Experiences from the study sites led to the proposition that teaching methods, teachers characteristics, beliefs and knowledge are important factors for teaching mathematics but they are not sufficient. Teachers need to know their subject matter content at a conceptual level. They also need to have the required knowledge of students if they are to support learning in this subject.

The main objective of the study was to establish teacher's professional orientation when responding to students productions and to determine mathematics teacher's pedagogical competency in secondary school mathematics

Several strategies were used to get the information they included questionnaires, written tasks, interviews and classroom observations. Professional statistics were also gathered through a questionnaire that captured beliefs and capability and preferred classroom acts. From the findings, teachers' theoretical knowledge about reforms in mathematics teaching and knowledge of what was required of them to support student learning was quite current. The need to seek continued professional development was evident as all the participating teaches had been exposed to the various teacher development (INSET) programs initiated for them. This was a good background to discuss the impact of the content offered during these teacher preparation and in-service programs.

Teacher competency was assessed in two ways. Through classroom observation and written tasks. The written tasks required the teacher to explain students production, generate remedial tasks and provide alternative solutions. Some of the tasks required teachers to solve the problems that they routinely gave to their students such as the one listed below

Item 2

"The solution to the simultaneous equations $2x+5y = 1$ and $3x = 5-4y$ is $x=3$ and $y = -1$ explain how you can show that this true"

This problem assessed teachers flexibility in explanations by using more than one approach to solve the problem and the use of non examples to emphasize understanding. The main area of assessment was knowledge of content, knowledge of student and specialized knowledge for teaching.

Rubrics for all items were drawn using a scale of 0 to 4.

The score of "0" represented wrong responses, incoherent explanations or no response while "4" represented the study's correct interpretation, clear explanation, evidence of

powerful pedagogy through use of analogies and correct remedial response. The score 1, 2, & 3, ranged within this extreme cases.

Proficiency I findings for the five categories were established and consolidated to making the following observations about MKfT

Findings

The competency in this knowledge was assessed across all of the items in varying degrees. It was found in 50 % of the items that assessed knowledge of content and students; teachers were unable to identify errors students made. In 60 of these responses, teachers could justify the response as correct when the item task did not give a cue to the inherent problem. In 98% of items, routine responses similar to those provided by learners were provided.

In one of the items where alternative solutions were expected, only one complete solution was given in 76 % of the responses. In 8 % of the responses only stated suggestions without solutions were given and in 25.6% of the responses, the respondents were unable to come up a solution. This trend was observed in an item on probability where suggestions for the use of a tree diagram for the students who had problem arriving at appropriate solutions would be correctly stated. However, the production of the actual tree diagram was found to be a challenge in 60 % of the respondents. In addition 30 % of the respondents could not draw the tree diagram. In 24% of the responses, a wrong alternative as an expected response would be presented. This observed insufficient knowledge of content has negative implication for required remedial support for students.

The generation of remedial tasks was observed in this study to provide the biggest challenge for the respondents. It was commonly observed that computational related remediation and remarks such as the student “forgot’ to multiply were used by respondents instead of dealing with the misconceptions. Teachers reacted to student errors using procedural perspective rather than a conceptual one. Accordingly only procedural remediation activities were suggested. This kind of response from teachers supported the observation that teachers taught mathematics instrumentally and rhetorically. This limitation in the use of conceptual perception was an indicator for the study of the opportunities that are availed to mathematics learners and teachers of mathematics

These findings were similar to those for the primary teachers who had been observed as they participated in a local mathematics inservice session. A general weakness in conceptual development and a mastery of procedures was quite evident when asked to

explain why we use 'reciprocal' when dealing with fractional divisors, description of its characteristics such as "changing the fraction upside down. - Putting a '1' over a given number" was the choral response. This is drawn from the traditional algorithm for division by a fraction which requires one to invert the divisor and multiply. Although this a textbook description, teachers are expected to be able to develop this algorithm by exploring the partition concept of division to explain what is done when you multiply by the reciprocal fraction.. Algorithms seem to be the focus of teaching which means that our teachers teach mathematics the way students learn it for exams

Items that required teachers to solve a problem and give alternative methods had the computation part well responded to. It was observed that teachers are able to confidently compute successfully secondary and primary school mathematics problems. The section that required teachers to give alternative or suggested different methods of solving a routine problem had 92% correct response for one routine method. However, developing an alternative solution was possible for less than 50 % of the responses. A third alternative was presented in 5 % of the responses.

The conclusion from this finding is that students are given limited opportunities to try out alternative strategies for solving routine problems. This stands in direct contradiction of a finding on classroom practices. The finding had been that teachers were aware of the need to allow alternative solutions in their classroom and that this activity was more frequently practices than the one solution approach. When students are exposed to one method of solving a given problem, then students who under normal circumstances have diversity in approach get discouraged and develop a negative attitude towards the subject. This is one reason proposed by the study to explain why students fail to excel in the subject since they are exposed to only one way of solving a problem albeit instrumentally. If teachers know what to do and do not do it, then insufficiency in knowledge and skills to support them in what they should be doing is the most likely reason to explain their actions. This knowledge base is the MKfT.

It has been said that experience helps to create experts through the maturing of teachers knowledge for teaching. This study found out that experience by number of years was not sufficient to create expertise among teachers. The study found that, it was more about the type of experience teachers had and the ability of teachers to identify and take advantage of these experiences available to them as they practiced. The study found little difference in engagement of students in problem solving between teachers who had been in the service for at least five years and those with up to 15 years experience. There emerged similarities in facilitation between novices (less than 5 years) those whose teaching experience

exceeded 18 years. To be able to make most of the available opportunities the teachers need to be empowered accordingly.

The Role of Experience

Teachers who were participating in this study had a wide range of experience, from 3 years to 21 years. The study found that experience did not add any value to teachers' knowledge except years of work. Instrumental teaching was found to have been more visible among teachers who had more years (18) of service. These teachers were observed to provide quick 'solutions' to students' challenges, making it even more difficult for the students who prefer in depth explanations. Those teachers with less than 5 years experience had little tolerance for alternative approaches and stuck with textbook examples. The conclusion made from this finding was that, the longer the years of experience, the more entrenched the teacher became in his/her beliefs about how to teach and is less likely to accept change. The little variation in approach among the beginning teacher presented a replay of their classroom exposure as students (12 years) prior to the preservice exposure. Accordingly the 'teach as you learned' approach becomes the only reference for these beginning teachers.

Participation in teacher development programs should provide the support needed by teachers especially with respect to mathematical knowledge for teaching. However, the study observed that despite established access to professional training programs (INSET), teachers did not transfer acquired knowledge appropriately at classroom level. Several reasons were given for this situation. Most teachers interviewed expressed concern that teaching for understanding exposed to them through the programs is not teacher friendly in terms of planning and expectations to complete syllabi.

When required to implement, teacher make convenient interpretations. This was exemplified in one class where a teacher, expected to mount a practical activity, used an activity to explain the solution to a problem instead of generating an activity for the process. This manipulation and concretizing of algorithms and products of a solved problem presents additional work for teachers because they duplicate the procedures of solving problems so as to look practical.

This observation is supported by a classroom activity which involved using a practical activity to explain cubes of numbers. Using an example for $3^3 = 27$, stages of cuboids in a lesson of 80 minutes for senior high students (form 2). Was used to explain how to present 27 which was the product of 3^3 . Students at this level already know that $3^3 = 27$ and an activity such as this cannot add learning value at this point in student learning progress. Teacher development programs may need to reevaluate what teachers really require

otherwise reinforcement of existing procedural approaches is the most observed outcome of their efforts. . This exacerbates the teachers reluctance to mount meaningful lessons

Pre service education for teachers of secondary school mathematics was found to focus on advanced content knowledge and general education programs. Accordingly, beginning teachers are left on their own to determine how they can pool their knowledge of educational psychology, instruction, administration and foundation with their advanced subject matter knowledge to teach secondary school mathematics. On the other hand, a pre service program for primary teachers of mathematics which is procedural limits their ability to integrate what they learned in the education course at classroom level. Teachers of mathematics at all these levels were found to be reactive rather than proactive to classroom challenges. The reason for this disposition according to this study is the incomplete training that prospective mathematics teachers are exposed to both at pre-service and inservice programs. Focus on pedagogy as is done for primary teachers is a limitation just as focus on advanced subject content knowledge is for the secondary teacher. According to Ball (1991), knowing mathematics and knowing how to teach mathematics require different kinds of academic exposure.

Presently students who take advanced mathematics units whether as a major, regular minor or special program at the university are all legible and are posted to teach mathematics at secondary school level. Besides calculus the other courses including stochastic are optional for some of these students. Due to the procedural approach used in teaching at this level there has been observed no significance difference in the learning outcome.. This could be used to erroneously state that it is of no significance the number of units taken at the university, however, with reforms, teachers will require to have an in-depth understanding of mathematics content and pedagogical skills.

Introduction of mathematics knowledge for teaching (MKfT) both at pre-service education level and during teacher development programs is proposed by this study as an additional course to the existing teacher education programs for teachers of mathematics. This is because the dynamic nature of mathematics requires that a conceptual approach towards mathematics education should be the norm rather than the exception.. The demand for higher order thinking in mathematics lessons should be the focus of instruction. To implement this, teachers need a strong foundation in conceptual developments of school mathematics concepts. Teachers should confidently draw explanations from this knowledge base and be able to use powerful analogies to transform content into comprehensible learning experiences. An appreciation of the abstract and dynamic nature of mathematics is the basis for mathematical instruction.

Inability to present the dynamism of mathematics has led to misunderstanding of mathematics. This can be seen in the way both teachers and students at secondary and primary level condone misuse of measuring units and other mathematical symbols, for example, when working on mathematical tasks because they focus on the product and not the process.

It is common to see the following working on the writing board as well as in student exercise books marked correct by teachers

'Given that the volume of a cuboid is 36 cm^3 and the area of 12 cm^2

What is the length of one side?'

If volume is 36 and area is 12, teachers and students know that the following formulas can be used

$$V = L \times W \times B = 36$$

$$A = L \times W = 12$$

And the required length can be found by the ratio $36/12 = 3$

Observed

The following process is condoned

$$\frac{\cancel{36 \text{ cm}^3}}{\cancel{12 \text{ cm}^2}} = \frac{3 \text{ cm}^1}{1} = 3 \text{ cm}$$

$$\frac{\cancel{36 \text{ cm}^3}}{\cancel{12 \text{ cm}^2}} =$$

Notice how that the cancelling is also done for the units as like in algebra

This example shows the incorrect transfer of content that go on in the classroom due to lack of teaching knowledge. Students whose process is incorrect with the right answer benefit from these lessons while those whose process may be correct but due to a computational error are marked down. Two types of students are lost in the lessons, one with a mistaken confidence and one whose talent is not supported all because the teacher does not have the mathematical knowledge for teaching.

To be able to manage the learning styles of present generation, problem solving other than solving problems should be the focus of classroom activities.

Proficiency level of **insufficient** found for the category of teachers specialized knowledge of teaching and knowledge of students established that teachers do not have the required level of proficiency to deal with transformation of mathematical content for the comprehension of the learners. They are challenged in providing support for alternative learning outcomes and as a result do not give the students the support they require to learn mathematics effectively and with understanding.

Knowledge of routine, procedural mathematics described as **fluent** by the study indicates that teachers are capable of managing the subject if given support. Although they are able to solve routine mathematical problems at this level confidently, they did not articulate superior content knowledge beyond that which their students knew. Knowledge of teaching is described by the study as **mediocre**. A learning environment structured around inspiring moments, deep engaging problem solving and freedom to pursue alternative approaches to problem solving were not observed. Routine computation and basic explanations that were content focused were frequent in mathematics classrooms.

The conclusion drawn by this study was that proficiency levels for the mathematics knowledge for teaching among our teachers at all levels is mediocre. But given the required support most of the teachers are capable of embracing effective facilitation of learning mathematics

Teachers preparation, teacher development programs have not been useful in supporting mathematics teachers at all levels, teachers continue to misrepresent mathematics content to unsuspecting students leading to mass failure and career suffocation. Mathematics is not a simplistic subject and requires intensive training that can help teachers present it elegantly.

When teachers are effectively trained, quality control is more focused and the present rate of student failure in mathematics can be addressed empirically. Programs for teacher preparation should include what teachers need to know about the content they teach and the students they interact with. Teacher development programs should address mathematics teaching at classroom level and strengthen the teachers' efforts towards teaching the subject.

This study recommends that a mathematics education program should be initiated for all levels of mathematics education. In this way new methods and approaches to mathematics

education can be made available to the teachers. Specifically mathematics knowledge for teaching should be introduced as a major area of study for teachers of mathematics.

The Mathematics education program can be offered either as a postgraduate course. When offered as an undergraduate program, more semester time will be required to provide quality content exposure. These Pre- service students need to be exposed to the conceptual development of all secondary and primary mathematical concepts. They also need to be exposed to the psychology of learning mathematics, nature of mathematics, history- foundation and philosophy of the subject. Students need time to access new trends in mathematics education. They require generating and practicing innovative strategies for the classrooms. Teachers need to know how to plan, manage and benefit from lesson study research sessions

Although mathematics is a cognitive subject, teachers as educators need to learn how to integrate cognitive, affective, psychomotor and social skills in their classrooms. This will reduce the lopsided approach to learning mathematics as a minds only subject. Practical exposure to all the categories of Mathematical knowledge for teaching should be mandatory for these teachers. This proposal has implication for teacher preparation programs and requires a committed change at both policy and practice levels towards the preparation that is done for our teachers. It should be noted that. Teachers knowledge for teaching mathematics cannot be pooled together with other subjects that require different learning styles

Solving problems should not be a means to an end but should give way to the higher order thinking inherent in the art of Problem solving. MKfT provides the knowledge site for intelligent discourse and the ideal learning and teaching environment for mathematics Teacher education programs for mathematics teachers therefore need to reform so as to address the dynamic nature of the subject and the new learning styles of the current generation.

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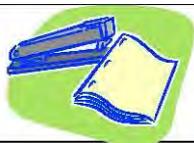
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Inclusive Lesson Planning Template

This lesson planning template is designed to help you develop skills and attitudes about thoughtful, inclusive lesson design. Therefore, we expect a great amount of detail as evidence of your thinking. Please understand, when you are designing lessons as a certified teacher, your written plans will not include as much detail, however you will engage in a similar, albeit abbreviated, thinking process.



COVER PAGE

A. Include the Following:

- Name
- Instructor's Name(s)
- School & Class
- Host Teacher's Name & Signature
- Placement A or B
- Date



Section 1 – THE PUPILS

A. Describe Your Class:

School _____ Class Level _____ Number of pupils _____

Demographic information (race, gender, social class, dis/ability):

Other important information about your class:

B. Describe Three Target Pupils:

Select three pupils to keep in mind during this lesson designing process. These pupils should represent an academic, behavioral and/or social range of learners in your class (e.g. struggling, average, high performing). Specifically consider pupils who have a disability and English language deficiency. Use initials to ensure confidentiality.

Write a positive student profile for each of the pupils, at minimum you must include the following information: 1) Like/dislikes, 2) Intelligences/Strengths, 3) Communication, 4) Behavior, 5) Academic performance, 6) Subject specific performance 7) Social Information, 8) Concerns, & 9) Other pertinent information.



Section 2 – THE SUBJECT

A. Subject:

What is the primary subject (e.g. social studies) and the area(s) of emphasis (e.g. geography)? Is this lesson interdisciplinary? If so, what other subjects are integrated (e.g. music)?

B. Theme, Concept, Problem or Unit:

C. Background:

What has come before this lesson and what will follow? How does this lesson connect to the larger unit?

D. Lesson Standards:

What class level specific content(s) are being addressed?



Section 3- THE CONCEPT MAPS

Provide evidence through your own concept maps/webs/brainstorms/MI think-tac-toes that you have thought about the following questions.

- **What aspects of this subject could I teach?**
- **How could I teach it?**
 - a) *How will you share information? How will the pupils engage in the learning?*
 - b) *Consider: Demonstration, modeling, mini-lecture, draw & tell story, student research, inquiry project, games, simulations, centers, video, etc.*

- **What are the various products pupils can create to demonstrate their new knowledge?**

These should tie specifically to the lesson objectives.

- Consider: Work samples, song, play, photo essay, mural, article, demonstration of a skill, booklet, individual or group presentation, videotape, CD, teaching another person, etc.*
- Consider: Will these products vary by pupil? Will students have a choice? Will different levels of mastery be accepted?*

- **How can I assess it?**
How will these products be assessed? What criteria will be used? Include a rubric.
- **How will I address the strengths of the target pupils?**
- **How will I address an array of Gardeners Multiple Intelligences?**
- **How will I address pupil culture? How is this culturally relevant?**
- **How will I differentiate? Extend? Modify? How will I challenge ALL students?**



Section 4 – THE LESSON

What specifically will you do during your lesson?

A. Lesson abstract:

Write a 1-paragraph summary of your lesson.

B. Lesson Objectives (Mathematical Emphases):

Specifically, in measurable language, what do you want students to know and be able to do by the end of this lesson? Use the Mager format (Condition, Performance & Criteria) and Blooms Taxonomy • **Whole-Class Objectives** (Math - Mathematical emphases): oEssential- What every pupil will learn and do. oExpected- What most pupils will learn and do. oEnrichment- What a few pupils will learn and do. • **Student Specific Objectives:** (Math: address what specific mathematics is being learned.) **Target pupils and others** Consider: *The pupil's profile, educational priorities and disability goals to justify your decisions.*

C. Definitions of Targeted Terms

List the targeted terms or content specific words and both of the corresponding definitions. 1. Formal (content related) definition 2. Grade-level appropriate definition

<p>D. Pre-assessment: Collect information on each pupil before you plan and teach. How will you gather this information? What do pupils know about this topic? Consider: <i>Formal or informal assessment, a quiz, work from previous lesson, anecdotal information...</i></p>	<p>E. Pre-requisite Skills: What other skills do pupils need to have in order to participate in this lesson (e.g., cooperative skills, language, writing, technology)? For students who may not have these skills, how will you teach the skills, or modify the lesson (e.g., pre-teach, peer support, communication device).</p>
<p>F. Impact on planning: How will the info from the pre-assessment and pre-requisite skills impact your planning?</p>	
<p>G. Advanced Preparation Reminders: What do you need to take care of before the lesson? (e.g. make play-dough for dough maps). List these to help you organize yourself before the lesson. Make sure you write or draw an agenda and review it with the pupils. If you are using technology, set up and practice before the lesson.</p>	<p>H. Materials and Assistive Technologies:</p> <ul style="list-style-type: none"> • Include numbers of each material that is needed and how many are needed for each group. (i.e. 12 timers; or each group will receive 1 thermometer, 2 sponges, 3 containers of hot water). • Describe any unique material considerations for specific pupils. • Are there any types of assistive technology (high or low tech) that will be useful for any pupil to help them to do a particular step in this lesson? • Make sure all materials look professional (i.e. worksheets must be computer generated). • Consider: <i>Access to written material, communication, the physical space etc.</i>
<p>I. Duration of the Lesson: How long will this lesson take?</p>	<p>J. Sequence of Lesson: (Check one)</p> <ul style="list-style-type: none"> • <i>The Learning Cycle: Engage, Explore, Explain, Apply.</i> • <i>Hunter's sequence: Teaching: Input, Modeling and Checking for Understanding, Guided Practice and Independent Practice.</i> • <i>Math (and others): The Launch, the Exploration/Investigation, & the Discussion/Congress.</i> • <i>Inquiry Sequence – Define Problem/Question, Speculate on Answers, Plan Investigation, Gather Info, Analyze Information, Reach Conclusion</i> • <i>Other: Describe Label where each phase of the learning cycle or other lesson sequence begins</i>

K. Student & Room Arrangement: How will pupils be grouped during this lesson? How will the physical arrangement of the room be configured for the lesson to ensure pupils success?

L. Teaching Strategies: What teaching strategies will be used to help the pupils learn? Consider: *Think-pair-share, graffiti, talk-walk, questioning, cueing, Pre-teaching, foreshadowing, adjust pacing, sequence, periodically check performance, reduce or increase complexity, physical guidance, pair verbal instruction with visuals, adjust behavior management.*

M. Co-Teaching & Collaboration: Who is present during this lesson? Give all adults present a specific role. Share this information with each of the adults who will be present during this lesson. Consider: *Options for co-teaching: Station teaching, one teach – one model, parallel teaching, alternative teaching, one teach- one make the presentation multi-sensory, split class with same content, team-teaching, tag-team teaching, etc.*

N. Behavioral Considerations: What behavioral strategies will you use to keep all pupils engaged? Do you anticipate that any pupils will exhibit challenging behavior during this lesson? What positive behavioral supports will you put in place? • Consider: *Setting expectations, praising desired behavior, purposeful partnering, increasing pupil responsibility, individual behavior plan, choice, scheduled breaks, voice/tone, incentives, etc.*

REMINDER: Inclusive SS lesson requires the use of children’s lit: include brief summary/ book info.

P. Detailed Outline

Key See Below	Clock Time: e.g. 9:00- 9:10	Sequence of Steps: Write in detail each step that will occur during your lesson.	Adaptations: Write any specific adaptations that are needed for the corresponding step of the lesson.
	Step 1:	Creative Introduction: (Anticipatory set, The Hook or Launch): How will you grab the pupil's attention and put them in a receptive frame of mind for learning? This should be engaging, meaningful & potentially exciting.	Adaptations
		<u>Your Key Questions & Anticipated Pupils Responses:</u> Write key questions you will ask the pupils. Use Bloom's Taxonomy. Write what you anticipate the pupils will say and what the pupils will do in response to your question. This should be about content , not management or attitudinal responses.	
		<u>Notes:</u> Leave this space blank initially. During your lesson, have your teacher take notes and give you feedback here. Following your lesson, you add your notes in a different color.	
	Step 2:	Explaining Behavioral Expectations: How will you explain these?	Adaptations
		<u>Your Key Questions & Anticipated pupil Responses</u>	
		NOTES:	
	Step 3:	Sharing Agenda & Objectives: Agenda: Make sure you write or draw an agenda for your lesson & review it with the students. Objectives: Make sure you post (write or draw) and review your objective(s) in an age-appropriate manner.	Adaptations
		<u>Your Key Questions & Anticipated Pupil Responses</u>	
		NOTES:	
	Step 4:		
		<u>Your Key Questions & Anticipated Pupil Responses</u>	
		NOTES:	
	Continue steps here	Each lesson needs to contain detailed step-by-step procedures. You will have many steps.	Adaptations
	Last Step:	Closure: This is to help pupils organize their learning, to reinforce major points to clarify any confusion. How will you help pupils to make sense of what they learned and transition to the next activity? This should be engaging & interesting.	
		<u>Your Key Questions & Anticipated Pupil Responses</u>	
		NOTES:	

Q. Make sure you have included the following in your lesson outline:

- **Transition:** Include how you will transition pupils (activity to activity, location to location, whole class/small group, etc.).
- **Directions:** Describe step by step how you will explain the various concepts or activities.
- **Assessment:** Be sure to include when and how assessment takes place in the body of your lesson.
- **Flow:** Double Check that your objectives match your teaching and your assessment.

- **KEY:** Mark each step in your plan with the following code. Use of various multiple intelligences Use of various components of Culturally Relevant teaching: Id. which of the 8 components. ☺ Use of target pupils' strengths

P. Detailed Outline – Alternate format for math.

Note: You may print this on legal size paper to have more room. **See letter "Q" from the previous page and include those expectations here.**

Causton-Theoharis & Theoharis, 2007, p.6

Key	Clock Time	Sequence of Steps	Questions	Anticipated Student Response	Adaptations	Notes
See above	9:10-9:25	Each lesson needs to contain detailed step-by-step procedures. You will have many steps.	Write key questions you will ask the students.	Write what you anticipate the pupils will say and what the pupils will do in response to your question. This should be about content , not management or attitudinal responses.	Write any specific adaptations that are needed for the corresponding step of the lesson.	Leave this space blank initially. During your lesson, have your teacher take notes and give you feedback here. Following your lesson, add your notes in a different color.
		Introduction: (Anticipatory set, The Hook or Launch): How will you grab the pupil's attention and put them in a receptive frame of mind for learning? This should be engaging, meaningful & potentially exciting.				
		Sharing Agenda: Make sure you write or draw an agenda for your lesson & review it with the pupils.				
		Explaining Behavioral Expectations: How will you explain these? Your body				
		Closure: This is to help pupils organize their learning, to reinforce major points to clarify any confusion. How will you help pupils to make sense of what they learned and transition to the next activity? This should be engaging & interesting.				



Section 5- THE ASSESSMENT

A. Evaluation of your pupils' learning.

What are you assessing? How you are assessing it? What criteria you are using? This should be connected to both the lesson objectives (mathematical emphases) and unit goals. Include the rubric or tool you are using to assess the work.

B. Evidence/thinking about pupil learning. What did your pupils learn from your lesson? Think about the whole class and 3 target pupils - Be sure to include evidence that pupils have learned something. The student's voices should come out in your reflection as well as pupil work (if applicable).



Section 6 – THE REFLECTION

A. After Teaching the Lesson Reflect on the Following:

Think about: Pupil participation and your planning, preparation and teaching.

a. What did you learn about teaching the specific **content** from this lesson?

- i. Where did pupils/you have difficulty with the content?
- ii. Where did pupils/you have success with the content?
- iii. What would you do differently? & what were you proud of?

b. What did you learn about teaching in general (preparation, management, etc) from this lesson?

What would you do differently? & what were you proud of?

c. How have your used/applied what you learned in class and readings in this lesson?



Section 7 – THE REFERENCES

A. After writing your lesson plan, include references of sources, ideas, theory, etc.

AFRICAN UNIVERSITIES' ROLE IN COMBATING HIV&AIDS AND OTHER DISEASES IN THE 21st CENTURY

Osoro E.N

Abstract

Sub-Saharan Africa is more heavily affected by [HIV and AIDS](#) than any other region of the world. An estimated 22 million people were living with HIV at the end of 2007 and approximately 1.9 million additional people were infected with HIV during that year. In just the past year, the AIDS epidemic in Africa has claimed the lives of an estimated 1.5 million people in this region. More than eleven million children have been orphaned by AIDS. In the absence of massively expanded prevention, treatment and care efforts, it is expected that the AIDS death toll in sub-Saharan Africa will continue to rise. Its social and economic consequences are already widely felt, not only in the health sector but also in education, industry, agriculture, transport, human resources and the economy in general. The government has recognized the vulnerability of youth. In the Sessional Paper on AIDS in Kenya, it has committed itself to protecting young people from HIV infection by equipping them with adequate knowledge and skills. Further, the government has stated that, as a matter of policy, it has integrated AIDS education programmes into existing school curricula. AIDS is one of the most serious challenges currently facing the education systems of poor countries. The damaging effect that AIDS is having on Educational institutions is, in turn, aggravating the epidemic itself in a vicious cycle. Without education, AIDS will continue its rampant spread. With AIDS out of control, education will be out of reach. The universities should monitor the illness and alert countries on the magnitude, the new trends of the disease and report on the success of the measures taken so far. It is the duty of universities to create a conducive and safe working and learning environment. The Universities should provide essential technical assistance, information and knowledge that are effective in combating HIV AIDS and other diseases.

Introduction

In September 2000, 189 heads of state adopted the United Nations Millennium Declaration which was translated into a roadmap setting out goals to be reached by the year 2015 (WHO 2005). They are for example; Millennium Development Goals, challenges of rich and poor countries like combating HIV&AIDS, malaria and other diseases.

Sub-Saharan Africa is the region of the world that is most affected by HIV&AIDS. Since the beginning of the HIV&AIDS pandemic, sub-Saharan Africa is one of the most severely affected regions. According to the UNAIDS, 2006 report, two thirds of the total number of

new cases (5 million) observed in the world live in sub-Saharan Africa. An estimated 25.4 million people are living with HIV and approximately 3.1 million new infections were reported in 2004. About 12 million children have been orphaned with HIV&AIDS and about 3 million people died of HIV&AIDS in the last one year.

This epidemic is reversing life expectancy and economic gains in several African countries. The impact of the epidemic is becoming clearer in many African countries as many people with HIV&AIDS are becoming increasingly sick. In the absence of massively extended prevention, treatment and care efforts, the AIDS death toll on the continent is expected to continue rising before 2015. This translates that the worst of the epidemic social and economic consequences are yet to be met in health, education, transport, education, production, human resource and the economy in general.

Effects on Universities

Kelly, MJ. (2001) points out that, the failure of many African universities to speak out and confront the HIV&AIDS crisis head-on means that valuable time has been lost. The result is the unraveling of hard-won development gains and crippling prospects for future economic growth.

Over 90% of the university population and other tertiary institutions fall within the age group of 15-19. This is the group that is mainly infected or affected with HIV&AIDS. It therefore be concluded that HIV&AIDS has affected the universities and the tertiary institutions in many different ways.

Education systems in the Sub Saharan Africa's Universities are in danger of being weakened and disrupted. HIV&AIDS actually increases the scale of existing educational problems, including the possibility of the fact that the systems might not be able to deliver their services. According to Schenker, (2003) due to the epidemic very few families are able to financially support their children's education. As a result there is a greater number of sick students' overstretching the limited health care resources. Many students especially the females are taken out of campuses to take care of sick parents, relatives or take over household tasks.

A lot of human resource has been lost also due to HIV&AIDS. Lecturers and University administrators have died, or traumatized psychologically due to family or community deaths due to HIV&AIDS. In most cases HIV positive educators remain on the payroll. Draining funds that might otherwise have been used to employ substitute or replacement staff. The

lecturers face new demands posed by the behavioral, emotional and psychological problems brought into the classroom by infected and affected students.

In Sub- Saharan Africa due to poverty there is a high likelihood of girls' early sexual relationships with men who are considerably older, often in exchange for money, school fees, and rent or to help their families. There are many accounts of lecturers using their positions to lure female students into sex, in exchange for good grades or promises of marriage. These circumstances and conditions reduce the ladies ability to negotiate safer sex and increase their chances of contracting HIV&AIDS.

In most cases, the curricula do not provide the knowledge and skills that young people need in an HIV&AIDS prone society. The lecturers in sub- Saharan Africa experience frequent deaths and serious sickness in their families, communities and Universities which tend to undermine their morale.

A clean and health environment is fundamental in preventing opportunistic diseases associated with HIV&AIDS. The people infected with Aids are more vulnerable to poor living conditions than the healthy individuals because of the expenses involved. Most of the subordinate and students live in hygienically compromised environments. With the policy of University admissions now not based on the bed space but class space, the accommodation facilities are overstretched making students to opt for cheap and affordable accommodation in the slums. The universities should strive to provide affordable accommodation to avoid students moving to put up in shanties and slums.

To achieve the Millennium Development Goals the universities as higher institutions of learning and research needs to be incorporated. African Universities are in a position to develop policies, units, personnel fully skilled and knowledgeable in preventing the prevalence of HIV&AIDS.

Most of the youths are vulnerable to HIV&AIDS and yet in is in university life that they get a lot of freedom. They believe that it is in college that they should enjoy life and even show off to colleagues on the number of relationships they are involved in. It is the role of the University Administration to accord them a special treatment which can help them understand their roles in economy development and the consequences of irresponsible behavior.

THE ROLE OF HIV EDUCATION

Educational institutions are powerful tools to address HIV&AIDS pandemic especially amongst the young people. The greater life of the youths is spent in educational institutions. Such education enables them to develop and adopt sexual behaviors to prevent further HIV infections and for those affected get to know how to cope up with the pandemic.

Some studies on the role of education in the face of HIV&AIDS pandemic have been undertaken (World Bank 1991; UNAIDS 2006). Through these studies, it is evident that education significantly assists the human race to prevent and where possible eliminate the pandemic and therefore HIV AIDS should be introduced at all levels of education if the general citizenry are to gain the necessary knowledge, skills and attitudes to enable them effectively participate in the fight against HIV&AIDS transmissions (World Bank 1991; UNAIDS 2006).

Since 1984, the education sector in Kenya has adopted a multi sectoral approach (that is in liaison with the ministry of medical services and other stakeholders) in mobilizing community participation in HIV&AIDS programmes in an effort to fight the disastrous effects of the disease. These initiatives made have so far achieved over 85% HIV&AIDS awareness levels in schools and colleges (NASCO, 1999). The HIV&AIDS theatre, Drama and Music clubs and shows by school children and college students have also propagated powerful HIV&AIDS messages for influencing Behavioral change.

According to Lodiaga, (2000) the HIV&AIDS awareness levels in schools and colleges as indicated are high, what is thus lacking is proper knowledge on the pandemic. Hence Hubley,(1995) viewed HIV&AIDS education as the most effective tool of providing knowledge on HIV&AIDS issues and developing a sense of responsibility in the fight against HIV&AIDS infections. He further concludes that education remains the most effective tool for persuading people to adopt behavior change and to avoid sexual behaviors, which might risk their survival in the face of HIV&AIDS infections.

UNESCO, (1995) asserts that everybody needs to understand the complexities HIV&AIDS education since AIDS infects everyone, and those who are not infected are already affected by either having those close to them infected or already dead due to HIV&AIDS. According to UNESCO, (1995) there is need for HIV&AIDS education so that people's actions are supportive of HIV&AIDS victims of infection and affection. Thus it is only through such education that the general public, especially the youth, can be knowledgeable about HIV&AIDS and its consequences.

The Way Forward

The government offers scholarships to students aiming at ensuring them a healthy and happy life, useful to themselves, to their families and to the society. They are expected to serve the nation at completion of their studies. Therefore they must protect themselves from HIV&AIDS and remain healthy; otherwise their studies would become a losing investment.

Describing university responses to the HIV&AIDS crisis, Kelly, M.J (2001) Says there is an “awe-inspiring silence” at the institutional, academic, and personal levels. He further states that Universities do not translate an awareness that they should be concerned with HIV&AIDS into any form of meaningful action plan. Universities largely leave the responsibility for action to interested individuals and groups. They undertake no institutional response, such as framing policy guidelines, taking a proactive role, mounting workplace education programs for the protection of staff, or mainstreaming HIV&AIDS awareness into university curriculum, financial planning and management.

Get the facts about HIV&AIDS out into the open and break every form of silence, secrecy, and shame that enshrouds the disease. Recognize that persons living with HIV&AIDS are among the most important actors in any program to contain and control the disease. Without in any way using or manipulating them, the university should draw upon their expertise and insights and fully involve them in every aspect of its HIV&AIDS campaign.

The African universities should recognize that HIV& AIDS is a health issue that has attracted widespread outcry. Logic therefore demands that the masses need to be informed on the facts that surround these ‘murderer’ and how to control it. If this is taken into mind the Universities should develop policies that will be geared towards helping both the students and the staff at large.

The Universities should address condom acceptance, proper use and the role of African culture in HIV&AIDS prevention. They should give accurate information on the risks involved with sex. According to UNAIDS, (2004) we should all know our HIV&AIDSstatus. Therefore the universities are endowed with a role of sensitizing its staff and students to undergo Voluntary Counseling and Testing (VCT). Such precautionary measures will help the University medical personnel to monitor victims’ health and begin therapy where possible. The African universities should regard HIV&AIDS as any other serious illness. They should provide written information to both the staff and students. They should also provide support to the victims of HIV aids by providing them with welfare and medical counsel. There is need for the provision of training for both the staff and students at intervals so that they can be helped to overcome narrow-mindedness, fears, to promote good health and safety practices, promote awareness of the policy, to increase awareness of the necessary

personal precautions. Finally they should liaise with specialized agencies in providing counseling and support to HIV patients. Scheme currently in force, nor any benefit, facilities or services provided by the universities on the grounds that an employee is infected with HIV & AIDS. On the staff, there should be no discrimination in pension provisions, subject to the rules of the Musiitwa JM, Katuta C, Sikwibele A L, (2002) assert that the role of university students in movements for social justice has been phenomenal, however, in the case of HIV&AIDS, due to the stigma, student mobilization has not been well organized. Different HIV&AIDS related organizations should start at universities around the world with students taking an active leadership role. This will allow more youth to involve themselves with HIV&AIDS related issues because they are the ones most affected now and in the future. Student organizations should take a significant part in making youth more active in HIV&AIDS issues. More HIV&AIDS organizations should therefore be started at institutions of higher education in order to allow students to take charge not only at their institutions, but in their communities as well. It also allows students to fully comprehend the impact of HIV&AIDS on their generation and what steps they need to take to start ending the problem.

These human resources are useful not only for prevention activities in the university community, but also for outreach activities in the community. One particular area of intervention is the surrounding secondary schools, whose adolescent students must particularly be informed and protected from HIV&AIDS. Activities of university students are best achieved through students' associations. Their members must regularly be trained in order to intervene in the university community and in outreach programs, mainly aiming prevention through communication for behaviour change. Multidisciplinary research is made easy by the existence of different faculties. With regard to documentation and research, the National University of Rwanda enjoys easy access to information and communication technologies, notably good internet connectivity. Research can be done through dissertations of students or through research projects. Such projects are highly needed because the approach to combat HIV&AIDS scourge must be holistic. It will be the best way to help other stakeholders, notably governmental and non-governmental organizations, community-based organizations as well as bilateral and multilateral cooperation to find new and efficient strategies in AIDS control. Sub regional cooperation is useful in sharing experience, notably through interuniversity festivals and in training of trainers.

During their first week at the campus, all new university students should undergo an initiation course on HIV&AIDS /STIs and reproductive health focusing on aspects of sexual physiology un wanted pregnancies, contraception, STIs, biology, epidemiology, modes of transmission, clinical aspects, prevention, treatment and socio-economic impact of

HIV&AIDS, and the role of student associations in AIDS control. Such seminars are useful to first year students who are at risk of unsafe sex due to the newly acquired liberty on the campus and ignorance related to HIV&AIDS. They also aim at sensitizing female and male students so that they are capable of refusing undesired and/or unprotected sex. They also help them identify places of high risk of HIV&AIDS contamination and take appropriate measures.

A compulsory course of 3-4 credits should be on the program of the first year curriculum for all Students; they pass an exam on it and it is on the official transcript. This course encompasses all aspects of HIV&AIDS: biology, epidemiology, anthropology, psychology, clinical aspects, socio-economic impact, judicial aspects, prevention and treatment of HIV&AIDS. At completion of this course, it is expected that students will be able to protect themselves against HIV&AIDS, that they will be skilled to be active in anti-AIDS projects within student associations and that, at completion of their studies, they will be active in the society, combating AIDS at their post of responsibility.

The University should set University Leagues for HIV&AIDS or HIV&AIDS Control Units. The University League or control Unit will organize training seminars for representatives of students and staff. Those training seminars should target the fields of HIV&AIDS /STIs and reproductive health and project design, implementation and evaluation.

The Universities need to develop Awareness programmes for its staff and students. The awareness programmes should also target neighboring communities and the world at large. They include: Cultural activities and sports, posters, Magazines, Radio and television broadcasting and web site.

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FACTORS CONTRIBUTING TO VIOLENCE IN SECONDARY SCHOOLS: THE ROLE OF GUARDANCE AND COUNSELLING IN KENYA

DR Mary W. Were Nasibi

ABSTRACT

At the close of the 20th century and the onset of the first decade of this century, Kenya has witnessed unprecedented unrest and violence in secondary schools. This has been taken the form of property destruction, assaults, sexual abuses, deaths and arsons. Although the Kenya government over the years has appointed various committees to investigate possible causes of the problem and solutions, the issue still persists. The findings by various presidential committees indicate that violence in schools is a manifestation of violence in the wider society. Students imitate what they see in the media, family, government and the society at large. Unrest and associated violence have also been attributed to an overloaded curriculum which gives little room for extra- curricular activities, lack of motivation in learning, abusive and incompetent teachers, autocratic leadership and poor parenting. This paper argues that guidance and counseling at family and school level would go along way in addressing the problem of violence. The parents are called upon to change their parenting practices by opening communication with their children and acting as their role models. The school administrators and teachers are to open dialogue with their students and view them as young adults to be listened to and understood. There is also need to have guidance and counselling departments in schools well equipped and manned by professional counsellors whose task would be not only to give guidance and counselling to students but also to counsel teachers, administrators, and even parents. This will lead to self awareness and the development of emotionally adjusted individuals who will shun violence and strive to meet the demands of the schools and the society at large.

INTRODUCTION

Violence in institutions of learning is one of the challenges facing education system in Kenya. Both private and public secondary schools have participated in school strikes which have caused untold suffering (physically and psychologically) to the students, their teachers, administrators and parents. Property worthy millions of shillings has been reduced to rubble and students arrested and judged for arson:

Nine Kabarnet High School students were yesterday arrested after fire razed a shs. 20 million dormitory (Nation: July24, 2008)

School violence has taken the form of burning down dormitories, classrooms, science and computers laboratories, administration blocks, staff rooms and teachers' houses. It has also been manifested in physical assaults to individual students, teachers and administrators. There are cases where school prefects have been burnt to death as in the Nyeri High School case in 1999 where four prefects died. This was the cry of one Anthony Kariuki (1999) during the rescue operation :

Nipeni maji, nipeni maji, (Give me water! Give me water)...
Kwa nini wametuchoma? (Why have they burnt us?)

In Nyahururu High school a student was stabbed by colleagues three times. During the operation in one of the hospitals a nail cutter was removed from his stomach (Nation, July 24, 2008). One student by the name Noor Abdi was burnt to death in the 2008 riots: "A Form three student at Upper Hill School died in a dormitory fire believed to have been sparked by unrest." (Aluanga in Nation July 26,7, 2008)

The issue of school unrest is not a new phenomenon in Kenya. It is older than the Kenya education system which has been in operation since 1964. The first case of students' unrest goes back to 1908 in Maseno. However, it is in the 1970's, mid 1980's, 1990's and now the first decade of the 21st Century that its impact has been felt.

In the seventies the unrest not only affected secondary schools but also middle level colleges and tertiary institutions. What featured in these disturbances was violence and destruction of property. The schools involved numbered 22 (0.9%). The number moved to 187 (7.2 %) in the period between 1980 and 1990 (MOEST, 2001). The period from 1986-1991, The incidents of unrest and indiscipline per province in the country between 1986-1991 were as follows: In the 1990's the strikes took a new dimension. Violence was no longer limited to buildings but to individuals as well. For instance on 13th July 1991 boys of St. Kizito attacked girls in the same institution and raped a number. This led to the death of nineteen (19) girls. The end of the 1999 witnessed the death of four school prefects whose cubicle was set on fire by other students in Nyeri High School, Central province.

Province	Percentage
Coast	23%
Nyanza province	10%
Western province	11%
North Eastern	7%
Rift Valley	11%
Eastern	11%
Central	17%
Nairobi	6%

In the period of 1999 – 2001, Central province alone had 106 reported cases of students unrest. These disturbances ranged from murder, destruction of the school property and harassment of teachers and fellow students. The state of affairs continued to 21st century as the table below shows:

Province	Existing number of secondary schools	Number of schools that experienced students' unrest	Percentage of schools going on strike	Gravity
Central	630	85	13.5	Violence and destruction
Coast	151	04	2.6	Destruction of school property
Nyanza	680	07	1.0	Destruction of school property
Eastern	626	76	12.4	Destruction of school property and loss of human life
Rift Valley	625	50	8.0	Violence and destruction
Western	408	19	4.7	Minor destruction of school property
Nairobi	93	02	0.02	Minor damage to school property
North Eastern	21	07	33.3	Destruction of school property

Source: Ministry of Education and Technology

The latest wave of unrest June- July 2008 reported over 300 schools (5.4%) having been involved in strikes in the month of June alone. This gives an average of 10 cases per a day. In both months the number was estimated at 500 schools (8.9%) with over 90% of the cases involving district schools. In central province about 50 schools participated in strikes in two weeks with one single school losing nine buildings to fire (Njagi in Nation , July 21, 2008). At

coast province 15 schools were affected in just one month of July 2008. The minister of education Sam Ongeru had this comment:

The youth have gone beyond the limits ... A culture of impunity is creeping in to our society and we must nip it.

The schools affected range from academic giants to little known schools cutting a cross national, provincial and district levels.

The Government has been appointing task forces to look into the issue since 1990. In 1991 after the Kizito incident the then President Daniel Arap Moi appointed a committee to look in to students unrest. In 2001 the then Minister of Education Henry Kosgey appointed a task force led by director of education Naomi Wangai to investigate the causes of unrest. Although she came up with useful recommendations not all of them were implemented. The task force however had one shortcoming. It failed to establish a protocol for stopping a wave of strikes again. This could be the reason why the country faced another wave in 2008.

In 2008, another task force was appointed by Pro-Sam Ongeru following yet again unprecedented wave of riots. It consisted of top education experts who were to investigate the cases and make recommendations on how the situation could be avoided in future.

Factors Contributing to violence in schools.

The various task forces and researches have come up with many explanations as to the causes of violence among the youth. What follows are the possible factors contributing to the problem.

1. The Government failure to implement most of the recommendations of past task forces on students' unrest. The Presidential Taskforce in 2001 for instance recommended the following among others:
 - To put an end to the ranking of schools by Kenya National Examination Council (KNEC).
 - Establishment of a comprehensive system of examination that could accommodate and recognise individual talents through continuous assessment tests.
 - Scrapping of district mock exams and replacing them with school based mocks during 2nd term of the year.
 - Banning of holiday, weekend and after school tuition.

- Rating of movies and confiscation of pornographic materials in schools.
- Organizing talks for parents on issues related to discipline
- Streamlining of admission criteria to address students' social backgrounds and avoiding bias.
- Residing of head teachers and deputies of boarding schools on the premises.
- Adhering to the Government regulations on class size of 40 and decongestion of dormitories.
- Establishment of guidance and counseling services in schools

Out of these recommendations only a few were put in force. They include recognition of the best students in national examinations instead of ranking of schools and; organisation of talks for parents by some schools. However, with free primary and subsidized secondary education, it has been difficult to have class size of 40. This is worse in secondary district schools. It has also been difficult to establish guidance and counseling departments in most schools and in cases where they exist a few are manned by professionals. Thus, the government's failure to implement the above recommendations and many others has led to continuous unrests.

2. Examination oriented curriculum: Kenya education system puts a lot of emphasis on learning in the cognitive domain with examination as a determinant of certification and career placements. The parents, teachers and the school pressurise students for good results leading to stress. It is significant to note that riots occur second term when students are preparing for Kenya Certificate of Secondary Education (KSEC) mocks. The examination has been the cause of tension, anxiety and fear among students who use strikes as a way of venting tension. This was so evident during the 2008 riots when several schools refused to sit for mocks because of fear of failure.
3. Over-loaded curriculum: A broad curriculum has been a main feature of 8.4.4 system of education. Although some subjects were removed from the curriculum and content of some reduced, the curriculum remains broad. The teachers rarely cover the syllabus within the stipulated time forcing them to look for extra time outside the established timetable to cover the content. This has forced students to be in class when they should be relaxing, this leads to stress. Besides, the students are examined on content covered for a period of four years. This makes retention difficult due to interference of both new and old material in learning. Interference as a forgetting theory is of two types: proactive and retroactive. In proactive the old material interferes with the new material being learnt while in retroactive new material interferes with the old one.

The manifestation of over-loaded curriculum is evident in students showing fear of examination partly because they feel unprepared. In the last wave of strikes, over 50% of the cases were because of this fear in provinces like Coast, Eastern, Nairobi and Central.

4. Corruption and inefficiency at Kenya National Examination Council (KNEC): The council has been accused of examination leakages for years. These leakages and open cheatings in many schools have gone unpunished and at times undetected. KNEC officials have been accused of selling examination papers to parents, schools and students or middlemen / women. It seems the council has institutionalized cheating.

KNEC is using school mocks as a yardstick for leakages. Whenever cheating has been dictated the council has resorted to mock scores to moderate the grades. Owing to this both the students and teachers are attaching a lot of importance on mocks. Given a chance, students would prefer rather to avoid it or sit for a less demanding examination. Some would even find satisfaction in cheating. This was evident when during the 2008 mocks candidates in some schools demanded that they be allowed to carry their notes, textbooks and mobiles to the exam rooms. Thus, frustrations over the fading confidence in KNEC's competence and capacity to oversee an open and fair competition in schools is one factor affecting management of schools leading to unrest.

5. Subsidized secondary education which has raised transition level of primary to secondary schools to 70%: This has overstretched facilities in public secondary schools. Most of the strikes (over 90%) occurred in public districts schools, low cost private and provincial schools that had admitted students without injection of extra learning resources or facilities.

A delay in releasing funds for secondary education has been a source of tension in some schools in Western province.

6. Poor role modeling at home, in schools and the society in general: Students come from families where domestic violence thrives. At school, teachers react to them violently when they find them at fault. There are schools still using caning as a form of discipline even after corporal punishment was banned in 2001.

The post –election violence of early 2008 demonstrated to young people that authority can be defied with no consequences and that violence is a means of communication and attention seeking. They learned that personal demands are more important than other people’s lives and property.

7. The role of the media: It is argued that strikes are fueled by the media which report the schools which have defied authority. These striking schools pose as heroes to other schools causing the former to do the same.
8. Emerging issues in education: These include the rights of children and the role of each player in education. Section 13, 18, and 23 of the Act denied teachers power to punish wayward students. Students are aware that any form of assault is a crime under section 25 of the penal code and is punishable by five years in jail. This has led senior education officials and the courts interfering with discipline cases and overruling certain issues unconditionally. There are cases where Board of Governors expel students but are later confronted by senior ministry of education officers to readmit the students unconditionally (Nation, July, 23, 2008).Such a scenario makes students big headed and disobedient to the school authorities and rules, causing chaos.
9. Lack of discipline among students: Both teachers and parents have failed to instill discipline among their children and students respectively. Decrying this Balala remarked: “Parents have failed to discipline their children because of foreign ideology which is detrimental to African form of disciplining children “(Najib in Nation, July 21, 2008)

For a long time the use of the cane was the only form of discipline known to teachers and parents. With the passing of children Act in 2001, which banned corporal punishment and made it criminal, teachers and parents have not found alternative methods of discipline. There were no in-service courses which were carried out to equip teachers with basic skills of dealing with the problem. The students have taken advantage of this unpreparedness and disobey authority at will. They know they cannot be caned nor given manual work. In case of the contrary, they can sue either their parents or teachers for subjecting them to physical and psychological abuse.

8. Poor parenting has emerged as a major factor in schools violence .Research by Obuto (2005) indicate that 99.9% of students and teachers cited poor parental upbringing as a factor contributing to school strikes. In another study by Mwikali(2005) ,poor parenting scored 100% among head teachers with 96% of students asserting that their parents are

poor role models. The psychologists argue that although the child is born with the potential of becoming healthy and successful the way he/she is brought up will determine whether the individual will grow into an emotionally healthy individual or not. Varkey (1997) contends that: "The parents can be princes charming that turn the children to princes or princesses or the witches that turn him them into frogs". This responsibility is not an easy one because "it is easier to rule a nation than to bring up a child" (Chinese proverb in Varkey (1997:68.)

Many parents have been found lacking in this area. They have neglected their parental duties in pursue of their careers. They have also embraced a foreign child rearing practices which are destructive to the children. For instance, a study by Africa Mental Health Foundation found out that "many children who abuse drugs came from families where one of the parents or other members of the family is abusing drugs."

9. Alcohol and drug abuse: A recent study showed that alcohol abuse among students has gone up by 71% over the last four months. The drugs' influence during the unrest was unearthed when among the items found in the burnt dormitories were "condoms, diesel, cigarettes and alcohol." A study in 2002 in 17 public schools indicated that students took the following drugs; beer, wine, sprits and cigarettes, bhang, cocaine, alcohol, petroleum products and among other drugs. This constituted about 18.1%.both in urban and rural schools. A study by Orifa (2004) in Kiambu, Central province showed that about 62% of secondary school students admitted having ever abused drugs in their lives with 23% still abusing them. In the same document 16% of indiscipline cases in the year 2001 in Central province were from this district.

Research shows that when one is under the influence of drugs, a sense of responsibility diminishes leading to perpetuation of acts which the individual might not have engaged in had he or she been sober. This explains why the students lose control of their instincts and destroy lives and property without a second thought.

10. Poor management skills by the administration: The school leadership has been accused of failing to have an open dialogue with students. It applies authoritative approach to discipline and autocratic management style closing the door to dialogue. For example in Lenana School which is an old national school of high standing , the cause of the strike was because of administration's failure to address the students grievances , the deputy principal's highhandness and bullying by senior students (Nation ,July, 23rd 2008). In the same paper, the causes of unrest in Pumwani Secondary, a provincial School, was poor food and congestion of dormitories. In Godama the students and parents complained of mismanagement of donated funds by the principal. Wachanga (2003) established that 66.7% of students viewed their headteachers as being autocratic and 86% as being inaccessible. All these are administrative related issues which could have been solved with a more responsible administration.

Inadequate management skills have led the administration investing a lot of power in prefects who harass and punish other students. Some of them set up kangaroo courts, which they preside over and mete corporal punishment on fellow students. Some students have reacted to these abuses with tragic consequences. The cases in mind are those of Nyeri High School already cited and that of Thomas Oguya and Allan Odaga both of Nyando Otieno Oyoo Secondary School who were assaulted by prefects at mid- night leading to dire consequences (Standard, July 23, 2009) .

11. Unbalanced curriculum which emphasises on cognitive development of the learners at the expense of the moral. It overlooks the religious element in teaching and the role of pastoral care programmes. The wave of unrest can be attributed to spiritual vacuum among students and if not checked it could destroy the fabric of nationhood (Eshiwani : 2001). The moral decay among the youth is so serious that some of them sneak out of school to engage in sex with either their boy friends or adult members of their parental home. Such students would like to cause chaos so that they can be sent home and have an opportunity to be involved in pre -marital sex.

12. Teacher related problems: These include poor teaching strategies which do not meet the needs of the students and lack of commitment displayed by non- planning for their lessons or absconding from duties. Some have been accused of uncalled for strictness or highhandedness or even humiliation of students by abuses and slaps. All these cause discontentment and dissatisfaction among the student body. For instance a study by Wachanga in 2003 indicates that 84% of students viewed their teachers as dictators who hardly listened to them nor involved them in anything. Similarly, Obuto (2005) found out that 70.8% of students did not like their teachers' authoritative behaviour, while 90.9% complained of harshness and dictatorial tendencies from both teachers and head teachers.

13. Political interferences: These were the causes in Eastern, Rift Valley, Western, Nairobi, Coast and Nyanza provinces. It is alleged that politicians have been influencing field officers to transfer either teachers or head teachers and replace them with the locals in the region where the schools are located and who are mainly their supporters. Some of the politicians had pledged to do this once elected. The transfers are affected regardless of the performance of those concerned.

14. Inadequate or lack of Guidance and Counseling services in schools: Although the services have been recommended over and over for every school, a number have yet to achieve this.

The justification of guidance and counseling as an intervening strategy

The problem of violence in schools can be addressed by using Guidance and Counselling Services (GCS) as an intervention strategy at school level. Below are reasons why it is the best option.

1. Guidance and counselling services have been recommended in schools by all commissioners of education since 1964. The Ominde Report in 1964 for instance, suggested that schools should provide some guidance to the students. This led to the Ministry of Education starting a sub-section within the inspectorate to deal with the implementation of guidance in schools in 1971. The emphasis however, was more on career advising than on counselling.

The Gachathi Commission of 1976 recommended that the Ministry of Education should expand its services to include guidance and counselling in each school. The head teacher was to assign one teacher to provide the services. It also recommended the establishment of courses at the University for training professional workers in guidance and counseling. Teachers undergoing training in education were take one course in counselling.

The Kamunge Report (1988) recommended that schools should establish guidance and counseling services with senior teachers being responsible for them. The services were to be decentralized and moved from the Ministry's headquarters to the district level. The Kenya Institute of Education (KIE) was charged with the responsibility of developing suitable and relevant guidance and counseling services.

The Koech Report (1999) recommended the following:

- Positive cultural practices such as counselling & guidance which go on during initiation ceremonies be encouraged and moderated to enhance the social development of the youth.
 - Guidance and Counselling in schools & colleges be strengthened.
 - Trained teacher counselors to work with other teachers, parents, NGO's and religious bodies where necessary.
 - Students should be counseled against use of violence as a solution to counter problems.
2. The Kenya Development Plans over years have pointed to the importance of guidance and counselling services to schools. For example, the 1974-1976 development Plan recommended that Ministry of Education should allow the designated guidance teachers more time to attend to students' counseling needs. The 1979-1983 Development Plan recommended that Guidance & Counselling be incorporated into the teacher training curriculum at both the college and University levels.
 3. The Government's sessional papers have underscored the importance of GCS in educational institutions. For instance ,session paper No.6 of 1988 expressed the

Government's interest in expanding the Guidance and Counseling program in Secondary Schools. It recommended the training of the school heads & senior teachers to supervise the G.S programs that had been established.

4. It was one of the major recommendations according to the report of the Presidential Committee on Students' Unrest and Indiscipline in Kenya Secondary School (Sept. 2001). It stated these recommendations:

- Recommendation 22: The Ministry of Education Science and Technology establishes a strong Guidance and Counseling division within the Ministry, which will coordinate all the activities of Guidance and Counseling in the country. This division will be equipped with the relevant personnel and resources to facilitate its functions.
- Recommendation 31: Training of Guidance and Counseling teachers should be given priority under a crash programme both by the public and private sectors.
- Recommendation 32: Teachers with qualifications in Guidance and Counseling be identified and deployed by the Teachers Service Commission (TSC) immediately.
- Recommendation 33: The number of teaching lessons given to G&C teacher should be reduced to allow them enough time to effectively carry out G& C activities.
- Recommendations 34: G&C teachers be given three increments above their present grade as an incentive.
- Recommendation 78 a: Knowledge and skills in G&C be imparted to all teacher trainees at all levels of training.
- Recommendation 78 b.: Heads of G &C be required to have postgraduate qualifications and experience in G &C.
- Recommendation 89: G&C in schools be strengthened at the teacher and peer level.
- Recommendation 141: The MOEST appoints teacher counselors for every public school. These teachers be trained so that they could have the required skills and knowledge in G& C.
- Recommendation 142: Peer counseling groups be set up in every school and peer counselors be given the necessary skills and knowledge.
- Recommendation 143: Parents be more involved in counseling services in schools.
- Recommendation 149: Students already on drugs be counseled by the teacher counselors or be referred to specialists for rehabilitation.
- Recommendation 155: G&C and pastoral care be strengthened in order to provide a strong foundation on moral values and spiritual growth.

5. The role performed by Guidance and Counselling in the lives of students can not be undertaken by any other department. According to Nasibi (2003) ,the importance of the named service to the students is discussed as follows.

- It contributes to the self knowledge, determination, realization, acceptance and self development of individuals by identifying their abilities, interests, aptitudes, values, potentialities and developing them to the full. The counselor specifies opportunities available to the students and the consequences of non-planning on their future possibilities. He/she helps the students to recognize that they do have some control over their future. This will go a long way in helping students focus on themselves and what they can do to improve their lot instead of engaging in self destructive activities.
- It helps the students to make the best possible adjustments to the situations in the school as well as the home. The problems they attempt to cope with range from academic (how to study, prepare for exams and manage stress) to social (how to interact and adjust properly with peers, siblings, parents etc). Students resort to violence because they can not cope with the situation at school and at home.
- It enables an individual to adapt confidently to rapidly changing circumstances, making him/her capable of making decisions, thus developing solving and decision-making skills. Some students are unable to make their own decisions but follow the decisions already made by others without thinking of the implications or the risks involved.
- It gives learners a sense of direction, purpose and fulfillment and by so doing, minimizes incidences of indiscipline among students. The riots are caused because students lack discipline therefore addressing this would go a long way in solving the problem.
- It encourages diversity in talents, originality and creativity among learners. This leads to self awareness which is essential in understanding ones environment and meeting life's challenges.
- It minimizes wastage and frustrations in education and employment by making learning experiences interesting, equipping the learner with effective study skills, identifying students' characteristics and potentialities, and matching the right occupation with the right courses and employment. This leads to the efficient use of human power in the world of work and creation of goal oriented individuals in schools.
- It helps to identify and motivate students from disadvantaged homes that experience difficulties in adjusting to the school environment. These are students who cause problems in schools leading to violence.
- It assists the students to identify clearly cultural standards against which they can either question or reject completely, thus developing their own value system.
- It helps the learners to become aware of the needs of others and to establish positive relationship with them. This leads to the development of group learning experiences hence building good relationships.

- It aids students in establishing and attaining worthwhile goals, becoming self reliant and responsible for their behavior and the choices they make.
- It keeps students informed on educational and vocational choices and in exploring vocations that would be appropriate outlets for their abilities, interests and personalities.
- It aids the teacher in creating an atmosphere that fosters meaningful learning relationships.
- It facilitates co-operation between teachers, parents and administrators to develop positive leaning experiences.
- It seeks to compensate for the extended family ties that kept the traditional society together.

Given the above roles of guidance and counseling, the causes of violence would best be addressed by engaging the services of a counselor who will strategize on how to deal with all those involved whether they are students, teachers, head teachers or parents collectively or individually.

6. Post- election violence has been blamed for the students' destructive behaviour. Ongeri (Nation July 2008) for instance argues that events following the flawed elections in 2007 caused negative effects on youths especially in areas that received displaced learners. Many youths were traumatized either physically or psychologically as they witnessed or participated in violence in person or viewed it on television. Such exposure is likely to generate anger, hopelessness and one is bound to react extremely at the most mundane of excuses. It is only through counselling that such students can be identified and necessary steps taken to redeem them. It could be possible that some are suffering from Post-Traumatic Disorder (PTSD). This disorder is characterized by re-experiencing (e.g nightmares and flashbacks), avoidance, numbing of general responsiveness, and hyper arousal (e.g. irritability and hyper vigilance) following a traumatic event (Bisson : 2007).
7. According to psychologists and psychoanalytic theorists like Freud, violence is a drive, a form of energy that persists until a goal is satisfied. Violence occurs when aggressive energy builds up until it has to find an outlet. Research shows that most people who commit aggressive acts have a history of aggressive behaviour. It is further argued that aggression can be learnt through observation or imitation and the more often it is reinforced, the more likely it is to occur. Studies conclude that observation of either live or filmed models of aggression increases the likelihood of aggression in the viewer.

Given that violence or aggression is experienced in Kenya on a daily basis, it is possible that the problems schools are going through could be addressed by focusing on aggression

which is a learnt behaviour and could therefore be unlearned. The unlearning is only possible when the counsellor as a therapist applies behavioral theories to counseling.

Conclusions

Based on the above analysis the following conclusions can be made:

- Violence in schools is as a result of factors within the school, the family and the larger society.
- These factors range from management, classroom practices, curriculum, and government policy to parental practices.
- It was however noted that the main factor contributing to continued crisis is the failure of government to implement the recommendations by earlier task forces.

Therefore the problem could be solved by the government going back to what has been recommended over the years by various task forces.

Recommendation

1. The government should implement all recommendations made by various past taskforces on the student unrest
2. The government should provide professional counselors in schools because the schools that had counsellors did not bear the brunt of the country -wide student strikes. Schools should ensure that the department (Guidance & Counselling) is fully equipped with rooms and furniture for both group and individual counseling.
3. The dual relationship where counselors are also teachers should be avoided. This is because students find it difficult to confide in counselors who are also their teachers. At times the teacher –counselors break the ethics of confidentiality and sever the relationship between them and the students
4. Disciplining of the students should be left to the principal, deputy principal and discipline master not teachers and prefects. However, teachers should be equipped with basic skills in counseling so that they will be able to interact with students harmoniously with little or no tension.
5. Students should be involved in management of the schools or governance by being:
 - Allowed to participate in setting of school rules so that they can own them.
 - Accepted to elect prefects democratically as a link between them and the administration.

- Permitted to form students' councils as a vehicle of channeling their grievances to the administration. .
- Authorised to use *barazas* in the Starehe Boys model, where the students can air their views freely with the administration.
- Involved in deciding on the meals they would like served at school.

This would give them confidence about the administration and themselves that they are important and part of what goes on in the institution. This approach would encourage upward communication channel from students to teachers instead of the reverse.

6. Students should be allowed to join various clubs of their choice as a recreational or leisure activity e.g. debating, Christian union, drama, choir, dancing and sporting.
7. The School ought to lay a lot of emphasis on extra-curricular activities especially sports. It was observed that students or schools at the heart of sports were hardly involved in destructive behaviour.
8. The parents are called upon to lay a strong foundation for discipline and value system among their children taking the responsibilities of parenthood more seriously. There is need for them to attend courses in parenting to sharpen their parenting skills.
9. The administrators should be exposed to an intensive in-service course on management skills organized and managed by Kenya Education Staff Institute (KESI).
10. The head teachers should help cultivate a democratic atmosphere in schools by encouraging dialogue with both teachers and students and giving attention and acting on their grievances.
11. The adults in the lives of all students must provide good models. This includes administrators, teachers, parents, political leaders and the wider community because the youth imitate what they see their significant others doing. Curriculum should be reviewed to inculcate national values and discipline to students. Subjects like Religious Studies and History & Government should be made compulsory. This will strengthen the students' value system and train them in morals and patriotism
12. There is need for new leadership at KNEC: It is believed that there would be more examination leakages unless there is a purge at the council. Failure to do this will encourage and strengthen a culture of impunity by a network of individuals working against handwork and merit.

13. The Kenya Government through the Minister of Education and Minister for Justice, National Cohesion and Constitutional Affairs should introduce laws which explicitly prohibit corporal punishment in schools.
14. Starting of Peace Education Networks (PEN0) in schools and among schools to quell violence among students .At school level lectures could be organized on importance of peace and harmony. This will teach the young the need of living harmoniously. Use of peace symbols in schools will go along way in addressing the issue.
15. Providing schools with a manual focusing on administration rules, code of conduct, disciplinary measures, inspection of schools and security or safety measures.

References

OWARDS QUALITY STANDARDS IN SCIENCE EDUCATION IN KENYA: THE CASE OF SECONARY SCHOOL BIOLOGY CURRICULUM

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Abstract

In a world filled with the products of scientific inquiry, the role of science and Mathematics in national development cannot be gainsaid. Everyone needs to use scientific information to make choices that arise everyday. Scientific literacy is therefore a necessity for everyone. This makes it necessary to develop and implement national science standards that outline what learners need to know, understand and be able to do at each grade level to be scientific all literate and useful in the society. This calls for efforts beyond what is stipulated in the syllabuses. The purpose of this study is to investigate the extent to which quality standards have been put in place for the secondary school biology curriculum in Kenya.

A content analysis of the school biology curriculum and curricula materials and in-depth interviews with quality assurance and standards officers in the ministry of education are conducted to identify the standards for the content in place. On the basis of the findings the possible content standards and benchmarks for school biology are suggested. The paper would establish a quality assurance standards framework that would go along way in making biology and other science areas to be more meaningful to the learners and the society at large.

INTRODUCTION

Kenya aims to be a fully industrialized, middle-income country, providing a high quality life to all its citizens by the year 2030. This expectation is clearly outlined in the country's new development blue print, "Kenya Vision 2030". An important strategy in this effort is to promote science, technology and innovation (STI). The STI policy framework will involve raising the quality of teaching science, mathematics and technology in Schools, Polytechnics and Universities (Republic of Kenya, 2007). This would hopefully create a scientifically

literate population that would serve as an effective reservoir for a technically oriented work force. The lessons learned from the more recently industrialized nations indicate that the economic productivity of a nation is closely linked to the scientific and technological skills of the work force.

In a world filled with the products of scientific inquiry, scientific literacy has become a necessity for everyone. Everyone needs to use scientific and technological information, principles and processes to make choices that arise every day. A sound grounding in science therefore strengthens many of the skills that people use everyday, like solving problems effectively, thinking critically, working cooperatively with others, using technology effectively, relying on evidence to make decisions, and engaging in life long learning (National Science Education Standards, 2000). Meaningful science education would therefore create a critical mass necessary for industrial take off a nation. This underlies the spirit of vision 2030. As a nation we therefore desire quality science and mathematics education for our children in schools. But how do we know that schools are providing quality science and mathematics education? We need to ascertain this from the set quality assurance standards. The momentum for this realization has been provided by the International organization for Standardization (ISO).

The quality standards relevant to science and mathematics education are the ISO 9000 family of standards. This represents an international consensus on good management practices with the aim of ensuring that a given organization can deliver the products or services that meet the clients' requirements. The Kenya Bureau of Standards (KEBS) is mandated to ensure that organizations and government agencies implement the ISO 9000 standards by establishing a working and effective quality management system.

In developed countries like the U.S.A and the United Kingdom, science education standards have been established and implemented. The standards outline what students need to know, understand and be able to do to be scientifically literate at different grade levels. The standards provide criteria that people can use to judge whether particular actions will serve the vision of a scientifically literate society. The standards however are not seen as requiring a specific curriculum. The curriculum may be decentralized but contributing to the achievement of the standards. The standards cover a wide area of engagement in science: standards for science teaching; professional development for science teachers; assessment in science; science content; science education programmes; and education systems. Each standard is in turn exemplified by specific benchmarks. These are specific statements of what all students should know or be able to do in science at each grade or level. They provide a measure for selecting content and allow teachers to reduce the sheer amount of

material covered and instead to focus on the ability to commit terms, algorithms and generalizations to deeper understanding. This helps students develop the necessary scientific literacy and numeracy.

In Kenya the ministry of Education has been developing such standards. The “All Round Standard Performance Indicators” or benchmarks have been developed for the various areas including sports, games, drama, music and academic performance. But these benchmarks should be formulated within the broad framework of established standards. This paper attempts to identify some of the subtle standards in the secondary school science curriculum in Kenya, using Biology as an example. Suggestions are also made on the way forward.

STATEMENT OF PROBLEM

The issue that necessitates the study lies in the fact that, despite efforts and initiatives by the Government of Kenya and other interested groups to improve the teaching of science in schools, performance in these areas have continued to decline over the years, particularly at the Kenya Certificate of Secondary Education (KCSE) level. For example, mean scores in Mathematics has continued to be below 20% while the sciences have consistently recorded mean scores of below 35% (KNEC Reports, 2005, 2007). The reasons for the poor performance could be many, ranging from lack of guidance to the teachers on the scope of the content to be taught to lack of adequate teaching skills among teachers. The former reason touches on content quality standards whose impact on the quality of teaching has not been investigated in the literature. This study attempts to open debate on the issue by indicating the extent to which content standards in Biology has been incorporated in the Secondary Schools curriculum.

PURPOSE OF THE STUDY

The purpose of the study is to investigate the extent to which Biology content standards have been incorporated in the secondary school biology curriculum currently in use in Kenya. Specifically, the study addressed the following research questions:

- a) Which official documents for the biology curriculum are currently in use in schools?
- b) What content standards are prescribed for the biology curriculum in Kenya?
- c) What support infrastructure is available for implementation of the biology content standards?

SIGNIFICANCE OF STUDY

The findings of the study would have both theoretical and practical values in the teaching and learning of science in general and biology in particular. In terms of theoretical value the

findings would identify and shed more light on the parameters involved in the learning and overall performance in biology. This would lead to the evolution of quality assurance standards framework that would indicate the allied benchmarks in the subject. In terms of practical value the findings would enable science education practitioners and researchers to devote more time on identifying the content standards and benchmarks for the biology curriculum and ways of implementing them through effective instructional strategies.

METHOD

The study used descriptive survey research design to understand the curriculum content standards in biology education. The target population was all the quality assurance and standards officers (QASOs) in Nyanza and Western Provinces of Kenya. It was envisioned that their perspectives would give a wider picture of this issue for the rest of Kenya, since they are centrally controlled from the Ministry of Education headquarters. A purposive sample of 20 QASOs (10 from each province) was selected with the help of the Provincial Director of Education (PDE) offices. Only those QASO's who have served in that capacity in the area of biology for at least 10 years were selected. It was assumed that their experience in the transformation of the inspectorate to Quality Assurance Division has enabled them to understand better the intricacies involved in quality assurance and standards in biology education. Data were collected using checklist for document analysis and a questionnaire for QASO's.

RESULTS AND DISCUSSION

The results were as presented under the following themes relating to the research questions.

a) Official Biology Curriculum Documents

The following documents were identified that outlined the prescribed biology content:

- Biology syllabus for Kenya Certificate of Secondary Education, published by Kenya Institute of Education.
- Biology syllabus for Kenya Certificate of Secondary Education, published by Kenya National Examinations Council.
- Biology section syllabus for the General Science course for Kenya Certificate of Secondary Education, published by Kenya Institute of Education.
- Various text books approved by Ministry of Education (both students textbook Form 1, 2, 3, and accompanying teachers' guides).

b) Biology content standards

The documents in (a) above were analyzed to identify if they included content standards and allied benchmarks for the course at all the four grade levels (Forms 1-4). The results were as summarized in Table 1

Curriculum item	Extent of incorporation		
	Syllabuses	Students' Textbooks	Teacher's guides
1. Objectives	X	---	X
• Course objectives	X	X	X
• Objectives for each topic			
2. Content	X	X	X
• Topics / Concepts	X	-	X
• Scientific Skills	-	-	-
• Scientific attitudes			
3. Teaching approaches	X	X	X
• Practical	X	-	X
• Theory			
4. Learning strategies	-	-	-
5. Content standards	-	-	-
6. Benchmarks for content standards	-	-	-

The table indicates that the content in terms of topics and sub topics to be covered and the associated scientific skills are contained in the syllabi and to a lesser extent in teachers' guides. However it is instructive that content standards and the associated benchmarks do not appear in all these curriculum documents. Given that the content standards stipulate the basic requirements that all students need to know, understand and be able to do to be scientifically literate at different grade levels and to demonstrate high levels of performance, the results indicate that this opportunity is lost to them. The standards call for more than scientific skills in which students learn such skills as observation, inference and experimentation. They pinpoint the need to be actively engaged in scientific inquiry, whereby they describe objects and events, ask questions, construct explanations, test the explanations against current scientific knowledge and communicate their ideas to others (NSES, 2000). In this way students actively develop their understanding of biology by

combining scientific knowledge with reasoning and thinking skills. The emphasis is on focusing on a small number of general principles that serve as the basis for teachers and students to develop further understanding of biology rather than on accumulating overwhelming amount of information and concepts that are usually forgotten rather quickly.

An analysis of literature indicates that in secondary schools, students' understanding of biology includes abstract knowledge, such as the structure and function of DNA and more comprehensive theories, such as evolution. Because molecular biology will continue to form the basis of developments in biology, students should understand the chemical basis of life not only for its own sake, but because of the need to take informed position on some of the practical and ethical implications in our capacity to manipulate living things (NSES, 2000). It appears that the content standards should include, but not limited, to the following:

Content standard 1: As a result of their activities in form 1-4, all students should develop an understanding of:

- The cell
- Molecular basis of heredity
- Biological evolution
- Interdependence of organisms
- Matter, energy and organization in living systems
- Behaviour of organisms

Taking the molecular basis of heredity as an example, the benchmarks would include:

In all organisms, the instructions for specifying the characteristics of the organism are carried in DNA, a large polymer formed from subunits of 4 kinds (A-G-C and T)

The chemical and structural properties of DNA explain how the genetic information that underlines heredity is both encoded in genes (string of molecular "letters") and replicated (by a templating mechanism). Each DNA molecule in a cell forms a single chromosome.

Most of the cells in a human contain two copies of each 22 different chromosomes. In addition, there is a pair of chromosomes that determines sex: a female contains 2 X chromosomes and a male contains one X and one Y chromosome. Transmission of genetic information to offspring occurs through egg and sperm cells that contains only one representative from each chromosome pair. An egg and a sperm unite to form a new individual.

The fact that the human body is formed from cells that contain 2 copies of each chromosome, and therefore two copies of each gene, explains many features of human heredity, such as how variations that are hidden in one generation can be expressed in the next. Changes in DNA (Mutations) occur spontaneously at low rates. Some of these change make no difference to the organisms, whereas others can create the variation that changes an organisms' offspring.

Content Standard 2: As a result of activities in Forms 1-4, all students should develop:

- Abilities necessary to do scientific inquiry
- Understandings about scientific inquiry

Benchmarks

Abilities necessary to do scientific inquiry:

- Identifying questions, and concepts that guide scientific investigations
- Designing and conducting scientific investigations
- Using technology and mathematics to improve investigations and communication
- Formulating and revising scientific explanations and models using logic and evidence
- Recognizing and analyzing alternative explanations
- Communicating and defending a scientific argument

Content standard 3: As a result of activities in forms 1-4 all students should develop understanding and abilities aligned with the following concepts and process:

- Systems, order and organization
- Evidence, models and explanation
- Constancy, change and measurement
- Evolution and equilibrium
- Form and function.

These are the unifying concepts in all the sciences.

The results therefore, indicate that there is an urgent need to develop biology content standards and the specific benchmarks if the teaching of biology has to engage all the students in meaningful learning.

c) Support Infrastructure

The infrastructure to support implementation of biology curriculum was found to depend on the general inspection schedules established by the Ministry of Education. The schedules

are geared towards maintaining performance by the teachers and the schools in all subject areas.

The relevant schedules are:

- Schedule 5: Physical environment (e.g. sanitation, classroom environment, workshops, laboratories, offices, equipment and apparatus).
- Schedule 6: Textbooks and other teaching and learning resources (e.g. access and utilization)
- Schedule 8: Individual teacher's observation (e.g. lesson planning, schemes of work, delivery in classroom, curriculum knowledge and interpretation).
- Schedule 9: Overall quality of teaching and learning
- Schedule 1: Demographic performance (teaching staff, examination data, wastage in school).
- Schedule 2: Whole school, human resource and curriculum management (e.g. effectiveness of head of biology dept,. supervision by QASO, competence of head teacher e.t.c)

These structures will need to be refined within the framework of content standards to ensure that these form the basis for teaching and learning biology in schools. This is necessary since the content embodied in the standards can be organized and presented with many different emphases and perspectives in many different curricula (NSES, 2000).

CONCLUSION

Whereas the content of biology is clearly outlined in the syllabi, it is not presented in the form that would permit teachers to guide students abstract the major generalizations that can serve as a basis for students to develop further understanding of biology. There is therefore a need, in our vision, to develop and document content standards designed to enable learners understand the bigger picture of biology as a stride in achieving scientific literacy. The standards imply a new way of teaching and learning about biology that reflects how science itself is done, emphasizing inquiry as a way of achieving knowledge and understanding about the natural world. They also invoke changes in what students are taught, in how their performance is assessed, in how teachers are trained and keep pace (NSES, 2000), and in the relationship between schools and the community at large in the way they share ideas and resources.

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CHANGING TRENDS IN THE ASSESSMENT AND EVALUATION OF STUDENT TEACHERS ON TEACHING PRACTICE AT KENYATTA UNIVERSITY

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Introduction

The purpose of this paper is to address several interrelated questions that assists in understanding changing trends in the assessment and evaluation of student teachers at Kenyatta University; thus, what is the role of teaching practice (TP) at Kenyatta University? What are the processes, procedures, actors and tools in the assessment and evaluation of student teachers on TP? How does a student teacher's gender, category of student program (e.g. regular, school based, opens learning and integrated) relate to the final TP grade? In addressing these questions, it should be realized that the process of instituting benchmarks to achieve quality and standardized TP good practices is not an easy one. The process of assessment and evaluation in TP is not just a matter of a reflected grade but a process that influenced by various interrelated factors such as the nature of the assessor, timing and availability of financial resources, the process of training of student teachers at the University, school environment, ensuring proper role of cooperating teachers among others. Examination of TP in Kenyan Universities shows that the process of assessment and evaluation begins way before the assessor puts the final TP grade on paper to validate the student teacher (Classen et al , 1995, Karugu A.M et al, 2001, Kazungu and Masube , 2001). The university has assumed and ensured over the years that TP assessment and evaluation is grounded in recognized educational assessment standards and by putting priority on validity, reliability, objectivity and benchmarking as guided by global and national standards (Committee on Standards for Educational Evaluation,(2003), Moskal, Barbara M., & Leydens, Jon A (2000). In practice, evaluation is rarely totally valid or reliable.

The paper documents the enduring trends and processes of assessment and evaluation of the student teacher at Kenyatta University using only a case study of two teaching practices sessions of 2006/ 2007 and 2007/ 2008. The 2006/ 2007 academic year teaching practice was in two sessions in one academic year. One session was done in May-August 2007 and

the other in September-November 2007. The 2007/ 2008 academic year teaching practice was also in two sessions; May-August 2008 and September-November 2008. Detailed examination of the influence and interaction of various variables to the TP grade in each session (such as TP environment, gender, student program category) and a comparative analysis of the grade performance in the four TP sessions will be presented in this paper. It is necessary to underscore the fact that assessment and evaluation of TP over the two academic years in question seems to show progressive changes and has been integrating the following recognized sound educational practices and long lasting trends;

- That student teacher evaluation are conducted lawfully, ethically, and with regard to the rights of both student teachers and supervisors / assessors.
- Promotion of well designed and implementation of informative, timely, and useful student teacher evaluations.
- Ensuring that student evaluations are practical; viable; cost-effective; and culturally, socially, and educationally appropriate.
- Ensuring that student teacher evaluations provides sound, accurate, and credible information about learning, performance and professional growth (Joint Committee on Standards for Educational Evaluation 1988, 2003, Moskal, Barbara M., and Leydens, Jon A, 2000).

HISTORICAL DEVELOPMENT OF TP EVALUATION

According to Karugu A.M et al, (2001) the process of assessing and evaluating student teachers on Teaching Practice (TP) has been going at Kenyatta University for over four decades. Kenyatta University College (KUC) was solely established for the training of secondary school teachers in its Bachelor of Education programme. This programme had been started by the University of Nairobi (UON) in 1972 as a crash programme to train secondary school teachers who were in high demand at the time (Republic of Kenya, 1981). Accordingly, KUC admitted its first B Ed. Students in July 1972. The college produced its first batch of graduates in 1975.

From a humble beginning with an enrollment of 200 students, the college's population increased steadily over the years to 2,270 by 1980. At the same time, plans to upgrade KUC to a fully-fledged university had been floated not so long after its establishment. Kenyatta University's reputation as a leading teacher training institution in the country received a boost when the UON transferred the entire Faculty of Education from its main Campus to the constituent college in July 1978. The move was aimed at maximizing manpower, physically facilities, equipment and other resources for enhanced results. At the same time,

two other faculties of enhanced results. At the same time, two other faculties of sciences and arts were also established as entities to offer subject content to the Bachelor of Education (Kenyatta University, 1978).

This development strengthened further the Faculty of Education both in student enrolment as well as in academic staff. For instance, the student population increased from 1153 in 1978 to 1414 in 1979 (Republic of Kenya, 1981). By the time the college became a full-fledged university in 1985, there were 2,320 students enrolled in the Faculty of Education degrees (Kenyatta University, 1988).

From the beginning of the B. Ed degree programme until 2007/2008 academic year student-teachers grades in the teaching practice were not included in the classification of B. Ed degree. Their assessment in Teaching Practice was expressed merely in term pass or fail. This mode has now changed and student-teachers grades in teaching practice, like in any other subject, are now considered in classification of B.Ed degree (Karugu A.M et al, 2001).

THE ROLE OF TEACHING PRACTICE AT KENYATTA UNIVERSITY

The assessment and evaluation of the student teacher against valid criteria reflecting the capabilities required to begin teaching effectively continuous to be an integral component and hallmark of all teaching practice guidelines at the University (Karugu A.M et al, 2001, Kenyatta University calendar 2001-2003, 2006-2009). Teaching Practice (TP) is a core and mandatory requirement in the training of professional teachers at the University. According to Karugu A.M et al, (2001), student trainees rate TP highly and attach greater importance to it in their career preparation. Currently, TP is equivalent to two university units and the average total TP mark of the two subjects appears on the transcripts and accounts towards each candidates' degree classification. Teaching practice (TP) benefit the learners, the participating school, the student teacher, the school collaborating staff, the University and the community in many ways. TP bridges the gap between pre-service training and full-time teaching. TP is often collaborative and collegial in the relationship because the student teacher works together with the two subject (cooperating) teachers). TP models the working relationships that characterize effective schools and gives students opportunities to network, gain real world experience or technical skills, and explores potential job placements or career options (Cates-McIver, L. (1998). Indeed, TP plays an important role in undergraduate and graduate education since it enables a student to gain practical learning experiences not available in the classroom (Classen et al, 1995, Kazungu T.W and Masube J.O, 2001, Karugu A.M et al, 2001) TP, with its required periods of three months, provide the basis and experience necessary for critical observation of teaching and learning and reflection and analysis of practice. Each of these is a key element of teacher professionalism

and is undertaken within the school. Evaluation action is based on experience and reflection on practice and the analysis of grade data and information that is availed from each student teacher. These experiences help build the student teacher's professional growth as a teacher. Generally TP provides the student teacher with the opportunity to "be a real teacher" and to establish if he or she can successfully meet the demands of continuous responsibility in the classroom as demanded by the University, employer, the Teacher Service Commission (TSC) and Ministry of education in Kenya(Kenyatta University calendar 1988-1989, 2001-2003, 2006-2009, Republic of Kenya,1981).

THE PROCESS OF ASSESSMENT IN TEACHING PRACTICE

Educational assessment is considered as the process of documenting in measurable terms the importance and value of gained knowledge, skills and attitudes. Assessment as a process of evaluation and collection of data is based on the University's theoretical frameworks and tools for teaching and learning or standards of performance in teaching practice (Committee on Standards for Educational Evaluation 2003). This process uses assessment tools aligned with Kenyan education standards which in turn helps student-teachers to better understand expectations and set goals for their performance. Assessment also assists student teachers on teaching practice in ensuring their personal and professional growth and development (Classen et al , 1995, Kazungu and Masube , 2001, Moskal, Barbara M., & Leydens, Jon A 2000).

Teaching practice for Kenyatta University assumes formal, internal and external assessment because a numerical score or grade based on student performance in class teaching is awarded after formal observations have been made. Formative assessment (educative assessment) is carried out as an ongoing exercise whereby student teachers are given continuous advice and guidance before the end of teaching practice. Summative assessment is carried out at the end of the teaching practice to assign the final teaching practice grade. In all cases of assessment, standards of quality are considered that aim to ensure a high level of reliability and validity in the entire teaching practice exercise (http://en.wikipedia.org/wiki/Educational_evaluation, Moskal, Barbara M., & Leydens, Jon A 2000).

Evaluation is the systematic determination of merit, worth, and significance of teaching practice using set criteria and standards. Evaluation is also considered as the process of synthesizing the assessment data to render a judgment of quality or value. The changing trends in teaching practice shows that, it starts by identifying and integrating a group of stakeholders such as student teachers, University administration, teaching departments, supervisors, schools, principals, cooperating teachers among others. Thus evaluation

focuses on what will be valued during the supervisory experience and is based on beliefs held about the expectations for the student teacher's performance (Classen et al , 1995,Committee on Standard for Educational Evaluation 2003, http://en.wikipedia.org/wiki/Educational_evaluation).

The overall experience of teaching practice incorporates what can be termed as the assessment/assistance dilemma: thus student teacher assistance, guidance or coaching which requires promotion of learning, growth, and development of the future teacher. This coaching must be integrated with assessment or measurement against some quality or standard of performance. It ultimately results in overall judgments that define whether one is a qualified professional teacher or not. One of the biggest challenges is to enable supervisors successfully balance student teacher assessment with the necessary assistance or coaching (Classen et al , 1995,Joint Committee on Standards for Educational Evaluation 1988, Moskal, Barbara M., & Leydens, Jon A 2000).

ACTORS IN THE ASSESSMENT AND EVALUATION OF TEACHING PRACTICE

Examination of TP during the period in question shows that there are several actors that play both direct and indirect roles to ensure that the final presented TP information is standardized, objective, quality grade that adheres to recognized education assessment and evaluation benchmarks. The prime responsibility for the assessment and evaluation process lies with the University. The university administration provides direction, guidance, financial facilitation and the necessary learning environment to ground the student teacher with the required theoretical background. The teaching practice center within the University, which has had different leadership in the past decade, provides the direction and day to day administration of TP programs during each session. The University responsibility of ensuring success of TP assessment and evaluation is undertaken in collaboration with the cooperating teachers and the Principal, deputy principal and staff of the school where the student teacher is placed /posted. The cooperating teachers provide mentoring of student teachers through guidance, collaboration and demonstration of excellent planning and teaching. Generally the institution provides the necessary environment, orientation, placement and feedback to the University through area /zonal coordinators using recognized tools such as **confidential report forms**. The University in turn is in a position to make judgments, assessment and final evaluation on the capacity of the student teacher as a competent and confident future teacher through its appointed area/ zonal coordinators and supervisors or assessors. The supervisors provide the last line in the assessment and evaluation of TP before the final grade is presented for discussion by the school of education board and senate. From then onwards the verdict can then be made who among the teacher trainees has or has not qualified to be a competent and professional teacher. It

is the integrated and effective use of all these actors and processes that enables to add credibility the final TP mark for the student teachers.

PROCEDURES AND TOOLS OF TP ASSESSMENT AND EVALUATION

External learning institutions to the University such as primary and high schools and colleges which in this paper refers to the 'school' form the pivot point and the link to teaching practice at Kenyatta University. The school gains access to teaching practice students through a process of negotiation and eventual posting (placement) of student teachers in institutions of their own choice. Before then, the University must be assured of the institution's suitable environment and its commitment to professional development and to promoting continuity in teacher education. It must also be assured that the school will model good professional practice before allowing student teachers to undertake teaching practice in it for purposes of focusing on quality and standardised assessment and evaluation (Classen et al, 1995) . Sometimes, due to the needs of individual student teachers, human factors, large number of students and other requirements, some student teachers have ended doing their TP in urban (Nairobi) schools that may not be considered conducive for teaching practice. This interferes with requirements of quality and standardised educational assessment and evaluation (Classen et al , 1995,Joint Committee on Standards for Educational Evaluation,1988, 2003).

Once students have been oriented, they report to their posted schools to undertake three month or full school teaching practice. The student teachers are allowed two weeks school orientation period which they use to familiarize themselves with how the TP institution carries out their day to day operations. They also use this period to induct themselves, interact with the collaborating teachers as they understand the ethos of their teaching practice environment. While on TP, students refer to and use standardized documents such as ***schemes of work, lesson plans, observation record form***, summarized TP rules and regulations among others (Classen et al, 1995).

Supervisors for student teachers are selected through a process that eventually requires the final approval of the teaching practice board. The teaching practice board requires the supervisor to apply both authentic assessment and evaluation processes to determine whether the student teacher is eligible and suitable to be a future professional teacher. After the two week orientation period, supervisors from the university begin classroom visitations based on the specific *job card*(appendix3) and pertinent assessment is done using a uniform standard checklist in form of *observation book* that outlines the criteria to be considered out of 100 marks (appendix 1). Each *observation sheet* (appendix 1) in the book considers aspects related to the student teacher's preparation /planning (20 marks),

introduction (10 marks), lesson development (50marks), learning resources (10marks), and lesson conclusion (10marks). All these form the overall performance profile that generates the final TP grade that is awarded to each student teacher. Each supervisor is supposed to observe the entire lesson from the start to the end of the lesson. At the end of the observed lesson, each student is given the first page of the observation which does not contain the performance profile scores. The other copies of observation sheet are taken to TP center for eventual forwarding to the department of communication technology where subject specialists countercheck the observed comments and use them to improve future presentation knowledge and skills for student teachers and supervisors. The supervisor is required to discuss with and advise the student teacher about their strength, weakness and how to improve where necessary (Classen et al, 1995). This approach agrees with the suggestion put forward by Committee on Standards for Educational Evaluation, (1988, 1984, and 2003) on direct performance observation for student teachers. Nevertheless the critical challenge is to ensure that all University supervisors are able to observe and rate student teachers objectively and reach a valid, reliable, quality and standardized TP grade.

According to the Kenyatta University calendar (2001-2003, 2006-2009) each student is required to be observed teaching in class a minimum of three times in each of their two subjects. To fulfill this requirement in practice, this requires substantial financial resources outlay. Since this is rarely forthcoming in a timely way, in actual practice, each student is observed a minimum of two times in each of the two subjects by different supervisors. Ideally as many university supervisors as possible should observe the two subjects being taught by each student teacher. Usually a minimum of two different supervisors is scheduled to observe each student teacher. This helps to minimize a situation where one supervisor or assessor observes one student teacher four times throughout the TP session. Every supervisor or assessor is therefore required to observe forty (40) lessons in ten (10) days thus four (4) lessons in a day. Most of these requirements have been passed and mandated by the Teaching Practice board and the school of education (Classen et al, 1995, Kenyatta University Calendar 2001-2003 page 244). At the end of teaching practice, respective teaching practice institution also provides out of classroom information for each student teachers using a prescribed **confidential report form**. The aspects considered are attendance, punctuality, reliability, work output, initiative, and interest shown in professional growth, relations with the staff, students and personality (Classen et al , 1995). All these information is captured in the student teacher's **confidential report** (appendix 2). All these assessment and evaluation tools used by the University help to ensure the undertaken TP evaluations are proper, useful, feasible, and accurate. The translation and distribution of the TP marks into literal grade is universally recognized as A=70 and above, B=60-69, C=50-59, D=40-49, E=0-39 (Kenyatta University calendar, 2006-2009).

THE INTERPLAY OF VARIABLES IN THE ASSESSMENT AND EVALUATION OF TEACHING PRACTICE AT KENYATTA UNIVERSITY

i) **Trends in TP evaluation in urban and rural schools** This section shows the statistical and graphical information on TP Area (Urban versus Rural) and distribution of TP scores. In this paper, urban environment considers only schools within Nairobi city, while rural schools are those outside Nairobi.

TABLE 1: TOTAL NUMBER OF TP ZONES/ AREAS FOR MAY-AUG 2007 TO SEPT-NOV 2008

TP SESSION	MAY-AUG 2007	SEPT-NOV 2007	MAY-AUG 2008	SEPT-NOV 2008
NOS OF TP ZONES	14	11	10	16
NOS OF STUDENTS	1183	845	586	1360

Table1 shows that there were a total of four (4) teaching practice sessions used for assessment and evaluation between may-August 2007 to September-November 2008. The number of zones is decided administratively according to the total of students registered for Teaching Practice (TP) in specific zones during each session. The September-November 2008 had more TP zones followed by May-August 2007, September-November 2007 and May-August 2008. The division of teaching practice into specific areas ensures that the assessment and evaluation of student teachers can be carried out effectively.

TABLE 2: TOTAL STUDENT TEACHERS PER TP AREA/ZONE FOR MAY-AUG 2007 TO-SEP-NOV 2008

TP	AREA / ZONE	AUG07	AUG08	NOV07	NOV08	TOTAL
1	KAKAMEGA/BUNGOMA/BUSIA	95	57	35	91	278
2	MOMBASA /MALINDI/ LAMU	110	24	22	81	279
3	THIKA / RUIRU/ JUJA	78	114+31	58	126	407
4	KIAMBU/NAIROBI WEST	70	74	38	53	235
5	MURANGA/ NYERI	135	31	53	100	319
6	MACHAKOS / KITUI	133	31	41	153	358
7	NAIROBI CENTRAL A	139	147	51	64	401
8	KISII/MIGORI/KERICHO/KISUMU	392		71	106	574
9	EMBU / KIRINYAGA/MERU/ISIOLO		44	46		90
10	NAIROBI WEST				81	81
11	NAIROBI EAST ZONE A			106	64	170
12	NAIROBI EAST ZONE B		195			195
13	NAIROBI EAST ZONE C				70	70

14	NAIROBI CENTRAL ZONE B				76	70
15	KERICHO / KISUMU	-			44	44
16	KITALE/ELDORET/NAKURU/NYAHURURU		81	65	29	175
17	MERU /ISIOLO				171	171
18	NORTH EASTERN PROVINCE				16	16
19	*EARLY CHILDHOOD	31	16	-	33	80
	GRAND TOTAL	1183	845	586	1360	3974

*Early Childhood is not an area but a special program/ course evaluated in nursery and primary schools

Table 2 shows the breakdown of teaching practice areas into urban (Nairobi zones) and rural zones (rest of areas outside of Nairobi). Usually the number of TP areas depends on the overall total of students registered per session and per zone. For administrative reasons, about 30 students can make a zone. In instances where the number of registered student teachers is few than 30 for a given TP session (with exception of north eastern province), some TP zones end up being consolidated into one or more zones. Each zone is administered and coordinated by one Area/ Zone TP coordinator. In this paper, the urban TP zones are all Nairobi zones (6) and majority of the early childhood programme students also prefer to do their TP within Nairobi and its environs. The other 13 zones are considered rural zones. It should be noted that the division into rural versus urban is not strict because we have some schools in rural areas that are within town centers such Kisumu town, Nakuru town and Kericho town. The combined number of students who preferred to be posted and assessed for their TP in Nairobi schools (1,222) during the May-August 2007 to September-November 2008 is higher than that of those indicated in any of the rural areas during the same period. Majority of early childhood program student teachers prefer to be assessed in Nairobi. Although no scientific research has been done to determine the actual reasons for student teacher's preference for urban environment, it is generally known that the practice of get paid while still on TP, opportunity for employment and to do non education(i.e. accounting, business, economics) courses and examination tops the list. Most of the schools in urban areas are private owned and some of them do not provide a conducive environment to practicing teaching and eventual assessment. There are instances where cooperating teachers, who should act as role models and mentors to the student teachers do not even exist in some urban schools. Yet, a comparison of supervisor's evaluated grades between the four mentioned TP sessions shows a mean score of 68.2% in the urban and 68.4% for the rural schools. This shows no significant difference in the awarding of TP marks between Nairobi (urban) and rest of (rural) schools. Additionally none of the student teachers from the two environments was awarded a failed grade during the TP sessions in question.

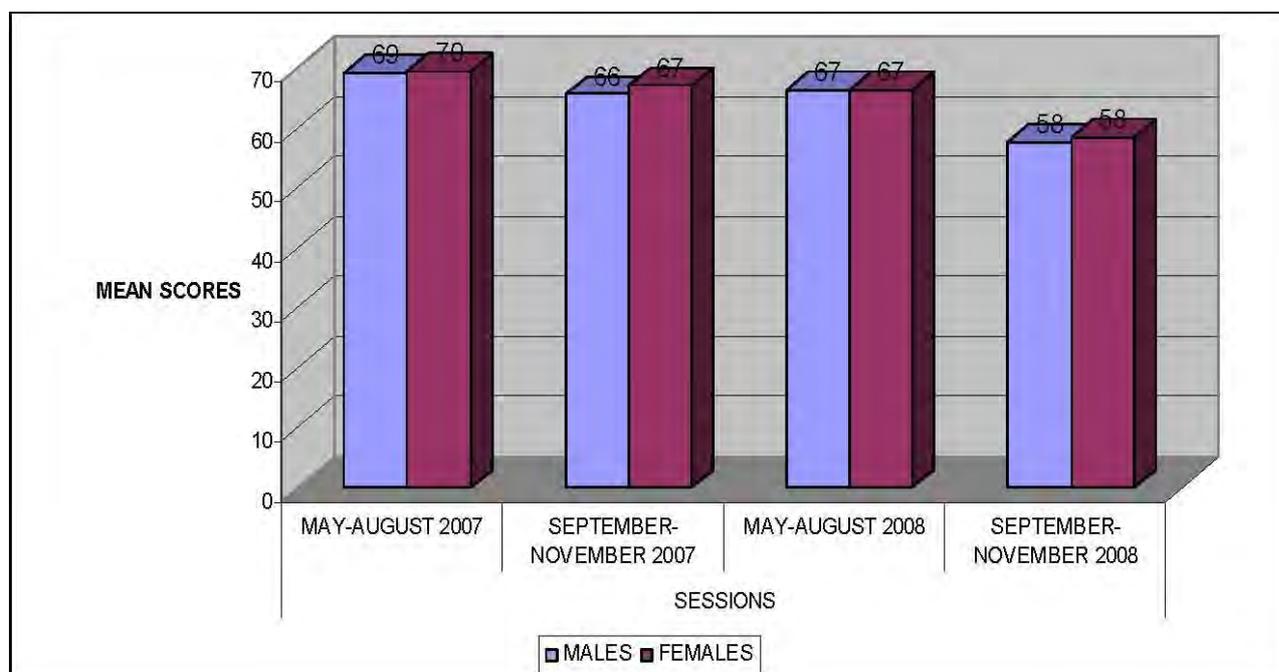
ii) GENDER DISTRIBUTION AND EVALUATION

TABLE 3: MEAN TP SCORES ACROSS PROGRAMS AND GENDER FOR MAY-AUG 2007 TP

PROGRAM	GENDER	MEAN TP SCORE PER GENDER	MEAN TP SCORE PER PROGRAM
INTERGRATED	MALES	69.03825	69.43766
	FEMALES	69.7995	
OPEN LEARNING	MALES	68.95025	68.88107
	FEMALES	68.49057	
REGULAR	MALES	67.95758	68.41391
	FEMALES	68.9635	
SCHOOL BASED	MALES	71.11111	70.79351
	FEMALES	70.43396	
OVERALL TP SCORE PER GENDER	MALES	69.232	
	FEMALES	69.557	
SESSION'S OVERALL TP SCORE			69.394

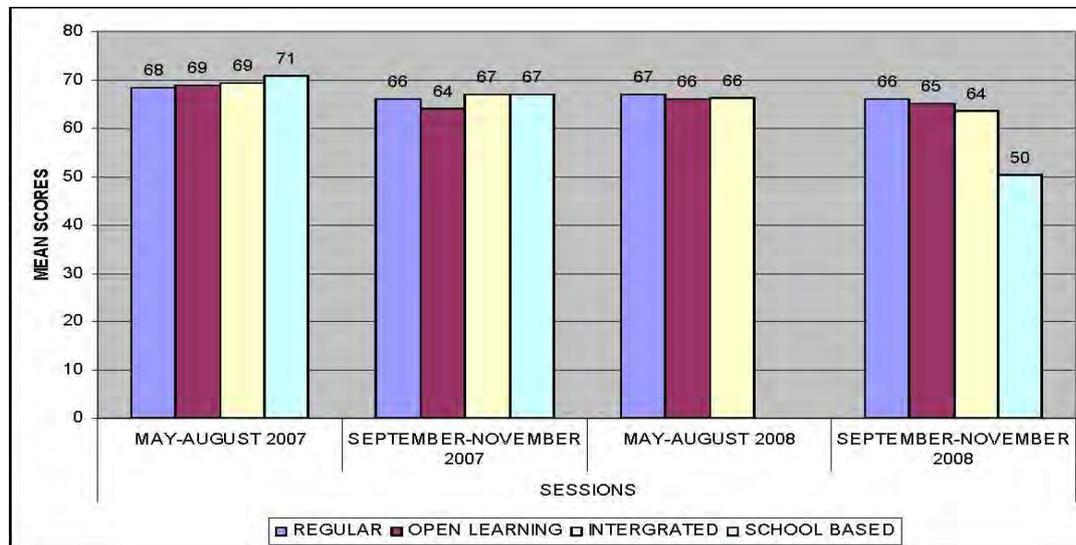
Table 4 and shows that awarded mean scores across gender and student program for May-August 2007 TP. This is a close reflection of the other three TP sessions as shown in graph 1.

GRAPH 1: GENDER ACROSS THE FOUR TP SESSIONS: MAY-AUGUST 2007 TO SEPTEMBER-NOVEMBER 2008



In graph 1, the overall awarded TP mean score per gender of 69 and 70, 66 and 67, 67 and 67, and 58 and 58 for the four respective sessions for male and female respectively shows no significant difference within and between the sessions.

iii) PROGRAM EVALUATION GRAPH 2: TP PROGRAMS EVALUATION ACROSS SESSIONS



***Regular** refers to the student teachers who attend residential learning within campus on full time basis. **Open learning** are those who learn through open learning system that involves use of module and computer technology. They occasionally come for brief sessions of 1 week residential learning. **Integrated** student teachers are those who usually referred to as module II or parallel program. They usually combined or integrated with the regular students. **School Based or Institutional Based Program (IBP)** are those who come during the school holidays in April, August and December to undertake residential learning.

Graph2 shows the various categories of student teacher programs who went on TP during the four sessions and the evaluated mean scores are indicated. There was very close performance by all category programs (regular, open learning, integrated and school based) for the student teachers who were evaluated during the may-august 2007 TP, September-November 2007, and may-august 2008 than in September-November 2008.

SPECIFIC CHANGES AND TRENDS IN THE MAY-AUGUST 2007 TO SEPTEMBER-NOVEMBER 2008

The four TP sessions in academic year 2006/ 2007 and 2007/2008 have witnessed the following overt and salient progressive changes and trends;

- I. All education programs requiring and involving teaching practice being put under one coordinating area-teaching practice center.

- II. A progressive and increasing trend towards vetting TP supervisors to determine and weed out those who do not hold teaching qualifications from assessing student teachers. Among the qualifications required include Master of Education, Bachelor of Education, and Postgraduate Diploma in Education (PGDE) and Primary Teacher 1 certificate.
- III. Mandatory academic staff orientation for all those supervisors intending to and evaluate student teachers on and barring those who don't attend this exercise from going to assess TP.
- IV. Ensuring that student teacher trainees practice teaching and get evaluated in at least two subjects as required by the Teachers' Service Commission (TSC)- the main prospect employer for public schools
- V. An increasing insistence by the TSC that student teachers must take specific subject combination and demand that those who do not have "correct and recognized" content areas and need to be employed the commission must undertake content enhancement. This has resulted into content enhancement students being forced to undertake TP assessment twice.
- VI. Instituting the use of observation sheet with rated item checklist to assist in increasing harmonized and standardized evaluation
- VII. Critical examination of returned observation sheets by a committee of education experts and subject specialists from communication and technology department with the aim of ensuring quality assurance
- VIII. Tendency towards allocating and using subject specialists to observe student teacher lessons especially in subjects such as German and French.
- IX. There has been reduction in the evaluation of student teachers teaching humanities such as history, geography, Christian religious education, Islamic religious education in two sessions of the academic year 2006/2007 and their slight increase in 2007/2008 as compared to science oriented subjects.
- X. A move away from simply indicating "pass" or "fail" in the student teachers academic transcript to the inclusion of actual TP grade and making it to account towards degree classification.

CONCLUSION

To ensure that there is quality and standardized scores that are commensurate with recognized national and international education benchmarks continue on the road to complete validity and reliability in future, the following measures are suggested;

- I. Orientation of academic staff should continue to be thorough and in future have student teacher video taped classroom lessons which the supervisors could use for

- mock assessment to arrive at agreed and standardized approaches to best taught sample lessons during the orientation workshop period.
- II. Feedback and actual samples of good and poor supervisor evaluated lessons during preceding TP session should be presented during academic staff orientation seminar for purposes of internalizing and implementing good TP practices
 - III. The TP observation checklist sheet to be revised to contain research based and international agreed variables for classroom assessment.
 - IV. Several measures to be enforced to ensure that supervisors / assessors strictly adhere to the supervision *job card* that outlines which student teachers must be observed without undue deviations
 - V. Relationship between student teachers and cooperating teachers to be formalized and strengthened. For example, schools could make it mandatory that the cooperating teachers sit and attends student teachers' classroom lessons at least once a week during the first month of teaching practice.
 - VI. The supervision of student teachers should be spread out in such way that each and every student teacher is observed every three weeks for a minimum of three times in each subject totaling to 6 observations at the end of 3month TP period.
 - VII. Include project work in the assessment and evaluation of student teachers as it is done in some public universities in Kenya.
 - VIII. It is recommended that additional research be carried out to determine the effect of supervisors' motivation, financial resources, school environment and the role of cooperating teachers on the outcome of the student teacher's TP grade.

In this paper, It is quite evident that the process of assessing and evaluating for purposes of instituting benchmarks to achieve quality and standardized TP good practices and ensuring progressive trends is not an easy one. It is not just a matter of a reflected grade but a process that is influenced by various factors such as the nature and motivation of the assessors, timing and availability of financial resources, training of student teachers, the nature school environment, the tools used in assessing among others. Thus assessment and evaluation begins way before the assessor puts the final TP grade on paper to validate the student teacher. But in the absence of capturing these salient factors, it should be assumed that the assessment and evaluation of student teachers as shown by the four teaching sessions (May-august 2007, September-November 2007. May-august 2008 and September-November 2008) and reflected by the indicated TP grade is actual objective, valid, reliable, quality based and standardized. In this paper, few selected aspects related to student teacher's teaching environment, gender, program category has been used to show changing trends in TP assessment and evaluation. However other key aspects such as student teacher subjects and staff morale in evaluation of TP should also be analysed in future studies. Nevertheless, without being presumptuous, it is reasonable to say that since what is

measured can be achieved, the student teachers who went for teaching practice in the indicated period qualified through professional evaluation. For future, deliberate measures must be put in place to ensure that at the end of the day, the final TP grade for the student teacher continuous to reflect a truly objective, valid, reliable standardized and quality score that follows recognized international, national and institutional benchmarks for educational assessment and evaluation.

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APPENDIX 1



KENYATTA UNIVERSITY

TEACHING PRACTICE OBSERVATION REPORT

REG. NO.		STUDENT'S NAME	
FORM/CLASS		INSTITUTION	
DATE		SUBJECT	

COMMENTS AND ADVICE		PERFORMANCE PROFILE (TICK)		√
1.	PREPARATION (20) (Scheme of work; Lesson Plan, Objectives, Org. of TP-file)	Excellent	16-20	
		Good	12-15	
		Average	10-11	
		B. Average	8 - 9	
		Fail	0 - 7	
2.	INTRODUCTION (10) (Exciting, Linking with prior knowledge, Voicing, Teacher-outlook etc)	Excellent	8 - 10	
		Good	6 - 7	
		Average	5	
		B. Average	4	
		Fail	0 - 3	
3.	LESSON DEVELOPMENT (50) (Learning activities, mastery of content, Class management, feedback; personality; use of a variety of skills e.g. Q-technique, reinforcement etc)	Excellent	40-50	
		Good	30-39	
		Average	25-29	
		B. Average	20-24	
		Fail	0 - 19	
4.	USE OF RESOURCES (10) (Ability to integrate relevant resources in activities; improvisation; use of a Writing Board (WB))	Excellent	8 - 10	
		Good	6 - 7	
		Average	5	
		B. Average	4	
		Fail	0 - 3	
5.	CONCLUSION (10) (Summary of the main parts; assignment; further reading.)	Excellent	8 - 10	
		Good	6 - 7	
		Average	5	
		B. Average	4	
		Fail	0 - 3	
		Percentage Marks		%

APPENDIX 2



KENYATTA UNIVERSITY

TEACHING PRACTICE CENTRE

P.O. Box 43844

Nairobi, Kenya
Tel 810901 Ext 57492/57011
Email: kutp@ku.ac.ke

DATE:

Students Teacher's Confidential Form

Name of Student:.....Reg. No.....
Subject Combination (1)..... (2).....
School:.....
Report submitted by:.....
(Head of School)
Duration of Teaching Practice: from..... to

1. ATTENDANCE:

(a) Date of Reporting on
Duty:.....
(b) Number of days absent during the above period:.....If absent,
state reasons given by the
student.....
.....
(c) Did the student teacher leave the school premises during school hours frequently,
sometimes or never for private purposes without official
consent?.....

2. PUNCTUALITY

Was the student ever late, sometimes late, or frequently late?
(a) For the commencement of the school day.....
(b) For his/her classes.....

3. RELIABILITY:

How reliable and responsible was the student teacher in his/her preparation of lessons.
Giving and marking of assignments, and participation in school life?.....
.....

4. WORK OUTPUT, INITIATIVE AND CONSCIENTIOUSNESS:

Comment on the amount of work done and the initiative and conscientiousness of the student teacher in doing it. Was the output very good, sometimes insufficient or regularly insufficient? Did the student teacher show above average, below average or average initiative and conscientiousness?.....

5. PLANNING, ORGANIZATION/COVERAGE OF A WORK PROGRAMME:

Comment on the quality of the student's schemes of work, the way it was followed and covered, and on the student's mastery of the subject content and its procedure.....

6. INTEREST SHOWN IN PROFESSIONAL GROWTH:

Did the student teacher show interest (great, satisfactory or little) in his/her professional growth by making regular comments on the lessons taught, and by making and recording observations as instructed in the teaching practice checklist?

7. THE STUDENT TEACHER'S RELATIONS WITH THE STAFF:

Comment on the student teacher's attitude to the staff, his/her willingness to accept and profit from advice, and his/her cooperation with staff members and administration.....

8. THE STUDENT TEACHER'S RELATIONS WITH STUDENTS:

Comment on the quality of the student teacher's relations with the students. Did she/he handle them well and stimulate their interest, participation and cooperation?

9. PERSONALITY AND GENERAL PROFESSIONAL COMPETENCE:

Comment on significant personal qualities (such as dress, decorum, confidence and sincerity) and his/her general professional competence including any matter not dealt with above which you consider important.

10. GRADE AWARDED;

(Circle as appropriate)

- A (outstanding)
- B (good)
- C (satisfactory)
- D (unsatisfactory)
- E (very unsatisfactory)

Signature:.....Date:.....

(Head of school) (School stamp)

APPENDIX 3

KENYATTA UNIVERSITY

TEACHING PRACTICE CENTRE

SUPERVISOR'S JOB CARD

Area:..... Weeks (Dates):

Name of Supervisor:Department:.....

SU
NAME OF SCHOOL S. NO. REG. NO. NAME OF STUDENT 1.
DATE DATE DAT
1.
2.
3.
4.
5.
6.
7.
8.
9.
10.
11.
12.

AREA SUPERVISOR'S SIGNATURE..... SUPERVISOR'S SIGNATURE:.....

THE POLITICS OF EDUCATIONAL FINANCING

John N. Kimemia

INTRODUCTION

Most of the developing countries both in Africa and the rest of the World have continued to spend high budgets on education at the expense of other sectors of national development. This trend has persisted due the traditionally held view that education is the mover of socio-economic developments of those countries. However with the prevailing changes in education and other related areas there has been a shift of emphasis from education to focusing on these other sectors of national development such as Agriculture, Health, Transport, Communication, and Technology as well as the infrastructures that support these aspects.

The current Free Primary Education in Kenya is refocusing the financing of education to this level. The gross total expenditure of the Ministry of Education was Kshs. 125.3 billion in 2007/08 an increase from Kshs 109.8 billion in 2006/07.

FACTORS TO BE CONSIDERED IN FINANCING EDUCATION

The change of heart and attitudes towards education as a mover of socio-economic development may be associated with the following factors:

- (i) The sky-rocketing increases in education expenditures.
- (ii) The uncertainties associated with the role of education in development processes in comparison to other sectors such as Agriculture, Health, Transport, Communication and Technology.
- (iii) The increasing competition between education and the other sectors for the inadequate public finance.
- (iv) The controversies surrounding education as to whether it is more of an investment than a consumption good or both.

First, the high spending in education has become increasingly questionable. This is because there are no tangible direct high returns (including incomes) from the investment in human capital. Apart from the positive gains from the primary education it is debatable whether the high spending in higher education has equivalent higher rates of return from this investment. The measures that have been put in place including the cost benefit analysis (CBA), the rate of return analysis (RRA) or the cost-effectiveness (CE) have not confirmed that education is a promising investment.

Second, the role of education in the development process is also becoming increasingly debatable. This is because whereas we are able to see and assess the impact or outcome from the funds spent on Agriculture, Transport, Communication or Technology, the results or benefits from education remain largely implicit. In particular, we are today witnessing and experiencing rather more negative repercussions from education. This include the unemployed graduates from our institutions of higher learning, the underemployment of the educated youths, the flooded labour market and the consequent brain drain from the developing countries to the developed rich countries such as U.S.A., Europe, the New Industrialized Countries(NIC) of Japan, Malaysia, Singapore, China, etc. In essence, the prevailing situations in terms of education and their involvement in national development is becoming increasingly questionable. In particular, why should we continue to spend more in education if and when the returns of that education continue to dwindle or furnish altogether?

Third, in order to understand the magnitude of the implication for ‘more education’ it is crucial to examine the current Free Primary Education. In the current budget over Kshs. 8 billion is allocated to education annually. (ROC: 2008:48). This government (public) finance covers only the tuition, expendable facilities and the teachers’ salaries. It does not cover other educational costs such as uniforms, transport, boarding or accommodation or the food programmes. These expenses will continue to be paid by the private (parental) financing. In addition, to the high budget the government employed about 6,500 teachers (ROK: 2004). The table below summarises the financial implication of the Free Primary Education in Kenya the 2003/2004 fiscal year.

Table 1: The Financial Implication for the Implementation of FPE (2003/2004)

Aspects of Expenditure	Expenditure (2002/03) (Estimated) Kshs.	Expenditure 2003/04 (Estimate) Kshs.
Curriculum	5,500,000,000	5,300,000,000
Special Education	500,000,000	400,000,000
Physical facilities	5,000,000	3,000,000,000
Disadvantaged groups	1,300,000,000	150,000,000
Media	3,000,000	1,000,000
Inservice training	500,000,000	1,500,000,000
Inspectorate	300,000,000	300,000,000
Total	8,000,000,000	10,500,000,000

Source: Report of Task Force on Implementation of FPE in *Mondoh: 2003:8*.

The mitigating factors that continue to negate the high spending on education include, the need for improved healthcare, the focus on the increasing population and other requirements including food, security, infrastructure and other national priorities. The urban and rural development priorities are also competing for the inadequate public finance.

Fourth, there are evident increasing social inequalities and economic disparities between the developed rich countries and the developing poor countries. This gap is widening. Surprisingly, education may be expected to bridge or to narrow these socio-economic disparities. The high expenditures on education are even supplemented by loans and grants in form of foreign aid. However, the developing countries do not seem to be catching up with the developed countries.

The question that remains unanswered is whether the high spending on education should continue at the expense of other sectors of national development. Is it possible that education, has so far received more than its **'fair share'** of the national cake?

Bray et al (1986) describe education as a vehicle of change rather than an independent force and that the direction the vehicle goes depends very strongly on **who** is driving it and **where** the driver wants to go (Cf: Bray et al: 1986).

The question that may require an answer for our education system is **who** is the **driver**? The stakeholders in education include the government comprising the policy-makers, planners, politicians and other professionals. The beneficiaries of that education comprising the communities and their leaders, the school administrators, the parents and generally the learners. Who among these groups determine the kind of education that will be provided?

DISCUSSION FOCUSING ON EDUCATION FINANCING

There are many educational commissions that have influenced Kenyan education since the attainment of political independence (1963). They include

Ominde Report (1964/65), Bessey (1972), Gachathi (1976), Mackay (1981), Kamunge (1988) and Koech (1999). All these educational commissions have attempted to structure and shape Kenyan education to suit the prevailing circumstances and to meet the educational challenges of the times. But where do these educational reports go wrong in driving the Kenyan education? What are the factors that seem to militate against the positive gains attained or intended by the various educational reforms in Kenya?

The argument that education in developing countries has received more than its **'fair-share'** of the national public finance needs a re-examination. For example, with the current Free Primary Education (FPE) Kenya is spending over 50% of its national budget. In comparison a country such as the United Kingdom spends just about 5% of its national budget. It is even difficult to reduce the high spending on education due to the widening regional disparities in income and economic levels. Thus, while the government could have reduced spending in education with measures such as the 'cost sharing' strategies these could not be applied nationally because of the economic inequalities. The national reforms such as the poverty reduction/alleviation strategies also negate the implementation of the 'cost sharing' strategy in education. The national economic recovery strategies dictate to the government the need to continue with the high spending in education. Similarly, the international conventions to which Kenya is a signatory such as the 'Education For All' (EFA) and the 'Children Right Bill' have directly put pressure on the government to continue spending more on education from the 'public' as opposed to 'private' purse (Cf: Saitoti: 2003).

Whereas expenditures on education have continued to increase particularly with new reforms and strategies such as the FPE in Kenya it is evident that education is no longer the **'sacred cow'** it used to be in immediate and post-independence era. This is because as mentioned earlier, most developing countries including Kenya have moved from a situation of manpower (human resource) scarcities to that of manpower surpluses. The consequent of this trend has resulted to high rates of educated unemployed, underemployment and by extension the brain drain.

It is appropriate to state that schools cannot create jobs and yet education is blamed for unemployment particularly the educated unemployment. The fact is that education has never been a strategy for job creation even when aspects such as technical-oriented or vocationalised education were a focus by the educational planners. Unemployment is not caused by education but by other national and international economic situations (Cf: Maclean: 1986). Education could only be attributed to unemployment in as far as job selectivity is concerned. Educated youths or graduates become selective in taking up employment especially in reference to rural or agriculturally based and blue-collar jobs.

Unemployment causes frustration to the educated and further creates academic overflooding of the labour market. This may unravel what Dore (1976) refers to as the **'Paradox of education'**. It explains how the educated unemployed are frustrated and their certificates and diplomas become useless while at the same time pressure for education expansion and expenditure continue to increase (Cf: Dore: 1976).

The need for more education obviously leads to more expenditure on education. It necessitates more education not only in form of more levels of education that is primary, secondary, tertiary and university but also higher spending at all these levels. The 8-4-4 system of education document refers to education as imparting positive attitudes towards rural areas where 80% of the Kenyan people live. In particular, the document focuses on the role of Agricultural productivity in national development and that Agriculture is the source of employment and income for nearly 80% of our people (Cf: ROK: **8-4-4 system: 1985**). Despite the reforms in rural areas and Agriculture as the mainstay of the Kenyan economy, education has not even attempted to resolve either the unemployment or the inequalities of income.

Imbalances between rural and urban communities persist. Why is there widespread famine that is now a '**national disaster**' and its accompanying poverty levels? Where did the educational planners (initiators of the 8-4-4 system of education) go wrong? Was it in curriculum planning or in financial allocation to education?

Educational financing requires the government's reconsideration of the national policies and priorities. These may include the following alternatives which may have implication on educational financing:

- (i) The possibility of raising the low productivity in education so as to achieve reduced educational unit costs. This may involve balancing input to education with the output per unit costs.
- (ii) Reducing educational service or labour costs currently between 60 – 95% of the total educational budget (teachers' salaries) to equivalent levels in types of education i.e. primary, secondary and university education. The impact and pressures from the trade unions and the service providers may be a big handle the educational policy makers will have to contend with.
- (iii) Can educational planners and economists strive to make savings from better utilization of available resources and facilities? Is it economical and cost-saving strategy to utilize improvised teaching aids and television circuits in education provision, so as to reduce costs through the economies of scale? Is the current national focus on computerizing education going to reduce costs and hence reduce educational financing from the national budget?
- (iv) The high capital investment in education should strive to balance the heavy spending with better quality education. However, better quality requires more capital and better services including not only teaching but also management and supervision.
- (v) There are a number of alternative measures that may reduce educational financing. First, it is important to consider how feasible it would be to be able to lower high

expenditures on higher (university) education to compare with primary education. What would be the risks and advantages of establishing 'open university' education as well as university satellites in provincial and district headquarters? Would the new strategy compromise the quality of education?

Second, would there be a cost-saving strategy if the **technical-oriented education** would be de-emphasized and instead refocus such aspect as 'on-job-training'?

Third, is there a cost-saving strategy if we de-emphasize formal education vis-à-vis more provision of distance education?

Despite the possibility of having in place these cost-saving measures there is a consequent of such strategies to quality. For example, low cost education is likely to be equated to low economic psychic benefits. In particular, in emphasizing rural oriented education as opposed to urban oriented education the resultant view would be seen as 'second best' education (Cf: Kimemia: 2003:127). Rural education cannot be a substitute to urban education and in the same way informal education cannot be a substitute of formal education. This is as it has rightly been observed; education does not determine or influence either the social or economic mobility in the Kenyan situation. It is not the level of education that determines what job or income one earns but other factors such as nepotism, tribalism, corruption etc.

(vii) There are symmetrically opposing views where consideration has to be made between the economic incentives from education and the cultural incentives from education. The demand from the parents and the community is for 'more education' for economic and cultural progress.

CONCLUSION

The propensity for education has therefore proved to be stronger than the priorities set by educational planners and the policy makers. (Cf: Kimemia: 2002: 127).

The prevailing situation dictate that the financing of education should be sought from the private sources while not ignoring the economic disparities which mitigate against such private funding and necessitate public financing of education.

Therefore, the politics of financing education dictate that national and international convention be observed in providing free primary and free-secondary education as opposed to fees-paying education. In addition, to 'free education' the parents and the community

have other educational costs which they will continue to meet. These include: transport costs, uniforms, boarding and accommodation costs.

Finally it is important to note that the Kenyan education and indeed in most of the developing countries there is a crisis in terms of public as well as private financing of education. The debate on whether public or private financing of education leads itself to further questions of quality, efficiency and equity in opportunities and access to education. These quality and equity issues are important and significant in considering whether emphasis should be placed on public financing of education or private financing of education. This is the core of the on-going debate that is currently going on in the Politics of Educational Financing for Kenya as well as for the rest of the developing countries.

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RESTRUCTION OF EDUCATION FOR THE 21ST CENTURY

Prof. Walgio O. Orwa

ABSTRACT

Restructuring of Education system is based on government policies and objectives of education. These policies and objectives are determined by Education commissions or committees. Since independence, several African governments have appointed committees and Commissions to study and propose the best of education system, which can serve respective countries. The Federal Republic of Nigeria has National Policy of Education (1976). Republic of Botswana had "Education for Kigisono" Report (1977). The Republic of Zambia Education Commission (1977). All these actions on the part of Governments aimed at restructuring education systems, which is relevant to independent African states.

Kenya provide a good menu for discussing, the restructuring education in the 21st century. The country had had several education commissions since 1948. As in preamble to discussing restructuring of education system, a brief summary of these education commissions will be presented below. This will be followed by discussing philosophy, policies and objectives of Early Childhood Education, Primary Education and Secondary Education in Kenya as a case study to the restructuring in each cycle will be presented cooperatively in light a proposed restructuring education in the four education systems in Kenya: Early Childhood, primary secondary and higher education.

EDUCATION COMMISSIONS AND REPORTS IN KENYA AND TEIR EFFECT ON THE PROVISION OF EDUCATION

Introduction

As we discuss provision of education in the 21st Century, it is appropriate to have a brief at the past education commissions and reports and their effects on the provision of education.

The Education Commissions and Reports

Since 1948, there had been seven education commissions and reports in Kenya. There are: African Education in Kenya, (The beecher Report) 1949, a Study of Education Policy and Practice in British Topical Africa (the Binns Report) 1952. The Kenya Education Commission (The Ominde report (1964), the National education Objectives and policy, the Gachathi Report (1976). The second University Report The Mackay's Report 1981. Presidential Working party on Education and –Man Power Training for the Next Decade and Beyond (The Kamuge Report) 1988 and of course the Koech Report (1999).

This is not the summary of the seven above reports. It had simply selected some aspect of the reports which have had either positive or negative bearing on education system. It is necessary to take account of these reports as a preamble to discussing the system of education we should have in the 21 st Century.

The Beecher Report 1949

The Beecher report has had some far-reaching effect on Education. Some of these effects are felt today fifty years later. The positive contributions of the Report were: its call for the establishment of unified teachers' service. Before Beecher recommendations teachers were either employed by individual Board of Governors or Local Authorities.

The Report also recommended improvement of teachers salary scales, which before the report were zoned. Along with the other recommendations, the Report also called for contributory pension fund for teachers.

On the negative side, the Report reduced basic primary education before examination from six years to four years. This meant that children stay in school for only four years before the first elimination examination. Proponent of the Report argued that four years was too short for pupils to get sound knowledge of literacy and numeracy. The Report also introduced Common Entrance Examination in each province.

The Binns Report 1952

Perhaps one of the far-reaching effects to Binns report was the dropping of Kiswahili as a medium of instruction and an examinable subject. "the change from Kiswahili to vernacular produced confined from up-country who could speak Queens English, but could not communicate in national language. On the positive contribution was the Reports "stress of the 1948 Teachers Certificate Ordinance which allowed teachers irrespective of academic qualifications to sit for examination for immediate higher grade. This recommendation had a greater positive effect on teachers' academic development. Many Kenyans both in Public Sector and University service achieved higher education through private studies. Today we have several professors in our Universities who started as primary school leavers with P3 then call T3 studied privately and gained admission to universities and went to earn their doctorates, and ended up as University Professors.

The Ominde report

The Ominde report is noted for abolition of racial schools, agricultural and gardening in primary schools and introduction on 7-4-2-3 system of education. Ironically immediate pre-Ominde structure was primary (KAPE) year, secondary two segments of, (KASE) years and Cambridge 2 years and 2 years matriculation at Makerere. This comes up 9-4-2 post-university system. In post-Ominde system. Europeans and Asian Education system was 7-4-2 while African education system was 8-4-2. The European argued that Africans were slow hence extra year for primary education!!.

The Gachathi Report 1976

The second post-independent Education Commission, "The Nation Committee on Education Objective and policies, also known as The Gathathi Report (1976)" made some down to earth, recommendations for the improvement of education. Unlike the Ominde Report which discouraged private school, the Gachathi Report supported private schools "so long as parents choose to pay the cost". The result was mushrooming of private schools in the country. The Report further recommended the integration of Harambee schools into the National school system. Although the Committee had some very realistic recommendations, this Report was never given due attention. There was no Sessional Paper as a Government reaction to the recommendations. The Report was not presented to the parliament for debate. There was therefore no official policy on the Report. However, the Report having been chaired by the permanent secretary, Ministry of Education, some recommendations were implemented in piece meal fashion.

The Waruhiu commission 1980

The Waruhiu Commission Report on the Civil Service Review, although strictly a civil service review committee, touched on the teaching service. The Report brought the teachers' salaries and other terms of services in line with the civil service.

The Second University the Mackay report 1981

Although the Mackey Report's main objective was a study for the establishment of a second university, the Committee went beyond its Terms of Reference and touched on the country education system. It recommended the restructuring of education system from 7-4-2-3 to 8-4-4. It is after this commission that major restructuring of education was undertaken without adequate debate on the proposals. Attempt to debate the system was strangulated by the Executive Branch of Government by declaring that those arguing about the system are anti-government.

The introduction of 8-4-4 shows the overcrowded curriculum, the 85% local secondary admission, and the abolition of private candidate examination. The result has been producing a nation of illiterates. Those bright primary school leavers who did not gain admission to secondary education for one reason or the other were destined to primary education for life.

Whereas private candidates excelled up to University, there was no chance unless one attended secondary school. The much academically rewarding of 1948 Teacher Certificate Ordinance was repealed by 8-4-4 system which required that candidates for KCSE must attend at least 3 years of secondary education. For twenty five years, Kenyans have had no opportunity to study privately and go beyond primary education.

PRE-SCHOOL EDUCATION RESTRUCTURING EARLY CHILDHOOD EDUCATION.

Introduction

Any education system begins with Early childhood Education. It is therefore important to start with this cycle of education, childhood may be divided into three phases. The first stage is from 0 – two and a half (2½) years. The second phases is two or two and half (2½) to five (5) years. It is however safe to say here that there is no formular for the recognition of child's readiness to move from one stage to the next. This is because development of child's readiness follows an individual pattern.

Early Childhood Education Programme

Education in the period under discussion had been known by different names, with different origins and connotation. The most common names are: Kindergarten, childhood, Montessori centres, Sunday Schools and Koranic Schools.

Historical Background

The history of early childhood education can be traced to the 18th Century. Rousseau (1712 – 1778) propose early childhood learning in this book *Emile*. He suggested that the child be educated through his/her own exploration of the environment. He argued that better education could be obtained through physical activities and perception of nature. Pestalozzi (1746 – 1827) advanced the theory of developing natural instincts of the child without any restriction. He wrote that method of instructing a child could either develop or retard child. While accepting discipline, he recommended that it should be based on child's experience with objects, places and his/her environment.

The other philosophers like Herbert (1776-1841) discouraged child learning based on mere accumulation of knowledge. He taught that a child be motivated and make contact with what is already known. Forebel (1782-1852) advanced the child centred learning theory. According to Dewey, learning should be democratic. The child should have his/her freedom to learn.

EARLY CHILDHOOD EDUCATION PROGRAMME

This section will briefly discuss the early childhood education listed at the beginning of the article.

Kindergarten

The oldest early education programme was froebels' Kindergarten movement. As the name implies, this is a garden where children can play and grow. This programme should be looked at from urban environment point of view – In big western towns and cities (Paris, London, Rome etc) open spaces for children are almost nonexistent. It is therefore necessary to get “a garden” in urban centres where children can play and grow. In the industrial nations, these are private plots. On the other hand in developing nations where there are abundant space in estates, the “Garden for children” approach should be looked at a fresh.

(b) Nursery School Movement

The nursery school concept was made popular in the Eastern bloc. After the Russian revolution and the emancipation of women work in factories, there was need for place where breast-feeding mothers could leave their children under the care of custodian while they went to work. The places where children were left were called Nursery. It was not a place for learning. The idea of learning was a later development.

(c) Day Care Center

Day care Center originated from the United States of America. Its main objective was to get a place where working mothers could leave their children. Apart from protection, the programme was also to provide opportunity for a child to develop physically, socially and accept himself/herself as a member of the larger society by being aware that there are members of the community apart from the nuclear family.

In Kenya, in the 1930, there was what could be pre-school or early childhood. There was sub A and Sub B, immediately after independence, primary schools were charging 20/= fee, while day care Centres charged on 2/= per month. Some parents opted for cheaper day Care Centres, assuming that theses centres were offering what primary schools were

offering. Parents' expectation forced Day Care centres to adapt primary School syllabus. This was the beginning of formal learning centres for early childhood which were originally places for protection and play for young children.

PR-PRIMARY PROGRAMME

Pre-primary education programme was a creation of the Nairobi city council. It is alleged that when the Council lost its Primary School Revenue, through free Primary Education in 1974, it introduced a compulsory fee paying pre-primary school programme as an appendix in council's primary schools. This move became the genesis of fee paying in early childhood education, which previously had been free service. It also forced urban parents to enrol their children in the early childhood "education" institution, if these children were to gain admission in primary schools.

Note:

Sub A of one year }
Sub B on one year } then 1st standard 1 – standard 6

Standard – Predetermined level of performance in a particular level of learning.

PSYCHOLOGISTS AND EARLY CHILDHOOD EDUCATION

The later Psychologists basing their work on Rousseau, came up with theory of maturation. These Psychologists argued that development of any organization (man included) begins with conception and develops in an orderly manner. Many kind of behavior follow an orderly sequence, provided that the environment is sufficiently favorable.

Developments such as using hands and fingers, crawling, standing, weaving, walking all follow a sequence. The activities come when the child is ready for them. Hilgard (1962) cites experimental evidence to show that the process of change in behaviours is determined by growth within rather than with influence from without. The psychologist gives an experiment of restricted Hopi child. Through the training of wins in typing. Despite restriction, these children develop normally such behaviour as putting in the mouth, grasping object, playing with hands and sitting up when they reach the right age (Maturation age).

MOTIVATION AND EARLY CHILDHOOD EDUCATION

In early childhood education programmes, the role of motivation and training should be seriously considered. The learner should be allowed to be "ripen". Before the age of reasoning, the child can conceive but not compare, he can have sensation but no

understanding. A child between 3 years and 5 years collect one book from one point and three books from another and count them, but he is not yet ready to work out $2 + 3 = 5$. This abstraction is beyond his/her ability.

LANGUAGE IN EARLY CHILDHOOD

In language learning, the child learns one single language but two languages are beyond his/her ability. Two languages call for comparison, but at this age, the child is still unable to compare. At the age of 3 years to 5 years, knowledge in river, mountain and town are on paper in which they are shown. At this age, the child has not developed moral relations. So history is beyond his/her comprehension. In language education, the child in early childhood education centre should hear only words he/she can pronounce. It is important to take note of the foregoing issues when developing early childhood education curriculum. Again if training is given to one twin while other is left without training, there is not much difference between the twins when maturation time is reached. It does not matter whether one of the twins had a head start. When maturation age is reached, even the untrained twin, catches up very quickly. Based on experiment, the following observations can be made on maturation, training and learning of a child:

- The rate of development remains uniform with wide of stimulation
- The more mature the child, the less training is needed to reach a certain level of proficiency
- Training given before maturation readiness may either result in no improvement, temporary improvement or fear to learn
- Pre-mature training, if frustrating may do more harm than good.

EARLY EDUCATION CURRICULUM FOR THE 21' CENTURY

From Rousseau to the present philosophers and psychologists have emphasized that the aim of early education should be non-academic and non-teaching approach. In a nutshell early childhood education should provide the following:

- Opportunity for physical development
- Opportunity for socializing in readiness for primary
- Opportunity for adequate supervision and protection while the child is in the early childhood centre
- Opportunity to bridge the child's life at home with parents and the child's life in school with larger group than circle
- Opportunity to provide atmosphere for child to gain better understanding of him/herself and learn to get along with other children.

Looking at the above literature on early childhood and the foregoing early childhood education objectives, the challenging question is, does a child need institution to get the above? Can a child achieve the above in non-institution, non-formal learning environment?

PROGRAMME OF EARLY CHILDHOOD EDUCATION

This question can be answered by revisiting the earlier childhood education programme. As it has been presented. Kindergarten was meant to provide children with a playing ground: where they could grow physically in an environment where empty spaces were scarce. This makes sense in cosmopolitan cities like Rome, Paris, London, new York and other urban areas in the world.

The day Care centres were organized to give care to children while their parents were working. In some way it was a collective sharing of baby-sitting which when left to an individual family is rather expensive.

As for pre-primary, it was in some way a creation of the Nairobi city council as a way getting revenue. This was supported by the resolution of City Education Board that “No child shall be admitted into class in any city schools unless the child has attended pre-primary schools, in which business took the first stage while education was mainly subsidiary to making money by these instructions.

From the foregoing presentation argument and claims, there are more questions: Is private school for early childhood education cost justified? Do children in large family and in contact with open grounds in the community in which socializing is a part of life in the house and the community need a designated institution for the purpose?

This article will not attempt to answer the above questions. What is abundantly clear is that formal early education for children between the ages of three and four or five is not professionally justified. There is no academic reason why an early childhood education school should charge as much as 10,000/= per term for a child of three years old. We believe that early childhood centers is unavailable in urban areas where free spaces are not available but paying high fees in pre-primary may not be justified. But whichever the case, where early childhood institutions are necessary, they should avoid introducing children to the strenuous of formal learning. Their aim should only be to enable children to achieve the objectives listed above and have a smooth progression to primary school cycle.

RESTRUCTURING OF PRIMARY EDUCATION

Introduction

As it has been argued elsewhere, no change in education should be implemented without thorough debate. Alternative systems, some which may concur with the appointed commission recommendations, should be considered. Again, as it has been shown, an education commission report can have a far reaching effect on provision of quality education. It is important to receive such reports with an open mind.

It is with the above in mind that the essay on effect of past education commission have been discussed. Along with this, early childhood Education is the foundation stone in the provision of education. That is why it became necessary to discuss this cycle immediately after the essay on education commission. The next step is to look at Primary Education system.

What is in years?

In Kenya attempts at education innovation over the years focused on playing around with the number of years. The issues have been, how many years a learner should take before sitting for an elimination examination at the end of each cycle.

- **6-2-2-2 Cycle System**

The first cycle 1930 – 1950 was 6-2-2-2. In this system, children took six years in primary school before sitting for an eliminating examination. Those who passed were admitted to the next two years cycle, which were then called form, I and Form II. After which the learners sat for Kenya African Preliminary Examination (KAPE). The successful candidates were admitted for a further two years of Junior Secondary School cycle then called Form III and form IV. The candidate's then sat for Kenya African Secondary Examination (KASE). The successful candidates joined a further two years cycle then called Form V and VI. At the end of this cycle, the candidates sat for Cambridge School certificate. This took twelve (12) years of primary and secondary education.

- **4-4-4 Cycle System**

In 1950s the Beecher report (1948) introduced 4 – 4 - 4 Education System. Children took four years in primary education cycle before sitting for the first examination. Those who passed their examination proceeded to a four-year cycle then designated standards 5,6,7 and 8. This ended with Keya African Preliminary Examination (KAPE). Successful candidates went to four-year secondary cycle, then referred to as Form I, II, III and IV, at the end, candidates sat for Cambridge school Certificate. Here as in the 6-2-2-2 cycle, took twelve (12) years for primary and secondary school.

- **8-4-4-System**

In 1984, the education cycle was structured 8-4-4 system. Learners took eight years in primary school before sitting for Certificate of primary Education (C.P.E). Those who passed their examination were admitted to a four-year secondary cycle. After that learners sat for secondary school leaving certificate, Kenya Certificate of Secondary Education. Here again, as it can be seen, it took 12 years for primary education and secondary education. One component of 8-4-4 system was the elimination of 2 years pre-university. Candidates were admitted to university directly after a 4 years secondary education. The 8-4-4 system adopted the United states High school system. However, the 8-4-4 system ignored one aspect of the American system that is most of the undergraduate degrees is pre-professional. The 8-4-4 system went directly to the professional education and training programme.

- **WHAT ARE OTHR SYSTEMS**

It may be said, “we do not need to invent the wheel’. The wheel was invented may years, ago. In a few paragraphs above, we have presented our wheels and attempts to repair the wheels over the years. We will now briefly look at others. Lionel Eivin (1981) and Edmund King (1976) have discussed education system in other countries, which will be presented below.

United Kingdom system – age 5 – 16 Years

In the United Kingdom, education curriculum is simply from age 5 to 16 years. Primary school is divided into first School of 3 years in some schools and four years in others. The second phase middle school takes seven (7) years in some schools and in others 8 years. Secondary school is 4 years, here primary and secondary school takes 12 years. Children must go to school at the age of five years and cannot leave until they are over 16 years. It takes 12 years of primary school and secondary school. The only difference between our curriculum and the UK curriculum is that the latter has no elimination examination. Children move from grade 1 to grade 12 without interruptions.

- **United State of America 8-2-2- System**

The U.S.A system is loosely divided into Elementary schools lasting 8 years, Junior High School grade 9 and 10 and Senior High School grades 11 and 12. The years of primary education and secondary education is 12 years. Here again, there are no barriers in the form o examinations. Children move from grade 1 to 12. This period of schooling is compulsory for all children.

France Education system 5-5-2

Education in France may be presented as 5-5-2. The first cycle of 5 years is called elementary education. The second stage or first cycle secondary education lasting 5 years. The last cycle of 2 years is second cycle of secondary education. Here again it is 12 years before joining university education.

- **Japan school system 6-3-3**

Japan pre-university education system is divided into three segments, namely: Elementary school 6 years. 3 lower secondary and 3 years upper secondary. The pre-university education comes 12 years.

- **India Education system 5-3-4**

The India system is structured in 5 years lower primary school (basic school). The following stage is 3 years of Higher Primary or Middle School and the last pre-university stage is 4 years of upper secondary school. The pre-university system is 12 years.

- **Former Soviet Union Education system 8-4**

“The former Soviet union education system was 8 years of primary school and four years of general secondary education, a total of 12 years.

WHICH EDUCATION SYSTEM FOR THE 21ST CENTURY?

There are a few factors, which have negated education innovation in Kenya. First our education is examination controlled. The period of a cycle is expected to respond to examinations and not subject matter. On the other hand, other people’s systems are free of examination. The length the cycle are controlled by content in the curriculum. One illustration is given below. From the chart, we can see that Kenya has very strong barriers, which every learner must struggle to go through, and very few learners screen through.

“This does not enable innovation towards free learning.

AGE	YEARS 1 2 3 4	5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21								
YEARS IN SCHOOL		1 2 3 4 5 6 7 8 9 11 12 13 15 16								
UNITED KINGDOM	PRE	<table border="1" style="display: inline-table; vertical-align: middle;"> <tr> <td>16</td> <td>C</td> </tr> <tr> <td></td> <td>C</td> </tr> <tr> <td></td> <td>S</td> </tr> <tr> <td></td> <td>E</td> </tr> </table>	16	C		C		S		E
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UNITED STATES	PRE-	ELEMENTARY 6 YEARS	JUNIOR 3 YRS	SENIOR 3 YRS		UNIVERSTIY 4 YERS
KENYA	PRE-	PRIMARY 8 YEARS	SECONDARY 2.0 YEARS		UNIVERSITY 4 YEARS	

Elimination
MAJORITY
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THE PROPOSED EDUCATION SYSTEM IN THE NEXT MEILLENIUUM

This paper proposed that in our next education system, the main goal of basic education system should be acquisition of literacy. Numeracy and manipulative skills. The production of learners who are ready for “the world of work” which dominated the 8-4-4 system at the expense of literacy, numeracy and manipulative Skills has Misplaced. Primary school leavers are too young. Children leaving primary school on the average are at the age of 13 or 14 years. Even if they have the skills, the Child Labour Law does not allow their employment. It is therefore important that the emphasis in the next primary cycle should produced leavers who can continue reading all their lives. Those who can competently add, subtract: multiply and divide. Those who can use numeracy skills acquired to run a small business. This is possible because many of our administrators who look over from colonial administrators at independence were primary school leavers.

It is further proposed that Kenya should start thinking about extend years of basic education. As of now listening to the debate on the system of education in the country, one is surprised to see that we have confined ourselves to the shortest possible period of basic education. The period of primary education cycle should not normally stop after 7 or 8 years. This period is due to limited resources. In an ideal situation, children should be in school until they are 16 to 18 years. They should leave as young adults who are mentally and physically ready to fend for themselves. Basic education in the 21 “century should be extended to the age of 16 or 18 years before a learner leaves school.

Second, as it had been observed above, more attention has been paid to chronological rearrangement. While leaving subject matter to be learned in the side line. While other Nations’ systems show that whatever the system, pre-university education cycle is normally 12 years and the system leavers being between 16 to 18 years old. From the above, Kenya

should know that manipulating the years is not the issue. The main issue in education is the curriculum content. The subject matter that a learner acquires in basic education.

Third, it is surprising if not puzzling for Kenyans to be debating on shorter or longer primary education cycle. From the debate, it seems that Kenyans believe that the first terminal education for the majority of citizens should be primary education of either 7 years or 8 years. As we have observed from other countries, compulsory education is up to the age of 16 years. It is therefore surprising or should we say depressing that instead of Kenyans agitating for uninterrupted 12 years of education we are bogged down with the debate on either reducing the basic cycle of schooling or leaving it at 8 years. This paper proposed that education planners should start thinking about non-elimination free education up to the age of 16 years.

As we think and work towards 12 years of basic education, this paper proposes a three separate programmes of secondary system. Any education system should respond to purpose. It is unrealistic to assume that over 7 million children in primary school should end up in University. That assumption is day-dreaming. As it has been, only small a number goes to secondary school and a negligible group end up with University education. Our 12 years basic education should respond to learners' aptitude towards a given vocation.

RESTRUCTING OF SECONDARY EDUCATION SYSTEM

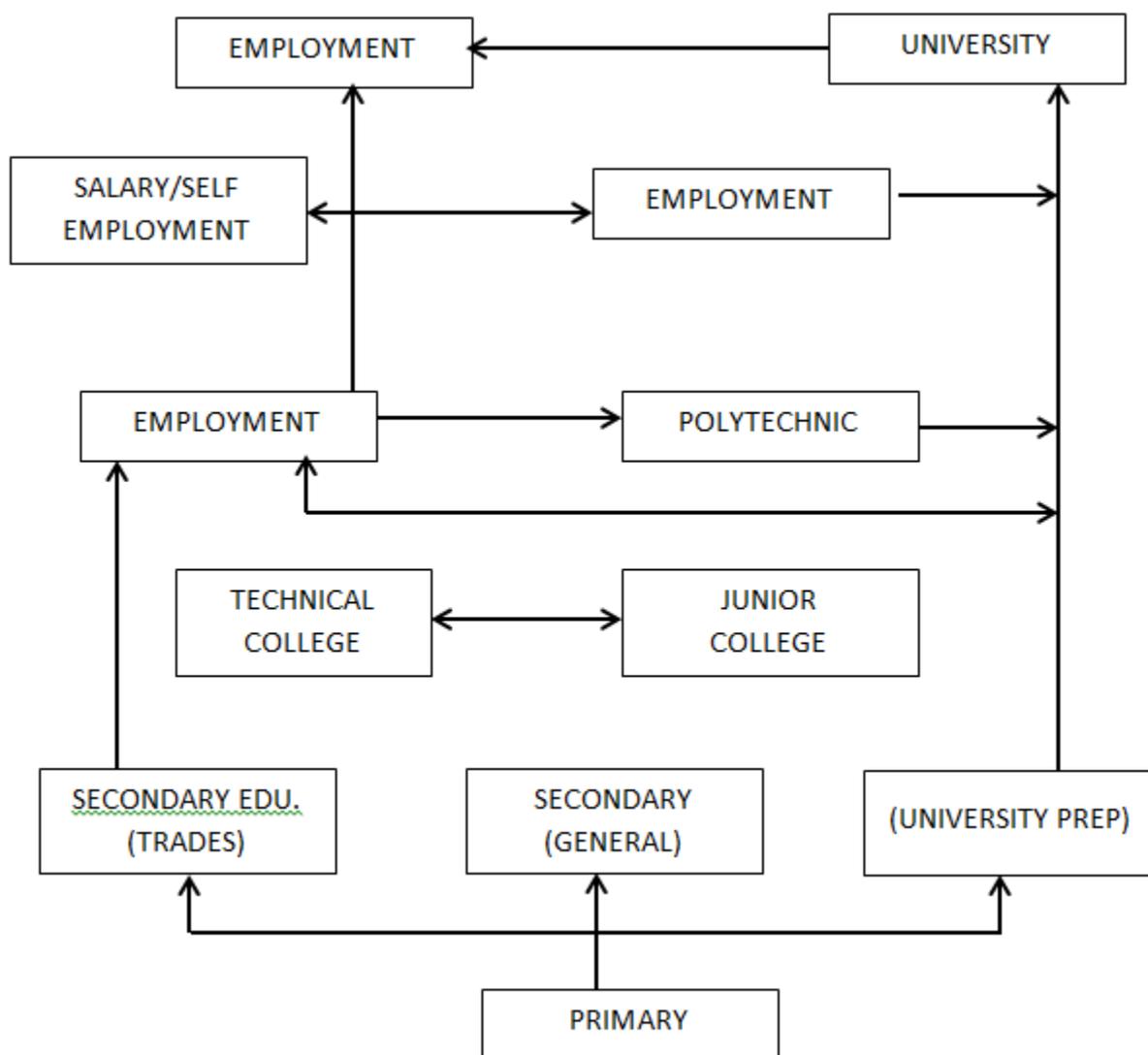
1. Introduction

The thesis of paper had in every section called for a fresh look at our education system. The pre-amble to this paper was a closer look at review of past education commissions and their effect on education system. Early Childhood Education as a corner stone of sound education was discussed in light of philosophy and psychology of the child growth and learning. It has been argued that primary education is mainly to enable the child to acquire sound literacy, numeracy and manipulative skills. It should also enable the child to become a balanced citizen who is able to adapt to the environment. Education as a medium of acquisition of serious academic knowledge and vocational skills should begin at the secondary school cycle. This section will now discuss that role of Secondary Education.

2. Proposed Secondary Education System

In order to cater for the majority of our children in secondary school and keep them in school for 16 years and above, a three programme system of secondary school is proposed. This had been proposed based on a few factors. First all our children do not have the same

intellectual ability. Therefore not all of them can pursue pure an academic curriculum in secondary schools. Considering the forgoing, it is necessary to offer alternative programmes for secondary school cycle in order to accommodate as many children as possible. It is therefore proposed here that secondary school cycle should have three programme namely: University Preparatory, General Education and Vocational Preparatory. The chart, below represents the proposed system.



PROPOSED EDUCATION PROGRAMM

3. University Preparatory

Secondary education cycle should have a purely academic programme. This should be in line with the British grammar school or United States College preparatory in comprehensive

High School. Admission to the academic programme should be purely on intellectual ability. The main purpose of the programme is to prepare students for university education. The curriculum will therefore be purely academic.

At the end of this programme, leavers should be awarded a High School diploma, designated (University).

4. General Education

The next programme should be the general education. As the name indicates, this will be a programme between university preparatory and vocational preparatory programme. Learners in this programme will be free to take subjects in both academic programme and vocational programme. This will be for children who mature late. At the completion of the programme, the graduates of the programme can either be admitted to technical institute or junior colleges. To support this programme, the institutes and junior colleges should offer an Associate Degrees, along the American Community Colleges. Students who do well in junior colleges or institutes may get admission to universities. Upon admission to universities, the Universities may waive some units based on what these students took in their institution junior colleges. This is not strange, Kenyatta University of Agriculture and Technology (JKUAT) is already waiving units of graduates from diploma colleges and National Polytechnics. Those who fail to secure admission to the University can comfortably enter the world of work either as self employed or salaried employees. The end certificate for this group should be secondary school Diploma (General)

5. Vocational or Trades Programme

The last of the proposed three secondary programmes should be Vocational Education Programme. Students admitted in the programme should concentrate on a given trade such as Carpentry, Masonry, Electrical, Mechanical, Tailoring/Dressmaking, Catering, Hairdressing e.t.c these students should take a comprehensive trade education for 4 years of secondary school. They should be given basic academic programmes such as History of Kenya, World history, working English, working Mathematics and any other required applied subjects to their trade. After 4 years graduates of this programme should be able to enter employment either as self-employed or salary employment. Those who perform exceptionally well and have aptitude for further academic work may join Technical colleges or junior colleges. The certificate for this group should be secondary school Diploma (vocational studies).

In the four sections, we have analyzed and looked at the first three cycles of education in the country namely Early Childhood Education, Primary Education and Secondary Education.

We have argued that each cycle should be re-examined and innovated to meet the challenges of this millennium. The purpose of education is to enable the learner to change with the ever-changing environment, locally, nationally and internationally. We cannot remain complacent. We have to be dynamic so as to make our education system dynamic and responsive to the ever changing political, social and economic environment.

EXAMINATION AND RESTRUCTURING OF EDUCATION

Introduction

The release of examination in Kenya has been met with protests, crisis and riots by the consumers; the students. The most serious one being the July 1974 by University of Nairobi Students. The crisis was in response to mass failure by Architect students. The crisis was so serious that the university authority had rescinded the mass failure in the department. This was followed by another crisis in 1992.

Recently, there have been several crises upon the release of examination results. In October 2000, there was protest and riot against the introduction of carry-over resit by University of Nairobi, (Daily Nation October 16, 2000). During the same period Maseno University students protested against changes in examination rules and regulations. (East Africa Standard September 29, 2000). There was protest and riot at Egerton University against supplementary and repeating the year of study (Daily Nation, January 5, 2002). It is the above cited events that rose interest in the study of common rules and regulations of examinations in public universities.

HISTORICAL BACKGROUND

Examination system as it is known today was introduced in England and Wales over one hundred years ago. (STEP 1974: SOC.S) Since then, and for a long time examination has been **Norm-referenced based**. This is a system of examination which lists scores of examinees from highest scorer to the lowest scorer of examined candidates. It is based on matching individual against individual in performance and achievement in a given examination. This type of examination has maintained the tradition of achievement according to merit. It has been used mainly for quantity control where the number of success is decided on predetermined availability of resources and capacity in the next stage in education cycle. In the last part of the 20th century a new approach to examination was introduced. This is **Criterion – referenced**. This system of examination is based on predetermined standard of achievement expected of the learner. The individual examinee's scores are compared with the scores that represent direct and acceptable level of performance in specific content area or with respect to specific behavior task.

This later approach is based on objectives of examinations which are to:

- (i) Enable the teacher to diagnose individual learner's strengths and weaknesses as opposed to indentifying learners' superiority or inferiority over another learner.
- (ii) Enable the teacher to match curriculum to learners' strengths.
- (iii) Enable the teacher to give feedback to learners and parents on the progress the learner should be making.
- (iv) Enable the teacher to give advice to the learner on necessary remedial assistance the learner may require.
- (v) Enable the teacher to determine how far the syllabus objectives have been achieved or whether there is need for the teacher to adjust the teaching – learning process.
- (vi) Enable the teacher to give correct information on the learner's standard of achievement to institutions of higher learning, professional training or job placement.
- (vii) Orwa (2004) study looked at the performance of reporters to determine whether reporting a year of study is justifiable. The result of the study does not support the regulation of repeating a year of study. The study found out that out of fourteen (14) courses attempted, repeaters still failed in 12 courses. It was further found that in second attempt eight candidates scored negative mean average.

It also defeats logic why a student who passes 13 courses and fails in only one is forced to repeat all the 13 courses in which the student has reached the predetermined standard and had satisfied the examiners both internal and external, the Faculty Board of examiners and university Senate and Senate Board of Examiners. What the examiners, internal faculty and senate it telling the public is that the learner who is repeating has not met the standard in all the courses he sat. This is not the case. It is also punitive to the candidate.

Kenya Public Universities adapted University of East Africa Examination rules and regulations without any amendments. University of East Africa Calendar (1967) regulation states:

No candidate shall be permitted to enter upon the second year of study until he has passed the university examinations at the end of the first year (p.455). This was common to all the three universities' regulations (Dar-as salaam (1992-93), Makerere (19991-93) Nairobi (1979-80)).

This is different form university of South Africa (1971 calendar). Its regulation says: A student shall pass at least (5) courses of first year before he may proceed to the second

year... A student shall pass at least five (5) courses in second year before he may proceed to courses of third year (p.111)

In this case a student takes six (6) courses. If he fails in one course, he is allowed to proceed to the next year of studying. In the case of universities in Kenya, student must pass all courses. A failure in one course, from the analysis of renders other passed courses a fail!!!. From the analysis of repeaters performance, this study recommends abolition of examination requiring students to repeat the whole year for simply, failing in a course.

A CASE OF SUPPLEMENTARY

Supplementary Examination is another interesting part of common rules and regulations for examinations. The general rules governing supplementary in public universities says:

A candidate who fails in one subject in ordinary university examination.... may be recommended for supplementary.... and must pass supplementary to proceed to the second year (University of Nairobi calendar 1975-1976 p.180).

The other regulation governing supplementary examinations is that which calls for scaling down scores earned in supplementary examinations. A pass in supplementary examinations will be counted as contributing to only 40 per cent.

This rule direct that even if a student study's so hard and gets 100 per cent in supplementary examination, the score has to be scaled down to be 40 percent which is the minimum pass marks. The hallmark of academic is honest and objective. But here is a case where people who are expected to be honest and objective are reporting to the learners, the parents and the public that the learner's ability and achievement is only 40 per cent, while in their own marking based on their own marking scheme, the actual score is 100%. What message has our universities giving to the public? Then comes another regulation: A person who qualifies for the award of degree only after re-examination shall not be eligible for the award of honours (p.182)

This regulation means that even a student who scores distinction in all the subjects and who for some reasons failed in one course say with 39 percent, one point of pass mark during the course study of his study will not be classified. Here again the intellectuals throw away the Hallmark of academic and tell the whole world that a first class honours students is just an ordinary pass student!!!

Perhaps our public universities need to borrow a leaf from other universities. A good example is from Union College in the United States. Regulations on a failed course is: A course in which a student receives the Grade of "F" does not account towards graduation and if the course is requiring to complete sequence in a major or otherwise required for graduation a student must repeat this course and obtain a satisfactory mark (p.64). The same regulation is applicable at university of East Africa at Baraton: A student who earns "F" or "D" in a course taken as a major, minor or concentration must repeat the course. (p.48) In the above regulations, the two universities are concerned with attaining expected standard in a given course as opposed to punishing the failure to repeat a year of study or denying a first class honours to a student who academically earns the honours.

The basic assumption of the study was that, students repeating a year would perform much better in the second attempt. The research finding is to the contrary. In general the deviation from the mean score in first attempt and mean score in the second attempt was only +2 points. The conclusion from the analysis of repeaters is simple. Repeating the year does not improve the learners' achievement. It is therefore a waste of funds, time and human resources.

There is another observation. Out of the 19 repeaters. 7 students passed 13 courses and failed in one. 8 students passed and 12 failed in 2 while 4 passed 11 courses and failed in 3. It defeats logic why one failed course renders 13 passed courses "fail". It is interesting to note all our public universities have been having the same regulations which requires a student who fails, even in one course to repeat a year of study.

As universities encourage fees payment by parents, it is not realistic to ask parents to pay for courses their children have passed. Universities should use unit hours required for graduation in a given discipline and introduce Grade Point Average GPA to determine students' standing.

A CASE OF CARRY OVER- RESIT FAILED COURSE

In order to enable students who fail a course to proceed to the next year of study, the supplementary examination regulation has been replaced with what is called "carry over-resit" failed course when the course is next examined. Maseno University Common Rules and Regulation for examination says: A resit constitute a failed course which a candidate must retake during regular examination time...

This is the change in examination regulations which caused unrest in the university in September 2000. The student complained against the scrapping of a special and

supplementary examination. The students are quoted to have alleged that introduced changes in examination format were punitive. Perhaps the students were right in protesting against the scrapping of the special examinations, which were given to students who fail to take regular examination due to circumstances beyond their control such as sickness or death in the family at the time of regular examinations.

The university Administration, through the deputy Principal in charge of Academic Affairs dismissed students' complaints saying: The changes are necessary as students and lecturers are spending too much time preparing for special/supplementary examination which affects the normal university calendar. (East Africa Standard, Friday September 29th, 2000).

There was the same reaction against the scrapping of supplementary and special examinations in favor of carry-over-resit at the University of Nairobi. The University of Nairobi justified carry-over-resit of failed courses as ensuring that (parallel and regular) students pass all examination before they graduate. (Daily Nation October 16th, 2000).

The study thought it is necessary to analyze the carry-over resit candidates. The resit of carry over failed courses were taken in the year 2000 by fourth year students former students who needed pass grade in failed courses in order to graduate. The candidates for carry-over resit examinations went back as far as 1991 admission group.

There are some interesting observations on the carry-over resit examinations some students have carried over failed examinations for almost ten (10) years. It is questionable whether a student should be allowed to wait for ten years to sit examinations for failed course without taking the course again. It is also unfair academically to suspend graduation of a student for over ten years simply because he failed i.e. one course. If unit hour system was used, such a student could have taken another, unit to compensate for the short-fall.

Another observation is that the majority of candidates scored only 40 percent, yet regulation for resit allows the actual in the examinations. The question is, why did the majority score the minimum marks for a pass grade? Assumptions in this study are, either most examiners simply gave the minimum pass marks in sympathy to enable these students to graduate.

As it has been found in the study, it is unrealistic to allow students to take examination for a course they failed and take it more than two years later without repeating the course. University of East Africa at Baraton has a reasonable regulation with regard to failed course.

A student is not permitted to.... improve the grade earned in a course by additional examination and/or project nor is an independent study course to be used to make up for unsatisfactory grade in regularly scheduled class (p.21).

The regulation further say: A student who has earned a grade F or D in a course taken for major, minor or concentration must repeat the course and pass. The recommendation of this study is that the regulation of carry-over-resit failed paper when next offered or at the convenience of the student should be scrapped. The University Of East Africa at Baraton regulation on failed course which required the student to repeat the course when next offered is more realistic.

A CASE OF COMPENSATION

Another interest examination is the one, which allows compensation. That involves reducing scores by a number of marks from one course, and adding the same to a failed course so as to bring the failed score to 40 percent which is the minimum pass score. The compensation regulation state: A candidate with 37 marks and above may be compensated in order to obtain a minimum pass mark. Marks for compensation shall be obtained by subtracting marks from a subject with close correlation with the subject being compensated. (Maseno University Rules and Regulations for Undergraduate Examination) p.16)

This is an interesting regulation. It says that if a student scores 70 percent in say Africa Literature and scores 37 percent in English Literature, since the two courses have close correlation, 70 percent which is a distinction is reduced to 67 percent and 37 percent which is a fail is upgraded to 40 percent which becomes a pass. In this case, the score of 67% and 40% do not measure performance or achievement in any of the two subjects.

Examination management involves setting the questions making a marking scheme; administering the examination, marking the question papers, scoring and reporting the scores. In the above case it is being reported that out of 100 items an examinee scored 40 and 67 items out of 100 respectively. This is not the case; it is a wrong reporting of candidates' achievement in the two examinations.

CONCLUSION

As we move into the 21st century, there is urgent need to liberalize education. In order to liberalize and internationalize education, there is immediate need to innovate examination rules and regulations in our public universities. The **Norm-referenced** system of examinations which was based on individual learner's achievement against the other

learners' achievement for the purpose of quantity control should be abolished. A more learner centered **Criterion referenced** approach which is based on standard of achievement and quality assurance should be used. This brief study of common rules and regulations in our public universities has found no merit or justification for requiring learners to sit supplementary, carry- over failed courses, repeat a year of study or be compensated in failed course(s). The key to education for all is innovation of common rules and regulations governing examinations in every level of our education system not only at our public universities but at nursery school level, primary schools and secondary school level. For our universities to internationalize higher education, which will involve, credit transfer, students' exchange, visiting lecturers, universities must hold quality assurance in content delivery. This can only be assured through well organized examinations rules and regulations. After all, education is concerned with curriculum implementation and examination is the means by which people involved in education can determine whether educational objectives and programmes as detailed in curriculum have been achieved. Restructuring of education system must go hand in hand with innovation of Examination rules and regulations at every level of Education system.

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REPRESENTATION AND MISREPRESENTATION OF WOMEN IN TEACHING HISTORY IN SECONDARY SCHOOLS IN KENYA

Dr. Mary W. Nasibi

Abstract

The African history has reached a high level of research and writing, yet the female role in history has not been brought out clearly, in historical explanation or discourse, and in teaching of the discipline. The main question posed is whether the history syllabus and the textbooks put in place to facilitate the implementation of the curriculum generate the kind of historical consciousness in education for both female and male gender. The research constituted a survey where information was collected by use of documentary analysis. The history syllabus (1992 and 2002) used in teaching at secondary level over a period of 17 years was analyzed together with some of the recommended textbooks by Kenya Institute of Education (K.I.E.). The books were evaluated to determine how the female gender was presented in history transmitted to the students. The data was presented by use of descriptive statistics and evaluative discussions. The findings indicate that in spite of a lot of information on women, the history syllabus and textbooks do not accurately portray the vital and multi-faceted roles played by both male and female in society. The syllabus suffers from sex blindness of traditional historiography and the most insidious forms of bias, bias of omission in relation to women history. The textbooks meant to facilitate the achievement of the syllabus objectives perpetuate the same views of male dominated approach to historiographic content. It is recommended that the curriculum should be revised to reflect gender as a new dimension of teaching history and writing. The history taught should impart knowledge of gender diversity. Women have a significant place in society; therefore a past which tends to ignore or obscure them should be avoided.

Introduction

Education of women is recognized world wide because of a new global ethic which upholds the dignity of human personhood and of human community (Bennaars: 1998). This world ethic is based on “the autonomy of the human person, the inalienable freedom of the human beings, the equality of all men and women in principle and the necessary solidarity of all men and women with one another (Kung: 1993 in Bennaars).

Education does not only contribute to national development (Ssenkolota: 1983) but it is indispensable to the survival of humanity (Rockefeller: 1977) and its lack leads to poverty,

over-population, malnutrition and illiteracy (Sullorot: 1971). This is what characterises the African scene where the illiterate women numbered 3.2 millions in 1980 and 78 million in 1995. They accounted for 37.7 % of the illiterate in the 1980 and 42.2% in 1995 (UNICEF: 1996).

It is generally believed that a country's development is linked to the education of its women. For this to be fully realised, the quality and quantity of education passed to the female child becomes important because the girls are the future mothers of the society. They are expected to work hand in hand with men, because in a society where men and women hold hands as equals benefits accrue more from environment (Zuogbo: 1983).

The educational system should therefore accurately portray the vital and multi-faceted roles played by both male and female in society (United Nations: 1980). Both boys and girls have to be prepared and equipped with relevant and realistic knowledge and skills because their access to and type of employment and subsequent national development is determined by the quality and quantity of education they have access to (UNICEF: 1992).

Education offered should be "of the total society for the future multiple adult roles" (Obura: 1991). It should be based on a system with "a sound foundation which places both sexes on an equal footing in respect of opportunities to acquire skills" (Elad: 1983). It should be an education which will empower children and youth to be dignified human beings, confident, proud and caring about the world and the society they live (in Bennaars: 1998).

The need for equality in education in Kenya was realised soon after independence (1963), when the main purpose of the education was; "to forge national and social unity, reduce social inequalities and imbalances and compensate for individual or sectoral historical disadvantages (Ominde: 1964). In the 1990s the main objective of Kenya government had been to ensure the total integration of women in the main stream of development and to foster equity and social justice for women and girls (UNICEF: 1992). The same vision persists in the 21st century.

Background Information

An area where a lot of historical reconstruction has been done is the history of women. Researches carried out in Europe, America and Africa have tried to highlight the fact that women have played very important roles in the history of humankind. They have not been silent observers in the theatre of history. Women like Joan of Ark, Elizabeth I, Elizabeth Fry, Florence Nightingale, Mrs Pankhurst, Queen Victoria, Elizabeth of England, Indira Gahdhi of India, Margaret Thatcher, Bandanaraika and Bhutto of Parkstan have contributed positively

to history. In Africa, a lot of focus has been on the role of women in politics, economy, and social fields. A lot of literature reveals that there were many women rulers like Queen Amina of Katsina, Queen Tin Hinan of Morocco, Queen Cleopatra of Egypt, Zydith (Zawdith) the Empress of Ethiopia, Nzinga of Mbundu in Angola, Ranavalona I, II, and III of Madagascar among many others.

In Niger, Chad, Hausa regions, women played key roles in the political fields. They founded cities, led migrations and expanded their kingdoms through conquests. In North Cameroon, it was often a woman who chose a site where a city would be founded. She also held insignia of power, or governed a large area equivalent to a district. Women even fought in the armies to protect their territories against outsider aggression. Notable examples are women armies in the Dahomey Kingdom under Kings Gezo, Glegle and Behanzin. There were also female legions in the armies of the Monometapa kingdom.

In certain societies women played key roles in ruling and making political decisions by sharing powers with the rulers. Examples are Queen Kassa wife of Mansa Suleyman who took part with him in the government. In Rwanda the royal power was invested in the king himself and his mother, who shared the same powers without any differentiation in duties or privileges. In Swaziland, the king and his mother were at the head of the political hierarchy. In Asante the chief's female counterpart (Ohemaa) from the royal lineage was a joint ruler with the ruler (Omahene). She gave advice, guided and criticised the ruler. In Ankole, the monarchy consisted of three persons, the king, his mother and one of the classificatory sisters. At one time, all the three enjoyed equal status. Among the Bateke, it is the king and two women who ruled.

Women have also played key roles in religious fields. Many of them were medicine-women, healers, prophetesses and liberators of their people against the colonialists. Such women include; Me Katilili wa Menza, the Wagiriama leader in the war against the British; Moraa the prophetess and leader of the Gusii rebellion against the British and Nehanda among the Shona.

In spite of the above roles, the story of humankind is still portrayed as a male domain. The United Nations report (1980:8) observed that women are portrayed in school textbooks "at all levels of education system as wives, mothers or occupy subordinate positions in employment." Adams (1983) noted that in most school books women are absent in the textual illustrations; and the use of male gender excludes them by implication or contrives to belittle them. Beddoe (1983) observed that women mentioned in books are those who made their marks in men's field e.g. Joan of Arc (Warfare), Elizabeth I (Government), Elizabeth Fry (Prison Administration) Florence Nightingale (Medicine) and Mrs Pankhurst

(Parliamentary politics). The same view was expressed by Klein (1985) who noted that women are largely left out of history and language of humankind. He goes on to say that they are subsumed or omitted unless they happened to be in a position of power at the time.

For national development, education should ensure curriculum based on student interests and needs and not on sex-role stereotypes (United Nations: 1980). It calls for a humanising pedagogy which will "liberate the girls (and the boys) from stereotype attitudes and practices and empower them by teaching how to advance their own development and their common destiny as human beings in society "(Bennaars: 1998).

A survey of history taught in Kenya secondary schools since 1964 under the old educational system (7:4:2:3) reveals that history was viewed from the male perspective, with no counterbalancing of female role. It was a past that was patriarchally defined, constructed and recorded by male. Thus, the role of women was de-emphasised, distorting events of the past and questioning the contributions of the women in contemporary and the future society. This wrong view about history was further perpetuated by the history textbooks prepared to facilitate the achievement of the syllabus objectives. The texts gave male and female readers a negative picture about the role of the female in history. For instance, in Wilson (1971) a Form I and II textbook, there are only two women mentioned by name: Empress Dowager of China and Catherine the Great of Russia. In the pictures presented in the book related to humans, 86.7% are on male, 4.4% on women and about 8.9% on both men and women.

In most places where women appeared in the texts, except in a few cases, they were presented in relation to men or in meager supportive roles e.g. Queen Cleopatra VII of Egypt was mentioned in relation to her friendship with Mark Antony the Roman General. Khadja, although she was the force behind the success of Mohammed as a merchant, featured only as a wife. African female leaders in the political arena or in the army as those of Dahomey were ignored.

When the syllabus was changed in 1985 under the 8-4-4 education system, the above limitations could still be traced in the textbooks. A research by Obura (1991) revealed that Kenyan children absorb wrong geographical concepts on economic activities in geography textbooks because farmers around Africa and the rest of the world are pictured as male. In the same texts, history of Africa was depicted as the history of men while women were invisible, absent or in meager supportive roles.

In view of the foregoing, this article examines the textbooks presently used in Kenya schools in order to find out about their content emphasis and relevance in relation to gender. The paper is therefore an enquiry into structural curriculum related problems on the teaching of history in Kenya secondary school education.

The purpose of the study

The main purpose of this paper is to establish whether the historical texts at secondary level expose and transmit the right historical awareness and images to the child. This awareness is essential for integration in society in which the child regardless of the gender is required to participate in decision making and national development. The right sensitization will prepare the male and female child for the multi-faceted roles they are expected to play in a modern society. To achieve this, the article concentrates on two objectives, viz:

- (i) It seeks to examine the historical textual literature on the role of girls and women in relation to the role of boys and men in society as presented through History and Government textbooks.
- (ii) It seeks to find out the role of women in history as portrayed by History and Government textbooks.

Methodology

The research design adapted was a survey method in order to obtain personal and social facts, beliefs and attitudes. It also sought the views of the learners about the role of women in history as portrayed by historical textual literature. To obtain research sample, random and stratified random sampling were used. The sample was secondary schools in Kenya where 8:4:4 History and Government is taught. From the schools, the researcher came up with the exact textbooks used in the teaching and learning of history.

Two provinces were chosen out of the total eight provinces in Kenya, to represent rural and urban setting which is characteristic of all schools in the country. Nairobi and Western provinces were selected to represent urban and rural provinces. The secondary schools in these provinces were categorised as public and private, the former were further grouped as national, provincial and district schools. Using stratified random sampling 17 schools out of 90 in Nairobi and in Western 20 schools were selected. In Nairobi 28 students representing forms I-IV were random selected from each school. In Western Province there were 20 students from each school. This gave a total of 420 students in Nairobi and 400 from Western Province. However, the actual students who participated were 668 in 35 schools.

Another sample consisted of textbooks used by students and teachers in these schools. The findings identified four of the books authored by Kenya Institute of Education (K.I.E) were

the most popular among the users of 1992 syllabus. Malkiat Singh books for Form 3& 4 which were supplementary readers were next in popularity to K.I.E books and therefore included in the sample. The recommended texts for the revised 2002 syllabus and used by the majority of schools in the revised 2002 syllabus were Revolving World: A History and Government Course Book co-authored by Felix Kiruthu, Jacinta Kapiyo and Wilson Kimori . Two out of the four books were evaluated; book 1 and 4. In total eight (8) textbooks under 8-4-4 educational system and focusing on 1992 and 2002 syllabi were analysed.

Research tools used were questionnaires and content analysis. Questionnaires consisted of both open-ended questions and fixed alternative or objective type items. Documentary analysis was used in the textbook analysis to find out what aspects of the textbooks addressed women's contribution to the history of humankind. It also looked at images in the texts in relation to gender.

Results

Evaluation of K.I.E., 2nd Edition, Books I-IV

Table 1: An Analysis of Gender in KIE. 2nd Edition

Aspects Analysed	KIE Book1 %	KIE Book 2 %	KIE Book3 %	KIE Book4 %
Male characters	91.1	95	95.1	95.4
Female characters	8.9	5	4.9	4.5
Men characters	89.6	96.7	90.2	46.2
Women characters	3.1	62	2.5	76.2
Mean characters by name	25	90.8	98.7	39.4
Woman characters by name	35	22.2	13	14.3
Nameless male characters	75	9.2	6	60.6
Nameless female characters	30	66.7	75.7	85.7
Gender female pronoun	2.3	87.7	92.7	20.7
Gender male pronoun	97.7	12.3	7.3	79.3
Female pictures	0	0	0	6.5
Male pictures	83.3	30.4	87.5	71
Female and male pictures	16.7	8.7	11.1	6.5
Children	0	0	0	0
Role model for girls/women	7	3.3	1.4	6.5
Role model girls/girls	1.0	0	0.1	0
Role model boys/men	93	96.4	93.4	82.7
Role model for boys/boys	6	0.7	0.8	0

Role model for youth/students	0	0	4.3	10.9
Gender indicated common noun male	99.3	95.6	92.2	73.1
Gender indicated common noun female	0.7	4.4	7.8	26.9

- i) **Male and female characters:** In book I, there are 91.1% of male characters compared to 8.9% of female characters. In book II there are 95% male and 5% female characters. In book III male characters have a percentage of 95.1 in comparison to 4.9% female characters. In book IV, there are 95.4% male and 4.5% of female characters.

- ii) **The gendered pronouns ;** They include such terms as he, his, him, she, hers, her which occur in book I, II, III and IV are as follows: 97.7% male and 2.3% female gendered; 87.7% male and 12.3% female gendered; 92.7% male and 7.3% female gendered and 79.3% male and 20.7% female gendered respectively. It is important to note that the female gendered pronoun used covers more on countries than on human female e.g. in book II, the pronoun she etc is used 54 times with 51 times for country and three times for human female.

- iii) **The gender indicated common nouns:** Under this category the following common nouns such as fishermen, manpower, mankind, herdsmen are represented by 99.3% for male and 0.7% for female in book I; 95.6% for male and 4.4% for female in book II, 92.2% masculine compared to 7.8% feminine in book III, and lastly 73.1% male and 26.9% female gendered common nouns in book IV.

- iv) **The role models for girls and boys:** In book I, the role models for girls and boys are portrayed by 93% for boys and 7% for girls as depicted by men and women respectively. The role model for boys as depicted by fellow boys is 6% and for girls by other girls is 1.0%. In book II, role models for girls as represented in women constitute 3.3% and for boys as they relate to men is 96.4% and boys for boys is 0.7%. In book III, the role models for boys as portrayed through men constitute 93.4%, boys as portrayed through boys is 0.8% of girls as depicted through women is 1.4% and for girls through girls is 0.1%. The role models for both boys and girls through images of students and the youth are 4.3%. In book IV, the role models for girls as represented by women constitute 6.5%, boys as represented by men is 82.7%, boys represented by boys is 0% and girls for girls is 0%. Those represented by both boys and girls through the youth and students is 10.9%.

- v) **Presentation of pictures:** In book I, 83.3% of the pictures are male dominated, 16.7% of the pictures cover men and women (adults) while there is no single

picture on women and children. In book II, 30.4% of the pictures are dominated by male, 8.7% by both men and women (adults) and 0% for women. The rest of the percentage is on various objects in the text. In book III, the percentage of male pictures is 87.5%, both male and female is 11.1% and 0% on women. In book IV, 71% of the illustrations have male dominance, 6.5% female and 6.5% both male and female.

- vi) **Words indicating either female or male chauvinism:** All the four books are dominated by words indicating male chauvinism e.g. in book I, we have Rhodesian man, Neanderthal man, Nutcracker man, Modern man, Early man etc. In places where neutral words have been used, male chauvinism is further perpetuated in the use of male pronoun e.g. the use of the terms Homo erectus, Cro-Magnon, Dryopithecus etc, they are followed by the pronoun he, his, him etc. In book II, we have terms like middlemen, noblemen, craftsmen spacemen etc and the male pronoun following gender neutral words such as owner, farmer, worker, peasant etc. Book III is dominated by masculine terms such as landlord, warlord, blackman, spokesman, policeman, medicine man which are followed by male dominated pronouns he, him, his. A similar picture is reflected in book IV.
- vii) **The order of presentation of the characters:** Content on different pages of the four books indicate that the male are presented first followed by female e.g. in book I, we have "Gikuyu and Mumbi , Louise and Mary Leakey , man and woman, boys and girls. In book II, the order is the same e.g. workman and rich lady, monks and nuns, men and women. In the whole text, there are about 85.7% of cases where men are mentioned first in relation to women.

When sections of the texts are analysed in depth to discover relationships and patterns of presentation one finds that, more prominence is given to male in places where they appear with females e.g. while describing the social organisation of the Bantu in book I the importance of boys after initiation is highlighted while nothing is said about girls yet they had their assigned roles in the society. In the same text while discussing the boys activities in Agikuyu society, five sentences of sixty -eight words are dedicated to the boys compared to one short sentence of seven (7) words assigned to girls.

In book II ,little is said about women compared to men .There is one case however where women cover two sentences of seventeen (17) words but this still compare unfavourably to a half a sentence of ten (10) words given to men. In the same text where women have been sidelined, Seyyid Said has coverage of one & a half pages,

Krapf two pages, Jesus Christ three pages, and Mohammed three pages. Several men like Copernicus Galileo, Isaac Newton have coverage of 1 paragraph each.

In Book III, the order in which female appear in the page and the content under which they are discussed is wanting. For instance, Nehanda who is described as one of the most important *mlimo's* messengers is presented in the third position after two male prophets on . Moraa a Gusii prophetess is not given the prominence she deserves. Although she was at the core of the resistance against the British, the text sidelines her and instead gives prominence to Otenyo a young man who responded to her call by spearing F.A.S. Northcote a British administrator.

In book IV, Elizabeth I, Queen of England is presented unfavourably in comparison with her male counterparts. While several pages (about eleven) have information on different kings of Britain, Elizabeth I is mentioned only on one page, last paragraph. Next time she is mentioned is in relation to the debt she incurred during her reign.

- viii) **The nature of presentation of female:** In all the four books, the females mentioned by name are presented as either autonomous individuals or as they relate to men e.g. in book I, Mumbi is mentioned with Gikuyu as founders of Agikuyu community, then as a wife. Mary Leakey is mentioned with her husband Louis, then as a discoverer of Zinjanthropus. In most cases, female are accompanied by male e.g. Mumbi and Gikuyu, Mary and Louis Leakey, Mary and Jonathan Leakey, boys and girls, men and women, daughters in relation to their parents, goddesses, in relation to gods etc.

In Book II, all females identified are mentioned after and in relation to men either as wives as in the case of Khadija, wife of Mohammed, Catherine wife of King Henry VIII, or they are presented as mothers, like Mary, the mother of Jesus. Even in religious practices, goodesses Isis and Oyo are described as wives of gods Osiris and Shango respectively. It is interesting to note that even when a complement is given to a woman like in the case of Khadija, it is followed by something negative: "Mohammed married Khadija, a rich widow much older than himself." Even a rich lady in Egypt who was buried with her jewellery comes only after a man; "a workman who was buried with his tools". In the whole text, there is no place where a female character mentioned by name appears as autonomous. For instance, a prominent woman like Prof. Wangari Maathai of Kenya is mentioned after male politicians .

In Book III, a part from prophetess Moraa and messenger Nehanda, the other women appear as mothers and wives e.g. Marsela Awuor mother of Tom Moby, and Grace Wahu, Edna Clark and Mama Ngina as wives of Jomo Kenyatta. Some are presented in relation to men e.g. Queen of England is presented in relation to the governor who was her appointee. Samori Toure's mother is mentioned in relation to her son who had to work for her release. Even when the women appear to be independent, men's dominance is felt in the background e.g. there were women fighting for the exception of women from taxation; the East African Association which was male dominated was opposed to compulsory labour for women; there were Agikuyu men fighting over the issue of female circumcision etc.

In Book IV, where Louis XVI's activities cover six pages, nothing is said about his wife Marie Antoinette whom, we are told was a bad influence to him. As in the case above and in many others women are presented in relation to men who are either their husbands or their fathers e.g. the mention of Prince Franz Ferdinand and his wife, then Elizabeth, daughter of King James I.

- ix) **Activities and roles:** In all the texts, activities and roles identified are male dominated. In book IV, male activities cover about 93.8% while women's are 6.25%. Leadership roles are all assigned to male e.g. 96.8% compared to 3.2%. In Book III all leadership is the preserve of men. Women have six cases of leadership (1.7%), while the male had three hundred and forty five (345) cases which constitute 98.3%. In Book II the role identified are male dominated e.g. sailing, overseeing and designing. Lastly in book I, all activities are given collectively as belonging to a given ethnic group e.g. hunting, gathering, fishing, animal husbandry and iron-working. It is only raiding which has been specified for warriors. Specific occupations of people are male-dominated. They include ruling, conquering, inventing, crafting, smiting, pouching, sheep herding etc.

Apart from the four books above, there are other textbooks used by secondary school students in the implementation of 1992 syllabus. Only two of these were analysed; Malkiat Singh 2nd edition used in form 3 and 4.

(b) Evaluation of Malkiat Singh, Books III & IV Revised Edition

An analysis of the first twenty-seven (27) pages out of book III shows that there are about 218 men mentioned by name in contrast to four women, giving a percentage of 98.2% and 1.8% respectively. The women mentioned are Queen Victoria who appears once and general Nyamazona appearing three times. The use of male pronoun appears one hundred

seventy- three (173) times in contrast to two for female pronouns. This gives a percentage of 98.9% and 1.1% respectively. There are also more male gendered nouns and word indicating male chauvinism such as maximum gun, henchmen etc. Note that Maxim is a man's name, the person who invented the gun.

This could be contrasted with female dominance in words like wives, mother and daughter which are very few. The words man or men appear five times compared to twice for women at 71.4% and 28.6% respectively. The pictures given as illustrations also portray male dominance. Out of about thirty-six pictures in the whole text on people, thirty- five (97.2%) are on male and only one (2.8%) has a female figure among so many men. This lone picture is on Jomo Kenyatta receiving instruments of independence from Prince Philip with Mama Ngina looking on.

In the evaluation Malkiat Book IV revised edition, the first twenty pages indicate that out of twenty three cases where the terms man/men, woman/women have been mentioned, the percentage for women is 65.2% and for men is 34.8%. This is the first time in all the books analysed where women have been referred to more than men. These women have been mentioned in reference to women's war among the Ibo. They have been assigned a whole column of ten paragraphs in the text. However, there is no woman referred by name, not even the leader of the war. The men who have been mentioned by name have occurred one hundred and seventeen times (117) in the text, giving 100% with none on women. Even male gendered nouns are prominent in the text more than female.

The illustrations in the book still show male dominance e.g. out of fifty three (53) pictures in the whole text, fifty (94.3%) are on men while only three (5%) are on women. These women are placed in relation to men e.g. a puritan woman and man on page 53, William and Mary of Orange p. 57, Louis XVI and Marie Antoinette on page 62 etc.

(c) Evaluation of Kiruthu, Kapiyo& Kimori Book I and IV

The text books recommended and used by majority of the schools in the revised syllabus portray a slightly different picture. The researcher managed to analyse about two text books to find if the trend has changed. The books evaluated are: The Evolving World: A History and Government Course Form 1 and 4.

In book 1 three chapters were evaluated out of eight; chapters 2, 5 and 8. In chapter 2 entitled Early man the term man is used with caution. The writers use it interchangeably with human beings. The term man has been used cautiously appearing about 81 times (72.9%) compared to humans /human being 30 times (27.2%). This is an improvement from

earlier texts evaluated. The term man/ men as compared to woman /women scored 93.1% and 6.9 % respectively. Men characters mentioned by name constitute 80.6% with their female counterparts comprising 19.6 %.

The gendered pronouns make up 96.97 % for male and 3.03 for female. The gender indicated common nouns are present e.g. mankind, fishermen, craftsmen, craftsmanship and middlemen although there has been an attempt to make some of them gender sensitive with the use of terms like medicine men /women/medicine person. Words of male chauvinism like millennium man, modern man, ape-man, Java man and Peking man are still prevalent. The book has very few pictures on people with 71.4% focusing on male, 28.6% on male and female and 0 % on women. Other two chapters the results were as follows: In chapter 5 men mentioned by name make up 93.3% in comparison to 6.7 % of women. Male characters are 77.3% and female are 22.7% All pronouns in the chapter are male gendered (100%). Although gender indicated common nouns such as middlemen, prophet and diviner appear there is an attempt to use gender neutral terms such as humankind instead of the traditional mankind. In chapter 8 only four male are given names contributing to 100% with no female appearing in the whole chapter. The male pronoun dominates with 66.7%.

In book IV three chapters out of nine were analysed. In chapter 1 men who are mentioned by name are 97.9 % compared to 2.1% of women. One is a wife while the other is the queen of England. In chapter 5, there are 84.9% men identified by name with 15.1% of women. These women constitute those who have been participating in sports and athletics and those honoured with presidential awards for their contributions in the development of the country. However, there are indeed very few politicians mentioned. In chapter 9, 81.3 % men are identified by name with corresponding 18.7 % women in leadership positions. Such women include Indira Gandhi, Margaret Thatcher and Queen Elizabeth. All are mentioned in passing except for Thatcher who has been assigned a half a sentence of twenty words.

In the entire book the illustrations are male dominated with 90.5 % of pictures on male either as individuals or in groups. Pictures with both male and female are 5.4 %. Those of women alone are 4.1%. It is commendable that the role of women is recognized in the World War II on page 36 in a paragraph of 74 words.

The Personalities the Learners would Like to Emulate from the Textbooks used for Learning History.

The learners were asked to identify by gender the personality from History and Government textbooks they admired and would like to imitate.

Table 1: Personalities in the Texts for Emulation

Gender	Urban Respondents		Rural Respondents	
	N(f)	%	N(f)	%
Male	160	45.3	155	49.8
Female	66	18.7	41	13.2
No response	127	36.0	115	37.0
Total	353	100	311	100

About a half of the learners both rural and urban preferred to emulate male characters than female while less than a quarter (18.6%) for rural and 13.2% for urban preferred female. This is interesting given that the ratio of male and female respondents was 1:1. It implies that female students prefer to emulate men than fellow women.

When the same learners were asked to identify the personalities they would like to imitate by name, they came up with 197 names of male personalities (71.1%) and 80 (28.9%) female personalities in urban schools. This correlates with 203 (93.1%) for male personalities and 15 (6.9%) female personalities in rural setting.

The African personalities identified for emulation are Jomo Kenyatta scoring a mere 9.6% for urban and 11.9% for rural students. He is followed by Nelson Mandela with an average of 7.6%. Next is Mekatilili who scored an average of 6.8%, followed by Menelik II; 3.2% and Kwame Nkrumah; 3%. Among the Kenyan Africans, Kenyatta still features as the most popular followed by Tom Mboya (2.8%). It is disappointing that none of the present leaders in Kenya featured prominently. The responses to prominent African leaders were limited indicating learner's inadequate exposure to African personalities in history. Their response to non-Africans was worse.

Among the rural schools, the female characters who featured were non-Africans. They include Mary Leakey appearing eight times, Marie Antoinette appearing once and Queen Elizabeth and Princess Diana twice each. African contemporary women cited were Winnie Mandela, Nyiva Mwendwa and Charity Ngilu. Each appeared only once.

Qualities to be emulated in both male and female in the text

When the learners were asked to identify the characters they would like to emulate from the personalities they had identified, the results showed that the most popular quality in male is liberation or fighting to free one's people. This scored an average percentage of 12.1%. This was followed by bravery/ courage which had a total average of 6.9% for both rural and urban. This same quality was admired in female characters scoring 8.2% for urban schools and 0.3% for rural. Other qualities featuring among the male included;

determination (4.8%), patriotism (3.6%) and intelligence (3.8%). As for the female personalities the quality admired by urban students in female characters is bravery which scored 8.2%. The rest of the qualities scored badly with 1.7% as highest for strong willed. Rural students did not respond well to this item. A few identified quest for freedom as a quality they admired in women.

Role played by women/girls in History

The learners were asked to state the role they think women play in history from the books they had read. The role identified by the majority of rural and urban students for women and girls is housework scoring 12.5% and 27.8% respectively. This is followed by fetching water and firewood scoring 1.4% for urban students and 7.7% for rural. Next in this order is looking for food which had 4.2% for urban and 3.5% for rural. Leadership role followed closely with 3.4% for urban and 4.5% for rural. These roles however, differed with what was in the texts. It seems the learners were giving what they thought the roles of girls/women should be.

Another related question was asked on specific aspects the learners would like to copy from the female characters in the textbooks. The quality identified was bravery/courage (10.8%) for urban and house work/cooking (4.8%) for rural children. This is followed by a desire for moulding young people among the rural students which scored 3.5%. Other qualities like devotion to family, industrious, leadership had a very low percentage below 2%.

Conclusion

The research findings in all the textbooks analysed indicated that there is more literature on the role of men relative to the role of women. All the texts are dominated by male characters, male gendered pronouns, gender indicated common nouns, male dominated pictures, activities and occupations. Even in places where both male and female appear more prominence and coverage is given to male. Only in a few cases are women mentioned as autonomous. Otherwise, they appear in relation to men as wives, mothers, daughters etc. When girls are compared to boys, more prominence is given to boys. There are few cases where the neutral term youth/students are used when referring to both boys and girls.

The effect on lack of literature on the role of girls and women was evident when the learners were asked to identify the personalities they would like to emulate from the textbooks they used by gender. The few who responded focused more on male than female characters (45.3% for male, 18.6% for female). Even when asked to identify these personalities by name, there were more male characters than female. This type of

responses could be attributed partly to lack of or a few women characters in the textbooks. In identifying the characteristics they would like to imitate in both male and female personalities there was more admiration of male characteristics.

Women are portrayed in these textbooks, as queens ruling different countries e.g. Cleopatra, and Hatsheput as Queens of Egypt, Victoria and Elizabeth I as Queens of England. They also feature as wives of kings/or presidents e.g. Catherine wife of King Henry VIII, Marie Antoinette wife of Louis XII, unnamed wife of Prince Franz Ferdinand, Grace Wahu, Edna Clarke, Wanjiku and Mama Ngina wives of Jomo Kenyatta. They are also depicted as wives of prophets e.g. Khadija wife of Prophet Mohamed; as mothers e.g. Mary mother of Jesus and Marsela Awuor, mother of Tom Mboya. Women are also portrayed as generals e.g. General Nyamazona; as prophetess e.g. Moraa, Nehanda, and Mekatilili; as daughters e.g. Elizabeth the daughter of King James; as archaeologists e.g. Mary Leakey; and as social workers e.g. Tanzanians women in development.

Throughout the texts however, very little is said about the contributions of these women to humanity. They are only mentioned in passing. The only exception is on the role of the monarchy in Britain where the part played by the queen is described in details in some books.. The other is on the role of Tanzania women in development where details have been given. Contemporary African women like Winnie Mandela, Miriam Makeba , Grace Ogot, Margaret Kenyatta, Ruth Habwe ,Prof. Maathai Wangari, Charity Ngilu, Nyiva Mwendwa, Angie Brooks of Liberia, Princess Elizabeth Bagaya of Toro among many others have been omitted in history taught to the African youth.

The learners' responses on the role of women in history showed that their roles do not stand out in the textbooks. Most learners gave the traditional role of women in society not necessarily what was in the textbook. There were however, some learners who stated that they have never come across any role played by women in history.

Recommendations

It is recommended that the textbook historiographers should be sensitive on gender issues in writing. They should rewrite history textbooks to bring out women's role. Historical events should focus on the contributions made by human race in the history of the world regardless of ethnicity and gender. The history of the former Soviet Union would be incomplete without an account of Catherine the Great; Napoleon Bernaparta's conquest of the world would not have been possible without the contribution of Josephine, his friend and advisor; the history of Ceylon is tied to Bandanaraike women; the history of USA is enriched with activities of African women in Diaspora like Coletta King, Shirley Chisholm,

Patricia Roberts Harris, Angela Davies etc.; and Frankline Roosevelt former USA president would have been a failure without the power behind his administration, his wife; Eleanor Roosevelt. In modern Africa the place of the following women should be taught. The woman who kept Mandela's name alive for over two decades Winnie Mandela, Kenya environmentalists and first African woman Nobel Peace Laureate Maathai Wangari, the Women have therefore played prominent roles in the history of the world, and a past which tend to ignore or obscure them should be avoided at all costs.

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COMMUNICATION DISORDERS IN PRIMARY SCHOOLS: IMPLICATIONS FOR APPROPRIATE ASSESSMENT TOOLS AND CLASSROOM PRACTICE IN KENYA

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Abstract

Currently many children with communication disorders have been identified in Educational assessment and resource centres established in various districts in Kenya. It is expected that once learners are identified further assessment should be done to ascertain specific speech and language difficulties they have. This would lead to enhancement of appropriate classroom practice by the teachers. This has been almost impossible in Kenya due to lack of appropriate tools for identification of speech and language difficulties such as articulation and phonemic errors. A study of such a magnitude was therefore essential. Noting that the most common language used in urban and rural areas is Kiswahili the study developed a tool in Kiswahili for the identification procedures. The population from which the study sample was drawn came from school-going children in Nairobi Province aged between 6 to 13 years 11months. The institutions included units, special schools, integrated special schools, and regular schools. Purposive sampling was used for piloting and for the actual study. From confirmed cases of 320 children with communication disorders, the researcher sampled 30% using purposive sampling. The actual sample came to 96 out of which 48 were females and 48 were males. The sample came from children who had hearing impairments, mental handicap, stutterers, cerebral palsy and learning disabilities. The data were collected using three different instruments namely: speech sound disorders assessment tool; speech mechanism observation tool and a home background information tool. Research questions and hypotheses were used for collecting and analyzing data. The collected data were qualitatively and quantitatively analyzed. To achieve this, the data were cross-tabulated. The results were analyzed by use of pie charts, frequencies and tables. ANOVA was also used in testing the hypotheses. The study revealed that, the most highly ranked speech sound disorders were omissions, distortions and substitutions. The most highly omitted speech sound disorder was phoneme /h/, with most respondents not able to pronounce the words "hoho" and "hema." /θ/ as in thin was the most highly misarticulated phoneme of the 22 phonemes tested. Phonemes /r/, /s/, /z/ and /j/ were either highly substituted or distorted. Majority of children with communication disorders were those who had mentally handicapping conditions, hearing impairments and learning disabilities. The study found

that most children with communication disorders were found in communities of low socio-economic status.

Introduction

Many children with speech and language problems are affected academically, psychologically and socially. In areas requiring speech and language, they do not perform well since speech and language disorders in most cases affect their reading and writing abilities. At times, they shy off as other children laugh at them. Since Educational Assessment Centres under the Directorate of Quality Assurance in the Ministry of Education in Kenya were established in September 1984, a large number of children with speech and language disorders have been identified. However, speech and language disorders have not yet been studied to show articulation and phonemic disorders these children have. In countries such as the United States, Finland, South Africa, England and Canada researches have shown that articulation and phonemic disorders have been identified in children with communication disorders. No such identification had been done in the Kenyan context before. The purpose of this study was to identify articulation and phonemic disorders in confirmed cases of children with communication disorders in primary schools in Nairobi Province.

Background to the Study

Shea and Bauer (1994) state that of all the forms of communication disorders, articulation disorders are the main problems for which children are most frequently referred for assessment in the United States. Riper (1972) states that, of all speech disorders, the articulatory disorders are by far the most frequently encountered. They comprise the great bulk of all cases treated by the speech clinician in the public schools. He asserts further that over 75% of all speech disorders in the United States are articulatory in nature. The study shows that such disorders are widespread in the world. In this regard, Kenya is no exception. However, the magnitude of this problem among the school pupils in the country is not known due to lack of any research.

Locke (in Wolfe & Goulding, 1973) reports that about one third of a group of three to ten year old children with articulation disorders consistently fail to differentiate between target and substituted speech sounds. Anyone whose speech is marked with errors of omission, substitution, distortion and addition could be extremely frustrating to both the speaker and the listener. These problems interfere with the child's learning as well as his/her social life at school and at home.

According to Kirk et al (2003), the processes that are needed for sound production are respiration, phonation, resonance and articulation. Respiration or breathing provides the source of energy for sound production. The breath stream activates the vocal cords, causing them to vibrate and produce sound or to phonate. This sound is then transmitted to the cavities and bones of the head and neck where it is resonated – conserved and concentrated giving a characteristic quality to each voice. Finally, through the movement of the mouth, the sound is shaped into the phonemes of language and articulated with other sounds as speech. For successful speech production, the hearing system must be functioning well. A breakdown in one or more of these systems interferes with speech sound production. Locke (1973) states that a break down in speech sound production leads to unintelligible speech especially in children with cerebral palsy. One of the problems could be misarticulation of sounds.

Locke (1980), van Riper (1972), Kirk et al (1997) found that misarticulations are common in children with cerebral palsy, learning disabilities, hearing impairments, stutterers and those with intellectual difficulties. In this study carried out in Nairobi Kenya, the oral mechanism of the selected sample were observed in order to rule out any speech disorders which could be related to tongue, anomaly, cleft palate or any other defects. Bangs (1986) notes that over the years, teachers had observed that, the older the child, who had problems, be they of speech or language, the more difficult it becomes to cut through his compensatory mechanisms and to patch up the basic problems. The child who proceeds undiagnosed until a relatively late stage in life faces serious problems Kirk et al (2003). This was the main reason why the study investigated children between 6 to 13 years 11 months, a period where identified problems could be effectively corrected through early intervention. This was in consideration of the fact that, many children in the rural areas go to school past the age of 7 years, especially those with speech and language disorders.

Parental concern and subsequent parental pressure, often add to the child's increasing problems. Teachers and parents are, therefore, placed in a difficult situation as the children's problems unfold. This study through the use of appropriate tools investigated the various ways of identifying speech disorders with a view to coming up with workable recommendations. More often there are misarticulations with no apparent structural defect. These disorders of functional origin have been attributed to varied influences, including impoverished environment, bilingualism, emotional problems or slow maturation and even genetic factors.

Tallal, Curtis and Kapland in Kirk et al (2003) note that speech and language disorders tend to run in families. They say the problems occur in about 33% of the children whose mothers have such problems and in 18% of children whose fathers have such problems. Knowing

that a member of the family has an articulation disorder or a language problem alerts parents to the risk of their children having a similar problem.

According to Kirk et al (2003), articulation deficits are now considered to affect from 5 to 10% of school going children with speech and language disorders in the United States. The prevalence of speech sound disorders in young children is 8-9%, roughly 5% of the children have noticeable speech disorders; the majority of these speech disorders have no known cause (<http://www.asha.org/students/professions/overview/sld.htm>) The World Health Organization puts the figure at between 10-15% for most of the developing countries such as Kenya which Kristensen's study used. Over 1 million children with speech and language disorders were served in the 1992-1993 school year in United States. The percentage in Kenya and in the developing countries could be much higher as the study done by Kristensen (1991) shows. Taking a population estimate of 38,000,000, currently Kenya should have 3.8 million children with communication disorder. However, proper information on children affected by communication disorders is lacking such as in identification processes.

According to Kristensen (1991), over 22,000 children in Kenya were assessed in 42 educational assessment centres located through out the country between 1984 and April 1991. The educational assessment centres represented 42 districts in the country. In Kristensen's study (1991), children were assessed for speech and language disorders. The results showed that, out of the 22,000 children assessed, almost half of the sample had speech and language disorders. Findings on children who were age six years and over and had minor speech and language disorders and did not attend school 46.3%, 43.1% of them attended regular schools and 2.7% attended special schools (KISE Bulletin, 1991). In Kristensen's study, the articulation disorders of the children in regular and special schools were not investigated. Kristensen (1991) notes that, the speech disorders addressed were generalized hence the details showing different types of speech disorders and variables related to them were not brought out. Therefore the current study aimed at addressing the issue of speech disorders which included additions, omissions, substitutions and distortions. It also found at variables which included gender, socio-economic status and whether teachers had specific skills to teach children with communication disorders.

Objectives of the Study

- The major objective were to identify articulation and phonemic errors in children with communication disorders in primary schools in Nairobi Province, Kenya.
- Find out whether socio-economic status has influence in sound speech disorders investigated.

- Come up with possible ways for teachers to effectively identify articulation and phonemic errors in children with communication disorders for purposes of intervention.
- Find out whether there are any differences in number of children identified with articulation and phonemic errors in class of specially trained teachers versus those with no special skills.

The following questions were formulated for the study:

1. Does poor socio-economic status influence the number of misarticulated phonemic sounds?
2. Does mother tongue influence the number of misarticulated phonemic sounds?
3. What are the most common misarticulated phonemic sounds?
4. How many teachers had relevant speech training skills in the sampled schools?
5. How many teachers applied relevant speech training skills in their classes?

Theoretical and Conceptual Framework

The Behaviorist position suggested by Skinner (in Child, 1997) and cognitive theory by Chomsky (in Child 1997) formed a strong theoretical framework in the current research. The researcher used the two theories because both are closely related in speech and language acquisition as well as communication disorders.

Skinner (in Child 1997) distinguishes three ways in which the repetition of speech responses may be encouraged. First, the child may use echoic responses. In this case, the child imitates a sound made by others, who immediately display approval. These sounds need to be made in the presence of an object to which they may be linked. Once the sound in question is firmly implanted, it gradually becomes associated with an object. The researcher in the current study strongly believes that it is through linking sounds to the objects that children learn speech and language. However, this position applies to pupils who have normal development milestones. Hence, the need for this study to concentrate on learners with speech and language disorders to find out if the results could be similar or different.

Cognitive Theory by Chomsky

Language comes naturally (Kirk et al 1997) since even children with slight to mild intellectual difficulties or mental retardation tried to mention names of the objects used in speech articulation assessment tool used in the study. In the current study, learners were of a widely varied intelligence and different cultural backgrounds. Cognitive is a general term referring to awareness and thinking, as well as to specific mental acts such as perceiving,

interpreting, remembering and anticipating. All these mental behaviours add up to what is called information processing, or the transformation of sensory input into mental representatives and the manipulation of such representations. In this regard, people may not think about things in the same way as others.

The opposite could happen to individuals with disabilities such as mentally retarded and those with learning disabilities: A case in point of seeing things differently could be on colour discrimination such as blue for black letters such as d, b, p and numbers such as 6, 9 and 3. Often children with learning disabilities will see these in reverse order e.g d as b p as d, 6 as 9 and 3 as E. It is in this context that the present study looks at the interpretation, perceiving, and comprehension abilities of children with communication disorders. Kirk, et al (2003), point out that negative thoughts reflect underlying dysfunctional beliefs and assumptions. The researcher used this theory in determining the levels of knowledge, speech intelligibility, perception, interpretation and comprehension.

It was found in the literature review that speech sound disorders were not only common to young children aged below ten years but also above 12 years, this is because children join school late especially in the developing countries. However, the problems were supposed to get corrected naturally as the children get older. As the problems persisted, they caused anxiety to the parents as well as to the children. The researcher also observed that articulation and phonemic disorders were to be found in almost all the communities, where the studies were done. It was not a problem of the poor only or certain ethnic groups, but the problem generally cuts across cultures.

The foreign studies were very specific in their kinds of investigation while the local studies done in Africa were general in perspective. For instance, the study done in Kuopio University – Finland was quite specific that one third of the 7 year old children had sound speech disorders/articulation disorders mainly |s| distortions produced too far anteriorly and |r| distortions produced too far posteriorly. On the other hand, the study done in Kenya revealed that out of 22,000 children assessed, 22.8% were found to be having moderate sound speech disorders and were attending regular schools. No classroom intervention has been effectively done due to lack of appropriate tools for identification which is study managed to develop.

Materials and Methods

This study employed multiple triangulation strategy. The designs used were ex-post facto and ethnographic which are quantitative and qualitative respectively.

According to Siverman (1985), quantitative data are numerical descriptions of attributes of events. Both are used by speech language pathologists and audiologists to answer

questions. Ex-post facto design is used to explore possible causal relationships among variables that cannot be manipulated by the researcher (Macmillan & Schumacher 1989). In this study, data collection and comparison of speech articulation disorders for different attributes in girls and boys were used.

The target population comprised 48 female and 48 male pupils aged between 6 to 13 years 11 months sampling the respondents was purposive for both pilot and actual study. The study used the following instruments: Speech articulation assessment tool, oral mechanism observation and home background information tools.

Study findings

This study had several questions that guided the interpretations whose findings are given below

Categories of phonemic disorders

This table shows categories of phonemic disorders amongst respondents as shown below.

Table 1: categories of phonemic disorders

Categories	Frequency	Percentage
Omissions	147	34.6%
Additions	18	4.2%
Substitutions	130	30.6%
Distortions	130	30.6%
Total	425	100%

The above table above shows only the frequency of the occurrence of phonemic errors which in total were 425. Omissions occurred most (147, 34.6%) followed substitutions and distortions. The findings concur with Ogilvie (1983) who did a study on children with articulation disorders.

Socio-economic background of the respondents

This table shows the socio-economic background and the responses given by respondents.

Table 2: Respondents socio-economic background

Responses	Number	Percent
High Class	10	10.4

Middle Class	16	16.6
Low Class	70	73
Total	96	100%

It is evident from the above table that the majority (70,73%) of the respondents were from the low socio-economic class.

Language used at home and phonemic disorders

This table shows the language used at home and phonemic disorders

Table 3: Languages spoken at home

Language used at home	Articulated	Substitutions	Omissions	Distortions	Additions	Not Intelligible	Number Of Respondents
Kiswahili	10	8	3	1	2	4	26
Mother tongue	15	13	1	1	1	20	50
More than one language usage	7	1	0	1	1	6	15
No response	0	2	0	1	0	2	5
Total	32	24	4	4	4	32	96

It emerged from the above table that over 52% of the respondents spoke mother tongue at home. 47% of those children who spoke mother tongue at home articulated phonemic sounds correctly. However, 54% of those who spoke mother tongue had problems of substitutions. According to the study findings, mother tongue interfered with articulation of Kiswahili speech sounds. This finding concurs with Kirk et al, (2000), that mother tongue interfered with second language learning.

Age and nature of disability

This table shows relationship of age and nature of disability of the respondents.

Table 4: Relation of age and nature of disability

Age	Nature of Disability					Total
	Mental Handicap	Hearing impairments	Cerebral palsy	Learning Disabilities	Stuttering	
6.0-7.11	12	7	0	4	1	24
8.0-9.11	11	6	1	6	0	24
10.0-11.11	11	1	1	11	0	24
12.0-13.11	9	6	3	5	1	24

Total	43	20	5	26	2	24
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The above table shows that almost 50% of the respondents had mental handicap. Learning disabilities and hearing impairment were also found to affect children in large proportions. However, disabilities were not confined to a specific age group. The problems were shared equitably

Between 10.0 – 11.11 age group there more children with learning disabilities. This could be due to the fact children with learning disabilities are hard to diagnose in their lower classes, until they start academic classes.

Gender and children’s speech intelligibility

Table 5: Gender and children’s speech intelligibility

Gender	Unintelligible	No Speech	Intelligible	Number of respondents
Female	18	1	29	48
Male	24	1	23	48
Total	42	2	52	96

It is evident from the above table that majority of females had intelligible speech as compared to their male counterparts.

Males were found to have more phonemic errors at 26% versus females who had 19%. This indicated that more males had Unintelligible speech or no speech at all.

Respondents’ birth positions

This table shows respondents birth positions

Table 6: Disability and Respondents’ birth positions

Birth Positions	Females	Male	Total Percent
First born	26	21	49
Second born	8	9	17.7
Third born	9	7	16.7
Fourth born	0	2	2.1
Fifth born	0	1	1

Six born	2	5	7.2
Seventh born	1	3	4.2
No response	2	0	2.1
Total	48	48	100%

The above table shows that the biggest numbers of respondents were firstborns and the number decreased as one went down the birth positions to 5th born. The results indicate that most parents were either inexperienced or never got the necessary medical attention as they carried their first pregnancies

Teachers' speech training skills

This table shows teachers' speech training skills as shown below.

Table 7: Teachers' speech training skills

Speech training skills	Frequency	Percent
With speech training skills	34	35.4%
Without speech training skills	51	53.1%
No response	11	11.5%
Total	96	100%

The study found there was a lack skilful trained specialised teacher in most schools in Nairobi province in Kenya. The findings presented in the table above indicate that more than half of the teachers had not received any skills in speech training (51, 53%). This shows that, some of the speech phonemic disorders could pass unnoticed especially in situations where they were mild in nature.

Usage of acquired speech training skills

This table shows the usage of acquired speech training skills by teachers as shown below.

Table 8: usage of acquired speech training skills by teachers

Usage of speech training skills	Frequency	Percent
Those who applied speech training skills in class	7	20.6%
Those who did not apply speech training skills in class	27	79.4%
Total	34	100%

The table above shows that most teachers never implemented the speech skills learnt at their training institutions (7, 21%. It was not, therefore, a surprise that children with communication disorders were never assisted to correct their speech articulation problems.

Nature of disability

This table shows nature of disabilities of the respondents

Table 9: Nature of disabilities of the respondents

Disability	Females	Male	Total Percent
Mental handicap	20	23	44.8
Hearing impairments	13	7	20.8
Cerebral Palsy	4	1	5.2
Learning disabilities	11	2	12.5
Stuttering	0	5	2.1
Total	48	48	100%

It is evident from the above table that most boys and girls were in two main disabilities. The disabilities were mental handicap (45%) and hearing impairments (21%). Other disabilities which presented speech problems to respondents were learning disability 12.5% and cerebral palsy at 5.2%. This finding concurs with Barcos and Carmen (1994) which investigated disorders of oral language common in primary school children in Spain. The finding also concurs with Hartley (1996) who did a study on children on verbal communication disorders in Eastern Uganda.

Ethnic groups in the study.

This table shows ethnicity of each respondent in the study, since one of the variables was on mother tongue as shown in the table below.

Table 10: Respondents mother tongues

ETHNIC GROUPS	FREQUENCY	PERCENT
KIKUYU	59	61.5
LUO	21	21.9
LUHYIA	4	4.2
KISII	1	1
KAMBA	3	3.1
KALENJIN	1	1

MASAI	2	2.1
SOMALI	3	3.1
OTHERS	2	2.1
TOTAL	96	100%

It is evident from the above table that most children came from the Kikuyu ethnic group (59,62%) distantly followed by Luo (21,22%). The other communities were not well-represented.

A high percentage of children who had phonemic disorders spoke mother tongue at home. The mother tongue used at home interfered with correct speech production in some Kiswahili phonemic sounds.

The study also found out that respondents who had learning disabilities were labeled as slow learners and were in regular schools but got minimal assistance from their class teachers. This finding concurs with Morley's study in Beech, Harding and Jones (1993)

Conclusions

The study arrived at the following conclusions based on the research questions and research findings.

- Children with communication disorders in Nairobi Province were not accorded proper attention in class. This was because there was a significant relationship between the age groups and addition of phonemic errors. Researcher found out that teachers lacked necessary skills to assist children who had phonemic errors. Some teachers especially those in regular schools where majority of children with learning disabilities came from looked down upon such learners.
- Children with communication disorders were likely to continue facing problems in identification and speech corrective measures at school. This was so because the trained specialist teachers were not applying the skills they acquired at college in order to assist children with speech problems. Possibly this was because there was lack of educational policy that gives direction on how children with communication disorders should be assisted.
- Theirs lack of trained specialist teachers and a high pupil-teacher ratio.

The concerned institutions through the Ministry of Education are not pro-active in coming up with a policy pertaining to identification and intervention of children with speech sound disorders.

- Children with special needs should be protected from uncaring parents and caregivers as well as protecting them from being taught by unskilled teachers.

Recommendations

Based on the study results, the following are the recommendations for the various groups involved in addressing issues touching on children with communication disorders:

- The primary schools in Kenya both public and private should include children with disabilities in regular classes or in special units. This will ease the problem of children already with difficulties traveling far from their homes.
- Teachers in all schools should be trained in speech and language identification techniques. This could be included in the special teacher training diploma curriculum.
- Children already identified to have other disabilities need to be closely monitored in their speech performance early enough in order to address to their problems.
- Children identified with severe and profound speech disorders are trained in other forms of communication such as sign language and Bliss symbols.
- There is a need for a national survey to identify speech and language disorders in children in order to know the magnitude of the problems so as to design intervention strategies.
- Teachers should be imparted with skills and tactics of teaching speech and languages by learning phonetics and phonology in order to be linguistically competent.
- Schools handling children with special needs require collecting background information about the children. This will trace any meaningful association of cases with genetic factors so that the affected can be counseled.
- There is need for the medical personnel handling children with speech disorders to work hand in hand with teachers.
- Most children identified to have various disabilities resulting into speech disorders were first borns. There is therefore need for the ante-natal clinics to advise and guide first time mothers accordingly in order to reduce the occurrence of disabilities amongst firstborns.
- There is need to introduce speech therapy programmes in schools for proper identification and remediation of children with communication disorders. This concurs with Ndurumo (1993) who states that “the teacher or speech pathologist would do well to conduct an in-depth analysis of the child’s misarticulations and the specific position in a word where the letters are omitted, substituted or distorted.

- Ministry of education should post enough competent and skilled personnel from the quality assurance section in schools to make sure that teachers apply skills learnt at their colleges.
- Frequent seminars and workshops should be held for teachers teaching children with special needs.
- Along with this, teachers should be in-serviced frequently in order to be able to handle existing and emerging challenges.
- Pre-service teachers who are in special schools should be trained in speech skills that would make them work effectively.
- The speech articulation assessment instruments used in this study be used for identification of articulation disorders in educational assessment centres in Kenya.

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FROM PASSIVE TO ACTIVE PARTICIPANTS: NEW DIRECTIONS FOR UNDERGRADUATE EDUCATION

Doris Kangai Njoka

Abstract

The paper looks at the aims of higher education in the twenty first century and the kind of graduate that can fit in the fast changing and unpredictable global arena, where what worked in the years past is fast losing potency. The norm in most universities has been (and still is) where the faculty play the role of knowledge fountains with the student usually absorbing that knowledge passively for reproduction in the end of year/semester examinations. Such teaching and learning rarely prepares one adequately for the graduate studies, professional life, or the social world. The lecture method is the predominant pedagogic approach in such cases. However, the graduate of this century should be able to go beyond cognitive mastery of content in various disciplines to an active participant in the search, creation and dissemination of knowledge. This will be made possible by having institutions of higher education adopt strategies such as inquiry-based learning in its different forms, where the learner will have active engagement with the task at hand individually or in small groups. The role of the lecturer here remains that of a mentor, facilitator and resource person. This is not to say that the traditional lecture method should be done away with; instead a balance should be explored between this and other methods.

Introduction

The Role of Higher Education

Every country looks up to the institutions of higher learning for direction and creative solutions to many problems facing every aspect of society especially with the constantly changing and turbulent global environment of the 21st Century. According to Article 9 of the World Declaration on Higher Education (1998):

Higher education should educate students to become well informed and deeply motivated citizens, who can think critically, analyse problems of society, look for solutions to the problems of society, and apply them and accept social responsibilities.

These qualities will enable individuals and the organisation they work in to remain competitive and relevant in the midst of stiff competition and environments where there is "short shelf life" not only for products, but also for services as well. As Posch and Steiner (2006: 276) say

Innovation is not only needed to develop successful business systems, it is also a driving force in the attempt to attain sustainable development, where problems cannot be solved by simple application of standard solutions, but instead need creativity.

It would, therefore, not be feasible for universities to operate the way they did in yester years since what worked then may not apply now and the problems and opportunities encountered then are not necessarily the same today. The nature of the workplace and that of employee requirements have changed immensely (Knowlton, 2003). This requires that universities take a deliberate effort to prepare graduates who are equipped not only with discipline-specific knowledge and skills, but also with a wide array of meta-cognitive and social skills which are transferable to other disciplines, the world of work and other situations in life. Some of these are:

- Finding, evaluating and using information to solve problems;
- Communicating effectively especially in writing and oral presentation;
- Working particularly in teams and small groups with people of diverse backgrounds;
- Understanding and mastery of information communication and technology;
- Making informed and independent judgments;
- Working without supervision;
- Thinking critically;
- Confidence;
- Willingness to learn
- Future-oriented.

Studies, however, reveal that the commonest mode of student and lecturer interaction is the lecture method (Muchiri, 1994; Ndethiu, 2007 ;) Like any Research indicates that the key means of acquiring the above competencies is active engagement with the learning process. However, as studies reveal, the lecture method is the prevalent mode of undergraduate teaching in higher education. Research shows that students are more motivated, tend learn and anchor information better in active learning situations, particularly in collaborative teams (Ivers, 1992; Wood, 2003;Cherney, 2008) where the learner becomes a partner in the venture with fellow students or with the lecturers. We learn better when we are allowed to look at the concept from different perspectives since they employ a variety of senses (Lagowski, 1992) in the learning context:

What they:

Read- 10%

Hear- 26%

See- 30

See and hear – 50%

Say – 70%

Say and do – 90%

It is clear that the more the students' engagement the better the results. In spite of such findings, most university classrooms use the traditional lecture method predominantly.

The Lecture Method

Lecture is a Greek word, which means, "read aloud", with its origins in the Athenian auditoriums of the 5th Century BC. Its use in the university lecture rooms is traced to the days when information sources were scarce and the lecture method facilitated alt is still the commonest pedagogical tool in higher education in spite of the wide array of other methods at the disposal of the lecturers. There are many reasons why this mode of teaching has endured for centuries and some of these are economic considerations, familiarity, and learning benefits. One, it is useful where resources are scarce. The lecturer delivers information from texts that may be in short supply as the students take notes. For example, it is possible that library catalogues do not hold sources on a new theory or research in a certain field, but the lecturer can access the same from other sources such as conferences, the internet or published journals and share it with the students It is also easy to deal with large classes using this method in case the university has a shortage of teaching staff and other resources.

Secondly, most lecturers find the lecture method familiar since it appears easy and also that was the way they learned (Duch, 2001). One explanation for maintain the status quo is the lack of training in teaching in This is not unusual since it is human to tread mostly on beaten paths and to dread the unknown since the latter involves high risks. It takes deep motivation to venture beyond that territory.

It is also mostly assumed that teaching at the university can be done without prior professional training lecture method is how most lecturers lean from another.

Economic prepares students to Introduces students to lecture-like situations outside college and develops skills like effective listening, note-taking, critical thinking and many others, for the same; "Like any teaching activity, the lecture can be effective or ineffective" (Lammers and Murphy, 2002: 55) A well-planned lecture can achieve --- this is when the lecturer is able to focus on the learning needs of the students and also to

Some Shortcomings of the lecture method

Need to re-think “how subject matter is presented and how intellectual and social growths are stimulated (Boyer Commission, 1998)

Maintaining student concentration is difficult in the lecture situation, especially when there is little or no integration of engaging activities. Marcangelo and Howard (2002), for example, say that “sustained and unchanging low-level activity – such as sitting, listening and note-taking – lowers concentration levels.” Studies show that attention wanes between 10 and 30 minutes into a task calling for a change in activity every 10-15 minutes (Marcangelo and Howard, 2002; Young, Robinson and Alberts, 2009: 42).

“Traditional pedagogies within a typically structured classroom are not able to prepare students for work environments in which questions and answers are not clearly defined because of the students depend on the teacher as the expert and organiser leading to dependency inclinations (Costello, Brunner and Hasty, 2002). Moreover, in these traditional lecture courses, many students do not have a coherent view of the concepts and their application in the real world because they have little understanding of the research process through which knowledge is generated (Wood, 2003). This means if the students are involved in the inquiry process, they would understand how knowledge is arrived at and how it applies to life situations especially if the problems are drawn from situations they can identify with. If the lecture can be improved upon and bring about effective learning, then why the current wave of new pedagogical methods like inquiry based learning?

What promotes deep learning?

Utilitarian purposes

Current workplace and its demands: What kind of graduate- employee are they looking for/

CF Job advertisements

KCB University circuit_ what do they want in a graduate/what kind of graduate do they want?

How do people learn naturally? - better in collaboration; others better in isolation or pairs, etc.

No longer feasible to have hierarchical acquisition of knowledge, application was said to result from Strengths. Research shows that students learn better in active learning exercises in or outside class because the learner is given an opportunity to interact with the content in a variety of ways and at different levels (Cherney, 2008:154)

Own learning and the concepts coz they feel part and parcel of the academic Develop meta-cognitive skills that are transferable across disciplines (Gokhale, 1995)

Students have different learning styles (Walker TRC, 2002: “There are many learning styles and no two people learn the same way. Students bring different talents and learning styles to the classroom...Students need the opportunity to show their talents and learn in ways that work for them.”

Introduced to how people learn in real life situations- learn better thru cooperation; learning usually driven by real issues (although the search for knowledge for its own sake is not discredited- intrinsic motivation- to satisfy personal psychological needs kills community in their disciplines Implications

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AN INQUIRY ON THE PARADOXES OF THE OF THE IMPACT OF PRESENTATION SKILLS

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INTRODUCTION

In all kinds of forums communication takes place. These forums could be social, academic, political, cultural, technological and so on. In a communication situation, information, messages and the whole array of ideas and suggestions are exchanged by groups of people. This paper will use “presenters” and “listeners” for these two groups of people. A further clarification in this realm of communication is production and reception. The production realm of communication will emphasize the oral skills, which necessarily imply speaking, and forms of Non-verbal Communication. The reception will include reading and listening. Currently however, in the communication spheres, it has become difficult to draw lines among the 4 basic communication skills of Reading, Listening, Speaking and Writing. It is not clear whether reading lies wholly on reception or whether it can also be considered a production aspect of communication. The situation being referred to here is where one reads out aloud to an audience, is one considered to be producing or receiving as the listeners do? The field of psycholinguistics discerns these differences. They are not the specific focus of this paper. Likewise, in a writing session when one generates ideas as one writes can one be termed to be receiving or producing?

The confines of this paper will be productive skills and the emphases will be on presentation skills in the jurisdiction of speakers. The paper stakes its claim on the issue that the person who gives information orally has others listening to him/her. The presenters use Language or words in speech and also use Non-verbal cues. These cues are categorized as gestures, facial expressions and expressive movements. As the presenter manifests these communicative acts, certain impressions form in the mind of those at the receiving end and these in turn affect the presenter. The objective of this paper will be to discuss the paradoxes of the impact of presentation. It is a known fact, albeit subtly, that those who listen to a presentation affect the presenters. The effect of the listener has a lot of consequences which this paper will endeavor to bring out.

The use of visual aids and other obvious factors such as physical outlook of the presenters will not be addressed. Other simplistic barriers in communication like language and content will not be considered as an area of discussion in this paper either.

Instead, the paper will look at the intricacies of the relatively unexplored area of the impact of a presenter's disposition on his/her listeners and the flip side of the situation on how the listeners impact on the presenters.

The pivot will be on the academic forums, seminars, workshop, conferences but mention will be made of other settings where the impact of the presenter and listener and vice versa exists.

The most common ways of communicating are through the use of Language orally and the often non-highlighted but important one that Osgood C (1956) calls Visual gestural channel of facial and postural expression. The human communication has faculties that can reserve and transit messages simultaneously when the presenters and listeners act either inadvertently or otherwise. This is what makes intentions clear: the message relayed may not be interpreted as was intended but the fact that the presenter has presented and the listener has heard means that a message has been relayed.

A communication setting involves a presenter who influences, willingly or unwillingly, the state or actions of another by selecting alternative signals that can be carried in a channel connecting them Osgood C (1956). However, there are those unseen messages that also cause a reaction between the presenters and the listeners.

CUES DEVELOPED BY THE PRESENTER

During presentation, the presenter tries to gauge the listeners' participation in various ways. A look at some of these ways follows:

Some parameters or checklist within the presenter helps him/her to find out how he/she is relating to the listeners. Eye contact is one way. Through eye contact, the presenter is almost 90% sure of the impact of the information. It should be mentioned at this stage, however, that the personality of the presenter comes into play here. If the presenter leans more on introversion then eye contact may not be there; again the expectations of the presenter may cloud what he/she sees as the presentation goes on, so eye contact may not be a very reliable measure of ***"my listeners are with me"***. Further discussion on eye contact will be done else where in this paper.

What are the likely effects on the presenter realizing that the listeners have adopted a negative stance to the presentation? The position of this paper will be that Psychologists over the years have grappled with personality factors and the abilities of individuals to ***"stand up and be counted"***. "If a personality is threatened by the "eye contact judgment" of

the listeners, several things can happen among them are the presenter may i) falter ii) discontinue presentation iii) or take flight. A fourth alternative also exists. The impact of this realization will have a dent on the presenter. Since the presenters' world will not end here, it would be an experience trying to relate to the victim of this situation in different forums. It would be worse if the presenter were to deliver a second or third paper to this audience. He/she may develop excuses for **"not being available; or cancel or postpone the presentation"**. On the other hand if the presenter is able to counteract the feedback from the eye contact" that judged him/her negatively then the tendency to alter the presentation to suit the whims of the listeners could manifest itself. Alternatively the presenter would take a stand of giving the information the way it is because his/her personality allows him/her to. The question arises:

"Do presenters resonate with their general impressions to listeners"?

Janis (1965) recognized that fear is a drive state which tends to multiply tendencies to respond. Fear or anxiety is a cue that elicits responses of hostility towards the source. The defensive avoidance of the presenter interferes with the reception. Thus the Psychologists advice that the "introvert" who exhibits fear should be encouraged to speak, by being rewarded positively, hence reinforcement in the hope that the acceptance level will help diminish fear in the presenter.

The complexity and paradox of the situation described above is that a number of studies have found that in positive relationships, *"the higher the fear arousal the greater the opinion changes"*. (Janis, Kaye and Kirscher 1960). What should a presenter do in situations like these? Advertisements and advice on smoking and the dangers of cancer, tetanus injections and the dangers of serious injections by avoiding tetanus injections have been promulgated by juxtaposing variables that should cause fear. But, what do we observe in the world today? ***A"non caring attitude"*** Bates, Michael (1991).

Psychologists would like to prove and indicate how this happens. A listeners mind could be wandering about in a different sphere but simply wants to portray a picture of ***"I am with you just go on"***, it takes a very astute presenter to assess the status quo. This paper emphasizes that the impact of the reaction of the listeners can then affect the presenter. If the information relayed by the listeners borders on ***"what are you saying" "I do not trust you"*** and such like elements that show mistrust of the presenter, then the presenter may be affected. His/her presentation is bound to falter. The personality of the speaker is important here but the point is: does the reaction of this listener especially if it is negative or non conforming or showing disregard, have an effect on the presenter?

If we consider a classroom situation where the teacher is regarded as the source of information, how is the teacher affected by reaction of the students that show ***“we do not regard you as worth our while?”*** The teacher may ***“give the students what they want to hear”*** and thus wrong unintended information is passed on, the teacher may want to ***“save his face”*** by restructuring the information due to fear or the desire to be held in some kind of esteem.

It may suffice to throw light on what a good listener is: generally, when opinions are sought from a conglomerate of people, about personalities, at times expression like ***“so and so is a good listener”*** are heard. What does this mean? In most cases it refers to ***“does not talk much”***. Studies by Ehlich M (1965) and Baten M (1994) indicate that these are people ***“who have no positive values to us” “not easily palpable,” “with low self esteem”*** or are, ***“passive”, or lack self assertiveness***. What confounds or clearly stands as a paradox, should there be a relationship between a listener and a presenter? Does the comprehension of the message need the relationship, between the two parties or is the message more important? How does character contribute to listening or listening ability? In communication forums, the attention should hinge on a desire to understand the meanings of the other.

Beatty J. (1999) expounds on the above scenario and states that ***“good listening is an intellectual and moral virtue and that at the center of virtuous or good listening is a kind of detachment. By ones good listening, one’s own and the others character are brought to awareness, scrutinized and revised”***. The Socratic view on listening as discussed by Osgood C (ibid) is that it ***“requires a fruitful inquiry, the thoughtful comprehension, and articulation of the others view creates all purposeful careful listening”***.

Hence, according to Beatty J. (ibid) during listening, the following activities should be given prominence ***“achieving a kind of fidelity to the intention”*** and other ***projects must recede***; for instance solving the others problem, appraising the others behaviour and gaining approval of the other, counseling the other, reducing the other to an emotional object thus distorting the meaning intended.

The ambiguous position here is that a listener is in all fairness supposed to indicate that he/she is of the same footing as the presenter even if he/she takes an opposing stand and be able to express these at the appropriate time. Once again the predisposition of the presenters is of great significance. If the prejudged ***“attitude”*** tends to indicate ***“I am ignoring you”*** then the presenter will adopt tactics that may not have been intended earlier for instance:

“In Anton Chekhov’s Early Short stories “Heartache” a Sleigh Driver attempts to tell his various friends that his son has recently died --- they respond with impatience, annoyance and indifference to this revelation. It is possible that they understood the content of the Sleigh Drivers’ communication, they had not really appreciated the meaning of his experience since they did not feel with him and identify the character traits he was wishing for.”

Does this mean they did not detach themselves? If the friends had been human, they would detach themselves and yet identify with the experiences of the Sleigh Driver. According to Beatty (ibid) they should detach themselves from their own moods and contents and understand the painful experience of the other”.

The Sleigh Driver developed a dislike for his friends due to this gesture. Once again explanations abound in Psychology for this behaviour, Beckhat (1990) Atkinson H (1976) Clark P (1960) Tandii K (1985).

This shows that people select what they want to believe and understand. This is technically referred to as *selective exposure*; Beatty (ibid) *a person’s receptive capacities (his stimulus encoding ability) are limited relative to the information available in the environment”*. He goes on to say that people use *random choice; acquired distinctiveness cues due to previous reinforcement current drive states and persisting values, modality”*.

In Psychological terms, the word *“ego defensive”, “seeking and avoiding”* are used this means that there is a tendency in human beings to seek information that conforms to their preconceptions and **“Actively avoid information that disconfirms them”**, that is why we avoid, with a lot of effort, what we do not believe. Beatty (ibid) states *“people avoid awareness information discrepant from their initial positions”*. The incongruity of this scenario is that anything that is not usual is regarded with askance. Could this also be the reason for change in any circumstance taking a long time? Is the Sleigh Driver then right in hating/disliking his friends? His friends also do not want to nurture this **“sad emotional feeling he has over the loss of his son”** did his friends behave appropriately?

If among his friends there was one who listened to him and behaved in the way he expected then the other friends would say of him that he is a good listener and is *“lazy, inattentive, desires comfort and does not want to help the Sleigh Driver.*

It is indicated through surveys Oliech and Ambam (1981) Cruink Albert (1959) that good listeners seem to be people who live in their own world and pay attention to other spheres of life. Society, these studies goes on to say regard shyness and those withdrawn with hostility as highly undesirable. They do not want to tax their brains they do this overtly in

their own time. Identifying with the Sleigh Driver in the manner of showing compassion would not help the Driver get relief from his state. However, disregard for his state did not help him either.

An aspect that can be misinterpreted but which has been elucidated by Beatty (ibid) is empathy. Beatty defines empathy as ***allowing the listener to be detached. Detachment is reason or intelligence's attempt to free itself from whatever is or could be an obstacle to the understanding of what is real/true / meaningful.*** The Presenters should be aware of this because it enables a more cognitive access to the true meaning. "Beatty (ibid) purports that some people unfortunately bash this off as being unrealistic, impractical and far fetched. It could explain the conundrum people are at times faced with leading them to say ***"I understand why you did that" if only to help the other person realize he/she has support***" after a deed that is an outright crime. ***"If I were in your shoes, I would do the same"***.

During presentation, a presenter should engage Listeners in the following activities.

A presenter should realize that a listener pays attention to

- *How the presenter expresses himself/herself*
- *The order of the concerns.*
- *The emphatic and the discounted*
- *The timing of the concern.*
- *The discounted and the why now.*
- *Fitness of the communication given the existing norms and the relationships.*
- *The gestures*
- *The posture*
- *The tone*
- *The feelings*
- *The moods*
- *Coherence*
- *Locutions and the fit between coherence and locutions.*
- *What is said and what is done to communicate it*
- *The significance of an action*
- *The concern for the listeners.*

This is an exhaustive summary from Beatty's study on Good Listening (ibid). There are assumptions that are made by all presenters when information is being relayed, he goes on to say. These assumptions are that *"beliefs, customs, prejudgments are the same for all"*. It is important for a presenter to gauge the entry behaviour of his/her listeners so that the

appropriate approach is adopted. After gauging the stance of the listeners should the presenter pitch his approach to the disposition of the majority or the minority?

The presenter should therefore be very wary of what audiences are likely to do so that they are not caught unawares. What is interesting is that despite all these, we have situations where some presenters are at a loss over what to do in certain circumstances. For instance, it is very useful that after a presentation, there should be reactions, comments or clarifications. Due to time constraints or other forms of mismanagement of time, we find that presenters may be told that the original 30 minutes they had for their presentation, have been reduced to 10 minutes and that no time will be given for questions or clarification. How does this impact on the presenter? How does the information get delivered in this kind of time? Or situations abound where we know that when given the opportunity to express oneself clearly it would take time, and for us to say that communication was effective we should know that our intended meanings were relayed.

An example from life's daily events would help shed light on this:

Have you ever wondered why at times when one has the opportunity of baying out the heart/mind there is always an interruption either external to the communicants or perpetuated by either the listener or presenter as a defense so as to create a barrier in communication or cause a communication breakdown? These situations make communicators unable to relay their messages fully for the desired effect. For instance, the listener feigns illness and becomes incommunicado, yet the climax of most meaningful things is usually less than a minute. If only the communication barrier was not created by the listener, the time intended for the communication would have rendered very effective relayance of the message?

In other words, when "*given*" the chance to express oneself clearly it would take time and it would be effective from the point of view of the presenter. Could this be the reason why study areas are quiet places, without any distraction so as to allow maximum concentration? Could it also explain why examination rooms require utter silence for presentation of information? Why do other situations deserving similar relayance of communication have opposing contexts e.g. a school next to a milling factory, and yet the students from that school perform equally well: Is it because the noise (Physical)and other disturbances become part of what they can take in their stride?.

NEED FOR INTERACTION

Beatty (ibid) believes that most institutions pay lip service to the cultivation of communicative virtues in public discourse. No time is given for interaction. He says “*some include class schedules that permit few temporal open clearing between classes for exchanges between presenters and listeners. In fact such relations of interaction between faculty and students are discouraged, Beatty (ibid) because of fear that that they will turn amorous relations and incur law suits*”.

Other situations where the interaction is not given its due place is where sending the project report or presentation of good grades in a school are seen as underlying objectives of seminars/conferences and School situations respectively. Listeners whose pursuit of understanding is framed by a grade system are unlikely to engage in dialogue system. This is because, Edel A (1990) states *listening are not considered as important; the precious innocence of inquiry is lost. The physical presence of presenters and listeners in a room is enough to show that something is going on otherwise why were grown men and women engaged in the activity for so long?*” he asks.

How does a teacher teach when she knows that *the students attempt to understand will be objectified in a grade asks Norman A (1997)?* The importance of the grade as a determiner of future success is vital. Norman (ibid) summarizes this situation by saying that “*the risk presenters run is that listeners will come to see listening as having no intrinsic value at all*”. The ability of a presenter to convince an audience whether in class, seminar, or workshop relies heavily on presentation skills. According to Gardener (1991) a presenter should fetch from Shulmans (1981) outline which states that there is content knowledge (knowledge of the subject) and pedagogical knowledge (knowledge of how to present content that is specific to what is being relayed). How to explicate particular concepts, demonstrate and rationalize certain procedures and methods and how to correct naïve theories and misconceptions about subject matter should be the task of the presenter.

In seminars, workshops and conferences a presenter should be wary of what the theme of the meeting is. Some presenters go about relaying content of a subject versus analyzing the theme of the meeting. An example from teacher training institutions would suffice. How much subject content does a teacher need? Did the teacher not cover these aspects while in school; doesn't the teacher only need to know how to relay this content? Isn't the methodology of relaying the content more important than the content itself? This has been a debate for many years leading to attitudes of “*why tell us what are already know*” from listeners.

Generally, presenters use discourse or language makers in their presentations to touch base with the listeners. It renders the listeners in pace / tandem with the presenters. This paper will explicate three major sections of a presentation.

The first to be considered is the introduction, followed by development and finally the conclusion.

INTRODUCTION

What is a presenter expected to say in the introduction and what is the impact of these statements and actions on listeners?

“I will introduce.... define... and I would appreciate if the questions /comments/reactions are noted and then asked when I finish the oral presentation”. One can imagine what would arise when such a presenter is interrupted by the questions during the presentation. How do such affect the introvert, extrovert? How does the nature of the question affect the presenter? Does it show agreement or controversial stance in the listener? Will this make the presenter redesign his presentation? Does the presenter have the capacity (ability) to accommodate such criticism without losing his/her string of thought?

Another introductory format used by presenters in seminars which could be termed as ice breakers is a situation where the presenter says ***“I have just come back from --- and 2 months ago I met ---- who told me that I had to give a paper on ...and I said “wait a minute I am not available” so was pestered by him/her so much that I decided to put Paper to pen and here I am today...***

Some listeners will feel offended by this because it may strike a feeling of ***“this was not really his liking he seems to have been pushed into it so his content may also just be something of a “for the sake of”***

Again in this ***“monetary after seminar presentation era”*** the financial reward may be the motivating factor. How will the listener impact on the presenter in a situation of this nature? How about presenters who start off with statements that may either be labeled as excuses for instance:

“I am not feeling very well so my presentation will be short”

versus one who just has a short presentation and is unable due to illness, to present the content for a long time but does not bother to explain or alert the listeners?

Which of the two presenters will the listeners value more? It may be true that the one who explains his disposition will be accepted more but some listeners are bound to say ***“that is just an excuse on his poor performance”*** (if the performance is not up to the expected standards).

How does an ice breaker used as an introduction impact on listeners and the presenters? How about when the ice breaker fails? What does a failed ice breaker: for example flat / bouncing joke do to the presenter? How about a presenter who puts his hand in his pockets or folds his arms across his chest? Or shakes and has a trembling voice out of fear?

What about a different situation where the presenter dishes out handouts which have a lot of mistakes and has illegible handwriting ... and later on asks the listeners their evaluation of the presentation orally? What is he bound to hear from the listeners? If the presenter asks this without realizing the frankness of some participants and they tell him/her the truth how is he/she as a presenter supposed to handle the genuine answer ***“you presented a hand out full of mistakes and it is illegible”***. Does the presenter ignore it, explain the reasons by blaming some one else or time? If the presenter is taken unawares by the genuine comments, what is he/she supposed to say ***“I do not see anything wrong”*** will erode all the confidence he might have earned. Likewise ignoring the concern will give an impression of ***“I was only looking for a way of boosting my ego”***. If on the other hand the participants are not genuine in their comments, the presenter gets a different impact. Should this be the case: that inappropriate behaviour is rewarded? Will there be any one later on willing to ***‘bell the cat’***?

If the presenter asks for the evaluation orally after his presentation and the responses are ***“very good work...”*** amidst all kinds of fidgeting e.g. rubbing the nose, scratching their necks, pulling their collars, exhibiting blank and confused stares, what message could they be relaying to the presenter? How will this impact on the presenter? Why is the verbal communication at variance with the non-verbal communication? Psychologists indicate that every body has one or more repetitive gesture / body expressive movement that could signal boredom, tension, agitation, disbelief...

These repetitive signals e.g. nose rubbing; looking out of the window/ the far away look ... are often seen in situations where the listener and the presenter have lost touch or are developing attitudes.

In other circumstances a glass of water is provided to presenters. Does the presenter need it or is it a way of relaxing the presenter? Is it a stimulus variation for the presenter and the listeners? How about a situation where the presenter drops the glass / spills the water on him/herself or chokes with the water? For each of these there would be different reactions.

For each of these some would be embarrassing to the presenter hence causing an impact on the listeners and the overall communication process.

What led to the theory of **“water giving”**? How about the case where the presenter totally ignores the tea/water out of fear of the above mentioned accidents or lack of time? The listeners will still view the action as **“lack of courage”** or **“slight”**, some may see the presenter as **“composed”** ... **“tense”**.....

In some interview situations this **“tea giving”** is used as part of the assessment. How does the interviewer react in these **“social circumstances”**. As such the tea giving will be testing the degree of nervousness or ability to hold oneself in anxious situations.

How about a situation where the nervous presenter trembles so much that the listeners walk out? What impact does this have on the presenter? If the presenter were to hold a second session, how would the listeners react? What is the overall effect of this to the presenter? Such situations abound and the writer feels it could be the case of “the presenter is unwell or has some other commitment or any other excuse given to the listeners to save the face of the presenter. The ability of humans to affect one another through empathy has been researched for a long time. The information obtained from the studies of Verducci Susan (2000) for moral Education is an indication of this.

EXPRESSIVE MOVEMENTS

Several factors impact on the listener, the presenter should be aware of facial expression and general dispositions. To some extent the presenter has control over these aspects. For instance in the study of Sheldon, Steven and Tucker (1940) the error they caused in their calculations has made us realize that body dispositions dictate personality type... there is some contribution on the impact of perception. The studies on attitudes and personality by Allport (1976) have tended to support that a **slumped posture that moves slowly is dull, lifeless, depressed ... a flabby handshake suggests lack of warmth; Jerky erratic movements may suggest force, vigor and constraint of movements will suggest aloofness and reserve**. The film industry has also used these general impressions in anticlimaxes to thrill viewers. The slump posture that is considered lazy all of a sudden reacts swiftly in such a manner to keep the audience thrilled!

Other cues are the voice. Voice is judged as warm, neutral, cold and these reflect predisposition of the presenter. The clothing, age, Gender of the presenter all have an impact on the listener. These studies have been supported by a recent study on perception of students by Ahmed Zawedi (1998) which states that **“when confronted with a person**

whose attitudes are at variance with theirs, they exert pressure on him to change” In other words a presenter is accepted if his/her beliefs tally with the listeners, or develops them in the direction they expect it to *“Members of a group whose beliefs have been shaken by an exposure to a counter communication would seek discussion partners who agreed with their beliefs* Brodbeck K (1996).

Little is known about the factors that enable a person to be more insightful in his evaluation of others in spite of the fact that such knowledge is extremely important in aspects of life. The question that arises at this stage is “Is there any relationship between physique and personality?”

What determines liking / disliking for people?

How do we arrive at Judgments about characteristics of other people? If we have attitudes about a person, we seem to carry these and observe the person with a view to supporting what we already possess and these could well be prejudicial.

Another impacting factor on the presenter and listener is the facial expression. Studies in this area point to the fact that facial expressions may be interpreted variously by listeners in three categories ***“too sure” “not known” “very unsure”***. A presenter who adopts a ***“too sure”*** stance may develop such high self esteem that exaggerations bordering on Ostentatiousness and preposterous stance will be manifest. Alternatively, the ***“very unsure”*** facial expression may be looking for a way out and may terminate the presentation prematurely. The ***“too sure”*** facial expression may go on and on presenting information for extra time without receiving complaints from the audience.

We will now turn to the development and conclusion of a presentation.

EVENTS DURING PRESENTATION

In an instance where a presenter gets power or electric failure of technological devices, the presenter is meant to give some kind of explanation. What is the impact on the listeners if this explanation is not forth coming? If the presenter was going to use transparencies and the power supply is cut off, how does what the presenter do impact on the listener? Will it build his/her inability to continue due to the power failure or will it be a show of lack of preparedness? If it was something that was within the ambit of the presenter is he/she expected to go ahead indicating ***“I am sorry I could elaborate more explicitly if I had power source”*** or does it show that the presenter is ill prepared? If the presenter says, ***“well power***

supply has been cut off” some listeners many wonder why he/she is stating the obvious! What paradoxes these are.

It is generally assumed that one who keeps on explaining is giving excuses for shortcomings is weak! For instance one who says ***“I have just had on attack of cold therefore my voice is a little husky”*** versus one who just continues with a husky voice without explaining why it is husky to the listeners. One would argue that it depends on the listeners – In a situation where listeners are a little mature and a free atmosphere has been created such explanations may not be warranted.

How about a classroom situation? For instance, standard 6 children whose age is about 11 on the average. Will such children understand the explanation? Will it be of value? Is it the duty of the teacher to do this? Do the children need to know why the teacher is talking like that? When the teacher explains his/her situation does his/her activities later on in the day get better interpretation from his/her listeners? Do others say she/he was just looking for sympathy ***“who does not become sick?”***

In some presentation situations, the presenter elicits support from listeners by nodding and asking for support in various non-verbal ways. These non verbal cues are at times meant to hoodwink listeners or are to persuade the listener towards a particular mode of thought?

FACIAL EXPRESSIONS

Studies show that there is hardly any disagreement that facial expressions effectively influence those who perceive it. But to be able to read and interpret facial expressions requires cultural and cognitive steep age. Facial expressions alone cannot account for reaction. However, it is evident that there is a transfer of facial expressions from listeners to the presenter which affects the status quo.

Couple facial expression, with facial imitation and the result is that there is a relationship. Studies suggest that faces reflexively imitate other faces and that facial imitation induces affect.

EFFECTS OF FACIAL EXPRESSIONS

One does not have to perceive that Michael is sad in order to induce sympathy. All one needs is to see Michael’s facial expression (not what it expresses) to imitate unconsciously and then be affected. Imitation of facial expression therefore, allows a subject to be infected with the affect of another without knowing the context eliciting the original affect.

Because this phenomenon can be induced with little cognitive activity, the transfer of emotion can be essentially affective.

If we were to walk into a room where people are fighting, our sympathies will be elicited by empathy our sympathetic feelings are elicited by the environmental cues. Our reactions depend on how we interpret the situation. Sympathy should not be confused with compassion. Compassion is described below.

Compassion It is sorrow or concern for the unfortunate condition or predicament of another. The difference between sympathy and compassion Osgood (ibid) is that with compassion you need not feel what the victim feels. All you do is show extreme concern. ***“I am in your shoes is not part of the communication”*** for compassion it is with sympathy.

It is important to distinguish these 3 areas for a listening situation. Do we feel compassion, sympathy or empathize with presenters when we are listeners? Whatever we do, how does it impact on the presenter? Listeners may or may not show any of these but they are affected, the presenter therefore has to be wary of the effects of his/her presentation skills.

Sympathy David Hume a (171-1776) Philosopher defines sympathy as *“a propensity to receive by communication the other inclinations and sentiments, however different from or even contrary they are to our own”*.

Beatty (ibid) goes on to say *however heroically dazzling, apparently sincere, cogently expressed or flattering, it may not accord with other aspects of what has been communicated. Nor should the poverty of language in common place expression, stereotypical pictures – necessarily disqualify an account. In Madame Bovary, because Rodolphe hears Emma professing her love for him in clichés he doubts the depth of her feeling. Flaubert’s narrator comments on this bad listener.*

Fidelity of meaning is difficult to establish but most people think precision and captivating description does it and that slovenly or trite language is not necessarily a sign that the meaning or experience has been falsified.

The unsure people are always taken for not being convincing yet there are reasons for this (a) personality (b) predisposition. There are no rules that a listener needs to follow according to Beatty. *The presenter should realize that she/he needs to monitor the listeners’ reactions to gauge the impact of the information: does the listener find it correct? Is it correct clearly and fully? Is the listener engaging wholly in the communication act by showing willingness to revise and abandon her particular understanding on the basis of the others responses?*

A presenter should be able to analyze feedback and to find out the impact of the communication act by

(a) Tracking the literal meaning of the others statements

(b) Attending to bodily signs of listeners

(c) Having tone, mood,

(d) Having internal dialogue with facial expressions.

(e) Interrogating own expressions

(f) Noting the impact of metaphors synecdoches, notes, coordinations, or the lack of the body expression after the impacts of words.

His/Her feeling of threat; boredom; Impluse, become more rigid or lax, and are at constant questioning as to the suitability of the situation.

If the presenter realizes that there is a threat she/he should ask (a) what is the source of the threat? (b) Does it arise from similarity/difference (c) why is it a threat (is it because 'I' the presenter am not prepared/confident)? What precisely makes me afraid as the presenter? (e) who in the audience makes me afraid as the presenter? Does the subject give me solace and comfort and if not why?

Empathy Kohut wrote extensively on empathy as the primary therapeutic tool in Psychoanalysis. Kohut believes that only empathy allows the therapist to know the patient within his frame work of self Psychology, Kohut contends that empathy consists of both an affective in-tuneness and a value neutral mode of data gathering and processing "reality per se, whether extrospective or introspective is unknowable. We can only describe what we see within the frame work of what we have done to see it.

There is a danger in over dependence on the presenter of information hence making the listener not "***separate the wheat from the chaff***". Sullivan (2000) warned of situations where *contacts with patients were characterized by the patients' strange dependence on what they think the doctor thinks they is suffering from. Such dependence is dangerous and causes the presenter to falsify or re-organize his/her information for approval. She/he may omit sections of the presentation that she/he knows may not augur well with his/her listeners.*

Other affects between presenter and listener are also evident in the area of synchrony which we will now turn to. **Synchrony** Richard Restak on Synchrony (1942) says that two clocks will tick in unison if they are mounted on the some support. If separated, this

synchronization will stop, Richard Restak names a similar process that occurs between individual humans, and he calls this process synchrony.

Restak claims that the drawing along of another or mutual entrainment (cause to flow along incorporate) that occurs with clocks also occurs with people. Research on the menstrual cycles of women who live together bear this fact in a biological manner. Restak posits that this sharing of rhythm occurs with affect as well.

Restak believes this process to be a possible neurophysiological correlate of empathy.

Medicine Watch someone giving medicine to another. As the person opens the mouth to take medicine, the other feeder or an onlooker performs the same actions; at a bus stage somebody goes into a bus another lifts up the leg or performs actions similar to the person getting on to the bus. These could be reflex actions.

Swallowing In other instances, one may salivate or swallow simply because another is doing a similar action but if that which is being eaten is bitter then the facial expressions translates to the one watching she/he also grimaces as if the bitterness is in his/her mouth.

Discontent In situations where one is enjoying a meal that the observer finds unpalatable try to compare the two facial expressions, watch whose face affects the other: the one enjoying or the one disgusted by it all?

In presentation situations the effects of the listeners' predisposition impact on the presenter in almost similar ways.

An embarrassed look from a presenter elicits embarrassed stares from some listeners. Similarly a happy face elicits the same from some listeners. The reverse is also true and this points to the paradoxes of communication.

Laughter is another example of how listeners may affect presenters. If a person begins to laugh heartily, even if those around do not know what she/he is laughing about they will usually find it difficult not to join (at least with a smile)

Educationists distinguish among empathy, sympathy and compassion. All these three exist in the presenter and listening contexts.

Gunn (ibid) assumes that empathy necessarily makes the rather large claim of being able to transpose one person into another's" Verducci S (ibid) explains that although theorists have

considered empathy a singular phenomenon they have been capturing and explicating individual components of a complex phenomenon. They argue that empathy has ***one facet and is motivated by a persons desire to help; to understand Most conceptions of empathy possess a primary affinity with emotions / cognition it is a mode of feeling / reasoning Susan verducci (ibid).***

Matin Buter (1965) states that empathy is the exclusion of one's own concreteness, the extinguishing of the actual situation of life, the absorption in pure aestheticism of the reality in which one participates".

The projection of "***feeling self into signals empathy***". The imagined mental representatives of the other and the viewers feelings become inseparable Buter goes on to say.

Vischers and Lipps (ibid) describe empathy as a human instinct desirous of unity and harmony with other humans. This is because there is a desire to merge with the others. Stern Edith (1891-1942) studied empathy extensively. He variously defines empathy as the "***experience of being led by the foreign experience***" it occurs in three grades

- (a) the emergence of the experience (we come into some sort of contact with another subject)
- (b) the fulfilling explication (our affect resonates with theirs)
- (c) the comprehensive objectification of the explained experience.

He says all levels, must occur and for an experience to be empathic they are equally valuable.

Do people alter their judgment with which they are associated? E.g. if people wear certain colors are they projecting different images? Do the stereotyping communications of various colors affect interpretation? For instance bright colors; (Whatever bright means) indicate-bright, alive person versus the attitude that dull and pale colors represent a dull person? Studies by Murila 1995, Njoka 1997) show that colour presentation predisposes certain cues in listeners.

Linguistically we know all these have an affect leading to the saying ***the way you say something is more important than what you say***. This is a sure way to indicating that even if the content was not expressed in the manner it would ever be presented be presenter is of utmost importance.

Others have also said that it seems more was spent on the cage than feeding the animals in the zoo!

INCIDENTS DURING PRESENTATION

Eyeball to Eyeball Contact

As a way of gauging impact of information on the listeners, presenters may choose to have eye contact. The personality of the presenter dictates the eye contact style adopted. There are those who can almost look at each of the eyes / faces of all the listeners as individuals. There are also those who cannot do this. They instead look through, above, beyond or simply adopt a style that tells the listeners. ***“I can see you”*** The fact that eye contact has so many words to describe it means it is a complex affair the Oxford University Press Thesaurus of 2001 lists the following words for eye contact a *squint, a stare, a glare, gaze, goggle, gawk, watch, blank look, wink, blink, sparkle, flinch, wince, observe, consider, contemplate, regard, view, survey, inspect, scrutinize, study, scan, pay attention, attend, notice, witness, investigate, explore, research, check, glance, struck, wide eyed, open mouthed, dazed....* The list is endless.

Eyes of a presenter can send a lot of messages to the listeners. They may present confusion, fear, and self confidence. A trained eye may also just stare to feign or fake seriousness. The eyes of the Listeners also have impact on the presenters in similar ways. What about culture that indicate that you do not look back / stare / look at your elders? When an older person talks to you, you should look aside. What about professions like the armed forces where the juniors are not supposed to look at the eyes of their seniors? How about the eyes of a judge in a court who may be younger than the other staff he or she is dealing with? More information as to the value / worth of a presenter is obtained from the eyes! In some cultures a young one does not just look at the older person but looks down or faces the opposite direction for example some tribes in The Sudan.

How about the eyes of a lover? The lovers are usually ***“swept off their feet”*** depending on the intensity of the relationship through looking at the eyes which at that time assume a dreamy state. What about people quarreling?

They always have eye contact. The eye contact relays dislike, seriousness, hatred, murder, sorrow, hurt, forgiveness, submission, authority.... The list is endless. During presentation, the presenters' eyes can also relay similar messages. What is the impact of these looks on the listeners and what are the listeners' impacts on the presenter? How does this enhance or inhibit effective communication.

Activities It is interesting to note that some embarrassing situations of clumsiness draw different reactions from listeners. If a presenter clumsily spills a cup of coffee/tea over himself / herself, in most cases there is increased attractiveness of the superior person. The average person appears less attractive. This was reported by Schmidt (1987). He defined a superior person as a ***“popular person who has qualities of an extrovert on the average”*** and not as one leaning towards introversion. It appears that when the expert has a little bit of human failing then the subject feels more rapport with him.

In actual social settings, Psychologists have found that people have little contact with those unlike themselves and are therefore much exposed to peer than to expert influence. The implication is that when the expert gets his message heard, he has more impact than the peer but that in the natural community he is much less often heard than are one's peers. Further, studies on selected exposure (Janis, Kay, Kirschner, 1965) indicate that people tend to overexpose themselves to communication that they perceive as coming from sources with whom they expect to agree and underexpose themselves to sources with whom they expect to disagree.

SOURCES OF INFORMATION AND THEIR IMPACT ON LISTENERS There is also ample evidence that a message is perceived and evaluated very differently depending on whether its purported source is positively / negatively valenced : more fair; factual; more thoroughly documented; when it is ascribed to high as opposed to low credibility sources.

Lawyers Lawyers believe that Belli T. (1963) man is innocent until proven guilty and thus the State must establish evidence of guilt before the defendant can be asked to present his case. This is because it is believed the presenter has a definite pursuance argument. Earlier studies talk of first impressions. They are impelling and they set the pace. We also realize that the issue of anticlimax effect is more meaningful at times. So is the ***“first impression compelling more of a common sense issue?”***

Judges only listen to both sides of the case as the Jury and only comment later... they are patient with all the hullabaloo and the back and forth cross examinations. They are patient with all they hear before Saying IT. All the while they have to humble themselves. Patience and self control are dispositions akin to respect because they allow others to tell their story in their way. According Osgood C., (ibid), even if the Judge could do it more clearly and dramatically, any interventions are to pick the correct thread from the many directions that the dialogue could be going; to the mobility to listen. Those that are slow make listeners impatient. It is increasingly becoming common that this impatience makes listeners disregard the slow as people without substance (S.I.C.)

Acknowledging oneself enables the presenter to be open to whatever is there and enables the listeners to express the meanings that are indeed the others; free of the expectations of the kind of reaction expected hence more meaningful comprehension.

Presenters should thus consider the following:

What is the state of the person when she/he receives the information? Is she/he alert, willing to participate or is she/he thrown off. Do listeners who have been put off behave as if they preferred to succeed even though it is not what they expected?

Monetary Reward Role of monetary reward after participation in an activity has propelled all kinds of presentations in different fora: Does a favor for a person who deserves courtesy seem to be the new adage.

The dissonance theory prediction states that the lower the drive or reward the greater the performance or attitude increment. What is usual is the reverse. This is another of the paradoxes of presentation. The more satisfied the person feels with his performance, the more he/she will internalize the new position and the greater the participation.

Aronson and Carlsmith (1963) found that children showed a greater internalized negative attitude) of a forbidden toy when they were given a mild threat to deter playing with the preferred toy that was kept before them.

McGuire (1999) states that, " *those who show high conformity early in the situations tend to be high conformers at the later stages also*".

Attitude change is the end product of a series of conditional behavioral elements: attentions to message, comprehension to its arguments and conclusion, yielding, retention, overt action. Is it true that the more intelligent person should yield less because he/she should have basis for belief; thus is less upset by opposing arguments and that he/she has better critical abilities therefore she/he can separate the wheat from the chaff hence has higher esteem and therefore, is more tolerant? No! Because attention and comprehension are determined by message reception among other factors.

This principle therefore does not make us give confident predictions but simply calls our attention to the complexity of presentation. When the material falls in the latitude of rejection we see it as discrepant from our own position and this makes a contrast error. We then misinterpret it and hate the presenter. The 3rd zone is the zone of indifference. Any material here is neither accepted nor unaccepted. It does not go through any distortion.

If the message advocates a position too far from the recipients own position, she/he tends to respond by rejecting the source rather than by changing his/her own position and such a message could have a boomerang effect.

Hovland (1964) indicated that as involvement increases the import of highly discrepant messages decreases. What can the presenter do about such a situation? Muchuhan and Fiore (1967) say that the medium through which the message is communicated has more impact on the receiver than does the message content.

EFFECT OF COMMUNICATION MODALITY

The written versus oral form

Efficacy is more with off the cuff speech over read speech but comprehension is greater with reading and hearing. Beightly (1952), Harwood (1951), Hague (1952), Toussaint (1960). There is also a relationship between the source and the receiver depending on whether he is reading or saying the message. There is anxiety; pressure; good taste to conform when the personalized spoken modality is used and the person is felt other than paying attention to what he is reading. So presenters should bring out themselves more / express themselves as the authors of the speech for impact. Rosenthal (1967) emphasizes on the role of Non-Verbal Communication (NVC). He says that a cathartic vicarious outlet effect the focus when the presenter is present.

Educated aware versus Non Educated Audience What is the effect on the presenter? How should a presenter relay information to an educated audience? Which mode impacts on such a group of listeners?

Walk Out Social constraints usually prevent the receivers from leaving the room, when another person begins to express opinions with which they disagree: boredom, fatigue, intellectually limited attention in face to face communication the demands of the presenter limit inattention so that the receiver will absorb more of the message. It is rare but not impossible for listeners to work out.

Is this what we see anymore? In areas where presenters realize they are at cross purposes with the listeners walking out has become the order of the day. Even in the entertainment industry the audience will scream "we want our money back" courtesy or no courtesy walking out is not a difficult thing. But there are those who hold back? Why do they do

this even if they know they are not benefiting? Is it because they are empathizing, sympathizing or being compassionate? Do they need to sit there and absorb all this?

Osgood C (ibid) says that “decoding” is regarded as the process whereby the stimulus patterns we call signs, elicit distinctive representational mediators (significance) and encoding refers to the process where by “*the self stimulation produced by these mediators (intentions) elicit distinctive patterns of instrumental skills, linguistic or otherwise*”

Thus it is important that a presenter and listeners communicate what they intend to communicate. The impact of the presenter and listener as we may have noticed determines, in many ways, the trend of the communication adopted.

It is not uncommon to observe highly intelligent people in situations, where they need to be at their best, being unable to express themselves. Other people of relatively low intelligence may display a high degree of fluency both verbal and non verbal. ***Eloquence comes into play for reasons that determine an effective communicator: presenter and listeners.***

How presenters deal with issues that surprise them and how a situation where concentration is important indicates a lot of correlation of reaction between presenters and listeners. How does a presenter deal with a naughty smile, a threat? How does the presenters’ naughty smile or threat impact on the listener? How do these two contribute to the communication process?

Can listeners alter the position of a presenter if they are not comfortable? For instance sometimes in a seminar a presenter could be using an over head projector and blocks the view of the listeners. Should this be left “unnoticed” by the listeners? Should the listeners tell the presenter? Or should the presenter ask the listener whether they can see what she/he is trying to share? In all of these cases there are repercussions. If we pick the case where the listeners tell the presenter and (s) he was uncomfortable about it; how does this impact on both the presenter and the listener; what about the mood of both the presenter and the listeners?

What is the impact of a presenter on listeners who keeps looking for confirmation as (s) he talks by constantly nodding the head?

What is the effect of pinpointing the deeds of inattention “**hey stop looking out of the window, I am saying something**”. What is the impact on the listener? What does this tell the presenter and how does (s) he then reorganize to move on? Meanwhile what about the communication process? Does it become less emphatic / effective?

“Listen to the cues, because there is a lot”. It is often said that when we have to make decisions, there are many voices in us. There are those voices that urge us on and there are those that slow us down and still others that warn of dangers so **“do not attempt”** the voices seem to be saying. Can this be equated to gathering courage to finally making the decision and being prepared for the consequences of the decision made?

It is not the speaking voice but the voice heard that is important in communication. Why is it not possible to maintain eye contact during conversation or a listening situation? There is always a tendency to look away, beyond, above, under, below; elsewhere. Do all these postures relay reliable meaning?

“Perceptual distortion as a function of comprehension maintains the messages actual meaning”, Osgood C (ibid). The receivers preferred position, the previous material which he has been judging, and the present context where the information is being judged all play a role in interpretation of information. The interpretation given to a message depends on whether it falls within the latitude of acceptance. Listeners tend to distort the message to be closer or like their own and hence accept it and it also depends on their acceptance of the source of the information.

The impact of the presenter on the listener and the impact of the listener play a great role in the communication process.

A more elaborate study could be done by designing tools to observe and report on the various situations of how presenters affect and are affected by listeners.

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YOUTH EMPLOYMENT IN KENYA: EMPLOYABILITY SKILLS FOR SOCIO-ECONOMIC DEVELOPMENT

Alice Githinji and Dr John Maundu

Introduction

Service to society is a vital role of human existence. This implies the undertaking of many activities which demand the utilisation of our mental and physical empowerment to achieve desired results. These activities may be self or otherwise designated. Self, private and public employment is a normal engagement among youth and adults. Such employment is not always readily available especially for the youth.

Youth unemployment is a global issue that requires urgent redress in order to harness the huge potential that this section of the population can contribute to economic and social development. Indeed, global youth population between 15-24 years, which registers a massive 1.03 billion, can bring about substantial socio-economic change in the world. In Sub-Saharan Africa, youth in the said age bracket constitutes about 37% of the working population. By participating in employment, the youth are able to lead full and productive lives and to eradicate extreme poverty among themselves (MDG Goal 1, Millennium World Summit in 2000). In Kenya, about 75% of the population is under 30 years of age while about 32 % of the population comprises of youth aged 15-30 years (CBS, 2005). Their contribution is greatly hampered by various educational, economic, social and health challenges.

In Kenya, over 500,000 persons enter the job market annually “to compete for the scarce employment opportunities generated by the economy” (Ministry of Labour and Human Resource Development, 2005:vi). However, the country’s economy has not been able to absorb most of the job-seeking youths and adults despite the 5.8%, 6.1% and 7.0% economic growth rates in 2005, 2006 and 2007 respectively (NewAfrican, May 2009:65). The pumping of **one trillion** into Sub-Saharan Africa by the combined effort of the World Bank and bilateral-Aid arrangements over the last 50 years has not checked the relentless rise in poverty levels (NewAfrican, May 2009). Further, the greatest number of those absorbed (about 74%) have had to contend with vacancies in the informal sector (Ibid), otherwise referred to as the *Jua Kali Sector* (*Jua* meaning *sun* and *Kali* standing for *hot or severe*). Despite the creation of more employment opportunities than the public sector, the *Jua Kali Sector*, whose workers struggle to eke a living under relatively harsh environmental conditions, is usually faced with several constraints such as:

- Working space (land)
- Poor access to credit for expansion of their businesses
- Inadequate infrastructure
- Limited business information and technological know-how
- Market outlets and viable marketing strategies for their products (Ministry of Labour, 2005; Twoli & Maundu 1994, 1996). Such a working scenario does not augur well for the youth who will normally be deficient of capital and entrepreneurial skills to start a business. This has partly contributed to the large scale unemployment observed in Kenya particularly over the last decade.

The mis-match between the rate of growth of the economy and that of the labour force has exacerbated the youth employment problem. Income generating opportunities and growth in productive employment has not kept pace with youth and adult employment demand. The labour force is projected to reach 16.8 million by next year (2010) while the economic growth has not been reported to register any appreciable percentage. “The rate of growth of the labour force therefore, outstrips the rate of job creation as measured by the rate of growth of the economy” (Ministry of Labour, Sessional Paper No. 6, 2006:1). It is indeed, a fact that “public wage employment has consistently declined” (Ibid) over the years. However, the government has made several efforts that seek to alleviate the huge youth unemployment deficit.

Efforts made by government to address youth unemployment

In Kenya, over 500,000 youth students graduate from various cadres of educational institutions each year. Of these, only about 25% are absorbed in the labour market. Further, some of those absorbed do not secure jobs that are commensurate with their qualifications and specialisation. (CBS, 2006). Sixty seven per cent (67%) of the unemployed persons in Kenya are youth aged between 15 and 30 years and 45 % are below 24 years.

Various players including NGOs, CBOs, FBOs, employment agencies and the government have made efforts to address the youth unemployment issue in the country. Despite these efforts, it is important to note that the rate of job creation is low and the interventions uncoordinated at times resulting in duplication of efforts. Consequently, the government has established the Ministry of Youth Affairs and Sports, with the mandate of addressing youth related issues and mainstreaming appropriate programmes for intervention purposes. Measures taken by the ministry include:

- Establishment of the *Youth Enterprise Development Fund (YEDF)*
- Construction/rehabilitation of Youth Polytechnics (YPs) for skill training/upgrading

- Development new YP curricula which focus on market driven courses
- Skills training in National Youth Service training institutions for capacity building to enable graduands secure jobs and serve the Nation better
- Coordination of Labour export to various regional and international destinations for accountability and planning purposes
- Promotion of sports potential through remuneration
- Trees for jobs Programme for payment of participants
- “Kazi kwa vijana” (KKV) initiative to provide temporary employment to the Youth (KSh. 15 billion in 2009 budget for over 30000 youths)

Although the above and similar efforts by the government are a commendable occupational gesture, this does not eliminate the mis-match between job availability and demand for one to earn a living through which one would improve her/his social and economic potential. Indeed, unemployment, especially for Youth, is a global phenomenon that requires urgent but focused attention before it explodes thereby ushering in a series of uncomfortable repercussions. One way is to enable the Youth improve their employability skills in order to enable them to compete better for the labour opportunities that may arise from time to time in public, private and informal establishments. This is particularly crucial for women participation in modern wage employment which in Kenya is significantly lower than that of men (almost 50% in 2006). Among the frequently cited reasons for the low women participation include:

- Level of education and training
- General negative attitude towards women
- Non-implementation of gender responsive policies and programmes (Ministry of Labour, Sessional Paper, No. 6, 2006).

These and similar hindrances to active and fair access to wage employment opportunities can be minimized if all Youth, female or male, are made aware of the basic employability skills.

Meaning of employability skills

In this competitive world, employability skills are essential for successful placement in the job market, social transformation and for achieving Kenya’s Vision 2030 goals whose central focus is the transformation of our country “into a modern, globally competitive, middle income country offering a high quality of life for all citizens” (Kenya Vision 2030, 2008).

Most employers the world over are greatly concerned with keeping expenditure at a minimum while increasing the quality and variety of products and services. These among other considerations serve as basis for recruitment, deployment, retention and promotion of staff. Most youth (in Kenya, 15 to 30 years), do not automatically secure entry into formal employment upon completing their schooling. In addition, the would- be employers do not necessarily recruit youth with academic certificates. In practice, they need people with both academic and non - technical skills, otherwise referred to as *employability skills*.

What are employability skills? Several descriptions and definitions have been proposed: The Alabama Cooperative Extension System describes employability skills as “those basic skills necessary for getting, keeping and doing well on a job.” (The Workplace, Volume 1, Issue 3, 2000: 1).

This means that for one to secure a job and function effectively at it, he/she has to possess certain fundamental abilities which make the employer consider the job applicant or employee as an asset to the institution.

Employability skills have also been described as encompassing

“the skills, knowledge and competences that enhance a worker’s ability to secure and retain a job, progress at work and cope with change, secure another job if he/she so wishes or has been laid off and enter more easily into the labour market at different periods of the life cycle.”
(www.rotaryportlouis.com/MEF/04_Employability_Skills.pdf). This was actually the definition adopted in 2000 at the 88 session of the International Labour Conference.)

Employability has similarly been described as “a person’s capability of gaining initial employment, maintaining employment, and obtaining new employment if required” (Wikipedia, 2009). In short, employability is about being capable of getting and keeping fulfilling work” (Ibid). To do this, one has to have the requisite assets, namely, **knowledge, skills and attitudes**. These ‘tools of trade’ should be updated from time to time to ensure their relevance in the ever-changing scientific and technological society both at the local and global contexts.

Utilisation of fundamental employability abilities serves as a necessary asset in securing and retaining a job. In the event that one leaves a certain job, she/he should be able to find another job for which the said abilities are applicable.

Whatever the definition, employability skills imply the capacity to secure a job when opportunities arise, and perform as effectively as possible. The term also connotes the ability to retain a job and even get promoted to a new position.

Categories of employability skills

Various categories of employability skills include the following:

1. Basic Academic skills:
2. Higher-order thinking skills
3. Personal Attributes

Basic academic skills include the ability to read and write, communicate orally, listen with understanding and perform basic arithmetical computations. It also encompasses the basic computer literacy. Such skills are commonplace in our educational curricula.

Higher-order skills on the other hand require the individual to identify and systematically solve problems, learn how to learn and use sense of reasoning when faced with situations that demand critical thinking. Higher-order also involves the ability to create new knowledge and skills and use logic in decision making. Youth, in their every day lives are faced with many challenges. It is, therefore, important that they attempt to solve as many of these challenges as possible. Such challenges include setting up their own shelter, writing a viable curriculum vitae (CV), securing and maintaining a job and establishing and maintaining mature relationships. All these require careful thinking and processing of ideas. Youth seeking for employment will find them essential. Formal schooling should provide a number high level thinking opportunities, for example, through classroom and outdoor practical learning sessions.

A third category of employability skills concerns personal attributes. Such qualities include performing one's duties at a given institution as an effective and efficient team member; being modest and humble; being professionally flexible; having a sense of responsibility i.e. being punctual and enthusiastic at work, being considered as dependable; and generally being able to get along well with other workers or members of a given group (i.e possessing good inter-personal skills). Dressing appropriately and being well groomed are also significant qualities that portray a person's self image. As much as possible, formal, non-formal and informal education engagements should create opportunities for learners to acquire survival affective traits within and outside a working environment.

To succeed in any undertaking one also needs to have self confidence and motivation. Along with this is the aspect of honesty and integrity which reflect one's attitude towards work.

Such attitude coupled with the ability to function efficiently with minimum supervision, is a significant contributor to an institution's trust on an employee with such affective skills.

The above triad of skill types constitute a desirable set of employability skills that the youth should seek to possess as they look for jobs, strive to keep the jobs they have acquired and as they choose and develop their careers..

Implications of employability skills for legal, policy formulation and Education considerations

As a country that cares and shows concern for the welfare of its citizens, Kenya needs to entrench employability skills in various aspects of its plans and activities. This entrenchment should be embraced by all stakeholders in both the public and the private domain. More specifically, due consideration should be given to ES regarding the countries:

- National Youth Policy
- Youth Employment Marshall Plan
- Formal education curricula at all levels including Early Childhood Education (ECE) and Universities (the formal education system is one of the surest avenues of enabling learners to acquire many employability skills. Right from Early Childhood to university, learners can acquire various academic and affective qualities that they may use later on in life. At the ECE level, children should not only learn how to speak, listen, read and write in the language of instruction, but also learn to solve such problems as word puzzles, maze puzzles, or settling disputes and other activities that could help build their cognitive, psychomotor, affective and social potential.
- Implementation of Education for All (EFA) initiatives
- Existing Education Acts (these should be revised to deliberately entrench employability skills)
- Intensification of economic growth strategies
- Intensification of job creation mechanisms
- Continual self-appraisal and improvement of employability assets by the youth to remain marketable
- Active learning of the work requirements at given institutions for one to keep a job and perform in a fulfilling manner.
- Monitoring and evaluation of ES programmes and activities by Quality Assurance and Standards personnel

As a positive gesture towards assisting the Youth in securing gainful employment, the government and other key job providers should periodically publish ES requirements for

various categories of employment opportunities. Further, such opportunities should continue being advertised in both print and electronic media for all to compete in a transparent manner.

Framework for developing, implementing and sustaining employability skills (ES) programmes

The framework for realizing wholesome acquisition and development of employability skills for effective survival and contribution to society should involve a number of **inputs** which should translate into desirable **outputs** and **outcomes** as summarized hereunder:

Inputs (through Educational Institutions, NGOs, CBOs, FBIs e.g. ECD, Primary, Secondary, Tertiary institutions, Universities)

1. Revision of extant curricula to include as many employability skills as possible
2. Development of ES resource materials for all levels of education
3. Pre-service and in-service training of curriculum implementers
4. Expansion of infrastructure and inclusion of ICT
5. Research, M&E to ensure quality and standards of ES materials and activities
6. Collaboration with employers and other stakeholders in attachment, placement and re-design of curricula.
7. Development of workable school-to-work transition programmes
8. Sensitisation of all stakeholders on need for ES

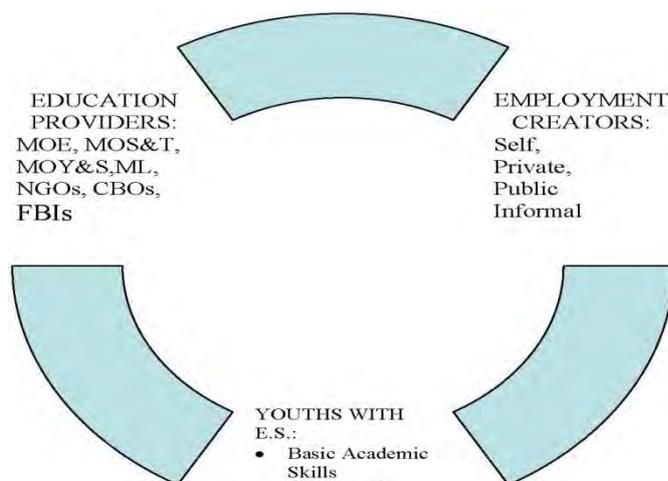
Outputs

1. Reasonable number of Youth with ES
2. Sets of ES materials for all levels of formal and non-formal education
3. A reasonable number of youth securing employment (Self, Public and Private)

Outcomes

1. More responsible and socially acceptable youth
2. Reduced youth unemployment
3. Increased income
4. Improved quality of life
5. Reduced crime rate
6. Better use of leisure
7. Increased potential for further education and training
8. Improved social status

9. Increased level of participation in job creation



EMPLOYMENT

EDUCATION PROVIDERS:

MOE, MOS&T, MOY&S,ML,
NGOs, CBOs, FBIs

CREATORS:

Self,
Private,
Public
Informal

YOUTHS WITH E.S.:

- Basic Academic Skills
- Higher-order thinking skills
- Affective skills

Conclusion

Youth unemployment has attained alarming proportions the world over. Kenya is particularly faced with the daunting task of having to step up its economic recovery and growth agenda in order to address the huge unemployment backlog which is increasing substantially year by year. The Republic, in its spirit of providing meaningful livelihood to all its citizens, has to do what it takes to enable the youth secure decent jobs without bias to sex, ethnicity or regional origin. All persons should be given room for full participation in nation building.

Employment creation strategies should be strengthened to stem the incessant rural to urban migration with a special focus on dignity for work at both types of settings (rural/urban). Concerted efforts should be made to engage all stakeholders in the incorporation of employability skills in all their undertakings in order to embrace firmly and with a focus, the need to bring up and nurture a society that truly and honestly values quality education for survival and development. The Youth should continually examine and upgrade their potential in the three key asset areas of Knowledge, Skills and Attitudes, in the spirit of constructivism, in order to stay relevant in this ever-changing scientific and technological world.

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TEACHERS' ATTITUDE TOWARDS HIV AND AIDS INFLUENCES THE IMPLEMENTATION OF HIV AND AIDS EDUCATIONAL PROGRAMME

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Introduction

The acquired Immune Deficiency Syndrome (AIDS) is a group of signs or symptoms of a disease, which is caused by a virus which is known as the Human Immune Deficiency Virus (HIV). When HIV infects a person, it attacks white blood cells that help the body fight off diseases. By attacking and slowly destroying the body's white blood cells, HIV makes a person begin to succumb to various infections which would normally not be a problem when the body's defense system is intact. According to Tuju (1996), HIV corrupts vital body fluids turning blood, semen and even breast milk from being sources of life into instruments of death.

HIV and AIDS presents a significant societal threat to both developed and developing nations. World-wide efforts to develop a drug or vaccine to combat this epidemic have been frantic but elusive (NASCO, 1996). The United Nations Programme on HIV and AIDS (2002) reported the following as some of the key statistics regarding the global HIV and AIDS pandemic: more than 60 million people have been infected with HIV and AIDS since the pandemic began. In 2002 the total number of those living with HIV and AIDS increased to 42 million up by 2 million from 2001.

According to National Aids Control Council (2000), HIV and AIDS is an epidemic occurring in every district of Kenya. It is responsible for the deaths of 1.5 million Kenyans since the early 1980s. These deaths have left behind more than 1 million orphans. About 500 Kenyans die each day from AIDS. Estimates suggest that over 2 million people out of a population of 29 million are infected. The cumulative number of deaths due to AIDS may rise to 2.6 million by the end of 2005 (NACC, 2000).

The World Health Organization (1994) best summarized the uniqueness of AIDS as one that has no known cure or vaccine to control it. "HIV is spread through modes at the core of human sexuality, which is shrewd in mystery and secrecy, making it difficult for health intervention measures. Due to long incubation of the disease (like 10 years) before symptoms are apparent, this leads unwittingly wide scale infection. At the same time, the disease is highly stigmatized in the society."

From 1981 when the first case of AIDS was reported in United States of America among gay community, Centre for Disease Control (1981) the AIDS has had unprecedented manifestation that has shaken the very survival of mankind (Pratt, 1988). Since no known cure or vaccine to combat the scourge has been discovered AIDS education managerial efforts both at national and international level have focused on informing and educating people about the disease (WHO, 1995). Aiken (1997) and the WHO (1995) also states that “in the absence at present of a vaccine or cure for HIV and AIDS, the single important component of National AIDS programmes is information because its transmission can be prevented through informed and responsible behavior.” However, the number and infection rate globally of HIV and AIDS has increased since the response in many countries has been inadequate (UNESCO, 2000).

One of the major impediments in management of the scourge has been misplaced attitude towards the disease. In United States of America (UNESCO, 2002), it is associated with gay men while in Africa, East Europe and South East Asia, it is associated with prostitutes. This indicates that misplaced attitudes toward HIV and AIDS are one of the managerial obstacles that influence the implementation of HIV and AIDS related programmes.

HIV and AIDS managerial obstacles can also be seen in some of the techniques used to fight it. Malawi and Zambia for example concentrate on providing facts about HIV and AIDS transmission and ignore other fronts of fighting the scourge. This kind of situation was also experienced in the Kenya National Development Plan (1994-1996) that states that some of the government policies on the management of HIV and AIDS are that HIV and AIDS awareness will help people make informed decisions in adopting lifestyle that slow the spread of HIV and AIDS. In the absence of a vaccine or cure, health education is the next option.

Consequently, information on the nature of disease, its modes of transmission, symptoms, testing and prevention was disseminated through posters, pamphlets, books and in the electronic media. Public institutions like schools, colleges, universities, churches and hospitals became avenues of HIV and AIDS health information (MOE, 2001). The health programmes were premised on the theory of reasoned Action and Health Relief Model, (Resenstock, 1966). The inherent assumption of these models is that individual human pride and adventures are restrained when faced with a threat to health (Agglestone Homas and Mossa, 1989). Behaviour change is dependent on the extent an individual perceives risks of contracting disease, its severity, degree of exposure to information and convenience that preventive measures have more rewards than costs.

The fact that adolescent age group is among the most vulnerable group have been supported in several studies. Secondary school age group falls in this category. This group has been identified as the most vulnerable. This implies that there is an urgent need to address the management of HIV and AIDS education programme in secondary schools. The HIV and AIDS syllabus for secondary schools was launched in Kenya in 1999. It was to be taught as a subject on its own or be integrated with other subjects, (Ikiara, 2001). However, a case study at the Coast Province of Kenya revealed that some teaching techniques used to teach HIV and AIDS have failed. This is due to the managerial problems influencing the implementation of HIV and AIDS education programme.

Managerial factors influencing HIV and AIDS programme can be found in the attitude towards HIV and AIDS education programme. Importance attached to these programmes is questioned due to the fact that it is not handled in the same way as other curriculum subjects. This is due to fact that HIV and AIDS awareness information has mainly been disseminated through non governmental organization (NACC, 2002). In most cases they liaise with guidance and counseling teachers, school heads or both to teach secondary school students on HIV and AIDS programme. Roeber and Crickson (1995) states that any service towards school whether related to maintenance of school facilities or services to supplement regular classroom instruction requires full support of headteacher and other high ranking education managers. Without their approval and continued support, any initiative to manage HIV and AIDS education programme will “Wither on the vine” because the students and teachers would not like to be at loggerheads with the administration.

Headteacher in secondary schools bear the ultimate responsibility of overall management of schools and for maintenance of the tone all – round standards. They are particularly charged with great responsibility of fostering the right atmosphere for child growth and development (Mbiti, 1974), headteachers may delegate but it is their responsibility to see to it that both academic and co-curricular programmes succeed.

Secondary school managers (heads) have to know how to change the attitudes of teachers involved with teaching about HIV and AIDS by ensuring that the resultant stigmatization that the sufferers of the disease encounter is addressed. This therefore means that if the secondary schools are effectively to be used in impacting relevant knowledge in fighting HIV and AIDS, the management problem identified must be addressed. Waihenya (2001) reports that laxity among school inspectors may slow down the HIV and AIDS campaign. School inspectors and school head have to be at it if the fight is to succeed.

Kimengi (1983), in his study on Kenya secondary school teachers’ attitudes towards teaching and their job satisfaction stated that teachers were not satisfied with supervision they

received from headteachers. This needs to be addressed if the school managers/heads have to implement the HIV and AIDS education programme. Teacher must have the confidence with their supervisors. Head teachers in turn must be fully equipped with relevant skills in this case; knowledge and management of HIV and AIDS education programme.

Kamau (2001) reports that male teachers were not willing to be taught about HIV and AIDS by a woman. This implies that the schoolheads need to know the impact of duty allocation in order to achieve desired goals. Related to this is what Mbiti (1974) asserts that headteachers must chart out their course with the student at the centre of all learning experiences.

Thika has been one of the leading districts with HIV and AIDS infection cases. Most infection occurs within the bracket of secondary school students' age group. If the problem is to be tackled, the school management must be at the centre of programmes aimed to stem the spread of disease. Thika District Development Plan (1997-2001), indicated that there were 368 HIV and AIDS cases out of 637 patients screened in year 1993. On the other hand, Thika District development Plan (2002-2008) states that HIV and AIDS prevalence in the District stands at 34%, the highest in Central Province. The implication is that out of the district total population of 170,664 in 2002, about 238, 565 people are HIV positive. This makes the HIV and AIDS hospital bed occupancy to be 60%.

Most of those infected are between the ages of 20-49 years. The education sector has been badly affected with HIV prevalence rate being 17% amongst primary school children and 22% amongst secondary school students. To manage the scourge, all stakeholders including education institution, private sectors have a mandate to intensify the campaign against the spread of AIDS and HIV since there is no cure. However with HIV and AIDS awareness in the district standing at 95% prevalence still high, the challenge that faces the district is to translate the awareness into practice so that the rate of prevalence is reduced. (Thika District Dev. Plan, 2002-2008).

Objective

- To investigate if the availability of funds and facilities influences the implementation of secondary schools HIV and AIDS education programme.
- To find out if the availability of personnel for the secondary school HIV and AIDS educational programme influences its implementation.
- To find out if the attitude towards HIV and AIDS influences the implementation of the HIV and AIDS educational programme.
- To establish whether HIV and AIDS education should be made an examinable subject.

- To determine if those involved in education especially headteachers and teachers should be made aware of the importance of HIV and AIDS education programme.

Methodology:

Questionnaire Return Rate:

Two questionnaires were used in collection of data. These were secondary headteacher and teachers questionnaires. In each case, the total was 79. Only 56 headteacher questionnaires were returned duly filled. This was 70 percent return rate. From the teachers 75, duly filled questionnaires were given back. This formed 94 percent return rate.

Conclusion

The study explored three areas related to HIV and AIDS education programme of secondary schools in Thika District. The purpose of this study was to investigate the managerial factors influencing the implementation of HIV and AIDS education programme in secondary school. Data was collected from secondary school managers and the teachers in charge of this programme. Data was analysed using descriptive statistics.

The results showed that inadequate funds and facilities (resources) were the main obstacles to the HIV and AIDS education programme. Lack of specific trained personnel for the HIV and AIDS programme had some important influence on the implementation of the programme. The attitudes of headteachers and teachers towards the scourge and the programme also influenced the implementation of this programme.

From the research carried out, it was also noted that some teachers had personal interest to teach the HIV and AIDS education programme. However they were unable to pursue this interest effectively due to the obstacles influencing the implementation of the programme. Some of these obstacles are insufficient of funds and facilities, general negative attitude towards the programme by learners and administrators, lack of enough teaching materials, insufficient time for implementation of the programmes, inadequate training and experiences among others.

Results

Biodata of Respondents:

Gender

There were 30 male comprising (56%) and 26 females (46%). This showed there were more males than female headteachers in Thika District.

Academic qualifications of headteachers

Most of the respondents were Bachelor of Education graduates forming 63 % (35). The headteachers with Master of Education were 10 (18%), 10 (18%) had KACE and only one (2%) had KCSE.

Professional qualifications of headteachers

Majority of the principals 63% (35) were qualified with Bachelor of Education, 10 (18%) had a Master in Education, 10 (18%) approved graduate teachers and only one (1%) had Diploma in Education.

Problems of personnel

The findings revealed that there is lack of enough HIV and AIDS education personnel. This is a real managerial obstacle that badly influences the implementation of the HIV and AIDS education programme. This is true for there is no programme that can succeed without enough qualified personnel.

Headteachers' view

Though in a minor way, the attitude towards the HIV and AIDS education is another problem that influences the implementation of this programme. This problem and the other two discussed above could be some of the major managerial factors influencing the implementation of the HIV and AIDS education programme. As the headteachers indicated there is a need to look for a solution if this programme is to succeed.

Headteachers' recommendations

The headteachers therefore suggested ways in which the major problem of HIV and AIDS education programme can be solved. By so doing they cited training of teachers as the main solution (34.4%). Other suggestions were financial assistance (16.1%), provision of teaching materials (10.8%) making the subject examinable (10.8). These would improve the implementation of HIV and AIDS education programme.

Teachers' demographic information

Age:

The teachers were asked to indicate their age and the youngest schoolteacher was 24 years of age while the oldest was 54 years of age. The mean age was 35 years.

Gender of the teachers' incharge of HIV and AIDS education

A total of 36 male teachers which formed 48.0% filled the questionnaires and 39 female teachers comprising 52.0% did the same.

Academic qualifications of the teachers

Majority of the teachers were graduates. They formed 79% (59), those with Masters degree were five (7%) and KACE were 12.0% (9) while those with KCSE qualification were two forming 2%. This implies that most of the teachers incharge of HIV and AIDS education programme were academically qualified.

Professional qualification

Only five (7%) of the teachers respondents had master degree of education. Majority had bachelor of education and they were 51 forming 68.0%, those with diploma in education were 6 (8%), Approved graduate teachers were 7 (9%) while S1 teachers were 2 (3%). The teachers incharge of HIV and AIDS education programme with Bachelor of science were 4 (5%)

Teachers' experience

Majority of the teachers (85%) had been teaching HIV and AIDS for 1-5 years. 8% had taught 6 to 10 years and those who had taught for more than 10 years comprised 7%. Out of 75 teachers 58 have been teaching HIV and AIDS education teachers, with a mean of 3 years of teaching, a maximum of 15 years and a minimum of 1 year of teaching experience. The longest time a teacher has been in that particular school was 18 years, shortest time being 1 year and a mean of 3 years.

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