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## **A SURVEY OF THE AVAILABILITY AND UTILIZATION OF CURRENT INFORMATION TECHNOLOGIES IN THE TRAINING OF TEACHERS OF ENGLISH LANGUAGE IN KENYA'S UNIVERSITIES**

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**ABSTRACT:** *This study was a survey of the availability and the use of educational technologies in the training of teachers of English in Moi University. The objectives of this study were to: identify the availability of the needed educational technologies, factors leading to ineffective use, the extent to which they are acquired and used in the training of teachers of English. This study was based on two theories namely: Technology Acceptance Model (The User Acceptance of Information Technology) and the Behaviourist theory based on the Audio- Visual Method. Technology acceptance model holds the principles that acceptance of technology is based on its relative advantage, compatibility, ease of use, triability and observability. The Behaviourists theory is based on the Audio- visual method which considers learning as a reinforced behaviour. It advocated that the more the common sense used to perceive information the better the retention of information. A descriptive survey research design was adopted. This was utilized to collect detailed descriptions of existing modern educational technologies with intent of employing data to justify current conditions and practices. The study population included fourth year student teacher trainees of English education, four lecturers of English and Literature education, Head of the department of curriculum instruction and educational media and the senior media technician. Non probability sampling mainly purposive was used to sample all the respondents. Questionnaires and interviews were used to collect data. The results were analyzed using Descriptive statistics, which involved the use of frequencies and percentages. The findings of this study were: the University had few modern and old educational technologies required for the training of teachers of English, that effective training was limited by shortage of training materials, shortage of time, shortage of funds, limited motivation, inadequate space, lack of collaboration between the University and K. I. E in the recommendation of teaching resources, few number of lecturers compared to large number of students and finally the University was slow in implementing the policies in the strategic plan for the year 2005 to 2015.*

**KEYWORDS:** Information Technologies, Training, Teachers, English Language, Kenya's Universities

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### **BACKGROUND TO THE STUDY**

UNESCO (1991) recommended the following as keys to effective teacher training programmes:

- (i) Adequate access to educational technology
- (ii) Incentives and support for teacher training
- (iii) Teacher directed training
- (iv) Community partnership

To enhance the importance of teacher training based on the adequate access to technology, Theodore and Schlechter (1991) stated that teacher education programs should respond to the public opinion, state initiatives federal directives, and current thinking in the profession. As a consequence, most teacher education programs should reflect the mood of times and allocate resources to critical areas of needs. In order to understand the role of technology training in both today's teacher education environment and the technology training needs of tomorrow's teachers, it is necessary to provide a perspective on the current context in which technology training occurs. They further argued that as Colleges and Universities look to the future it will be critical that staff consider important factors. Briefly these may be summarized in the following manner:

- Teachers must be competent designers of instructional systems which will enable them to assist their students to become critical thinkers and information workers (Bitter, 1989).
- Tomorrow's technologically oriented schools will call for new teacher roles and knowledge of technology. This means that teachers will need to be proficient, critical users of technology which includes a recognition of technology's limitations and potentials.
- College and University faculty will need to become more knowledgeable and proficient in using technology in order to model effective instructional techniques
- Preservice teacher's clinical experiences must be in schools in which teachers and students are actively involved in using technology as a common learning experience.

Underwood and Underwood (1990) also noted that computers, software and related technologies are continuously changing and therefore teacher training programmes need to reflect the dynamic nature of underlying technology.

The National Council for Educational Technology (1969) of the United Kingdom defined educational technology as:-

"The development, application and evaluation of systems, techniques and aids to improve the process of human learning" (Clark, 1983:457).

Here technology viewed broadly encompasses tools (e.g. audiovisual media and computers), techniques (e.g. programmed instruction and simulation games) and processes (e.g. systematic instructional design). The same National Council enumerated the following as the potentials that can be achieved when modern educational technology is used:

- (i) Improving the clarity and comprehensibility of learning in classroom.
- (ii) Providing mechanism for greater individualization in learning
- (iii) Enhancing the application of new learning to daily life and
- (iv) Increasing the instructional productivity of schools.

Technology is turning the whole world into a global village. Unless the training of teachers put emphasis on the modern technology, they will be overtaken by the events. Studies by Ogoma (1987), Osion (1992), Odanga (2000) observed that a good number of institutions have acquired computers, television, video-tapes, telephone lines recorders etc but they have not used them for instructional purposes. In the list of instructional resources recommended for English instruction in Kenya secondary school syllabus are modern educational technologies such as:

- (i) Recorded materials e.g. radio programmes, audio and video tapes, CDs and films.
- (ii) Computers and television sets
- (iii) Internet

The above resources are recommended for the teachers to effectively help the learners acquire proficiency in language skills (Kenya secondary school syllabus Appendix ii). It was in this context that the researcher felt that a research should be conducted to find out the effectiveness of teacher training institutions in the use of modern educational technologies in the present era of the modern technology. According to Ominde (1964) provision of a well- educated, keen and competent teacher is the most important thing a government of Kenya can give to schools.

One of the National Objectives of Kenya is to be an industrialized nation by the year 2020. This important dream can only be attained through education. The use of modern educational technology in instruction therefore should be given a strong attention by all. This attention should begin from the quality of teacher training in the area of modern educational technology. This was observed by Kimani (1997) who stated that the success of any educational programme depends on the training of its teachers. He noted that teachers must acquire skills to select, organize and utilize relevant learning resources.

Learners of today are very much exposed to modern technology. They have television, radios and even computers in their homes or in their neighborhood. Through curiosity some of them have known how to operate them. The same technologies can be of great harm to their moral development if not directed well. It is therefore the great duty of a teacher to assist the learners to use the modern technologies professionally and profitably.

Abenga (2005) observed that the twenty- first century student is very informed and up to date in the use of modern communications and information storage, transmission and accessing devices such as computers, video, television and others. Such students would find teachers using traditional instructional technology outdated and boring. The investigation from this research would help teachers from embarrassing situations of being behind their students in the field of modern technology. This problem can only be solved by getting proper information right from the source which is the teacher training institutions.

### **Statement of the Problem**

Low English grades continue to puzzle people of all categories. This has become a matter of concern and politicians, parents, teachers, quality assurance and standards officers and the policy makers have aired their concern. The deteriorating standards have been observed in both written examinations and oral communications.

Training in modern technology is one of the central points in the improvement of quality in any field of production Armstrong (1989). He further noted that training is concerned with defining the gap between what is happening and what should happen. From Armstrong point of view this study would like to find out the reality of the gap that can be bridged with effective training of teachers in modern educational technology. Maranga (1977) pointed out that teaching has revealed that all things being equal teacher trained in particular skill perform better than untrained teacher. He further noted that quality training can only be received through a programme that is relevant to

the needs of its recipients; in this case, training in the modern educational technologies is very relevant.

It is against this statement of the problem that the researcher gained an enormous desire to investigate the relevance of the methods used by the Universities in the preparation of teachers of English and literature education.

### **Objectives of the Study**

The objectives of this study were to:

- 1) Identify the availability of the modern educational technologies for the training of teachers of English for Secondary Schools.
- 2) To examine factors leading to the ineffective use of educational technologies in the training of teachers of English for secondary schools.

### **THEORETICAL FRAMEWORK**

This study was guided by two theories namely: Technology Acceptance Model (TAM) and the Behaviourist theory under the Audio-Visual Method.

#### **Technology Acceptance model (TAM)**

The Technology Acceptance Model (TAM) is an information system theory that models how user comes to accept and use a technology. The model suggests that when users are presented with new software package a number of factors influence their decision about how and when they will use it, notably:

**Perceived Usefulness (PU)** - this was defined by (Fred Davis 1988) as the degree to which a person believes that using a particular system would enhance his or her job performance.

**Perceived Ease of Use (PEOU)**-Davies defined this as the degree to which a person believes that using a particular system would be free from effort (Devis, 1989).

- TAM is one of the most influential extensions of Ajzen and Fishbein's theory of Reasoned Action (TRA) in the literature. It was developed by Fred Davis and Richard Bagozzi (Bagozzi, 1992; Devis, 1989).

TAM replaces many of TRA's attitude measures with the two-technology acceptance measures namely ease of use and usefulness. TRA and TAM, both of which have strong behavioral elements assume that when someone forms an intention to act, they will be free to act without limitation.

The TAM theory further explain that In the real world there are many constraints, such as limited ability, time constraints, environment or organizational limits or unconscious habits, which will limit the freedom to act. Because new technologies such as personal computers are complex and element of uncertainty exist in the minds of decision makers with respect to successful adoption of them/ people form attitudes and intentions toward trying to learn to use the new technology prior to initiating efforts directed at using. Attitudes towards usage and intentions to use may occur only after preliminary striving to learn to use the technology evolved. Thus, actual usage may not be a direct or immediate consequence of such attitudes and intentions.

Rogers (1995) explained that the following are the five characteristics of User Acceptance of Information Technology (U.A.I.T):-

- Relative advantage (the extent to which it offers improvement over available tools.

- Compatibility (its consistency with social practices and norms among its users).
  - Complexity (it ease of use or learning).
  - Triability (the opportunity to try an innovation before committing to use it).
  - Observability (the extent to which the technology gains are clear to see).
- This theory was very relevant to this study particularly during the investigation of the reasons why people fail to use available resources.

### **Characteristics of Accepting Users**

Many researchers have attempted to identify psychological variables that distinguish users who accept or reject technologies.

In a Meta-analysis of research, (Alavi and Joachimsthaler, 1992) suggest that the most relevant user factors determining technology acceptance are Cognitive Style, Personality, Demographics and users situational variables.

This theory is supported by Shadel Joachimsthaler (1992), Rogers (1995), and Davies (1989) among others. Numerous diffusion studies have demonstrated that innovations affording relative advantages compatibility with existing practices and beliefs low complexity, potential triability and observability will extensively and rapidly accepted than an innovation with the opposite characteristics. This model guided this research and found out possible reasons behind failure to acquire and use the modern educational technologies in our schools to enhance English instruction.

## **LITERATURE REVIEW**

This involved the systematic identification, location and analysis of primary and secondary publications related to the study. It also entailed casual observations and opinions related to the planned research. This study reviewed the literature related to the usefulness of the acquisition and the effective use of the modern educational technologies in the teaching of English. The review focused on the topical issue and attempted to bridge the gap of knowledge that exists in the related area.

### **The Importance of the Modern Educational Technologies to the Teacher**

Teacher training has an absolutely vital role to play in the molding of teachers (Webb and Kembo, 2000:309). They assert that language teacher training is too important to be taken for granted. It is therefore necessary for teacher training institutions such as Moi University to incorporate the modern educational technologies in the language teacher training programme. This will ensure teacher competence in the use and acquisition of modern educational technologies in the field of English instruction.

The evolution of education and the need for generalizing and integrating new technologies, make teacher training a pivotal point. Teacher education must incorporate both knowledge acquisition and pedagogical competencies for effective language instruction.

The introduction of new technologies in teaching needs some reflection about the educational system of education of tomorrow, and the nature of the School (Watson and Tinsley, 1995).

According to Veen (1984), the decision of teachers whether or not to use computers depends on the basic categories of factors at school level and factors at teacher level. However, teacher factors appear to be more significant than the factors at school level. When teachers are less equipped during the teacher training, they will be less competent in creative acquisition and the use of modern educational technologies at school level.

Fear seems to exist among teachers whether the use modern educational technologies would replace. Job security in developing countries is paramount and therefore everybody will do all that is possible to protect his/ her source of daily bread.

The introduction of new technologies i.e. machines in some places have rendered most of the people jobless. "E-learning involves application of different technologies such as interactive white boards, video... for example in South African we have a project where schools that are 15 kilometers apart have only one Maths teacher" (Daily Nation June 8, 2007: p 14).

One of the leading educational technologists said in educational conference in Nairobi. Delegates in the same conference who included education ministers agreed that technology if it is fully utilized can reduce the cost of education and boost efficiency

A teacher remains a teacher and a machine remains a machine. Teachers are trained in human psychology and philosophy which help them in shaping learner's destiny which machines cannot do.

Scientific researchers have proved successfully that:

- Human resources are needed to design, purchase, implement, develop, maintain, administer, evaluate, monitor, support and (in some cases) compensate for the computer resource. Furthermore what computers can teach well and what people can teach well are sometimes quite different things (Noel Williams, 1991).
- Appropriate technology use can be very beneficial to increase productivity and the credit goes to the teacher (Byrom and Bigham 2001; Clement and Sarama, 2003; Kulik 2002; Mann, Shake Shaft, Beeker and Koffkame, 1998; Valdez, McNabb, Foertsch Anderson, hawksers, and rack, 1999 Wax man, Connell, and Gray, 2002; Wenglinsky, 1998). They added that to be effective when using technology, teachers need to be highly involved by interacting and providing feedback to students as cited by (Abenga, 2005).
- The effect of technology on students' access to knowledge is determined by the pedagogical knowledge and skills of teachers. He even became more direct when she stated that without strong teacher knowledge of ways to use technology; a lot of precious time can be wasted (Coppola, 2004).
- Administrative relief: computers can help with administrative burden of teaching, such as using spreadsheet for recording marks, calculating awards and modeling students, progress, using databases for student records, keeping performance report sheets in word processors and so on.

The use of educational technologies by teachers will greatly promote their professionalism and help them in time management (Parr, 1999). (Charr-Chellman and Dyer, 2000), noted that the current support for and promotion of the use of learning technologies in classrooms, will bring admirable needs and additional focus increased time release for experienced teachers to undertake the professional development.



Investigations also show that the innovation and the effective use of technology promote creativity and social rapport among the teachers and the learners hence making learning more productive. Technology does not take away the work of a teacher as may be by some speculations. Instead technology increases the effectiveness of teaching profession for it promotes a teacher from a school to becoming a global teacher (Underwood and Underwood, 1990) and they further noted that Technology has brought about the Global village learning. In the storage of facts, machines can remember facts more than human beings and therefore machines will relieve teachers from the unnecessary work trying to remember everything in a limited period of time (Theodore and Shlechtel, 1991).

Most of the world's current curriculum of education promotes student centred kind of learning and the innovation and the use of educational technologies will relieve teachers from being the centre of knowledge to being a resourceful. Technologies bring activities, which are miles away to classroom, which otherwise could not have been learnt forever. Teachers and learners also can increase their knowledge from specialist in a distant world through technology.

If the use of technology is complementary and not substitutive to the work of a teacher, then what makes the teacher not to use modern educational technologies effectively?

## **RELEVANCE OF EDUCATIONAL TECHNOLOGY TO TEACHING**

Modern educational technologies, which encompassed audio-visual media and computers, have great potential to improve and transform learning in secondary education. This potentiality include improving the clarity and comprehensibility of communication in classroom, providing mechanism for greater individualization in learning, implementing curriculum reforms, enhancing the application of new learning to daily life and increasing instructional productivity of schools.

The integration of learning technologies into high school classrooms is being promoted and supported around the world. Underlying the promotion and support are claims that successful integration will lead to enhanced learning outcomes (UNESCO, 1998). Fox (2005) stated that technology is being fused into the schools and its ongoing is unstoppable, and necessary.

Thus school use and access to the new and current technologies is on the rise and more countries have established technology standards for students, teachers and administrators.

The following prominent researchers in the use of educational technologies in instruction (Fulton, Teldman, Spitzer, Rubin and Namara, 1996) believe that technology has the following potentials in the learners (UNESCO 1997).

- Open the classroom to more communication opportunities
- Encourage more teacher-student and student- student discussion.
- Share the authority as more resources are brought into the classroom.
- Create opportunities for tasks that are complex and authentic and connected to projects which may be multidisciplinary and long term.
- Give students more opportunities for multiple ways of discovering, creating and communicating information in various format and voices.

Meanwhile, the educational role of technology has grown tremendously in several ways providing that the use is undeniably important for helping to teach content (Suydam, 1990 as cited in Jarrett, 1998) who acknowledged that:

- Today's technology can offer adolescents a bridge from concrete to abstract thinking enabling them to observe and create multiple representations of mathematical ideas: numerically, graphically, and symbolically.
- Technology has become a very powerful instructional tool to develop abstract thinking, which should be reflected also in assessment,  
According to Means and Olson (1997) as cited in Charr-Chellan and Dyer (2000), the use of educational technologies fosters the following:
- Technology supports students' performances of complex tasks that are similar to those performed by adult professionals.
- Technology can be integrated into activities that are a core part of the classroom curriculum.
- Technology is treated as tools to help accomplish a complex task (rather than as a subject of study for its own sake) that engage students in extended and co-operative learning experiences that involve multiple discipline.
- Technology has been proved to accommodate learning style and to be effective motivation for students with specific learning needs.
- Technology promotes collaborative – team learning.

Reeves (1988) stated that learning achievement is directly dependent on four factors; aptitudes, motivation, instruction, and the psychological environment of the classroom. Important to add is idea from Plomp and Ely, (1996) who assert that though in a given society schools perform a number of functions in addition to instruction in the curriculum, educational technology focuses on primary mission, that of attainment of the knowledge, skills, and attitudes separated in the curriculum.

The following scholars cited by (Ramiszowski, 1988), stated clearly the importance of using educational technology in the instruction of learning: (Wittich and Schuller, 1953; Dale, 1954; Kim and Kellough, 1974; Wend, 1975; Walken, 1982 and Hills, 1986). All of them agree that the following results can be realized when instructional resources are carefully selected and used:

- Learning becomes more interesting.
- Learning is retained longer than that acquired by verbal teaching.
- Learners acquire different skills.
- Greater benefits can be obtained from the use of multi-media technology.

Solomon (1984) stated that media use in the instruction is very motivating to the learners and very stimulating hence better learning. During educational conference in Nairobi, experts who included education ministers agreed that if fully utilized, technology can reduce the cost of education and boost efficiency (Daily Nation June 8, 2007).

Because a lot of research which have been conducted by experts all over the world have proved beyond doubt that the use of educational technologies have innumerable benefits, this research



therefore investigated the availability and the effective use of these technologies in preparation of teachers of English.

The gap of knowledge that existed was:

- Were the teacher trainees aware of the importance of using educational technologies in instruction?
- Were they equipped with sufficient skills necessary to using modern educational technologies in English instruction?
- Were the stakeholders aware of the importance of these facilities in the school?
- What were the factors limiting the availability and use of these very important resources?

### **URGENCY OF THE MODERN EDUCATIONAL TECHNOLOGIES**

According to Underwood and Underwood (1990), teaching is changing and in many ways becoming a more difficult job because of increasingly numerous contradictory expectations including the following:

- We are living in an age of information overload with the expectations that students will learn high-level skills such as how to access, evaluate, analyse and synthesize vast quantities of information. At the same time, teachers are evaluated by their ability to have students pass tests that often give no value to those abilities.
- Teachers are expected to teach students to solve complex problems that require knowledge necessary across many subject areas and even as they are held accountable for that teaching and learning of isolated skills and information
- Thirdly is that educationalists parents, and society in general would like to see the effective use of new technology in classroom.
- Teachers are expected to meet the needs of all the students and move them toward fulfillment of their individual potentials even as they are presumed to prepare students for maximum performance on high- stakes assessment tests that are the primary measure of student and school success.
- Preparedness of the teachers in using the new technology to teach is a challenge right from the training institutions to the field full of challenges and a lot of expectations as it is highlighted by (Barasa, 2005), (Webb and Kembo-Sure, 2000) and by (Abenga,2005). Training is not sufficient but expected production is very high.
- As the world community strides into the 21<sup>st</sup> century characterized as scientific and technological, Africa Lingers at the doorstep in a dilemma and faced with millennium challenge (The educator 2006:201).

The challenge to the teacher is have they used, the radio, television and videos exhaustively to motivate them to enter into the world of computer and Internet.

These are therefore the impetus for this research. Before the introduction of the Internet, which is recommended in the present English integrated syllabus, of secondary schools in Kenya, the question was were the teachers well trained in the use of modern educational technologies ?

In fact the idea is with us at present for a pilot project has been already started in some schools. Under the New partnership for African's Development (Nepad), initiative, Kenya launched a pilot

project, in six secondary schools where students use computer for E-learning. The project was started at Isiolo Girls secondary school and was replicated in Wajir Girls' secondary school, Menengai Mixed, Maranda Boys, Mumbi Girls and Chavakali Boys secondary school (Daily Nation June 8, 2007). This is in support of what other researchers have done. The school use and access to current technologies is on the rise and more countries have established technology standards for students' teachers and administrators (Fox, 2005). For this reason, this study investigated the availability and the effective use of the modern educational technologies in training of teachers of English in Moi University.

## **RELATED RESEARCHES IN KENYA**

Researches on the use of computers in education in Kenya mostly have been directed exclusively at the general usage of computers in schools. Others have researched on the effective use of computers in mathematics (Wanjala, 2005).

Too (1996) researched on the availability and the use of media resources in mathematics instruction and therefore there was a need to research on the availability of electronic media in the field of English and their effective use.

Mukwa (1979) investigated on the role of audio-visual media and recommended that their use in the field of education is effective. Time has change and the world is dynamic and therefore this study will revisit the same area and there is an addition of computer.

Abenga (2005) did a comprehensive research on the adoption and the use of new educational technologies in the training of primary school teachers. In her unpublished thesis she highlighted a lot on the importance of the adoption and the use of the new educational technologies in the training of teachers of primary schools.

This study filled the gap, which existed in the teachers who are practicing in secondary schools. This research also intended to find out if the teachers in the secondary schools had received enough or rather sufficient training in the use of modern educational technologies in their former training institutions if they did not appropriate recommendations will be made.

Report from Friedland, (1985) and Turner (1986) about the introduction of computers and their uses in Starehe Boys centres Nairobi, was in 1980. The objective was to train boys for jobs. Other studies from developing countries such as (Hawkidge, 1990; Hawkridge, 1991; Friedland, 1985; Makau, 1990; Reeves 1993) concentrated on political, philosophical and economic considerations in the use of modern technologies more than the use of computers in education and particularly in the instruction.

This research is necessary, moreover a good number of institutions in other parts of Kenya have computers, televisions, videos, telephone lines, recorders etc. Studies from Ogoma (1987), Oslon (1992) and Odanga (2000) have shown that this equipment has not been adapted to instructional and professional purposes by teachers.

## THE USE OF MODERN TECHNOLOGY IN ENGLISH INSTRUCTION.

### Television.

The technological innovation in the instruction of English integrated approach is highly productive. According to the report from the UNESCO (1995:59), the current prices of the television, video and the media is increasingly getting cheap. "Television is increasingly affordable and available and has widespread popularity. Some language subtitling and putting text on the television screen with popular songs could therefore reach millions of people and contribute massive gains in literacy in a simple and most effective way".

This shows that the Television, Radio and Video are no longer out of reach to many people and therefore as the world expect us now to be using computers and the internet as well recommended in the Kenya English Secondary school syllabus our worry is have we acquired and use the cheap and easily maintainable electronic media? The use of simple electronic media and their benefits bring a lot of motivation to acquire and use the more complex ones. In fact research has proven that the benefits of the modern educational technologies are beyond description and therefore this research found it necessary to find out if the innovation of these educational technologies in our schools is effective. Many researches which have been conducted were on the methodology and the use of textual materials in instructional teaching and a lot of improvements in the same field have been done. This research will fill the gap existing in the use of educational technologies in the training of teachers.

"Today's children are immersed in media. According to a recent Kaiser family foundation report, children under six spend an average of two hours a day with screen media, more than twice the amount of time they spend being read to or reading about 25% of children this age are already active computer users while about the same percentage has a TV, VCR, or Video game player..." (David Crystals, 2001:71).

All the observations above are from other parts of the world. The same findings support the common observation that television is already an important and widely used instructional resource. It is high time to find out if these important machines are being used to make learning and instruction more lively and productive in teacher training institutions.

The Visual aspect of the television is very important in learning and this can be seen in the old adage that values a picture a thousand times than the values of a word. Research in the past two decades has proven what we intuitively know (Kozma, 1991) that:

- Our brain deal with images differently than print.
- Brains are programmed to remember experiences that have emotional components television has a powerful ability to relay experiences through the emotions evoked by images.
- Television offers information in multiple forms: images, motion, and sound and, at times text. The richness of these forms of information benefits learners by enabling them to learn through both verbal and visual means, to views.
- When all multiple forms of receiving information through senses increase, there is an increase comprehension.

- According to Solomon (1984), viewers' intention is key to learning and he reported that schoolchildren tend to view television as an "easier" medium than books.
- According to Marshall, (2002), education find today media being additive to learning rather than substitutive and they can be used to enhance learning greatly.
- To date, much research has focused on the role of the television in promoting learning in early childhood. Findings show that the positive academic and social lessons learned in early childhood, (Fisch, 2001).

These results combined with those of an earlier Nationwide 1997 Corporation for Public Broadcasting Survey, demonstrate that teachers are overwhelmingly positive about the use of television in the classroom it was further cited that the instructional use of Television:

- Stimulates class discussion.
- Reinforces lecturers and reading.
- Provides a common base of knowledge among students and
- Helps them to teach more effectively.
- Enhances student comprehension and discussion of content.
- Better accommodation of diverse learning styles.
- Increased students' motivation and enthusiasm for learning..

### **Videos**

Many ESL teachers use video technology to provide a visual context for language teaching. They may present videotapes of the evening news as springboard for discussing social and political issues or use videotape conversations a starting point for examining the way language is used in various social situations.

Some teachers also show learners how to record their own videos; learners tape their own role-plays and then analyze the verbal language, non-verbal behaviour, or tone that might be most effective in a given situation. The use of video effectively therefore can become the starting point for discussions, problem solving, or problem posing.

Significant body of research has investigated the manipulation of the formal features of video to promote learning (Welts and Welch, 1983; Bryant, 1973; Kozma, 1991).

Wetzel (1994) notes that instructional television and film research confirms that the general rules for good instruction also apply to video presentations hence students learning from video are enhanced when common sense principles are employed, that is, when the video message is purposeful, clear and cogent.

### **Radio**

The use of the radio for teaching purposes has become popular. The introduction of transistor radios which operate on dry batteries has even made it possible and cheap for schools to use them. According to Farrant (1980), radios are cheap, readily available, portable, requires low source of power and therefore can use torch batteries and efficient for programmed instructions. Bennaars (1994) also supported the use of the radio because of its economic advantages in use. They mentioned that one person can teach many people at a distance over the radio. To them also radio

broadcasts to schools are special programmes prepared for teaching purposes. The broadcasts are not intended to replace the teacher in the classroom but instead they supplement the teachers' lesson. A lot of publications and researches have shown how widely the radio has been used in the wide field of education in different parts of the world.

Examples are: In Thailand the radio has been extensively used to teach mathematics to school children Galda (1984) and for teacher training and other curricula (Fuller, 1984); In India, for rural development (Long, 1984); Swaziland, for public health purposes, Mali for literacy training (Quane, 1982); Columbia, for various programmes (Muhlman de Masoner, Masoner, and Bernal, 1982); Mexico, for literacy training and other programs (Grinsburg and Arias-Goding, 1984); Kenya, for teachers training and also in support for correspondence courses (Kinyajui, 1973); Philippines, for nutritional education (Cooke and Rommeber, 1977).

In Guatemala, the radio broadcasting has been used to promote changes in farming practices and to improve education, (Ray, 1978); Srilanka, for family planning (Academy for Educational Development, 1980); South Korea in support of family planning (Park, 1967); Botswana for civic education (Bryum, Kaule and Matenge 1980) cited from (Academy for Educational Development 1984). All those shows how effective the media is in the wider perspective and therefore this research aim at narrowing the effective use of the radio in teaching English.

Kenya is a multilingual society with more than forty five languages being spoken. Every native speaker is learning English as a second language gets into trouble due to the influence of inter-language transfers. Teachers also in most cases have some problems originating from their first languages. Radio Programmes in English can be used to enhance competence. One person who is competent can teach all the students in Kenya from the radio station. Fluency in pronunciation can be enhanced through the use of the radio- broadcasting lessons.

### **Tape Recorders/ players**

Tape recorders have the same educational benefits as the radio. Information is usually recorded on a disc on a tape and is ready for use whenever necessary. Tape recorders can be used to record radio broadcast lessons and these lessons can be replayed to students at a more suitable time (Bennaars, 1994). The lessons in the tape recorder can be re-played several times whenever it is needed. A teacher can stop at a point, add a point, and let it continue. They also stated that tape recorders could be used for those who may miss class for some reasons and for slow learners. It is therefore good for individualized learning. In English language teaching, a teacher who knows his/ her weaknesses in some areas of language instructions e.g. pronunciation sentence construction and in literature the discussion of themes, styles, and characterization in a set book may approach a resource person perhaps in a faraway place tape record him/ her and use in the lesson to assist the learners to acquire certain skills hence making the learning more effective.

### **Computers**

Computers have been used for language teaching since 1960s. According to Warschaver and Healey (1998), this forty-year period can be divided into three main Computer Assisted Language Learning (CALL) stages: Behaviourist (CALL) Communicative (CALL) and Integrative (CALL).

Each stage evidently corresponds to the level of technology and to the pedagogical theories typical of the given time span.

Behaviourist (CALL) was designed and implemented in the 1960s and 1970s and it represents the first form of computer- assisted language learning. It was based on the behaviorists learning pattern that the computer was viewed as a mechanical tutor who had to correct mistakes as soon as they had been identified. It was used for extensive repetitive language drills (the “drill- and- practice” method) explicit grammar instruction, and translations, tests. Its best tutorial system, PLATO included grammar instruction, and their translation, drills as well as evaluations. Nonetheless, it marks the beginning of a new era in teaching.

Communicative (CALL) emerged in the 1970s and 1980s as a rejection to behaviorist approaches at both theoretical and pedagogical level.

It was stressed for the first time that language teaching in general and CALL in particular should focus on using forms, rather than on the forms in themselves. Grammar therefore should be taught implicitly and students are encouraged to generate original literalness instead of just reproducing or at best, manipulating “Prefabricated” linguistic structures. This form of computer based instruction corresponded to cognitive theories which argued that learning was a creative process of discovery, spontaneous expression and genuine communication.

Integrative CALL brings a new perspective on the relationship between information technologies and language teaching. We have slowly moved away from a cognitive view of communicative language teaching, to a social-cognitive one, which emphasizes real language use in a meaningful, authentic context.

Many publications and researches from different language educationists and linguists have greatly supported that the use of computer to mediate language instruction and learning is very efficient. To them computers can be used to teach pronunciation, Tense, Spellings sentence structure, grammar etc. Computers can also be used to evaluate learning and also to promote the spirit of discovery and motivates learners of language.

Research from the following people noted by Noel Williams, (1991) supports the effective use of computers in teaching writing skills (Daiute, 1985; D’Agostino and Varone, 1990; Sharples and Pemberton, 1990). This research therefore would create awareness in the use of computers professionally in secondary schools. It will enable the stakeholders to see the need of competing with the world as far as technological innovation in our schools is concern.

## **RESEARCH DESIGN AND METHODOLOGY**

This chapter of the thesis dealt with the description of the methods applied in carrying out the research study. It is organized under the following sections, research design, and research site, population, sampling techniques, and research instruments, procedures for data collection and data analysis and presentation.



**Research Design**

The descriptive survey method was used to gather data on the availability and the effective use of the educational technologies in the training of teachers of English to enhance their competence in the selection, use and maintenance of educational technologies. The use of survey was appropriate to this study because it provided accurate information (Kerlinger, 1978).

This design was used to collect descriptions of the existing phenomena. Information concerning the number of existing educational technologies such as Radio-tapes, Television (TV monitors), Videos-tapes and Computers was collected. Data was collected to justify current conditions and practices which enabled this study to make comparisons of the existing status with the expected standards and make recommendations for future improvements.

It also enabled the researcher to extensively explore the extent of the training of teachers of English using modern education technologies in various topics in English and Literature. Cohen and Manion (1994) assert that the intention of a survey research is to gather data at a particular time and use it to describe the nature of existing conditions.

The purpose of this design was to provide quantitative and numeric descriptions of some part of the population. This considered issues such as economy of design rapid data collection and ability to understand population from part of it. This is suitable for extensive and intensive research. (Oso and Onen 2005:32). Therefore it was relevant for this study.

**Research Instruments**

This study adopted questionnaires and interviews as the instruments for data collection.

**Questionnaires**

According to Brown (2001), Questionnaires are written instruments that presents respondents with a series of questions or statements to which they are to react to either by writing out their answers or selecting from among existing answers. They are efficient on gathering data on large-scale basis.

Questionnaires were particularly used to:

- (i) Find out the modern educational technologies which were used in the training of teachers of English.
- (ii) Establish the extent to which the training of teachers of English are equipped with relevant skills of selection, use and developing appropriate lesson programmes using the modern educational technology.
- (iii) To investigate students' factors limiting the effective use of modern educational technologies in their training.
- (iv) To identify if there were challenges that the respondents found in their teaching practice concerning the use of modern educational technologies.

To achieve the first objective in this context the respondents identified the type of the modern educational technologies which were used in their training. In the second case they rated the efficiency of their training against the given modern educational technologies.

To establish the extent of their training, the respondents were supposed to indicate the appropriate modern technology they used that could be used in the teaching of against every stated skill in English.

To justify the extent of their training in the use of educational technologies in content and skills coverage, the respondent were supplied with questions that tested their training and ability to use and develop teaching lessons using the modern educational technologies.

To determine factors limiting effective training in the use of modern educational technologies in the level of students they were provided with questions having limiting factors so that the respondents could rate them. Factors were derived from the literature reviewed.

According to Mugenda and Mugenda (2003), questionnaires have advantages of being easy to administer, analyze permit greater depth of response simulative economical and may give an insight of the respondent's feelings interests and hidden motivation. Patton (1990) supports the same ideas and added that questionnaires have an advantage of capturing a large sample of population.

#### **Interview schedules**

Interview schedules are tools used for gathering oral data in particular categories (Brown 2001). According to Mugenda and Mugenda (2003) interview is an oral administration of a questionnaire or an interview schedule. They are therefore face-to-face encounter with the respondents. Schedules in appendix **C, D, E** were used to obtain relevant information from the respondents. All the interviews were informally conducted in a free and friendly atmosphere. It was through discussions using a set of structured questions and answer forms.

Oral interviews and discussions were preferred by the researcher because they were required to meet specific objectives of this study, guard against any confusion of the questions, probing questions brought more information, yielded higher response rate, and finally they provided in-depth data which was not possible to get using a questionnaire.

.Interviews guided by the questions in schedules appendix **C** were asked to the Senior Technician because the Chief technician was on leave. Discussions were done freely and observations of the available educational technologies was done and recorded.

The Head of Curriculum Instruction and Educational Media was also interviewed face to face. Discussions were conducted and the relevant course outlines and the resource room was observed. In all cases information was recorded.

Three lecturers of English education were also interviewed orally. One was the main supervisor of this research and therefore he was not interviewed. Relevant information during discussions was recorded.

## GENERAL DISCUSSIONS

These are the discussions which have been drawn from the analysis and presentations of the data.

### **Discussions based on availability.**

The study established that the availability of the radios, radio-tapes and recorders were few. The available ones were old and were installed 20 years ago. The numbers were too few compared to a very large number of teacher trainees; this has therefore contributed to very low use of the modern Educational Technologies in the training of teachers. The few resources therefore had affected the efficiency and the extent in which the training of teachers of English and Literature teachers the in use of Educational Technologies was taking place in the University. The findings of this study revealed that most of the teacher trainees could not discern even alternative instructional materials neither could they develop educational programmes nor lessons using the radios and tape-recorders. In the views of these findings, the study shows that shortages of educational technologies had adversely affected the training of student teachers.

This study also investigated the availability of the television and videotapes (TV- Monitors) CDs DVDs, VCDs and their use in the process of training teachers of English and Literature. From the findings, the situation revealed that the numbers of television monitors are only four, which were installed back in 1987, and now they are old and slow. This number compared to the number of students in the school of education was quite below average. This had therefore compromised the quality of practical training. Most of the teacher trainees did not use in their training and more than that, they responded that they were not competent enough to develop any English instructional programme using them.

Another investigation was on the availability and use of computers and internet access in the training of teachers of English. The literature reviewed in this study revealed that the innumerable advantages of computer assisted language and literature learning should be exploited in the learning of English in Secondary Schools at all cost.

Findings revealed by this research shows that computer and internet service in the training teachers of English was not provided to undergraduate student teachers, that 80% of the respondents were not computer literate and the few who have basic knowledge in computer learned in their previous secondary schools and other local training places provided commercially and privately within and around the University. That those who responded to the questionnaires concerning this study were not aware of Computer assisted learning programmes. That most of them were unable to download any information from the internet.

This shows that the teacher trainees in Moi University were not provided with basic computer and internet knowledge and skills and they are not trained to use computers to aid their teaching and lesson development yet the K. I. E in the Kenya Secondary School syllabus has recommended well the use of computers and even include lessons such as writing of e- mail in the syllabus which requires the use of computers.

This therefore reveals that the University is behind the development of instructional materials found in the field yet their trainees were expected to go and implement what they have not been trained in.

**Discussion based on limiting factors.**

The study established that there is a rampant shortage of all the modern educational technologies. The shortage was the main reason to why the training of teachers of English in instructional materials was quite below average. Revelation from the study was that the college is rapidly expanding in enrolment yet the numbers of few education resources were stagnant and perhaps depreciating.

Computers and internet access was non-existent for undergraduate student teachers despite the fact that they are the technologies which have turned the whole planet to a global village. The findings shows that the University does not provide access to computers and internet neither does they have even basic computers training in their Programmes for undergraduate student teachers.

This study also established that time factor was another militating factor against effective training in the area of modern educational technologies available. Time for practical training in the use of modern educational technologies should be expanded to enable student trainees to gain more skills, knowledge and attitudes relevant to their professional training. Results show that CIM 360, CIM 314 and CIM 315 were more theoretical than practical. As a result of the above stated facts it can be seen that the University is slow in implementing the existing policies and their vision regarding the use of modern educational technologies and this was a serious limiting factor to the effective training of teachers of English in the instructional materials.

Media Room in upstairs of the main administration Moi University is also another limiting factor. The findings from this study reveals that: the media room in upstairs is not accessible to physical challenged teacher trainees and lecturers, that the lifts were not functional, that the media room was multiple purpose functions such for it was a lecture room for masters and doctorate students, that is used for seminars, proposals, projects and thesis defense venue among others. From the view of these findings, it is enough to conclude that Moi University does not have a well designed, equipped and accessible facility for modern educational technologies where training should be taking place and that was a set back to be corrected.

Another problem revealed from this study is that the University authorities were very slow in implementing recommendations from lecturers and students hence making them to loose hope and maintain the status quo.

Sources from this study show that more often than not students and lecturers have been forwarding their views concerning improvement of instructional materials but all in vain. They have even recommended the integration of computers and internet training into the main training programme for teachers but the University authorizes have not paid any attention to that.

Media technicians have also made their recommendations for them to be re trained and for more modern educational technologies to be purchased but all in vain. This is therefore another serious limiting factor. From the findings, the conclusion is that the University is rapidly expanding in enrolment but very slow in expanding their training facilities and particularly the modern educational training technologies.

Another disadvantage was shortage of lecturers and media- technicians. Results from these findings reveal that the ratio of the lecturers to that of the student teachers trainees is too small. Lecturers are too overloaded and therefore they have resorted to theory in everything they do. The same situation to the media technicians they are overloaded with others works such as the production of student's college ID cards among others.

In this case they stated that they have only resorted to little demonstrations which they are sure that they do not help the trainees very much.

Findings from this study therefore establishes that there was acute shortage of lecturers and media technicians in the school of education to provide closer, training, monitoring and assessments of teachers trainees in the area of instructional resources.

Results revealed by this study, show that implementation of new educational technologies is hampered by shortage of funds. The old and other educational technologies were donated by well-wishers long time ago. Findings of this study further revealed that some of the educational technologies have broken down and have not been repaired due to financial problems. However, the University should be aware that no amount of excuse should allow them to compromise the quality of training teachers.

### **Discussions based on KIE and University collaboration.**

Based on the findings of this research survey, the researcher found out that there is no collaboration between Moi University and Kenya Institute of Education which is in charge of designing, recommending and disseminating educational resources in Kenya schools. This lack of collaboration has rendered the University to train their teacher's trainee's irrelevantly using outdated instructional materials and lag behind from what the KIE has recommended to be used in schools such as computers and internet resources.

This study revealed that about 80% of the outgoing trained teachers were not computer literate and the only few who were computer literate learned the skills and computer knowledge in their former secondary schools. This shows that some Secondary schools are a head of the University in the implementation of modern educational technologies. In view of these findings, lack of collaboration between the University and the Kenya Institute of Education in the field of teacher training is a serious gap in the area of the provision of relevant skills in training of teachers and particularly in instructional media materials.

### **SUMMARY OF THE FINDINGS**

Generally, the findings proved that University had very few modern and even old educational technologies. That the availability of educational technologies was below average yet the student enrolment is enormously expanding every year.

Effective training of teachers of English and Literature is hindered by many factors such as few modern educational technologies, shortage of time, poor motivation, shortage of funds, small space, lack of co-operation between the University and K.I.E in the recommendation and preparation of instructional materials, incompetent staff in the area of modern educational

technologies, few number of lecturers, and the University is slow in implementing recommended modern educational materials among others.

Findings of this study proved that the extent of training in various topics of English and Literature in the use of instructional materials was very inadequate and in most cases not existent. This shows that there is a gap in the training of teachers of English and Literature in instructional materials which should be addressed to make the training more effective.

## **SUMMARY OF THE FINDINGS, CONCLUSION AND RECOMMENDATIONS**

### **SUMMARY**

The objectives of this study were first, to identify the availability of the needed modern educational technologies recommended in the (Kenya Secondary School syllabus), in the area of training teachers of English and Literature.

The data collected, presented and analyzed shows that, there was a great shortage of modern educational technologies. The existing educational technologies were also very old. It is also sad to mention that computers and internet materials are non-existent for all the education undergraduate students. As one of the latest information technologies in the country, the computer has a wide range of potentials that can be exploited in the field of instruction and teacher training. In chapter two literatures reviewed clearly pointed out the multiple benefits of a computer in the teaching and learning of English and Literature.

Computers can assist learning in areas such as spellings, pronunciation, and grammar composition and e-mail writing among others. Secondary school level is an area where one is expected to perfect language, art and technology. Other reviewed literature also proves that a good number of our Kenya secondary schools have computers what is lacking the professional use to enhance instruction.

The results analyzed in chapter four shows that more than 80% of the respondents were computer illiterate and they have no knowledge of internet services despite the fact that Moi University is credited as a giant technological University in Kenya and south of Sahara. The technological advancement in other schools within the University should be spilling-over to the school of education.

The second objective was to identify factors leading to ineffective acquisition and use of educational technologies in the training of teachers of English and Literature. From the data collected, analyzed and presented ineffective use of the modern educational technologies was largely as a result of ; limited educational technologies and small space against large numbers of students, shortage of funds to purchase and implement modern educational technologies, shortage of technicians, there was no collaboration between the K. I. E and the University in the recommendation of training Programmes for teachers, shortage of qualified staff and finally some lecturers are not well motivated because of the slow process by the University to implement their recommendations in the area of educational technologies.



Location of the media equipment in the upstairs limits the physically challenged students and lecturers from using the few available educational technologies and also it is cumbersome to carry up and down some big and fragile machines. Other related limitations were similar to those found in chapter two of this thesis in literature reviewed. Such as lack of commitment directing the use of educational technologies, communication regarding change is poor, lack of technical support low expectation of students, constraints of academic schedules and departmental structures, lecturers discomfort with technology, communication and leadership pitfalls to implementation, failure to have shared vision, clear goals and objectives with defined measurable outcomes. Implementation of technologies has been compromised among others.

The third objective this study was to establish the extent to which the use of modern educational technologies is taking place in the training of teachers of English and literature in Moi- University. These objectives intended to find out if the training equips the teachers with skills of discerning the appropriate technology, skills of innovation, improvisation, effective use, proper storage and maintenance of educational resources.

The findings show that the training in the use of the radios, radio tapes and recorders, television and video tapes is indeed very shallow. It also shows that student teachers in fourth year who have been trained in the following courses CIM 314 special methods in English language and CIM 315 special methods in literature in English and have done two teaching practices are unable to discern alternative teaching resources apart from the new educational technologies. The most recent technologies such as computers, internet, VCDs, VCRs and VCDs were completely non- existent to undergraduate, students teachers of Moi university. Findings show that respondents are unable to develop English and Literature Programmes using video- tapes, television, computers and internet. The literature reviewed in chapter two shows how vital the uses of new educational technologies are in enhancing the teaching and learning of English and Literature.

Educational researchers have proved that educational electronics are very important for instruction. The use of educational electronics promotes comprehension because of paralinguistic features, the use of television and video complement the knowledge acquired from textual materials, it act as relief from textual stresses, support discussions of themes and characterization after reading novels, motivates the learners and promotes the understanding of poetry, drama, songs and other genres of oral literature.

## CONCLUSION

From the background of this study it can be concluded that to make teacher training more effective, the training programme need to be evaluated so that necessary improvements may be made from time to time. Teacher education programmes should be adjusted to respond to the public opinion, current thinking in the profession and changes in external environment such as technological change.

Training institutions should provide teacher education programmes that reflect the mood of times and allocate resources to critical areas of needs. In order to understand the role of technology training in both today's teacher education environment and the technology training needs of

tomorrow's teachers, it is necessary to provide a perspective on the current context in which technology training occurs.

Findings of this study show that educational technologies are powerful tools, which have powerful effects upon children's minds. Information technology is an enabling technology. Their usefulness in the teaching and learning of English and literature include; making learning to become more interesting, enhancing retaining rate, aids acquisition of skills easily, promotion of collaborative learning, motivation of learners, makes learning student centred and gives students more opportunities for multiple ways of discovering, creating and communicating information in various formats and voices.

Educational technologies also are very useful to teachers. Contrary to the opinion that technology might rob teachers their work, instead technology enrich the work of the teachers. This study concludes from its findings that the teachers role such as providing a favorable environment which is in sympathy with the child's level of cognitive and physical development, provision of scaffold for children's problem solving situation, and providing support when the child is in difficulty to select, remember and plan. Teachers also evaluate learners, shape their attitudes and ensure discipline among the learners which machines can not do. Technology therefore does not replace the teacher it perfects the work of the teacher.

As far as the availability and use of educational technologies in the training of teachers of English in Moi University is concern, it can be concluded from the research findings that; the availability of the radios, television and the videos are below expectation and Language Laboratory is nonexistent. The use of computers and internet services to train undergraduate teachers of English is nonexistent. The most current educational technologies such as DVDs, VCDs and VCRs have not been implemented in the training of teachers. This shortage and lack of educational technologies has negatively affected the quality of teacher training. The findings of this study revealed that most of the teacher trainees could not discern any relevant instructional materials neither are they able to use the modern technologies such as computers to develop Computer Assisted Learning programmes in English and Literature.

Unfortunately while the technology show much promise in the effective training of teachers, the following factors have impacted negatively in their effective use: limited resources, poor planning, shortage of time for enough training in practicals, few lecturers which has rendered practical lessons to remain theoretical, the University is slow in implementing the existing policies concerning educational technologies as in the University strategic plan 2005- 20015, lack of proper space and a well designed room fit for educational technologies and lack of frequent on- the job training to the media technicians and the lecturers particularly in the use of modern technologies. The numbers of technicians are also few, shortage of funds to purchase the new educational technology equipment and the general ignorance resulting from the regular maintenance of status quo.

The disparity between the training needs in the University and the existing situation in schools is due to the lack of collaboration between the University which is the producer of the manpower needed and the K.I. E which recommends and prepares most of the instructional resources in the Kenya Secondary Schools.

Advances should be based on the realities of training and the needs of the students. Until this happens, modern educational technology will be interesting but will remain promise unfulfilled. Hopefully, the future will see the problems solved and the recommendations of this study will help a lot in reducing the gap that exist as of now.

## RECOMMENDATIONS

From the findings, discussions, summary and conclusions above, it is therefore against this background that the recommendations below are made:

### **The role of education**

The educators should prepare for a technology- rich future and keep up with change by adopting effective strategies that infuse lessons with appropriate technologies. Assessment must keep pace with effective instructional technology use.

### **Role of students**

Students should be given more opportunities for multiple ways of discovering, creating and communicating information in various ways in their studies. This will provide guidance on the evaluation of technology and thereby provide ways to determine the effectiveness of educational technology.

### **Educational leaders**

Educational leaders and various stakeholders should develop a technology vision to support learning goals that are focused on improved teacher training in the use of modern educational technologies. They should share the vision for comprehensive integration of technology and foster an environment and culture conducive to the realization of that vision.

### **Teachers training Universities.**

Should secure the necessary technology resources and ensure that technology integration is treated as an ongoing Endeavour and not isolated from system wide improvement efforts. They should not treat educational as one- time cost.

Ongoing maintenance support and replacement of software and hardware are large cost that must be added into the budget and be always evaluated.

### **Educational leaders**

Should ensure that curricular design, instructional strategies and learning environments integrate appropriate technologies to maximize learning and training of teachers.

### **Educational Technologies**

The University should purchase and install new educational technologies, which are relevant in the area of instructional training resources. As the enrolment rapidly expands the development in educational technologies should match the expansion of the University.

### **Computers and Internet**

Basic training in computer and internet should be provided to all undergraduate teacher trainees. Computer training should be incorporated to the main teacher training Programmes and more so the teachers should be trained in Computer Assisted Learning (CAL) Programmes.

### **Resource room**

Since the upstairs media room has been found to be a limiting factor, the University authorities should design, build and develop a modern resource room particularly for modern educational media technologies. The room should be designed in such away that can be accessible to all human

beings irrespective of their physical challenges. The room also should be big enough to accommodate the teacher trainees.

### **Revision of the present training programme**

The present training programme should be revised and the syllabus should include and emphasize the new educational technologies which are currently desired most, for example the use of computers during training and for professional and personal purposes.

### **Collaboration between K.I.E and the School of Education Moi University**

This collaboration will ensure relevance of the training in general and particularly the relevance in appropriate use of instructional materials for training teachers.

### **The government**

Government should take- up responsibility of providing educational resources and materials particularly new educational hardware and software to all public universities and make sure that there is uniformity in the training of teachers.

### **Establishment of national centre for the technology**

For the teachers in the field, the government should establish a national centre for technology and teachers education that disseminate new knowledge, develops new knowledge, coordinate and recommend new educational technologies and provides refresher courses to already practicing teaching and lecturers.

### **Employment of more training personnel.**

The University should employ more training personnel and provide refresher courses to the existing ones. These will manage and maintain the technologies.

### **Creation of more opportunities for technology access to students**

The available technologies should be made more accessible to teacher trainees to practice the skills of using them during their own free time with assistance from the media technicians.

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