INTEGRATION OF AUDIO-VISUAL TECHNOLOGY ON ACQUISITION OF READING SKILLS FOR PRE-UNIT LEARNERS IN PUBLIC SCHOOLS IN KAJIADO NORTH SUB-COUNTY, KENYA

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ABSTRACT

Audiovisual (AV) technology has been in existence for a long time. The establishment of an Instructional Resource Programme in Public Nursery Schools in Kenya is essential because it will impart mainly verbal medium as a powerful tool of pictorial-verbal for enhancing communication to pre-unit class learners. The study sought to analyze the problems of lack of skills, Language of content by the integration of AV technology in Public Nursery Schools in Kajiado North Sub-county, Kenya and comes out with some solutions to solve these problems. The purpose of the study was to analyze the integration of AV technology in learning environment. The objectives of the study were to: identify the types of AV technology available for pre-unit learners in Public Nursery Schools in Kajiado North Sub-county; establish the adequacy of AV technology on acquisition of reading skills in the study area; examine the extent of use of AV technology on acquisition of reading skills for Pre-unit learners in the study area and to determine ways of enhancing AV technology on acquisition of reading skills for Pre-unit learners in the study area. The study adopted a descriptive research method design. The target population of the study comprised of 54 schools, 54 head teachers, 54 teachers and 810 pupils. Simple random sampling was used to select the schools, while the head teachers, teachers and pupils were selected using purposive sampling. The sample size comprised of 16 schools, 16 head teachers, 16 teachers and 243 pupils. Interview schedule, Questionnaires and observation checklist were the main data collection instruments. The data collection instruments were piloted before they were put into use in the field to attest their validity and reliability. The data from interview schedule was analyzed using content analysis while the data from questionnaires and observation checklist was analyzed using numerical or statistical means. The data was collected, analyzed, tabulated, classified and presented using frequency distribution tables, bar graphs, charts and summary paragraphs. The study found out that despite the schools having audio visual equipment's, most of them were not used. Also Majority of the teachers were not computer literate. The study recommended that proper mechanism should be put in place to appreciate and recognize of the needs of integrating audiovisual technology for pre-unit pupil's education and in other classes as well.

KEY WORDS: AV Technology, Early Childhood Education, Education Management Information Systems, Learning System Management.

INTRODUCTION

The contempary world is living in multimedia which has now become so accustomed to communication via media and that Kenya as a developing country should not take it for granted. We are continuously exposed to a variety of media including: books, newspapers, periodicals, TVs, tapes and disc recordings, films, slides, flash disks, social media etc. In view of this we should expect the integration of AV technology on acquisition of reading skills for pre-unit learners in our schools to reflect these resources and services to which we have become accustomed by making man's knowledge readily available in all the formats in which it has been recorded.

According to Anzaku (2011), since time immemorial, audio-visual technologies existed but were not incorporated into educational system. According to Anzaku (2011), the advent of audio-visual technologies is long but it is the use that had been limited until in the 1960s and 1970s that schools

realized the use of these technologies and started incorporating them into the school collections for future use. Summer stressing on the advent of the technologies stated that before man developed speech as a means of communication, he expressed himself in terms of drawings, signals and symbols. The point here is that the use of audio-visual technologies started as early as man's civilization began. This is evident in their attempt to communicate ideas. In time of antiquity, man carried pictures on rocks for conveying ideas.

Experience around the world in developing, industrialized and information-based countries has shown that for the past three decades the world has witnessed a notable shift in the way media and technology are used in schools (Gutnick, Robb, Takeuchi and Kotler 2011). Far back in 1969 they were classified into three categories that is Audio i.e. radio, tape recorder, Visual media, Audio-visual and computer meditated technologies. Ellington and Race (2013) classified the teaching and learning resources into seven groups; Printed and duplicated materials; Non-projected display materials; Still-projected display materials: Audio materials: Linked- audio and still-visual Material: Video materials and Computer- mediated materials. Aina and Olutade (2006)supporting the introduction of audio-visual aids observed that as far back as the 1920s audio-visual technologies came to be used in teaching in the United State of America.

The U.S. Department of Education released the National Education Technology Plan to promote learner-centered learning with technology as a way to improve learner achievement (U.S. Department of Education, 2010),and most recently the Federal Communications Commission announced a $3 billion investment along with additional investments by private technology companies to close the technology gaps in our schools(Bidwell, 2014). Further, school districts are spending millions of dollars on newer devices, including LA County, the second largest school district in the country, which spent $30 million on iPads for every k-12 classroom (Svensson, 2013).

As technology was later in coming to the less industrialized countries, so were educational applications. In many countries educational technology came with the financial and technical support of industrialized countries, intending to help expand educational opportunities as part of nation building for example, in 1961UNESCO and the Ford Foundation established a pilot project in Ivory Coast and Niger to offer televised lessons to learners in those countries. In 1966, a project was initiated for communicating agricultural information to farmers in some 80 villages in Africa. The programs were viewed communally and were followed by group discussion. This pattern of urban in-school programs and rural agricultural development support was followed in many other developing countries. During the 1960s and 1970s, educational audiovisual projects were undertaken in more than a dozen countries in Africa. In many cases, these projects were not intended to be permanent in any event, most were not sustained. Although the lessons themselves were educationally effective the overall projects suffered from systemic problems. Analysis echoed these findings, noting that systems in which major components are absent or dysfunctional tended to perish (Hallett and Faria2006).

In the post-colonial era, audiovisual technology was viewed as a means of expanding the reach of disadvantaged education systems while improving the quality of the education that was offered. The evidence indicated that from a strictly economic standpoint these early projects were difficult to justify. Reform based on audiovisual technology may be a faster means of changing the curriculum and improving teaching methods but it is also more expensive in these settings and often not locally sustainable. Thinkers in educational technology were viewing teaching and learning problems as communication problems. Improvement of communication depended on detecting where the weak points in the process were and eliminating them, choosing more visual medium, building more redundancy into the message, matching the receiver's language capability better, providing the sender with better feedback about the receiver's response, and the like.

According to Dike (2003), the various methods of teaching informally such as observation, participation and the use of the senses are forms of audio-visual resources in our indigenous Kenyan Education. The child is asked to observe carefully without verbal instructions and to participate in domestic science, craft and agriculture; the child is able to grasp knowledge from different fields unconsciously. In modern times, the value of instructional materials has been realized of late in this country and attempts are being made by all organs connected with education to see that audio-visual technologies are used in teaching and learning situations. For examples, Kenya Institute of Curriculum Development has established Curriculum Development and Instructional Materials Centre to promote the utilization of various types of audio-visual technologies and media in the school.

Yelland (2006) asserts that in the modern era of reading skills teaching, different innovations are brought in the field to come out from the traditional teaching approaches. With the changed necessity of learning reading skills; the teaching methods and approaches have also been adapted. Language teachers are trying to bring new innovations in their teaching to make their reading skills teaching effective. Teaching reading is not an easy task and it needs to be interesting enough to remove the anxiety of the learners. For this reason, language teachers tend to adapt different techniques to teach reading more effectively and more interestingly. With the rapid growth and availability of technology, language teachers are incorporating different additional aids along with the text books to teach reading. Different electronic boards, overhead transparency, multimedia projector, computer, audio and video equipment are making the language teachers' task easier and dynamic Language teachers are using these audio-visual technology to deliver their lessons and teach the target reading skills to the learners making the class interesting and contextualized (Zevenbergen, 2007).

According to an early childhood education officer Kajiado North Sub-county, there are no guidelines to determine Developmentally Appropriate Practices (DAP) computer applications within the sub-county to teach acquisition of language skills. An employee from the office of sub-county instruction and technology explained, currently there is not a checklist for determining developmentally appropriate software, but the sub-county does offer software assistance from a logistical perspective set up and management. She went on to clarify that the sub-county offers curriculum alignment information for primary schools but not for early childhood. Additionally, an

early childhood teacher confirmed the sub-county had provided limited information regarding the implementation of audiovisual technology into their classrooms.

As a result of limited resources for implementing developmentally appropriate audiovisual technology applications, there is inconsistent implementation of audiovisual technology in all early childhood classrooms. While much of the current literature provides some valuable information with reference to audiovisual technology within the different education sectors, research specifically related to integration of audio-visual technology on acquisition of reading skills for pre-unit learners in public schools in Kajiado North Sub-county is relatively limited. Therefore, an investigation such as this would be a timely and useful study to bring to light the responses and views of early childhood teachers in this technologically saturated era, particularly as in recent times there has undoubtedly been a significant increase in the profile and positioning of audiovisual technology in ECDE. It is in this view that the study analysed the integration of Audiovisual Technology in the acquisition of Reading Skills for pre-unit learners in public schools in Kajiado North Sub-county, Kenya.

Statement of the problem

Despite the government of Kenya's effort to ensure that every child, regardless of diversity acquires reading skills before joining class one in Kajiado North Sub-county seven out of ten children in class one cannot read according to Uwezo at Twaweza's Third annual report (2013). Too few teachers are adequately prepared to teach reading and schools are unable to supply the engaging audiovisual technology needed to motivate learners to acquire reading skills.

Objectives of the study

The purpose of this study is to analyze the integration of audiovisual technology on the acquisition of reading skills for pre-unit learners in public schools in Kajiado Sub-county, Kenya.

The study was guided by the following objectives:
  i. Identify the types of audiovisual technology on acquisition of reading skills for pre-unit learners in public Schools in Kajiado North Sub-county, Kenya.
 ii. Establish the adequacy of audiovisual technology on acquisition of reading skills.
iii. Examine the extent of use of audiovisual technology on acquisition of reading skills.
 iv. Determine ways of enhancing AV technology on acquisition of reading skills for Pre-unit learners in Public Schools in the study area.

Research questions

The research questions of the study were-:

   i.   What are the types of audiovisual technology on acquisition of reading skills for pre-unit learners in public Schools in Kajiado North Sub-county, Kenya?
   ii.   How does the adequacy of audiovisual technology affect acquisition of reading skills for pre-unit learners in public Schools in the study area?

iii. To what extent does the use of audiovisual technology influence the acquisition of reading skills for pre-unit learners in public nursery Schools in the study area?

iv. Are there ways of enhancing AV technology on acquisition of reading skills for Pre-unit learners in Public Schools in the study area?

Theoretical Framework

This research was guided by Stephen Krashen's Theory of Second Language Acquisition (1982). Krashen's (1982) language acquisition theory studied extensively the correlation between comprehensive input and language acquisition of ELLs. The input Hypothesis outlined by Krashen (1982) specified that language is acquired only when learners receive input that is slightly above their current knowledge level. He also emphasizes that comprehensive input occurs only when the learner affective filter, defined as the impact of learner's affective sentiments such as anxiety and boredom on their learning ability, is low.

Typically, the higher your affective filter the less you are willing to learn. In order for ELL learners to be proficient in the target language, the language acquisition process should not only emphasize comprehensive input, but the input should also be rich. The presentation of this input, moreover, should be done in a way that does not put the acquirer 'on the defensive' (Krashen, 1982).

By referring to a learner, being on the "defensive," Krashen's theory explains how a high affective filter can block comprehensive input from reaching the brains and therefore hindering the language acquisition process. His theory emphasizes the importance of negative emotions, passive moods, low motivation, low self-esteem and anxiety in preventive learning to occur. Krashen (1982) research has led to subsequent studies on the need to create a motivating learning environment.

on the need to create a motivating learning environment. Using technology tools as a way of enhancing Ell's language acquisition by providing a rich and comprehensive input will be relevant in motivating ELLs. Research by Echevarría, Vogt and Short (2013) on Sheltered Instruction Observation Protocol (SIOP) widely implemented by school districts throughout all 50 States and in dozens of countries worldwide, provides a continuum of Krashen (1982)'s comprehensive input theory. SIOP is based on differentiated instruction methods and scaffolding. According to Echevarría, Vogt and Short (2013), scaffolding methods such Krashen (1982) research has led to subsequent studies on the need to create

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The use of creative computer-based technology tools such as assistive technology to motivate learners with severe reading disabilities to overcome their disabilities is an example of technology tools used as comprehensive input method. Technology tools such as Skype will help bridge the cultural gap that exists among learners from different background by linking classrooms across the globe. By doing, so we are achieving not only a social function but we are also maintaining a positive learning environment that emphases cultural diversity: we can transform any curriculum to confront racism, sexism, classism, ethnocentrism, disability or xenophobia (Clayton, 2003). Research on character education offers an interesting perspective in educating learners and teachers in key moral values in a learning environment that fosters teamwork as does online learning communities by uniting learners and teachers from different background who work together to achieve projects that benefit their communities

The purpose of this study was to find out how audiovisual technology can be used to help pre-unit learners become more proficient in reading skills. With the growing number of reading programs relying heavily on audiovisual technology to make reading acquisition more comprehensible to a wide range of learners (Winkle & Goertler, 2008) and using a theoretical approach that emphasizes comprehensive and rich input, this study demonstrated that audiovisual technology is a great asset in helping pre-unit learners achieve success in acquiring reading skills.

Conceptual Representation on integration of Audiovisual Technology on Acquisition of Reading Skills for pre-unit learners in public nursery school

The researcher in this study conceptualized the relationship between variables in the study and see their relationship in a diagram as illustrated below:-

Independent variables   **Dependent variables**
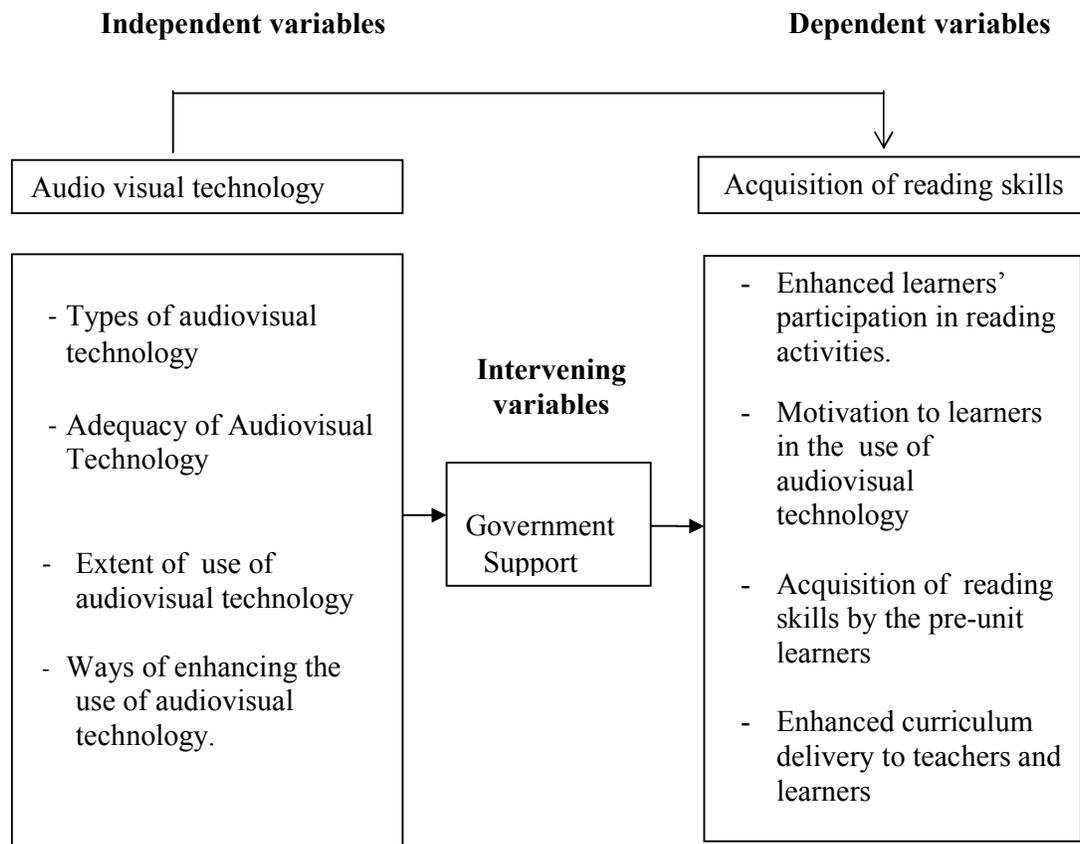
Figure 2.1: A Conceptual Framework showing integration of Audiovisual Technology on the Acquisition of Reading Skills for pre-unit learners in Public Schools in Kajiado North Sub-County, Kenya.

Source: Researcher 2018

The variables:
Independent variables
Types and availability of Audiovisual Technology- The study visualized that if varied types of audiovisual technology are made available in the public nursery schools learners participation in reading activities would be enhanced leading to acquisition of reading skills by pre-unit learners in public nursery school in Kajiado North Sub-County, Kenya.

Adequacy of audiovisual technology- Key to the usage of audiovisual technology on acquisition of reading skills, their adequacy will lead to motivation of learners in the use of audiovisual technology promoting acquisition of reading skills by pre-unit learners in public nursery schools in Kajiado North Sub-County, Kenya.

Extent of use of audiovisual technology-According to the study by Anbuchelvan (2005) the use of Audio-Visual technology can make a significant contribution to Acquisition of reading skills by the pre-unit learners in public nursery schools in Kajiado North Sub-County, Kenya.

Dependent variable-Acquisition of Reading Skills for pre-unit learners in public schools - when different strategies of enhancing the use of audiovisual technology are employed, curriculum delivery to teachers and learners will be enhanced translating to acquisition reading skills for pre-unit learners in public schools in Kajiado North Sub-County, Kenya.

Intervening variable: Government support
Government support may be an intervening variable in that it may ensure that audiovisual technology is enhanced in public pre-unit classes leading to acquisition of reading skills while lack of government support may contribute to lack of audiovisual technology hence low acquisition of reading skills by pre-unit learners in public schools.

METHODOLOGY
This chapter discusses the research design, location, target population, sample size, sampling procedures, research instruments, pilot study, data collection procedure and methods of data analysis of the study.

This study employed descriptive research design. Descriptive research study is concerned with describing the characteristics of a particular individual or of a group. It deals with specify predictions, with narration of facts and characteristics concerning individual, group or situation (Kothari, 2004). Descriptive research design was appropriate for this study because the researcher collected data on integration of audiovisual technology on the acquisition of reading skills for pre-unit learners in public schools and reported without manipulating any variables as outlined by (Borg and Gall 1999). Orodho (2008) points out that descriptive research design allow researchers to gather information, summarize, present and interpret.

Location of the Study
The study was carried out in public schools in Kajiado North Sub-County Kenya which is situated in the northern part of Kajiado County. The sub-county borders Nairobi city to the North and East, Narok to the west and Kajiado Central to the South. The area has been chosen because the integration of audiovisual technology on the acquisition of reading skills for pre-unit learners in public schools in Kajiado North Sub-County is very low (Uwezo 2013).

Table 3.1: Kajiado North Sub-county Pre-unit learners who cannot read

Year	Sounds	Two letter words	Three letter words	Four letter words	sentence	Average
2011	41.5	55.7	62.7	73.3	76.0	61.8
2012	40.0	57.6	69.9	75.9	78.8	64.4
2013	42.7	54.3	64.4	73.5	75.2	62.0

Source: Government of Kenya Uwezo Annual Learning Assessment Report (2013).

3.4 Study Population

It comprised of 54 head teachers from the 54 public nursery schools in the study area. 54 teachers from Public schools for pre-unit learners form the teacher's population while 810 pre-unit pupils form the pupils' population. This population was adequate as pointed out by Gay (2002) that the population accessible and target population must be comparable on many characteristics. This population is appropriate for this study because it comprises the main stakeholders in education for pre-unit learners in public schools. The head teachers as school administrators have copies of documents and resources that address audiovisual technology. Teachers are aware of audiovisual technology that is available for pre-unit learners in public schools. Pre-unit learners are the beneficiaries of audiovisual technology and they have experience on how the resources influence their acquisition of reading skills.

Table 3.2: Population of Head teachers and Teachers

Respondents	Population	Percentage of respondents
Headteachers from 54 schools	54	100%
Teachers from54schools	54	100%
Pupils from 54 schools	810	100%
Total	918	100%

The sample size comprised of Sixteen (16) head teachers from Sixteen (16) public schools which is 30% head teachers population. The sample size for teachers comprised of Sixteen (16) teachers from these Sixteen (16) schools which is 30% of the teachers' population while the sample size for pupils will be eight hundred and ten(810) which is 100% of the pupils' population. According to Kerlinger (2003) a sample in a study should represent at least 30% of the target population. This is considered easy to work with in terms of time and resources and is also representative enough of the entire population. This sampling was therefore considered appropriate considering the time and money constraints.

Table 3.3: Sample of Head teacher, Teachers and pupils

Respondents	Population	Sample Size	Percentage of respondents
Head teachers	54	16	30%
Teachers	54	16	30%
Pupils	810	810	100%
Total	918	842	92%

Random sampling method was used to select the sixteen schools in Kajiado North Sub-county. This method is appropriate as it gives the schools equal chances to take part in the study (Orodho, 2008). In this case the sixteen public schools were included in the sample. Head teachers from the sixteen sampled schools formed the sample for head teachers. Teachers were selected using purposive sampling method because they have information on influences of audiovisual technology on acquisition of reading skills for pre-unit learners in public nursery schools in their classes. Pupils were selected using purposive sampling to give each pupil a chance to be a respondent in the study.

Data was collected from head teachers by means of interview schedule and teachers by means of questionnaire and observation checklists for learners.

The interview schedule for head teacher focused on head teachers' background information, pre-unit learners' enrolment and audiovisual technology types, adequacy of audiovisual technology, extent of use of audiovisual technologies and the ways of enhancing use of audiovisual technology on the acquisition of reading skills for pre-unit learners in public nursery schools.

The questionnaires for teachers elicited the teachers' biodata, types of audiovisual technology, adequacy of audiovisual technology, extent of use of audiovisual technology and the strategies of enhancing use of audiovisual technology on the acquisition of reading skills for pre-unit learners in public schools.

RESULTS AND DISCUSSIONS

The targeted sample size was 32 participants who comprised of the 16 head teachers, 16 teachers in public Schools in Kajiado North Sub-county, Kenya. Those filled and returned questionnaires were 32 respondents making a response rate of 100%. The researcher observed the learners in 16 schools making a response rate of 100%. According to Mugenda and Mugenda (2003), 30 percent return rate is adequate hence the higher return rates further satisfied this study. This means that the response rate for this study which was established to be 100% was excellent and therefore enough for data analysis and interpretation.

Table 4.1: Response rate

| Questionnaires/Interview schedule	Frequency	Percent (%)
Response	48	100%
Non-response	0	0%
Total	**48**	**100.00%**

Source: Author, 2018

Background Information

The study determined the general information of the respondents. The information was presented in the section below:

Education qualification of the teachers

The study sought to determine education qualification of teachers who participated in the survey. Figure 4.1 represents a pie chart showing the distribution of teacher's education qualification.
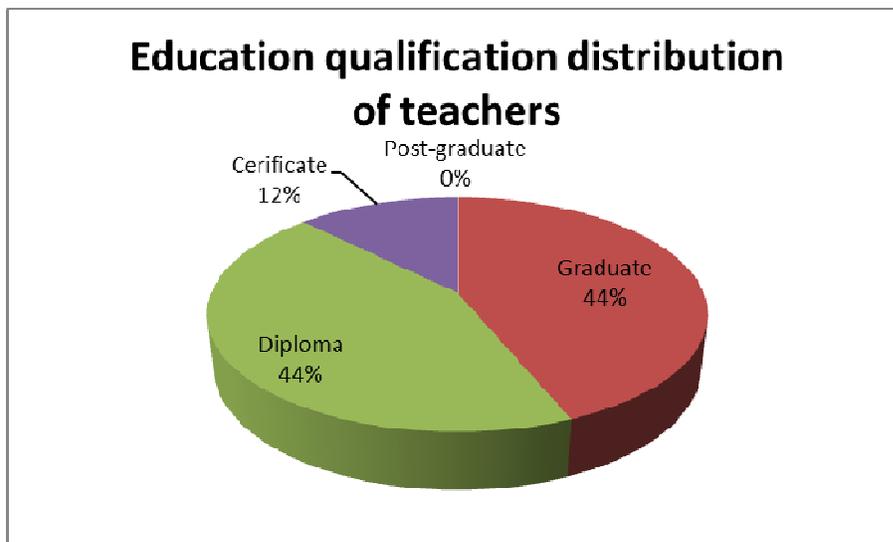
Figure 4.1: Teachers education qualification distribution.

Number of years head teachers have been in teaching profession

The study determined the number of years the head teachers have been in teaching profession as shown in table 4.2 below:

Table 4.2: Number of years head teachers have been in teaching profession

Years	Number of head teachers	Percentage
Above 20 years	4	25%
15-20 years	6	37.5%
10-15 years	4	25%
5-20 years	1	6.3%
Below 5 years	1	6.3%
Total	**16**	**100%**

Source: Author, 2018

Findings indicate that majority of the head teachers representing 37.5% have 15-20 years in teaching profession, 25% have above 20 years and 10-15 years while, 6.3% of them have both 5-20 years and below 5 years in teaching profession.

Level of the teachers' technology proficiency

The study determined the teacher's level of technology proficiency skills

Table 4.3: Teachers Level of technology proficiency

Level of technology proficiency	Number of teachers	Percentage
Excellent	0	0%
Very good	0	0%
Good	0	0%
Fair	7	43.8%
Poor	9	56.3%
Very poor	0	0%
Total	**16**	**100%**

Source: Author, 2018

The table 4.3 shows that 7 teachers which represent 43.8% of teachers are fairly proficient in technology skills while 9 representing 56.3% have poor technology skills. There were no teachers who had excellent, very good, good and very poor technology skills.

Types of Audiovisual Technology Device Used in Acquisition of Reading Skills for Pre-Unit Learner in Public Schools

The study determined the types of audiovisual devices used in acquisition of reading skills for pre-unit learners in public Schools in Kajiado North Sub-county

Table 4.4: Availability of Audiovisual technology required for acquisition of reading skills by pre-unit learners in public schools:

Technology item	Available	Unavailable
Computer Laboratory	5(31.3%)	11(68.8%)
Personal Computer (PC)	0(0%)	16(100%)
Instructional Software	0(0%)	16(100%)
Projector	5(31.3%)	11(68.8%)
Smart board	5(31.3%)	11(68.8%)
Televisions	0(0%)	16(100%)
Radios	7(43.8%)	9(56.3)
Videos	0(0%)	16(100%)

Source: Author, 2018

The results indicate that most of the technology items were not available as indicated by the respondents.68.8% of the interviewed respondents said that computer laboratory was not available. Also 100% of the interviewed respondents said that PC, instructional software and televisions were not available while 68.8% said that projector and smart board were not available and 56.3% said that Radios were not available.

Adequacy of audiovisual technology on acquisition of reading skills for pre-unit learners in public nursery schools:

The study sought to find out if the audiovisual technological items used by pre-unit learners were adequate. Table 4.5 shows the responses from the teachers:

Table 4.5: Adequacy of Audiovisual technology on acquisition of reading skills for pre-unit learners in public nursery schools:

Technology item	H/Teachers		Teachers		pupils	
	Adequate	**Inadequate**	**Adequate**	**Inadequate**	**Adequate**	**Inadequate**
Computer Laboratory	0.0%	16(100%)	0.0%	16(100%)	0.0%	240(100%)
Personal Computer (PC)	0(0%)	16(100%)	0.0%	16(100%)	0.0%	240(100%)
Instructional Software	0(0%)	16(100%)	0.0%	16(100%)	0.0%)	240(100%)
Projector	0(0%)	16(100%)	0.0%	16(100%)	0.0%)	240(100%)
Smart board	0(0%)	16(100%)	0.0%	16(100%)	0.0%)	240(100%)
Televisions	0(0%)	16(100%)	0.0%	16(100%)	0.0%)	240(100%)
Radios	0(0%)	16(100%)	0.0%	16(100%)	0.0%)	240(100%)
videos	0(0%)	16(100%)	0.0%	16(100%)	0.0%)	240 (100%)

Source: Author, 2018

All the respondents said that the technological items such as computer laboratory, PC, projector, instructional software, smart board, television, radios and videos were inadequate.

Extent of use of audiovisual technology on acquisition of reading skills:

The study sought from the respondents how often they used audiovisual technological in acquisition of reading skills. Table 4.6 shows the responses from the respondents:

Table 4.6: Frequency of use of audiovisual technology on acquisition of reading skills in public nursery schools:

	Always	**Frequently**	**Rarely**	**Never**
Head teacher	0(0.0%)	0(0.0%)	0(0.0%)	16(100%)
Teacher	0(0.0%)	0(0.0%)	0(0.0%)	16(100%)

Source: Author, 2018

All the respondents stated that they never made use of audiovisual technological devices in acquisition of reading skills. 100% of head teachers and 100% of teachers said that they never made use of the devices in acquisition of reading skills in their schools.

Ways of Enhancing Audiovisual Technology on Acquisition of Reading Skills for Pre-Unit Learners in Public Schools

The study sought from the respondents whether they were satisfied with the ways of enhancing audiovisual technology on acquisition of reading skills for pre-unit learners in their schools. Table 4.7 shows the responses from the respondents:

Table 4.7: Ways of enhancing audiovisual technology on acquisition of reading skills for pre-unit learner in public nursery schools:

Strategy	Head teachers				Teachers			
	S.A	Agree	Disagree	SD	S.A	Agree	Disagree	SD
Training	16(100%)	0%	0%	0%	16(100%)	0%	0%	0%
Planning/ preparation	16(100%)	0%	0%	0%	16(100%)	0%	0%	0%
Teacher ownership	16(100%)	0%	0%	0%	16(100%)	0%	0%	0%
Choosing AV technology wisely	16(100%)	0%	0%	0%	16(100%)	0%	0%	0%
Teachers knowing their pupils age, level, interest, ability	16(100%)	0%	0%	0%	16(100%)	0%	0%	0%
Proper presentation	16(100%)	0%	0%	0%	16(100%)	0%	0%	0%
Inexpensive AV technology	16(100%)	0%	0%	0%	16(100%)	0%	0%	0%
Evaluation whether objectives are achieved	16(100%)	0%	0%	0%	16(100%)	0%	0%	0%

Source: Author, 2018

All the respondents from the survey strongly agreed that adapted activities strategy such as training, planning, proper presentation, choosing audiovisual technology wisely and evaluating whether objectives are achieved could be used to enhance audiovisual technology on acquisition of reading skills. Additionally, teacher's ownership of audiovisual technological devices and their ability to know their pupil's age, level, interest and ability was another strategy that was agreed upon by all the respondents from the survey that could be used to enhance acquisition of reading skills.

Inferential Statistics

The study further applied general linear Regression model and correlation analysis to determine the predictive power and correlation of the independent variables in the influence of audiovisual technology on acquisition of reading skills in public schools in Kajiado North Sub-County. The researcher applied correlation analysis and regression analysis to all the study variables.

Correlations Analysis

The study sought to establish whether there was any relationship between the variables under study. The variables defining the independent variable were correlated against the dependent variable. Correlation analysis assists the researcher to establish the nature of the relationship in order to make a valid conclusion and recommendation about the variables. Normally a correlation coefficient lies between +1 and -1. A positive correlation means the two items under test affect each other in a way that when one improves the other improves as well and a negative correlation means that when one factor increases the other reduces. The test of significance in the relationship is done at either a significant value of 5% or 1%. The results were presented in table 4.8

Table 4.8: Pearson's Correlations

		Strategies	Types	Adequacy	Extent
Strategies	Pearson Correlation	1			
	Sig. (2-tailed)				
Types	Pearson Correlation	.863**	1		
	Sig. (2-tailed)	0.000			
Adequacy	Pearson Correlation	.912**	.875**	1	
	Sig. (2-tailed)	0.000	.000		
Extent	Pearson Correlation	.716**	.713**	.605**	1
	Sig. (2-tailed)	0.000	.000	.000	

*. Correlation is significant at the 0.05 level (2-tailed).

Source: (Survey Data), 2018

From table 4.8 it is seen that there is a strong positive correlation of 0.863 which is very significant at a value of 0.00 between Strategies of enhancing audiovisual technology and Types of audiovisual technology devices. This indicates that by improving audiovisual technology devices

there is improved acquisition of reading skills. The study indicates that there is a very strong positive correlation of 0.912 between adequacy of audiovisual technological device and acquisition of reading skills. For the relationship between the extent of use and strategies of enhancing audiovisual technology the study established a strong positive correlation of 0.716 that was very significant (0.000) at 1% level of significance. From the study it's evident that all factors under study had a positive correlation with strategies of enhancing audiovisual technology.

Multiple Regression Analysis

The study sought to analyze audiovisual technology on acquisition of reading skills by pre-unit pupils in public schools. The factors investigated were: type, adequacy, and the extent of use of audiovisual technology.

Assumptions of Multiple regression analysis

Multicollinearity Test

Multicollinearity was tested by computing the Variance Inflation Factor (VIF) and its reciprocal, the tolerance. It is a situation in which the predictor variables in a multiple regression analysis are themselves highly correlated making it difficult to determine the actual contribution of respective predictors to the variance in the dependent variable. (Gujarat & Porter, 2009). Thus, collinearity diagnostics measure how much regressor are related to other regressors and how this affects the stability and variance of the regression estimates. The existence of multicollinearity is a vital problem in applying multiple time series regression model (Gujarat & Porter, 2009).

To detect for multicollinearity, the study examined the correlation matrix or by using Variance Inflation Factor (VIF) as shown in table 4.9. The Variance Inflation Factor (VIF) quantifies the severity of multicollinearity in an ordinary least- squares regression analysis. O'Brien (2007) suggested that a Variance Inflation Factor (VIF) greater than 10 are a sign of multicollinearity; the higher the value of VIF's, the more severe the problem. Results in table 4.30; show that all the variables had a variance inflation factors (VIF) of less than 10 that is, types of audiovisual technology (2.855), adequacy of audiovisual technology (1.445), and extent of use of audiovisual technology (5.251). This implies that there was no collinearity with the variables thus all the variables were maintained in the regression model.

Table 4.9 Pearson's Correlations

Variables	Tolerance	VIF
Types of audiovisual technology	.357	2.855
Adequacy of audiovisual technology	.742	1.445
Extent of use of audiovisual technology	.186	5.251

Source: (Researcher, 2018)

Test of normality

Normality was tested using the Shapiro-Wilk test which has power to detect departure from normality due to either kurtosis or skewness or both. Its statistic ranges from zero to one and figures higher than 0.05 indicate the data is normal (Razali & Wah, 2011).

The tests reject normality when the p-value is greater than or equal to 0.05 (Sekaran & Bougie, 2010). Table 4.4 shows that the Shapiro-Wilk statistics were types of audiovisual technology p = .006, adequacy of audiovisual technology p = .017 and extent of use of audiovisual technology p = .028 respectively. Since the p-values were greater than the significance level (0.05) (not significant if p<.05), this implies that the variables were normally distributed.

Table 4.10 Shapiro-Wilko

	Statistic	Df	p-value
Types of audiovisual technology	.945	31	.006
Adequacy of audiovisual technology	.868	31	.017
Extent of use of audiovisual technology	.843	31	.028

Source: (Researcher, 2018)

The regression model was:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \varepsilon$$

Whereby Y represent the strategies of enhancing audiovisual technology, X_1 Types of audiovisual technology, X_2 is Adequacy of audiovisual technology, and X3 is Extent of use of audiovisual technology. B_0 is the model's constant, and $\beta_1 - \beta_4$ are the regression coefficients while ε is the model's significance from f-significance results obtained from analysis of variance (ANOVA).

Table 4.11: Model's Goodness of Fit Statistics

R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
.965[a]	.931	.897	.15523	0.765

a. Predictors: (Constant), types of audiovisual technology, adequacy and extent of use of audiovisual technology

Source: (Researcher, 2018)

Table 4.11 shows that there is a good linear association between the dependent and independent variables used in the study. This is shown by a correlation (R) coefficient of 0.965. The determination coefficient as measured by the adjusted R-square presents a strong relationship between dependent and independent variables given a value of .897. This depicts that the model accounts for 89.7% of the total observations while 10.3% remains unexplained by the regression model.

Analysis of Variance

Table 4.12 shows the results of analysis of variance

Table 4.12: Analysis of Variance (ANOVA)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	25.187	3	8.39	96.436	.000[b]
	Residual	2.542	29	.087		
	Total	27.729	32			

a. Predictors: (Constant), types of audiovisual technology, adequacy and extent of use of audiovisual technology

b. Dependent Variable: acquisition of reading skills.

Source: (Researcher, 2018)

The ANOVA statistics presented in Table 4.12 was used to present the regression model significance. The significance value of p= 0.000 was established and since the p-value was less than 0.05, the model was considered significant for the study.

Table 4.13: Regression Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
(Constant)	1.512	.207		7.2122	.000
Types of audiovisual technology	.371	.055	.212	6.774	.000
Adequacy of audiovisual technology	.181	.107	.115	11.03	.014
Extent of use of audiovisual technology	.536	.074	.375	7.243	.000

a. Dependent Variable: Acquisition of reading skills.
Source: (Author), 2018

The following regression result was obtained:

$Y = 1.512 + 0.371X_1 + 0.181X_2 + 0.536X_3$

From the model, when other factors (types of audiovisual technology, adequacy and extent of use audiovisual technology) are at zero, acquisition of reading skills will be 1.512. Holding other factors constant, a unit increase in types of audiovisual technology would lead to a 0.371 increase in acquisition of reading skills. On the other hand, holding other factors constant, a unit increase in adequacy of audiovisual technology would lead to a 0.181 increase in acquisition of reading skills Table 4.7 also shows that holding other factors constant, a unit increase in extent of use of audiovisual technology would lead to a 0.536 increase in acquisition of reading skills. All the variables under study had a p-value of < 0.05 which means they were all significant and positively influenced the strategies of enhancing audiovisual technology.

SUMMARY, CONCLUSION AND RECOMMENDATIONS AND THE WAY FORWARD

The study is based on integration of audiovisual technology on acquisition of reading skills for pre-unit learners in public primary schools in Kajiado North Sub-County. Based on this preposition, theoretical literature was reviewed. The study examined several empirical literatures relevant to the study area. Based on theories, empirical work and literature, conceptual framework of the relationship between independent and dependent variables was drawn.

The study was conducted on all the 272 participants who comprised of the 16 head teachers, 16 teachers and 240 pupils in public primary schools in Kajiado North sub-county. Those filled and returned questionnaires were 32 respondents making a response rate of 100% and 16 observation schedules were filled by the researcher making a responses rate of 100%. The study achieved a response rate of 100% which was above the postulated 30% minimum (Mugenda and Mugenda, 2003). Guided by the general objective, this thesis examined: integration of audiovisual technology on acquisition of reading skills for pre-unit learners in public primary schools in Kajiado North Sub-County.

Types of audiovisual technological devices used in public primary schools

It was found that different types of the technologies were not available as indicated by the respondents. Respondents said that audiovisual technologies such as computers, Televisions, projectors were not available in schools. Additionally, majority of the teachers were not proficient in computer skills. 56.3% of the teachers said that they were poor in computer skills while 43.8% had fair computer proficiency skills. There were no teachers who had good computer skills in the public primary schools.

The adequacy of audiovisual technology on acquisition of reading skills.

All the respondents said that the audiovisual technologies were not adequate hence they were not utilized in the acquisition of reading skills for the pre-unit learners in the public schools.

The extent of use of audiovisual technology on acquisition of reading skills.
The researcher asked the respondents if the teachers often used the audiovisual technology in acquisition of reading skills. All the teachers interviewed said that they never used them in acquisition of reading skills.

Ways of enhancing AV technology on acquisition of reading skills for Pre-unit learners in Public Schools in the study area.
The study sought from the respondents the ways or the strategies that should be adopted to enhance audiovisual technology on acquisition of reading skills by the pre-unit learners in public schools. All the respondents from the survey agreed that adapted activities strategy such as training, proper presentation and choosing audiovisual technology wisely could be used to enhance reading skills in pre-unit learners in public schools. Additionally, teachers ownership of the technology devices, their ability to know their pupils age, interest and ability were other strategies that were agreed upon by all the respondents from the survey that could be used as a strategy to enhance reading skills in pre-unit learners in public schools.. Individualized planning strategy was agreed upon by all the respondents involved in the survey that it could, be used as a strategy to enhance reading skills in pre-unit learners in public schools.

Conclusion
While the government efforts in improving the access to and the quality of basic education and technology devices for children, public schools are generally impressive and commendable, the situation is quite gloomy when such efforts are examined with respect to the education and accessibility of technological devices in public primary schools. The results of this research have revealed that the current efforts to improve the delivery of basic education have not taken account the need of technology in enhancing the reading skills in pre-unit pupils in public schools. Majority of the technological devices used to enhance reading skills by the pre-unit pupils are now available. Those that are available are inadequate for pupils use and the teachers lack proper skills to use them for teaching hence cannot be relied on .Pupils in public primary schools and particularly the pre-unit learners have not enjoyed the achievements of the Free Primary Education and other ongoing educational reforms in the country.

This research has uncovered several factors that constrain the provision of quality education and affordable technologies for pre-unit learners in public schools. These include first, human resource barriers to education and inadequate audiovisual technology in schools. Majority of people including teachers have little understanding of the technologies used in enhancing reading skills. This has had challenges on how to use them on acquisition of reading skills by the pupils. Stakeholders in education sector are yet to appreciate and recognize the importance of educating teachers on necessary computer skills to be able to use the audiovisual technological devices in enhancing reading skills by the pre-unit pupils.

Recommendations
- Proper mechanism be put in place to appreciate and recognize the needs of integrating audiovisual technology to pre-unit pupils education and in other classes as well.
- Need for awareness raising campaigns about the importance of audiovisual technological devices in enhancing reading skills.
- The ministry of education should consider having pre-unit teachers and other teachers undertake computer training programs to increase their skills and competence while discharging their duties.
- Developing whole rounded learners as well as promoting national development.

Suggestions for further studies

The study is based on integration of audiovisual technology on acquisition of reading skills for pre-unit learners in public primary schools in Kajiado North Sub-County. The study suggests that further studies can be to other sub counties in Kajiado to check if the results will be consistent. Also other learners can use different variables in approaching the idea of integration of audiovisual technology on acquisition of reading skills.

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