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Factors Influencing Selection and Use of Media for Christian Religious Education Teaching and Learning

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Abstract
Christian Religious Education (CRE) is an important subject for moral and spiritual development. For it to be effectively implemented, teachers have to consider various factors influencing selection and use of media for teaching and learning the subject. Despite its importance, the subject has been taught with minimal use of media. This is because schools are faced with inadequate provision of instructional media which hampers efficient teaching and learning of the subject. The purpose of this study was to determine factors influencing selection and use of media for CRE teaching and learning in Secondary Schools. The study was based on Descriptive Survey Design. The study population consisted of 112 Head teachers, 160 teachers of CRE and 4000 form two students. Random Sampling Technique was used to select 25 Head Teachers. Simple Random Sampling was used to select 53 teachers of CRE and 1333 students. Data was collected using Questionnaires, Teachers' Interview Schedule, Lesson Observation Schedule and Document Analysis Guide. The study found out that; learner related factors, teacher related factors, available time, availability of media, cost of media and other practical constraints were among factors influencing selection and use of media for Christian religious education teaching and learning. Learners' abilities were ranked highly as a factor that influenced selection and use of media for CRE teaching and learning as compared to learners' preferences which were lowly ranked. Teachers' knowledge and skills on the other hand were also highly ranked as compared to teacher preferences. The study recommended that; school administrators should be inducted on the importance of selection and use of instructional media resources so as to be supportive of their teachers in the effort of availing such resources to schools.
Keywords: Influence, Selection and Use

A medium (plural- media) is a channel of communication. Media are carriers of information between a source and a receiver (Smaldino, Lowther and Russel, 2008). In this case, media materials in teaching and learning carry messages which enable the learners to understand what is taught by teachers. Examples of media include video tapes, diagrams, printed materials and computer software. These are considered media because they carry messages with an instructional purpose. Mediated instruction refers to any instructional process that makes use of some device (mechanical or otherwise) to facilitate the teaching and learning process. Such aids to instruction range from simple forms such as textbooks and radios to moderately complex forms such as multimedia kits and computer assisted instruction and even problematic forms such as electroencephalographs and chemicals (Lorber and Pierce, 1983).

Media plays a very crucial role in the instructional process. Walaba (2013) summarizes the significance of media and stipulates that the use of media during instructional process: Motivates the learners by capturing their attention and stimulates interests in the subject; integrates learners vicariously and meaningfully in the teaching and learning experiences; contributes to the formation of attitudes and the development of appreciations; explains and illustrates subject content and performance skills and provides opportunities for self – analysis of individual performance and behavior.

The process of selection and use of media in the teaching and learning process is influenced by both administrative, teacher and learner factors. The attempt to select the best combination of media for education is an ongoing process in all parts of the world. Classroom teachers are deciding what methods are best to get information they are about to teach and how to teach the students (Walaba, 2010). Ambuko (2008) argues that the main categories of factors that may influence the choice of media are: task factors, learner factors, teacher factors and economic/availability factors which may limit the choice in practice. Selection of instructional media should be done with lesson objectives in mind and in conjunction with the selection of the teaching-learning methods (Nkuuhe, 1991). If the school has an instructional media center, the teacher should investigate what is available for CRE teaching and make a tentative list of potential useful items that relate to the content areas and the formulated lesson objectives.

The learner factors that affect selection and use of media include their preferences, perceptual difficulties, experiences and backgrounds, interests, level of motivation, individual differences, physical ability amongst others (Laver, 1990). As a teacher, one influences media selection and use through his or her own skills, knowledge, attitude and preferences. For instance, a teacher lacking technical knowledge on how to operate an overhead projector may be tempted to avoid using it even when it is available in the school.

In explaining how culture influences media selection and use, Patsula (2002) views Culture as a

complex whole that includes knowledge, beliefs, morals, laws, customs and any other capability and habit by a human being as a member of the society. He explains that language is one of the major factors that hinder the easy assimilation of media by many developing countries. The radio, television programmes, computers and printed texts are produced in different countries bearing different cultural backgrounds. As such, such tools may fail to impress students of another country. While Patsulas study dealt with how culture influences selection of media for teaching and learning, the current study focused on how teacher and learner related factors influenced selection and use of media for CRE teaching and learning.

Santrock (2006) supports Patsulas view by saying that it may be more appropriate to identify the cultures of the learners prior to the development of instructional media so that it is sensitive to those cultural forms. Numerous researchers support the importance of understanding a culture and ways of learning before implementing a solution. Understanding the socio-cultural context is key to developing appropriate support systems for learners.

According to Tchombe (2008), once technology is selected, there are certain factors that need the concern of policy makers. Handling of new technology needs care and technical proficiency. For this, training is an important aspect. Many developing countries lack enough personnel to train manpower in new technology. Moreover, constant retraining of manpower to acquaint them with changing technology is also important. These often act as constraints before the smooth growth of media technology.

Bates (2011) suggests eight practical guidelines that designers can use to help select media to improve the quality of learning programs; the guidelines are as follows: cost, accessibility, socio political suitability, cultural friendless, openness/flexibility, interactivity, motivational value and effectiveness. He further explains that economic factors also affect selection and use of media in teaching, for instance most developing countries often lack the initial allocation as well as matching funds to make feasible investments in media technology. Many countries often acquire costly technology without making provisions for building sufficient infrastructure to run them.

Luvisa (2013) explains that many schools are faced with both economic and administrative constraints. These often affect the budget. Consequently, shortages of equipments such as projectors, television sets, videos, computers and teaching and learning materials such as handouts, study pictures, textbooks, transparencies, slides and films will greatly affect media selection and use. However, if a teacher is convinced of the necessity for media, he should try and get them or find substitutes, which may not be as good as the originals, but are better than nothing (Shijedi, 2014).

The situation reported by Oneni in (1995), that innovation in instructional materials at the University of Nairobi presented a representative case study of media typical of most developing countries. A whole university that housed six colleges in different campuses had a single overhead projector, a single film projector and a photocopier in its media centre all of which were shared among six different colleges. He further explains that it is illogical to expect any better situation in the elementary schools. The traditional media of printed text, the famous chalkboard, a few models and teachers own innovations such as straw abacus and hand drawn graphics are a common scene in the elementary schools. In most secondary schools the responsibility for development and application of media is left upon teachers, with minimum support from school authority (Njeru, 2014)

Obuchere (2011) gives the following reasons as the major barriers to successful implementation of educational technology that when: the purpose is not made clear, the participants are not involved in the planning process, the appeal is based on personal reasons, there is fear of failure, the cost is too high and when there is lack of respect and trust in the change initiator.

Likewise, Ambuko (2008) also concurs that there are many factors that affect technology implementation in schools including the following: Lack of technology infrastructure, lack of technical support, teacher discomfort with technology, lack of instructional vision for technology use in schools, lack of student technology skills, accountability pressure and failure to have shared vision, clear goals and objectives with defined measurable outcomes. He further explains that if barriers to implementation are not dealt with the chances of success for even the best planned implementation is seriously compromised. These are important implementation pitfalls to avoid and barriers overcome, but there are some problems, which are unique to technology leadership that requires special attention. One of them is the need for professional development for both administers and teachers. This could be because many educators did not receive adequate preparation in the use of media technology in their pre- service experience. Patsula (2002), Santrock (2006), Obuchere (2011) and Ambuko (2008) in their studies have explained the various factors influencing selection and use of media in teaching and learning but dint to explain how the factors influence media selection and use in CRE teaching and learning which the current study sought to address.

Age would also be a definite deciding factor in the choice of media, as children have a shorter attention span than adults. The teacher should therefore vary his or her media resources to keep them interested and motivated. Adults on the other hand can do with much less visual simulation because their lessons are much longer in comparison to a lesson with a group of young children (Masinde, 2011)

According to Jones (2005), the number of students plays an important part during selection and use of media for teaching and learning. The size of your class could vary; you could be giving an individual one-one lesson or addressing a class of say perhaps forty students. Audio and audio visual aids are appropriate for handling a large group of students as compared to a class of few students. He also supports the fact that different learning styles affect selection and use of media. After spending some time with your students you will soon understand each student's unique learning style. The materials used for teaching and learning should be a mix of media and multimedia to appeal to all the learners. Instructional media should be adapted to suit the needs of the students in order to ensure that every student benefits equally.

Lazer (2008) says that media selection and use should be done basing on the following factors: the nature of what is to be learnt and the structural properties of the learning task, the media should be simple and relevant; it should be flexible and used anywhere necessary. In addition, when choosing textual media, one should consider the type of content and the type of students to be taught in terms of their abilities, preferences and experiences.

Lorent (2013) suggests that selection of appropriate instructional resources should be done on a more objective basis whereby some guidelines can be followed so that such selection can be justified in a non subjective manner. He avers four fundamental questions on which decisions concerning media selection and use can be anchored as follows:

(i) Will the media available be presented to a group or will it be used for self-paced learning? Some resources like overhead transparencies are best used for presentations. Others like materials on paper are more suitable for self-paced learning. Most can be adapted to either a group or an individual.

(ii) Does the content require graphic treatment, photography or a combination of graphics and photography? Graphics such as diagrams, artworks, cartoons and charts can clarify and simplify complex concepts. Nevertheless, some concepts need true reality of a photographic form such as photographs, slides, films or video recordings.

(iii) Should visuals be prepared in the form of still pictures or as motion pictures? A motion picture is a transient medium, requiring learners to grasp the message as each concept or bit of information in the film presented. A still picture is a persistent medium, allowing a learner to study the message at length. These differences may be important when selecting the visual media. Should the visual materials be accompanied by a record sound? When used with visuals, sounds on tape or film can direct attention, explain details, raise questions, provide answers and make transitions from one picture or idea to the next one.

Kizerbo (1990) argues that in Kenya, the 8-4-4 system of education requires a lot of input resources in teaching and learning process including instructional media. However, schools are under-resourced with instructional media, particularly in CRE. Hence the benefits of using media are not achieved by both teachers and students. This could also be a contributing factor to relatively low performance of students in CRE in Vihiga County, Kenya. These benefits of using media in teaching and learning should translate into improvement of learners' academic performance yet Vihiga County has posted relatively low results in CRE at Kenya Certificate of Secondary Examination in the last five years. This is because percentage mean score for each of the five years is less than 50% as follows: 2010 (54.0%), 2011 (48.4%), 2012 (47.2%), 2013 (49.0%), 2014 (48.3%) and 2015 (48.2%). This generally indicates low performance in the subject.

Reseach Objective

The study therefore sought to establish factors influencing selection and use of media in teaching and learning of Christian Religious Education which could be a factor that contributes to the relatively low performance in CRE in schools.

Materials and Methods

Research Design

This study explored teachers' selection and use of diverse media in the teaching and learning of CRE. Descriptive survey design was therefore suitable in conducting this study. This design enabled the researcher to collect data that helped in the answering of the research questions concerning the current status of the subject of study (Mugenda and Mugenda, 2003). Descriptive survey design was also used because it yields a great deal of information which is accurate (Ader, Van, Deltaan and Beekman, 2008). The design also enabled the researcher to gather data at a particular point in time and used it to describe the nature of the existing conditions (Cohen, Manion and Morizon, 2000). The research aimed at gathering accurate information and characteristics that were observable on factors that influenced selection and use of media in teaching and learning of CRE in Secondary schools in Vihiga County.

METHODOLOGY

Sample and Sampling Techniques

A number of sampling techniques were used so that a more representative sample could be arrived at. Krathwohl (2003) supports the view that where a study population is large, a combination of sampling methods is most preferred so as to enable the researcher to get a more representative sample. Out of 112 secondary schools in Vihiga County, Five secondary schools were randomly sampled from each sub-county within Vihiga County (i.e five in Luanda, five in Emuhaya, five in Vihiga, five in Sabatia and five in Hamisi). Random sampling technique was used to select the schools because it enabled all members of the group or population to have an equal and independent chance of being selected (Mugenda and Mugenda, 2003)

Simple random sampling technique was used to select a sample of 1333 students from the total of 4000 students representing 33% of the study population. This is according to Orodho and Kombo (2002) who state that a third of the study population will provide an equal opportunity of selection of each element of the population and will help yield data that will be generalized to the larger student population

Simple random sampling was also used to select 53 teachers of CRE from a total of 160 representing 33% of the study population. This is according to Kalai (2009) who supports that a third of the study population enables the researcher to get opinion from selected respondents who represent the population of interest.

Saturated sampling method was used to select the head teachers of the 25 secondary schools and this is according to Borg and Gall (2007) who state that saturated sampling is a non-probability sampling technique in which all members of the target population are selected because they are too few to make a sample out of them.

Reliability of the Instruments

Reliability authorities such as Farrel, Issac and Trucano (2007) subscribe to the view that, researchers originate from a variety of backgrounds and have different interests and inclinations. Fairchid (2011) argues that, reliability could be viewed in terms of comprehensiveness of data and what actually occurred in the setting under study. Farrel et al (2007) further explains that reliability is enhanced by triangulation where the same facts are elicited from different people in the same setting. This particular study compared questionnaire results from teachers and students from the same schools and environments respectively, thereby enhancing the reliability of the results through triangulation.

To establish reliability of research instruments, a pilot study was carried out involving 400 students, 16 teachers of CRE and 3 head teachers. This was 10% of the entire population (Nichmas and Chava, 2008). Reliability was also done using test re- test technique to the same respondents at an interval of two weeks. For quantitative data, Pearson's (r) was used to determine correlation of the instruments judged reliable at 0.7. The formulae that was used to calculate reliability was:

$$x = \frac{\sum (x - \bar{x})(y - \bar{y})}{\sqrt{\left[(\sum (x - \bar{x})^2 \sum (y - \bar{y})^2 \right]}}$$

For qualitative data, the pilot study was carried out to find out whether the terms used in the instruments resonated with the terms which were familiar to teachers, head teachers and students. The researcher also verified the instruments content for accuracy, consistency and ensured that ambiguous information was removed while deficiencies were noted and corrected in the instruments which were used in the final study (Joppe, 2000). Respondents who participated in the pilot study did not participate in the main study.

Validity of the Instruments

Validity is the ability of instruments to measure what it is intended to measure (Creswell and Miller, 2000). According to Mugenda and Mugenda (2003), validity is the accuracy and meaningfulness of inferences which is made on the research results. They further explain that, if data is a true reflection of the variables, then inferences based on such data will be accurate and meaningful. They further argue that validity deals with the degree to which the results of research study are generalizable to larger setting outside the research situation.

For face validity of the instruments to be ensured, content related validity was used to validate the developed instruments by preparing what each instrument was intended to measure, then presented them along with the instruments to three experts from the school of Education of Jaramogi Oginga Odinga University of Science and Technology who examined the content of the instruments and advised the researcher on face validity. Improvements were made according to the recommendations suggested by the experts before the instruments were finally taken into the field.

Data Collection Procedures

The researcher secured a research permit and a research authorization letter from the National Council for Science and Technology in the Ministry of Higher Education, Science and Technology through the School of Graduate Studies (S.G.S) of Jaramogi Oginga Odinga University of Science and Technology before proceeding to the field for data collection. The researcher then reported to Vihiga county Education office and presented a copy of the letter of research authorization. Permission was sought from the head teachers of the sampled schools through written letters two weeks before the study was undertaken.

For effective administration of the questionnaires, the researcher made personal visits to the sampled schools giving relevant instructions on how to fill questionnaires. He then administered the questionnaires, then requested teachers and students to fill them carefully. Where necessary, clarification was made on the items of the questionnaires. Finally, the researcher withdrew the completed questionnaires before he left for another school to avoid loss of some questionnaires. The researcher also gathered data by interviewing teachers of CRE, looking at the relevant records with help of the Document Analysis (DA) and the Lesson Observation Schedule (LOS).

Methods of Data Analysis

Data was analyzed both quantitatively and qualitatively.

Quantitative Data Analysis

Data analysis in descriptive survey studies involves descriptive and inferential statistics (Mugenda and Mugenda, 2003). Quantitative data which was gathered by responses to closed ended questions from Teachers Questionnaires (CTQ), Head Teachers Questionnaires (HTQ) and learners Questionnaires (LQ) was analyzed using descriptive statistics such as frequencies, means and percentages, summarized and presented in tables (Kalai, 2009). This study used frequencies, means and percentages because they easily communicate the research findings to majority of the readers (Gay, 1992 cited in Atieno, 2012 pg 46). Frequencies easily show the number of subjects in a given category. Percentages were used to compare sub-groups that differed in size and population, then finally summarized and presented in tables.

Qualitative Data Analysis

Qualitative data was gathered by responses to open ended questions from; Teachers Questionnaires, Head Teachers Questionnaires, Learners Questionnaires and the Teachers Interview Schedule. These were read carefully paying attention to comments, ideas and concerns of participants, then organized, categorized and presented in narratives according to various emergent themes because qualitative data analysis is a systematic procedure followed in order to identify essential features, themes and categories (Borg and Gall, 2007)

The researcher also observed various lessons taught by teachers and compared his observations from various lessons as he drew final conclusions based on objectives of the study. Data gathered by the Lesson Observation Schedule and Document Analysis was also presented in narratives according to various themes of the study. The researcher finally reviewed the data again to locate additional evidence backing up each theme as he compared general themes across all data sources while creating broader consistent themes.

RESULTS AND DISCUSSION

Factors Influencing Selection and Use of Instructional Media for CRE Teaching and Learning

Teachers were asked to indicate the extent to which various enlisted factors influenced selection and use of media. As regards factors influencing media selection and use, the analysis of the findings is shown in Table 1 below;

Table 1: Factors Influencing Selection and Use of Media for CRE Teaching and Learning.

Factors	Perceived Level of Influence (%)				
	A	B	C	D	E
Available time	60	20	10	10	00
Availability of media	70	20	10	00	00
Cost of media	50	50	00	00	00
Practical constraints	40	40	10	05	05
Lesson objectives	10	10	10	30	40

KEY

A -Very great extent, **B** - Great extent, **C** - Fair extent, **B** - Minimum extent, **D** - No extent at all

The findings reveal that the above mentioned factors influenced selection and use of media in the study schools. Concerning available time, the findings reveal that 80% of the teachers argued that availability of time influenced media selection and use. They explained that they did not have enough time to prepare the different educational media due to the high teaching load in terms of the number of lessons they taught per week. They

also remarked that the whole curriculum is congested leaving very little time for the preparation of media for class lessons. The only time they got an opportunity to prepare the various media was during games time (4:00-5:00p.m). However most teachers are involved in games and therefore missed the opportunity. Teachers who dint participate in games argued that they used the hour to mark assignments and to prepare notes for the next days lessons.

Availability of media was another factor that influenced selection and use of media. Ninety percent of the teachers argued that media resources for teaching religious education were either inadequate or not available at all in schools. The reason given for this was that head teachers had always not purchased them due to lack of funds because they are expensive. Jerry (2015) supports the view that some media resources for teaching and learning are expensive to purchase. Therefore schools should device ways of designing instructional media from the locally available and cheap materials.

Practical constraints also influenced media selection and use. This is because out of 80% of the teachers who indicated that they influenced selection and use of media to a great extent, 40% argued that their schools had limited electronic media resources but the problem was that they dint know how to operate them. Based on this finding, teachers need in-service on the use of electronic media in teaching religious education.

The findings in table 19 reveal that lesson objectives did not influence selection and use of media to a great extent. The reason for this could be that teachers in the study schools were all trained and experienced in teaching CRE. Hence they knew how to adapt lesson objectives to suit different media resources in teaching and learning of CRE.

Learner related factors influenced selection and use of media as shown in Table 2 below;

Table 2: How Learner Related Factors Influence Selection and Use of Media.

Factors	**Responses (%)**		
	1	**2**	**3**
Learners abilities	70	25	05
Learners preferences	00	10	90
Learners experiences	15	30	55

KEY

1-1st rank, **2-2nd** rank, **3-3rd** rank

The findings in the table above reveal that learners' abilities were ranked quite highly as being a factor that influences media selection and use. Learners' preferences on the other hand were lowly ranked, meaning that during selection and use of media teachers do not pay regard to learners' preferences.

Teachers reported that they got poor response from learners when they used different media resources. This was because most learners did not take the media, especially audio and audio visual media, seriously. To them, such media was just entertainment. The learners therefore tuned off their attention during periods in the programme when there was no humor. Perhaps this points towards a problem of poor production against the young learners search for fun and amusement. In addition, the teachers explained that most students could not follow the audio and audio visual programmes due to poor language skills making it necessary to interpret the programmes for them.

This finding agrees with Tallo (2015) who concurs that during selection of media for use in teaching and learning, teachers should take into account learner factors such as their abilities, experiences, preferences and their individual differences. Georges (2014) also supports that the teacher should take into consideration the learners abilities and differences during selection of media for teaching and learning. This is because some learners are fast in learning as compared to others.

Teacher related factors also influenced selection and use of media as shown in Table 3 below.

Table 3: How Teacher Related Factors Influence Selection and Use of Media for CRE Teaching and Learning

Factors	**Responses**			
	1	**2**	**3**	**4**
Teachers skills	30	55	10	05
Teachers knowledge	55	30	15	00
Teachers attitude	15	10	45	30
Teachers preferences	00	05	30	65

KEY

1-1st rank, 2-2nd rank, 3-3rd rank, 4-4th rank

The findings in the table above reveal that teachers' knowledge and skills were highly ranked as factors that influenced selection and use of media. Teachers' preferences on the other hand were lowly ranked meaning that they were ignored during selection and use of media.

Apart from the fact that some teachers didn't know how to operate computers, video players and projectors, they also argued that they did not have adequate skills for the local production of good posters, charts

and pictures. Specifically they said that they would be more confident and active in producing charts if they had the technical details of good printing and drawing. In the researchers view, this puts a question mark on the quality of training that teachers are already offered as teacher N reported that:

> "*l am unable to design charts, pictures and posters to use in teaching CRE because l was not trained on how to make them when I was in college. Apart from that, I have not attended any in-service course to prepare me on production of instructional media from locally available materials."*

This finding shows that lack of technical knowledge on media preparation and use among teachers clearly hampers the effective use of the various media in the study schools. Bingimlas (2009) acknowledged the important role of the teacher in using media in the teaching learning process. He argues that lack of skills and knowledge among teachers was a precursor of in-competency when it comes to the use of media technology in teaching and learning in a classroom environment.

In addition, 10 % of the teachers had a negative attitude towards use of electronic media technology in teaching and learning of CRE. Teacher Y said that:

> *"Since I was posted in this school , l have never used computers, projectors and television in teaching CRE and l will never use because such devices can be used effectively by young teachers. I don't know how to operate them and l don't feel like knowing."*

Based on this finding, it can be concluded that teacher apathy influences selection and use of media for CRE teaching and learning in the study schools. This finding concurs with Erdogan (2010) who argues that negative attitude of teachers were detrimental to the use of computers in teaching and learning process. He further explains that the negative attitude led to teachers avoiding use of technology and if they did then they passed the phobia and the negative attitude to their students. Allan and Wong (2003) viewed that negative attitude was a barrier towards the integration of computers in teaching and learning.

CONCLUSIONS

Based on the findings, the study makes the following conclusions:

The various factors that influenced selection and use of media for CRE teaching and learning include; learner related factors, teacher related factors, available time, availability of media, cost of media and other practical constraints. Learners' abilities were ranked highly as a factor that influenced selection and use of media for CRE teaching and learning as compared to learners' preferences which were lowly ranked. Teachers' knowledge and skills on the other hand were also highly ranked as compared to teacher preferences.

RECOMMENDATIONS

Based on the conclusions, the study makes the following recommendations:

Concerning objective four, the study recommends that school administrators should be inducted on the importance of selection and use of instructional media resources so as to be supportive of their teachers in the effort of availing such resources to schools. This is because most of the schools budgetary allocations are channeled to physical amenities with little regard to the provision of instructional media.

REFERENCES

Ader, H. J. and Marwik, H. W. Deltaan, M & Beekman, A. (2008). *Advising on Research Methods*: *A Consultant's Comparison.* Huizen, The Netherlands: Johannes an Kessel Publishing.

Allan, G. and Wong, F. (2003). *Practical Guidelines for Selecting Media*. New York: Inc. Publishers.

Ambuko, B. (2008). Use of Media in Teaching and Learning of Kiswahili in Emuhaya District. Unpublished MEd Thesis: Maseno University.

Bates, A. (2011). *E- Learning and Distance Education*. New York: Graw Publishers.

Bingimlas, K. (2009) Barriers to The Successful Integration of ICT in Teaching and Learning Environments. A Review of Literature. *Eurasian Journal of Mathematics, Science and Technology.* 5(3), 120-461.

Borg, R.W. & Gall, J.P. (2007). *Educational Research: An Introduction.* New York: Longman publishers.

Cohen, L. Manion, H. & Morizon, K. (2000). *Research Methods in Education*. London: Croomhelm.

Creswell, J.W and Miller. K. (2000). *Research Design: Qualitative and Mixed Methods Approaches*. London: Sage Publishers.

Edorgan, T. (2010). Obstacles in Integration of ICT in Schools Taking into Consideration the Opinions of Teachers and Principles of Primary and Secondary Schools in Turkey. *Journal of Instructional Science and Technology*, (5): 23-78.

Farrel, M. Issac, S and Trucano, M. (2007). *The Nepad e-School Demonstration Project*. Washington: Inforder.

Gay, L.R. (1992). *Educational Research: Competencies for Analysis and Application*, 4th edition. New York: Macmillan Publishers.

Georges, P. H. (2014). *Effective Teaching and Learning in The 21st Century*. New York: Macmillan Publishers.

Jerry, W. (2015). *Educational Research: Contemporary Issues and Practical Approaches*. Nairobi: MK

Publishers.
Jones, G. (2005). *Utilization of Education Resource Inputs*. London: Kogan Page.
Joppe, M. (2000). *The Research Process*. Retrieved on 2nd Sept. 2009 at 2.00 P.M.*@http://www.ryerson.ca/~mjoppe/rp.htm*
Kalai, P. (2009). *Understanding Research Methods.* Nairobi: University of Nairobi Press.
Kizerbo, J. (1990). *Educate or Perish: Africa Impasse and Prospects.* Darkar: UNESCO/INICEF
Krathwohl, D. R (2003) *Educational and Social Science Research: An Integrated Approach.* Toronto: Longman.
Laver, T. (1990). *Learning and Aids to Learning*. London: Prentice Hall.
Lazer, G. (2008). *Literature and Language Teaching*. London: Cambridge University Press.
Lorber, R and Pierce. J. (1983). *Media Technology in Language Learning*. London: Croomhelm.
Lorent, M. (2013). *ICT Integrated Learning*. New York: Harper Ron.
Luvisa, J.C. (2003). Availability and Use of Instructional Media in Teaching Kiswahili in Secondary Schools in Bungoma District. Unpublished MEd Thesis: Moi University.
Masinde, S. M. (2011). Factors Influencing Effective Teaching and Learning in Secondary Schools in Bomet District, Kenya. Unpublished MEd Thesis: Moi University, Eldoret.
Mugenda, O.M and Mugenda, A. G. (2003). *Research Methods: Quantitative and Qualitative Approaches.* Nairobi: African Centre for Technology Studies Press.
Nichmas, D and Chava, F. (2008). *Research Methods in Social Sciences*. United Kingdom: Bristol.
Njeru. M. (2014). Integration of Information and Communication Technology in Teaching of Science Subjects in Secondary Schools in Machakos County. Unpublished MEd Thesis: Kenyatta Universiy.
Nkuuhe, J. (1991). *Language Learning With Resources: An Evaluative Analysis of Language Resources.* New York: Harper.
Obuchere, Z . M. (2011). Factors Influencing the Implementation of Early Childhood Curriculum in Emuhaya District, Kenya. Unpublished MEd Thesis: Maseno University.
Oneni .C. (2005) Influence of Teacher Characteristics on Students Performance in Chemisty. Unpublished MED Thesis: Kenyatta University.
Orodho, J. and Kombo. T. (2002). *Consultancy Paper on Enhancing Access and Participating in Secondary Education Among the Poor and Vulnerable Through Bursaries in Kenya:* Nairobi: Kenya Institute of Policy analysis and Research.
Patsula, R. (2002) *Classroom Use of Technology*. New York: Zam Publishers
Posner, G.J (1992) *Analyzing the Curriculum*. New York: Mc Graw- Hill
Powell, F. R (1961) *Use of Electronic Devices in Teaching and Learning*. Krishi Darshan: Jekirsh Publishers.
Rabari, J. A (2011). Creativity Extent, Perceptions, Correlations and Differences Among Secondary School Physics Students in Nairobi Province, Kenya. Unpublished PhD Thesis: Maseno University.
Shijedi, H.(2014). Influence of School Factors on students Performance in KCSE Examination in Sabatia Sub-County. Unpublished MED Thesis: Moi University.
Smaldino, M, Lowther. R and Russel . J (2008) *Media Technoogy in Instruction.* New York: Inc Publishers.
Tallo, J. O (2015) Influence of School Factors in Teaching and Learning of Geography in Secondary Schools in Gem Sub-County. Unpublished Med Thesis: Moi University.
Tchombe, T. (2008). *Classroom Events: Methods, Techniques and Psychological Correlates*. Yaounde: Vita Press.
Walaba, A. (2010) *Teaching Christian Religious Education*. Nairobi: Bohn Publishers.