

**EFFECT OF INSTRUCTIONAL MEDIA ON STUDENTS' ACADEMIC  
PERFORMANCE IN CHRISTIAN RELIGIOUS EDUCATION IN PUBLIC  
SECONDARY SCHOOLS IN MACHAKOS SUB-COUNTY, KENYA**

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for the Requirements of the Award of the Master of Education Degree, Department of  
Educational Communication and Technology of the Machakos University.**

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**DECLARATION**

This research project is my original work and has not been presented in any other university for a degree or any other award. No part of this proposal should be reproduced without the authors' permission or that of the institution.

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## **DEDICATION**

I dedicate this work to: my dear husband Dr. Francis Mutua, my sons Trevor and Jevan for whose support and love I found it necessary to work hard. My dedication also goes to my late mother Mbeneka. God bless you.

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## **ABBREVIATIONS AND ACRONYMS**

CAI:	Computer Assisted Instruction
CAL:	Computer Assisted Learning
CRK:	Christian Religious Knowledge
CRE:	Christian Religious Education
KICD:	Kenya Institute of Curriculum Development
KNEC:	Kenya National Examination Council
MOE:	Ministry of Education
NACOSTI:	National Commission for Science, Technology & Innovation
RE:	Religious Education
SEE:	Social Education and Ethics
SPSS:	Statistical Package for Social Sciences

## **ABSTRACT**

Academic performance of a student is of paramount importance in every academic institution. The focus of this study was to address the effect of instructional media on students' academic performance in CRE in public secondary schools in Machakos Sub-county. The students' performance in CRE remains a top priority for educators in CRE because when students get good grades, they become competitive in the world of work and may have better employment opportunities. The objectives of this study were: to identify the different types of instructional media available for teaching CRE in public secondary schools in Machakos Sub-County, to find out the use of instructional media in teaching CRE, to establish teachers' perception on instructional media and how it affects academic performance of CRE students and to establish the challenges faced by CRE teachers when using instructional media in Machakos Sub-county. The study adopted a descriptive survey design and the system theory was used to investigate on how instructional media affects the academic performance of CRE students. The researcher used simple random sampling techniques to sample 10 schools to be used in the study out of the 75 secondary schools in Machakos sub-county. Proportional stratified technique was used to select a total of 300 CRE students from the 10 selected public secondary schools. Purposive sampling was applied to sample 10 Form Three CRE teachers. The study used questionnaires as the research instruments. There was a questionnaire for students and the teachers. Data was analyzed with the aid of the Statistical Package for Social Sciences (SPSS). The study established that majority (50%) of the teachers indicated that CRE performance in their school was very good. In addition, majority (56%) of the students indicated that the CRE performance in their school was good. The study found that the use of instructional media can enhance learner's performance as the lessons are always interesting, it makes the topic to be better understood, and also the issues become more familiar to the students. The instructional media improves learner's motivation thus increasing performance. Further it also improves the learner's memory as they are able to remember issues easily. The study established that majority (60%) of the respondents indicated that they did not face challenges when using instructional media in teaching. The challenges included lack of charts in certain schools which are located in the interior within the sub counties. Another challenge is that most topics are not structured to accommodate instructional media. The study concluded that the performance of CRE was good due to the use of instructional media in teaching and learning. The study also concluded that the instructional media the teacher mostly used in teaching CRE was boards followed by textbook. It is therefore clear that the schools in Machakos have inadequate instructional materials needed for learning. The study further concluded that the instructional media used by teachers in conducting CRE lessons was the blackboard. The study recommended that the principals should emphasis the importance of instructional media with the aim of raising the academic performance of the schools as it has been proved that instructional media in teaching and learning enhanced the performance of the students.

# CHAPTER ONE

## 1.0. INTRODUCTION

### 1.1. Background to the Study

The use of instructional media started somewhere from the Stone Age period (World Encyclopedia, 2001). The Egyptians for example used hieroglyphics for visual communication of ideas. With such inscriptions, the elders used them as symbols to teach their children how to kill animals accurately during their hunting and farming. Also through initiation rites, storytelling, and festivals the young were given some form of training and instruction.

Various studies have examined the relevance of Instructional Media for effective teaching and learning. Fidanboylu (2014) noted that the use of visual aids in teaching can motivate the students and reinforce the subject content. According to Makewa, Role and Ngussa (2012) media resources are important when it comes to instruction. They also argue that instructional resources are vital to the teaching of any subject. Seth (2009) indicates that lack of wall charts, models and other conventional media to compliment the use of chalkboards and textbooks in the schools increased difficult for teachers to offer quality teaching and learning to promote high academic performance for junior high school pupils in Ghana. Chinooneka and Mupa (2015) conducted a study in Zimbabwe and discovered that teachers' failure to use a variety of media in the teaching and learning process resulted into failure in grasping basic skills of reading and writing. When it comes to the teaching of Religious Education, the Ministry of Education can prepare RE materials to be used in schools in order to promote moral and spiritual growth of the learners. This implies that Christian Religious Education is, and continues to be part of the school curriculum in Kenya and therefore considered as one of the most important subjects in our secondary schools in Kenya.

Many authors have examined the significance of using instructional media in teaching/learning process. Wambura (2017) noted that computer has many benefits in education, for example: in enhancing academic works, improving lesson and students understanding and influencing independent learning. According to Nasibi and Kiiro (2006) as cited in Karanja (2015), argue that teaching and learning resources are important in education because they motivate and encourage learners to utilize more than one sense hence increasing their attention and retention capacity. Further, teaching and learning resources create motivation in learning (Monda, 2012).

CRE remains the only subject that addresses moral concerns of learning in Kenya's secondary education with the removal of Social Education and Ethics (SEE) in the curriculum. If CRE is taught by use of audiovisual media, the students would understand and retain more of what they would have learnt and this is likely to have a positive moral impact in their lives. Teaching of CRE enables the learner to integrate all subjects of the curriculum, their relationship with the environment, both physical and cultural, other people and God (KIE, 2000). One of the key objectives of teaching Christian Religious Education in Kenya is to assist learners acquire social, spiritual and moral insights to help them make appropriate moral decisions in a rapidly changing society. This argument could be attributed to the way the subject is taught. Like any other subject, CRE needs to be taught by use of audiovisual resources and the right methods for students to understand and for the subject to be relevant to learners' lives. CRE in secondary schools in Kenya therefore occupies a key position in the 8-4-4 curriculum and students must perform well academically in this important subject (KIE,2000).The need for instructional media for effective teaching and learning has been established especially in other studies (WootingPong ,2014; Asadi,2015).

Slavin (2000) points out that instructional or audio-visual materials such as text book, pictures diagram's, flashcards, posters, television and others are materials or devices that help in the teaching learning process because they influence the senses of seeing and hearing, but its utilization must depend on proper planning. The focus of this study was to address the effect of instructional media on student academic in CRE in public secondary schools in Machakos Sub-county because academic performance of a student is of paramount importance in every academic institution (Regier, 2011). Student's performance in CRE remains a top priority for educators in CRE because when students get good grades, they become competitive in the world of work and may have better employment opportunities. Ballard and Bates (2008), argues that academic performance is mainly related to assessment and it's about meeting short-term and long-term goals in education. Good academic performance of students depends on how well they have mastered the content taught and masterly of content will be aided by use of instructional media in the right way. Performance of CRE in 2014 was 4.68, 2015 it was 4.62, 2016 it was 3.12 and in 2017 it was 3.60 in Machakos Sub- County. This is not a good performance.

## **1.2.Statement of the problem**

School accountability for students' performance has become of more concern in Kenya. According to Kenya National Examination Council (KNEC) Report Book (2006), CRE is poorly performed on national Examination. The report indicated that the performance of students in CRE was mainly below average stating that the students would score as low as mean grade of 40%. There has been a poor performance by CRE students in Machakos sub-county public secondary schools over the years. This has called for urgent measures to identify issues that may have been bringing in challenges in the teaching and learning of the CRE. Some key issues that affect the quality of education are curriculum, instructional media and equipment, and teachers, among

others (MOE, 2011). There are factors like learning resources and over-reliance on traditional methodology like the lecture method (Twoli, et al., 2007). These factors can cause students to perform unsatisfactorily. This study was meant to investigate whether the use of instructional media in teaching can have a positive effect on students' academic performance in CRE. Thus, the main concern of this study was to investigate, identify, and describe the availability of instructional media and the teachers' use of these media and whether their use enhance students' academic performance in Machakos Sub - county.

In the area of technology integration in education several studies have been conducted. For instance, Wambui (2013) examined the use of instructional media on learner participation in science classroom in pre-school in Kiine zone of Kirinyaga County. Owusu (2009) also looked at the availability of instructional media and its impact on instruction at the Junior High Advances in Social Sciences. These studies have not looked at the effect of instructional media on academic performance in CRE. Therefore, there is a gap to be filled by this study.

### **1.3. Purpose of the Study**

The purpose of this study was to investigate the effect of instructional media on students' academic performance in CRE in public secondary schools in Machakos sub-county, Machakos County.

### **1.4. Research Objectives**

- i. To identify the different types of instructional media available for teaching CRE in public secondary schools in Machakos Sub-County

- ii. To find out how often instructional media are used in teaching CRE in public secondary schools in Machakos Sub-County.
- iii. To establish the perception of teachers on instructional media on academic performance of CRE students in public secondary schools in Machakos Sub-County.
- iv. To establish the challenges faced by CRE teachers when using instructional media in Machakos Sub-county.

### **1.5. Research Questions**

The following were research questions for this study:

- i. What are the different types of instructional media available for teaching CRE in public secondary schools in Machakos Sub-County?
- ii. How often do the CRE teachers use instructional media in teaching CRE in Machakos Sub-county?
- iii. How does teachers' perception on instructional media affect academic performance of CRE students?
- iv. What are the challenges faced by CRE teachers when using the available instructional media?

### **1.6. Assumptions of the Study**

This study was guided by the following assumptions: That the CRE Teachers use Instructional Media in teaching their students, Use of Instructional Media by teachers has an impact on the performance of students and that availability of Instructional Media in the schools does not guarantee their effective use unless planned and effectively utilized by teachers.

### **1.7. Delimitations of the Study**

Kombo and Tromp, (2006) explains that delimitation of the study refers to the boundary of the study. The study was restricted to selected public secondary schools in Machakos Sub-County, Machakos County. Private secondary schools were not included because their operational and supervisory structure depends on school managers. The study was focused on the use of Instructional Media by CRE Teachers in enhancing learning of CRE. The study employed descriptive survey design and system theory. It confined itself to Form 3 classes only since these are students who have stayed in the school for quite some time. The study was also restricted to 75 secondary school, 3750 CRE students and 100 CRE teachers. Simple random sampling was used to sample 10 schools, proportional stratified technique was used to select a total of 300 CRE students and purposive sampling was applied to sample 10 Form Three CRE teachers. The researcher used public secondary schools in the study. A questionnaire for teachers and students was used to collect data.

### **1.8. Limitations of the study**

The study was limited by distance from one school to another making it difficult to cover all the schools. Therefore, the researcher employed research assistants to ensure the expected scope is covered within the given time. Some respondents may be suspicious of the researcher's objective of collecting the data hence they may end up not responding to the questionnaires. Therefore, some questionnaires may be returned blank or even fail to return them after filling. Again, some respondents may not co-operate since they may have attitude towards the subject matter. Limitation is an aspect of research that may influence the results negatively and the researcher has no control over it (Kombo & Tromp, 2006).

### **1.9. Significance of the Study**

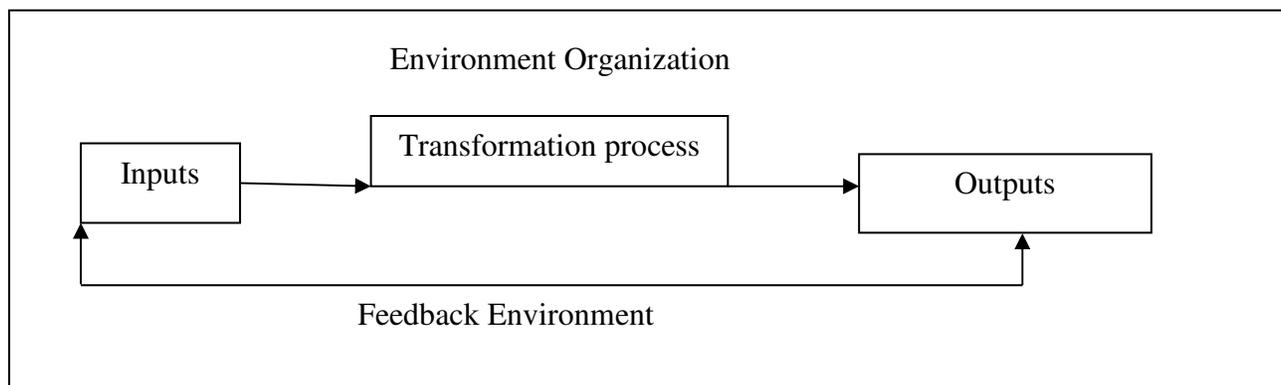
The results of this study may add more information to the present literature on the effect of instructional media on students' performance in Religious studies in public secondary schools in Kenya. The findings of this study may be of immediate benefit to Kenya Institute of Curriculum Development in formulation of a syllabus to in-service teachers on students and performance of Religious studies of students at the secondary schools in Kenya. Further, the results of the study may also provide a feedback to Curriculum Developers at the Kenya Institute of Education about performance of Religious studies students in secondary schools in Kenya.

Further, the results of this study may help teachers to sharpen their teaching strategies they use to teach CRE at secondary schools in Kenya. In addition, the results of the study may be of immediate use to Quality Assurance and Standards Officers on the relationship between instructional media and performance in CRE in the public secondary schools in Kenya. Finally, the findings may help college Administrators and the Ministry of Education (MOE) when drawing policies related to teaching of CRE students and the performance of CRE in the public secondary schools in Kenya.

### **1.10. Theoretical Framework**

This study was based on system theory. The Systems Theory was developed by Ludwig von Bertalanffy in 1968 and others. Schools are social systems in which two or more persons work together in a coordinated manner to attain common goals (Scott, 2008). All schools are open systems, although the degree of interaction with their environment may vary. According to open-systems views, schools constantly interact with their environments. In fact, they need to structure themselves to deal with forces in the world around them (Scott, 2008).

A system can be defined as an interrelated set of elements functioning as an operating unit (Senge, 2006). As depicted in Figure 1, an open system consists of five basic elements (Scott, 2008): inputs, a transformation process, outputs, feedback, and the environment.



**Figure 2.1. Systems Theory Model, Source: (Ludwig von Bertalanffy in 1968)**

**Inputs:** Systems such as schools use four kinds of inputs or resources from the environment: human resources, financial resources, physical resources, and information resources. Human resources include administrative and staff talent, labor, and the like. Financial resources are the capital the school/school district uses to finance both ongoing and long-term operations. Physical resources include supplies, materials, facilities, and equipment. Information resources are knowledge, curricula, data, and other kinds of information utilized by the school/school sub county. In this study the inputs include the teachers, CRE students and instructional media used.

**Transformation Process:** The school administrator's job involves combining and coordinating these various resources to attain the school's goals – learning for all. The interaction between CRE students, instructional media and teachers is part of the transformation or learning process by which students become educated citizens capable of contributing to society. How do school administrators accomplish this? Work of some kind is done in the system to produce output. The system adds a value added to the work in process (Scott, 2008).

This transformation process includes the internal operation of the organization and its system of operational management. Some components of the system of operational management include the technical competence of school administrators and other staff, their plans of operation, and their ability to cope with change. Tasks performed by school administrators within the organization's structure will affect the school outputs. This study will investigate the effect of instructional media in students' academic performance in CRE in Machakos Sub County.

**Outputs:** It is the principal's job to secure and use inputs in the schools, transform them while considering external variables to produce outputs. In social systems, outputs are the attainment of goals or objectives of the school and are represented by the products, good results, outcomes, or accomplishments of the system. Although the kinds of outputs will vary with a specific school, they usually include one or more of the following: growth and achievement levels of students and teachers, student dropout rates, employee performance and turnover, school-community relations, and job satisfaction. The desirable outputs in this study are the achievement of quality grades by the CRE students in Machakos Sub County.

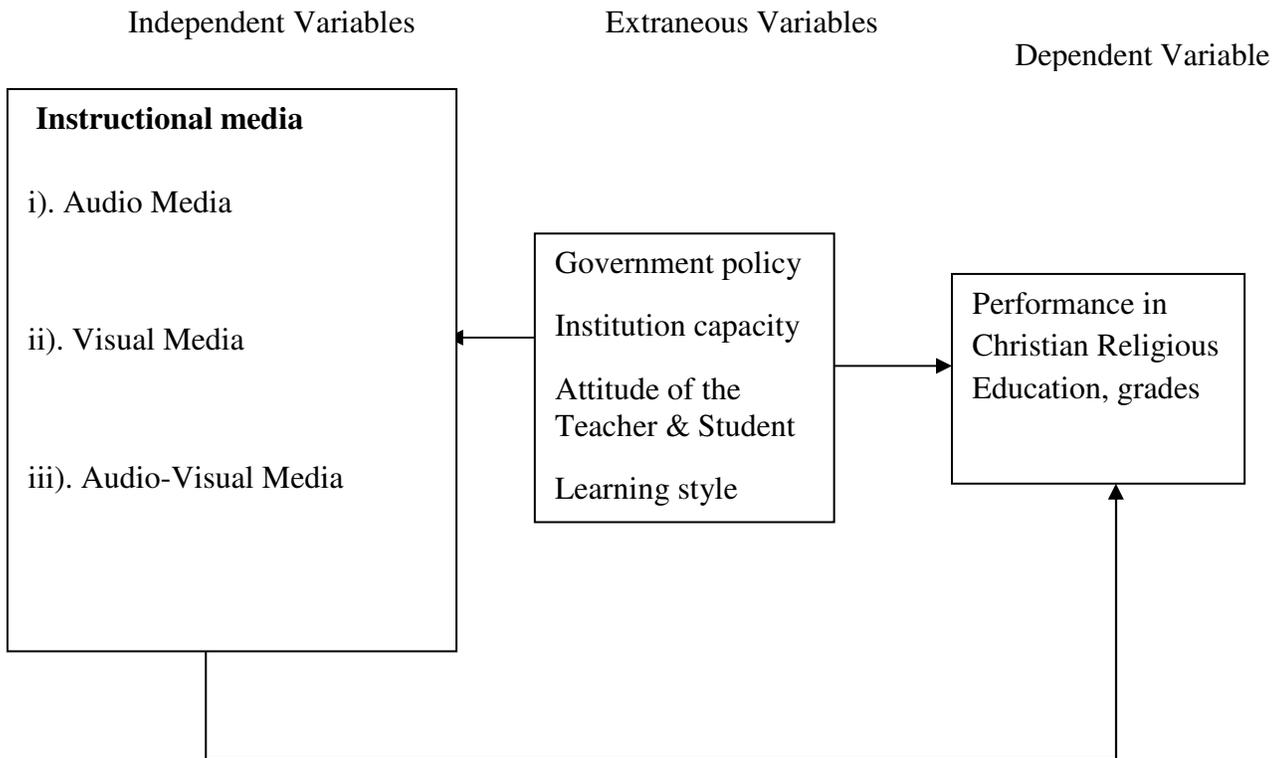
**Feedback:** Feedback is crucial to the success of the school operation. Negative feedback, for example, can be used to correct deficiencies in the transformation process or the inputs or both, which in turn will have an effect on the school's future outputs. In this study due to poor performance in the CRE, it is recommended that causes of deficiencies are identified and corrected in the transformation process. Use of instructional media will be investigated to find whether it has any effect in academic performance of CRE students in Machakos Sub County.

**Environment:** The environment surrounding the school includes the social, political, and economic forces that impinge on the organization. The environment in the open systems model takes on added significance today in a climate of policy accountability. The social, political, and

economic contexts in which school administrators work are marked by pressures at the local, state, and federal levels. Thus, school administrators today find it necessary to manage and develop internal operations while concurrently monitoring the environment and anticipating and responding to external demands. In this study, the environment surrounding the school comprises of various stakeholders who include the government departments (such as the Ministry of Education), the parents, sponsors and Kenya Institute of Curriculum Development (for Curriculum development).

The theory is applicable to the current study in that it helps the researcher to indentify how the school systems work in unison to ensure that the student academic performance improves steadily. The school system comprises of the teachers, students, instructional materials and media, the structures such as classes which should work in cohesion to ensure success of the institution. Schools are social systems in which two or more persons work together in a coordinated manner to attain common goals. All schools are open systems, although the degree of interaction with their environment may vary. According to open-systems views, schools constantly interact with their environments. In fact, they need to structure themselves to deal with forces in the world around them. The teachers should always interact with the students through teaching and through the use of instructional media to ensure that the input they give the students is reflected in their output.

### 1.11. Conceptual Framework



**Figure 2.2. Use of Instructional media and Students’ academic performance in CRE**

Use of instructional media: visual, audio and audio visual will affect the academic performance of CRE. Independent variables affect (dependent variable) performance. However, extraneous variables such as government policy and institutional capacity (or operational environment of the school) can determine the way independent variables affected dependent variable. Performance is measured in quality grades which range from fail grade E to A. The Kenya National Examinations Council (KNEC) is the examining body for the CRE students under study. In this study the researcher will use systems theory to investigate the effect of instructional media in students’ academic performance in CRE in Machakos sub County.

## **1.12. Operational Definition of Terms**

**Audio-visual Media:** Equipment and materials that involve recorded sound and pictures, to transmit information and promote teaching and learning. Such materials are radio, computer monitor screens, T.V, film, video, tapes, projectors and power point.

**CRE Teachers:** Personnel who are trained and have qualified as professional instructors with the responsibility of teaching the CRE subject in secondary schools or other institutions of learning.

**Instructional media:** Teaching aids used to facilitate the teaching and learning process, For example, radio, video, charts and models.

**Instructional Technology:** The systematic way of designing, carrying out and enhancing the process of learning in terms of specific objectives to bring out more effective instruction.

**Learning Resources:** The objects or stimuli for learners that include printed material, software, persons, fields of play, equipment, objects such as models, realia, graphics and hardware or machines like computers.

**Learning Resource Centre:** Establishment in schools that hold and issue out facilities like print material audio-visuals, audio-visual equipment for purposes of teaching and learning operated on a catalogue system to enable users to locate, retrieve and use the materials of their choice for learning purposes.

**Utilization:** The act and process of planning, selection and objective use of the teaching and learning resources in enhancing teaching and learning of CRE.

## **CHAPTER TWO**

### **2.0 LITERATURE REVIEW**

#### **2.1 Introduction**

This chapter contains comprehensive literature review in line with research objectives and past studies on utilization of instructional media for teaching and learning. This review is presented by themes namely: Performance of CRE in public secondary schools, types of instructional media used in teaching and learning of CRE, use of instructional media in teaching and learning of CRE, perception of teachers on instructional media and how it affects academic performance of CRE students and the challenges faced by CRE Teachers when using instructional media in teaching/learning process.

#### **2.2 Performance of Christian Religious Education in secondary schools**

The risk of poor academic performance has been a topic of concern for Religious Studies students (Corn et al., 2002). Academically poor students have slow reading rates (Fellenius, 2001; LaGrow, 2000). Slow reading rates have a negative impact on the acquisition of religious skills. Negative attitudes towards the subject or reading in general may also affect student's academic performance (Erin & Sumranveth, 1995). A significant role for teachers is to address their students' slow reading rates and attitudinal barriers through the use of appropriate instructional strategies. Christian Religious Education is an educational subject at all levels of learning i.e. primary, secondary and university level. Research done earlier have shown that a big percentage of students do not perform very well in CRE. Although there may be many numerous challenges facing the performance of CRE, this study will focus only on effect of instructional media on performance of this subject. The Ministry of Education (MOE) has prepared through the Kenya Institute of Curriculum Development (KICD) the syllabus for CRE as a subject. The syllabus has

been approved but general performance in CRE remains poor. According to Kenya National Examination Council (KNEC) Report Book (2006), CRE is poorly performed on national Examination. The report indicated that the performance of students in CRE was mainly below average stating that the students would score as low as mean grade of 40%. Performance of CRE in 2014 was 4.68, 2015 it was 4.62, 2016 it was 3.12 and in 2017 it was 3.60 in Machakos Sub-County. This is not a good performance.

### **2.3. Types of instructional media used in teaching and learning of CRE**

A medium (media) is a channel of communication i.e. film television, pictures, charts, diagram, printed materials, computers etc. (Heinichet *al*, 1993). Instructional Media are channels or means of transmitting instruction. They act as middle conditions between the student and what he/she is to learn (Dececco and Crawford, 1974). In any instructional situation there is a message to be communicated. The message is usually the subject-matter or content that is directed to the learners, questions about the content, feedback on the appropriateness of responses or other information. Therefore, the CRE teacher can use instructional media to pass CRE content to the learner.

Instructional Media also refers to any kind of format used to convey information to the student. The format can be visual, audio or audio-visual. Audio-Media refers to the channels through which messages are heard. It conveys meaning without visual symbols for example radio and tape-recorder. Audio-media use sound as the agent through which information is passed to the learners. Audio-media involves the use of the sense of hearing. Visual-media on the other hand are channels through which messages are seen. Messages are conveyed without verbal symbols for example textbooks, charts, pictures, and chalkboard and real objects. Visual-media therefore enables learners to see the message. Audio-Visual Media refers to media through which messages

are heard and seen. These media convey meaning with complete dependence on verbal symbols or languages. These ones include television, film projectors and instructional computers. Instructional media then, refers to the kind of media used in teaching to aid in learners' easier understanding according to the set objectives (Idris, 2015).

According to the KIE (2002) the following instructional media are recommended for teaching and learning CRE in secondary schools: Print media, which refers to textbooks, newspapers, journals, magazines and practical; Non-projected media, which refers to the materials that use a combination of drawing words, pictures and other, symbols e.g. chalkboards, maps and magnetic boards; Silent projected media, which refers to materials that are projected but have no sound e.g. slide, and film strips; Audio-media, which refers to sound materials such as audio-tape, recordings or radios; Audio-visual media, which refers to materials that utilize sight and sound such as film strips, documentaries and video tapes and usage of internet to acquire up to date information.

Dale (1969) as cited in Naumy (2012) categorizes instructional media into three groups namely: Visual, Audio and Audio – Visual which are briefly explained below: Visual media: Are those media whose content is received through the sense of sight. Examples of these include books, pictures, photographs, charts, diagrams, maps, posters, drawings, real objects, chalkboard, cartoons and the like. Audio media: These are media that involves hearing. Examples of audio media are radio, video tapes, telephone, disc recordings, telephone and sound distribution systems and Audio- visual media: These are media that utilize sight and sound and they include film strips, television, video tapes, demonstrations and motion pictures (Wamalwa, 2016)

According to Dick and Carey (2001) Instructional media encompasses all the materials and physical means an instructor might use to implement instruction and facilitate students'

achievement of instructional objectives. This may include traditional materials such as chalkboards, hand-outs, charts, slides, overheads, real objects, and videotape or film, as well as newer materials and methods such as computers, DVDs, CD-ROMs, the Internet, and interactive videoconferencing. Tailor and Williams (1966) argues that there are different types of media for instructional purposes. Projected media are audio, visual or both. These projected media include different types that include films, Over-head projectors (OHPs), power point, audio cassettes, video, television, slides and reel films. Over time in their studies, scholars have discussed the usefulness of visual aids as being more than those of the lecture methods globally. The visual aids like charts and video enhance the amount of content the student can remember, the enhanced understanding of concepts presented and the enjoyment experienced when the visual aids are utilized (Farrant, 1964). The role of these materials in teaching and learning has neither changed nor ceased. Where these vital resources are not used to the optimum, students' learning may be compromised. The non-projected media include graphics such as drawings, charts, maps and pictures. Pictures can be used to generate ideas for writing (Ministry of Education, 2003). Such material together with others like boards or chalk walls, models, prints and text books are vital resources, depending on whether and how the teachers utilize them. The teachers can make use of this wide range of media enhancing learning/teaching.

In his study on utilization of instructional media to enhance student performance in learning of English in Bungoma District, Wamalwa (2016) observed that a planned utilization of instructional media help the students comprehend, retain and recall concepts, principals or theories and acquire professional skills. It could therefore, be said that subjects in schools could be better taught and learnt if the teaching is accompanied with instructional media. The teacher needs instructional media to further help him/her cope effectively with the differences in learners' abilities as learners

come to school from different backgrounds. There may be learners who understand the printed work on the board, while there are others who do not understand concepts by mere writing on the board. As a result, this may necessitate the need for the materials such as chalk board and text books to help motivate and communicate to the students effectively otherwise there may be many different learners with different education backgrounds and they may not have achieved the required knowledge. Because of the development of modern technology, teachers no longer have to rely solely on mere lectures to deliver their teaching content. There is a great variety of materials that can be used to make meanings more vivid and more interesting. These materials are often referred to as instructional aids; devices used to supplement or complement the teachers' task. Like any other subject, CRE content can be made clearer, more interesting and relevant if audiovisual media are used in learning/teaching (Wamalwa, 2016).

#### **2.4 Use of Instructional media in teaching and learning**

In the year 1982 there was an international meeting of experts held in Grunwald in Germany (Grunwald Declaration, 1982). Therefore, following this meeting the United Nations Education Scientific and Cultural Organization (UNESCO) published a declaration making the argument for media education (UNESCO, 2001). According to the Grunwald Declaration the media are an increasingly significant and powerful force in contemporary societies. Advocates of media education have often argued that it should be seen as an element of all curriculum subjects. There are several reasons for this argument, that there is the fact that all teachers use media of different kinds as “teaching aids” - not only audio-visual media, but also textbooks and other print materials. For example, CRE teachers will routinely use films or photographs as sources of evidence alongside printed documents (UNESCO, 2006). The Kenya Institute of Education (KIE) (2002) recommends the use of the following instructional media in teaching and learning in

secondary schools; (i) Print media which refers to textbooks, newspapers, journals, magazines and practical(ii) Non projected media, which refers to the materials that use a combination of drawing words, pictures and other symbols e.g. chalkboards, maps and magnetic boards. (iii) Silent projected media which refer to materials that are projected but have no sound e.g. slide, film strips, and microfilms. (iv) Audio-media which refers to sound materials such as audio-tape, recordings or radios. (v) Audio-visual media which refers to materials that utilize sight and sound like filmstrips, documentaries and videotapes (vi) Recommended also the usage of internet to acquire up to date information (KIE, 2002).

Castle (1984), in his study reported on audio-visual materials in which he expressed the need for teaching materials especially on the African child. He stated that, these instruments are especially important in Africa because, children need to see and share to see hand books and pictures which they can study in their leisure time. In this case, visual materials become essential for understanding the real meaning of many of the Biblical teachings. Instructional media provide the teacher with interest compelling spring board into a wide variety of learning activities. The materials have a role-play in stimulating and revolving the students. In most cases a teacher's limitation will mainly be his own imagination, the more he can find useful way of employing these materials for more meaningful and permit learning to take place the better.

Today, many countries around the world use some form of technological media in education to enhance learning. In a few countries, the use is fairly widespread. In instances where the student is the Centre of attention, technology is a catalyst for educational change. Its absence would make a significant difference to the educational process because technology is an integral part of well thought-out system not merely a teacher's aids. According to UNESCO (1975), failure to use modern communication media within the educational system as tools of instruction may mean

low academic performance of the learners. Callahan and Clark (1990) observe that of all the materials of instruction, the textbook has had the most influence on teaching content and method. This is unfortunate because the textbook is just one of the teaching tools. It is not supposed to be revered as the ultimate media.

According to Tairu (1987), in many societies teachers are placed in the center of educational process. The work of the teachers is to impart to the student certain ideas, skills, basic knowledge in the possible time given according to the principles of learning, the main effort of the teacher is to help the learner and direct him/her in the way he or she will achieve that knowledge. The teacher uses materials for effective teaching. These materials assist both the teacher and the student to acquire the prescribed knowledge, skills and ideas. Students need enough instructional media and qualified teachers to help them comprehend the content in teaching and learning. The resources of learning may have some impact on the learners which may lead to improvement in the students' academic performance.

Wamalwa (2016) observed that educational technology has expanded to include teaching machines and computers. These machines present teaching-learning programs to students. Computer Assisted Instruction (CAI) is the most popular term used to describe the use of computers for instructional purpose. CAI can be purchased in form of diskettes, cassettes tapes or cartridges and used for teaching and learning (Callahan & Clark, 1990). Therefore, CRE can be taught by use of CAI to make it interesting and hence achieve its objectives.

Academic performance of a learner is significantly connected to the availability of educational resources like library, computer laboratory and textbooks in an institution (Karemera, Reuben & Sillah, 2003). According to Godfrey (2012), resources are vital since they do inform and guide teachers in their teaching. This implies that most of the secondary schools which have limited

instructional media for example textbooks are likely to perform poorly in their final exam which is Kenya Certificate of Secondary Education (KCSE). Poor results in CRE in Kenya are attributed to the absence of core text books which cover the content of the curriculum fully (Dinama, 2010). Even in instances where textbooks are available, teachers rarely explore other readily available resources, such as the library and the internet, to increase their own and their students' knowledge about religions.

Lack of enough instructional media can lead to learners having their lessons carried out in places such as laboratories, libraries; out-door spaces and school dining-hall that are not designed to be classrooms (Archibald, 2006). . In their study, Bandiera, Larcinese, and Rasul (2010) noted that class size can affect student academic performance. Moreover, the teacher-student ratio has an impact on how teachers attend to individual students because if an average student is moved to a large class his or her performance will necessarily drop (Bandiera, Larcinese & Rasul, 2010) due to inadequate attention by the teacher (Monks & Schmidt, 2010). Teacher-student ratio therefore negatively affects students' academic performance (Yelkper, Namale, Esia-Donkoh & Ofose-Dwamena, 2012), for example, if the class is too large the teacher will naturally fail to adequately interact with all learners and would not be able to fully engage them into the various classroom activities. The usage of instructional media can also be affected by entry points of the previous performance at a lower level (Geiser & Santelices, 2007) since the entry behavior of students may vary hence becoming a challenge for the teacher to use the same instructional media for average and fast learners.

Therefore, Instructional media should be selected on the basis of their contribution in achieving the set lesson objectives according to the learner's level and ability. Selection of instructional media is based on how well the media will perform the intended task. Some authorities suggest

the following criteria in the selection on instructional media (Twoli, et. al, 2007): That the best available material should be selected to realize a goal or lesson objective ensuring the materials make the learning situation more realistic and concrete, that the material should be appropriate for their age, intelligence, interests and experience of the learners and thus making learning easier and quicker hence ensuring that the material present information in an interesting manner. These materials should also supply a concrete basis for conceptual thinking and stimulate critical thinking while providing for integration of subject matter. The materials should be physically or visually attractive in real colour and neatness to present up to date information on the topic as being worth the time, expense and effort involved in its use. The lesson should be content driven and not media driven. Use of available Instructional media should be dictated by the learning objectives.

Formal education was introduced, packed with preferred and planned content along with methods of teaching. Kenya has in the recent past renewed its quest to provide quality and adequate education by providing teaching and learning resources in learning institutions since 2003 (Ministry of Education, 2007), in response to the several education commission reports which documented the need for learning institutions to acquire, maintain and use suitable instructional media to improve the quality and relevance of education (Kamunge, 1988). Methods in teaching and learning are ever changing as per the curriculum. New strategies and techniques come up hence the educational technological advancements witnessed like the use of computer in the Computer Assisted - Learning also referred to as CAL (Davies and Elder, 2008). This technology provides devices and techniques for bringing the best, most relevant and wide range of experiences for students. There is need therefore to address the ever growing and emerging issues that concern the strategies that enhance learning.

Teaching and learning processes have undergone great revolution due to advancement in technology by use of different strategies and gadgets. This has made education more readily available leading to the improvement of its quality due to enhanced interest, comprehension, retention and concreteness. Teaching has advanced from the traditional verbal instruction and requires knowledge on the use of applicable media. The study sought to investigate how the use of instructional media can assist in the advancement and teaching of CRE in order to better performance of CRE in Machakos Sub County.

According to Talabi (2001) instructional media are generally designed to provide realistic images and substitute experience to reach curriculum experiences. The media are considered the most efficient facilitators in the education set up. They are not substitutes for the teacher. Their use however, calls for an imaginative approach by the teacher who needs to constantly be on the alert for new ideas and techniques to make the lessons presented with different instructional media achieve effective outcomes. Monda (2012) concluded that teaching and learning resources create motivation in learning. Thus, it can be said that combination of various instructional media is vital when ones need to achieve the desired objectives in any leaning aspect particularly CRE.

Instructional media can be an integral part of CRE teaching. Visual aids have been used to enhance learning successfully and teachers are taught and encouraged to frequently utilize instructional media when teaching. Teachers can therefore exploit current instructional media at their disposal. Teachers during the previous times, while in training had far less practical experience of technology and communication (Unwin, 1969). They were theoretically trained in the traditional method. Newer trends have availed the use of instructional media that improve learning and prepares trainees more effectively for the teaching task like the use of computer and other computer accessories.

The CRE teachers should seek to avail and frequently use computer projection by power point as some lessons may require though this demands for capacity, endowment and commitment. There are other challenges like under-utilization of the resources in Learning Resource Centers (Kimui, 1990). Instead, these LRCs are mostly used as book and other resource stores. CRE being a core subject in the Kenyan secondary schools' curriculum; there is need to frequently use them in teaching for effective enhancement of learning. Instructional media can be used to reflect what they are doing by providing feedback of their skills for personal proficiency and learn how to teach them (Volker, et. al 1989). When students are given opportunity to portray their ideas, skills and game activities on visuals, they benefit more. They are more creative and able to accurately correct what they have done.

Teacher trainees undergo thorough training in the use of instructional media in teaching. The training enables and prepares them to adequately cover the syllabus with help of instructional media having had adequate exposure to these aids. When they are in the field, the teachers are expected to have acquired adequate knowledge, skills and information. This will enable them to impart this knowledge, skills and information on their learners with confidence. It is important therefore, that student-teachers while in training be exposed to a well implemented curriculum that enables them to be effective in their subject area and in the use of instructional media. The CRE teacher is exposed to many ways of presenting skills, instructions and content. Frequent use of Instructional media is an added advantage to facilitate and help the teacher explain concepts in more concrete approaches. Projected media can be used to present content difficult to explain or show verbally. Such media as video can also be an excellent way of providing immediate feedback since it employs sensory receptors that compound the learning experience.

Farrant, (1964) pointed out that non projected media like printed material and static visuals are good for reinforcement, feedback and self-evaluation if used frequently. Instructional media that are auditory like radio and recorded programs give external and internal stimuli and aid in presentation of content. This is particularly good for teaching of CRE. There is need to emphasize the frequent use of instructional media in teaching the CRE and therefore CRE teaching is concerned with development of not only skills but also attitudes and values. Teachers should explore the use of the wide range of options in the Instructional Media. Instructional media can also be illustrated as techniques of teaching subject matter in micro teaching where, if a teacher uses a lecture, he can also demonstrate using video because video stimulates learning (Farrant, 1964). Computers and cyber media offer many tools for teaching and learning-from the ubiquitous courseware management systems teleconferencing systems to newer technologies like blogs, wikis and podcasting. Computers combine almost all aspects of oral and literary cultures and provide a way for students to learn in an individualized setting. Visuals, like charts, pictures, diagrams, cartoons, slides and transparencies can convey messages that are hard for words. Visual aids can be hanged on boards or walls to be viewed over a long period of time long after the lesson is over. Visuals evoke emotional responses that promote desired learning. Visual aids are used in order to increase the learners' concentration and retention. More recent research has shown that a learner retains 83% of what they hear and see but only 50% of what they hear (Gathumbi, et. al 2008). The chalkboard may be the most frequently used and readily available visual aid in schools. It is in fact available in every classroom. Chalkboard use if skillfully utilized by the teacher aids a lot in presenting information in diagrammatic presentations. Tape cassettes provide sound effects and music, a stimulus that motivates and enhances learning on the part of the learner. Moreover, educational radio programs can also be taped with the purposes of supplementing classroom teaching with the help of trained technicians in the absence of teachers

or, lessons can be recorded then revisited later as a form of revision. These instructional media when well planned and carried out objectively, will enhance academic performance.

## **2.5. Teachers perception on the effect of Instructional Media in Enhancing Teaching and Learning**

Adefuye (2006) found out that when various learning resources are used in learning institutions like secondary schools they arouse students' interest towards learning and definitely this might have positive effects on performance. That's why Neo (2007) emphasized on the need for adequate supply of learning materials in schools. Supply of quality textbooks for example in schools can be of immense importance towards the academic development or performance of the students.

Wang (2008) in his study of comparing learning environments in different types of schools (good, average and below) and different educational streams he found out that there existed significant difference on the utilization of educational media among different categories of schools. Another study by Neo (2007) on secondary science laboratory environments using the SLEI established that teaching environment help to improve the perceptions of students and teachers. Students perceived that they were interested in being taught by their teachers in laboratories as opposed to their classrooms while teachers said that students are active when different methodologies are employed during teaching and learning process.

According to Adeyemo (2011) the interest in the study of learning environment has become more prominent since it has been evident that learning outcomes and students' attitude towards learning were closely linked to the learning environment. Classroom learning environment refers to a setting or space where teachers and learners interact with each other, use variety of tools and

information resources with each other, and use variety of tools and information resources in their pursuit of learning activities (Young, 2006).

Technology integration is very key in the process of teaching and learning CRE. According to Bransford (2010) it does not make sense to think of a higher academic achievement when you had not recognized the important role technology plays in education. Technology enthusiasts have long heralded the power of technology; from the printing press, to blackboards, to the lap tops, to transform education. With the rapid expansion of information communication technologies around the globe, there is a high level of interest for several reasons in harnessing modern technology to enhance teaching and learning. In their study on the effects of teacher's individual characteristics and perceptions of contextual factors that influence ICT integration in classrooms, Inan and Lowther (2010) found out that teachers' computer proficiency, teachers' overall support, teachers' technical support, and computer availability had a significant influence on teachers' beliefs about technology. Teachers' competence with computer technology is a key factor for effective use of ICT in teaching. Teachers' computer competence is a major predictor of integrating ICT in teaching (Knezek & Cristensen, 2014).

Significance of Instructional Media for effective teaching and learning has been hailed by many authors. Fidanboylu (2014) noted that the use of visual aids during teaching motivates the learners and reinforces what is learned. Makewa *et al.* (2012) indicated that media resources are useful in teaching. This means that the use of various instructional media is essential for mastery of content in CRE. According to Seth (2009) lack of wall charts, models and other conventional media to compliment the use of chalkboards and textbooks in the schools leads to increased difficult for teachers to offer quality teaching and learning to promote high academic performance students. Chinooneka & Mupa (2015) in their study discovered that teachers' failure to use a variety of

media in the teaching and learning process resulted into failure in grasping subject content. The use of instructional media makes the learning process more effective because it builds greater understanding, reinforcement and retention of the subject matter (Ayot, 1984) as cited in (Ngussa, 2015). Naz and Akbar (2010) further argue that instructional media have knowledge in an impressive way making learning more effective as they help learners in greater acquisition of knowledge. Wambura (2017) observed that computer has many benefits in education including enhancing academic works, improving lesson and students understanding and influencing independent learning. The significance of instructional media is further presented by Nasibi and Kiiio (2006) as cited in Karanja (2015) that teaching and learning resources are important in education because they motivate and encourage learners to utilize more than one sense hence increasing their attention and retention capacity. Monda (2012) argues that teaching and learning resources create motivation in learning and that a combination of various instructional media is vital when one need to achieve desired objectives in any leaning aspect and in particular CRE.

Aggarwal (1995) stated that teachers should be innovative and venture to experiment to improve teaching and enhance learning. Visual methods in teaching and learning create longer lasting experiences and relate readily to other sensory experiences. According to Douglas (1964) learning is distributed through the five senses as follows: learners retain: 1% of what they learn through taste, 1.5% of what they touch, 3.5% of what they smell, 11% of what they hear (unless impaired) and, 83% of what they see unless they are visually impaired. Instructional media that employ the visual stimulus arouses and sustains interest and defines facts and information easily and precisely, giving meaning to words. This in turn, helps learners to remember as it stimulates their imagination. Visuals are instruments for teachers to aid learning, they add realism and attractiveness to the learning experience (Mukwa & Patel, 1986).

## **2.6.Challenges faced when Using Instructional Media**

According to Mitchell and Miranda and Russell (2011) “good learning requires constant variation in the purposeful intellectual activities of the learner and a wide range of pedagogical stratifies”. To them many teachers do not have access to didactic materials and modern educational technologies (laboratory, printer, video, multimedia, software etc.), which could have made training learner-centered. Therefore, for such teachers achieving their lesson objectives becomes a challenge to them.

Karemera, Reuben and Sillah (2003), found out that academic performance of a student is significantly connected to the availability of educational resources like library, computer laboratory and textbooks in an institution. According to Godfrey (2012), resources are vital since they do inform and guide teachers in their teaching. Therefore, secondary schools which have limited instructional media for example textbooks are likely to perform poorly in their final CRE exam which is KCSE. Even in instances where textbooks are available, teachers rarely explore other readily available resources, such as the library and the internet, to increase their own and their students’ knowledge about religions.

According to Archibald (2006) when learning materials are not enough for teaching/learning process, learners can have their lessons carried out in places such as laboratories, libraries; outdoor spaces and school dining-hall that are not designed to be classrooms. Bandiera, Larcinese, and Rasul (2010) noted that the number of students can affect is academic performance of students. The teacher-student ratio determines how teachers attend to individual students because if an average student is moved to a large class his or her performance will necessarily drop (Bandiera, Larcinese & Rasul, 2010) due to inadequate attention by the teacher (Monks &

Schmidt, 2010) for example, it may be difficult for a teacher to use a chart to a class which has many students.

According to Slavin (2000), instructional or audio-visual materials such as text book, pictures diagrams, flashcards, posters, television and others are materials or devices that help in the teaching learning process because they influence the senses of seeing and hearing, but its utilization must depend on proper planning. Therefore, this means that for a teacher to succeed in his work of instruction he must plan well on how and where to use instructional resources or else he won't achieve lesson objectives.

Another challenge faced by CRE teachers when using instructional media which can affect student academic performance is entry points of the previous performance (Geiser & Santelices, 2007) for example there are some instructional media that you can't use for slow learners & vice versa. This becomes a challenge for the teacher since there is no class for pure genius students and vice versa Kocchar (1990) as cited by Wamalwa (2016) even though teachers may have the competence and positive attitudes, without sufficient resources, their efforts will come to waste. This argument is in line with the views of the German agency for technical cooperation (GTZ) report (1979) that it is essential for teachers to be provided with the required materials early enough to facilitate teaching and learning. In the process of teaching and learning, the teacher is required to use a variety of instructional media. Due to some reasons like laziness, unavailability of learning resources and the like, some teachers may not use the variety of these resources.

## **2.7. Summary of the Reviewed Literature and the Gaps**

The reviewed literature is based on the effect of instructional media on student academic performance in CRE. This review is presented by themes namely: Performance of CRE in

secondary schools, types of instructional media used in teaching and learning of CRE, use of instructional media in teaching and learning, the significance of Instructional media in teaching CRE and the challenges faced when using instructional media in enhancing teaching and learning. According to Kenya National Examination Council (KNEC) Report Book (2006), CRE is poorly performed on national Examination. The report indicated that the performance of students in CRE was mainly below average stating that the students would score as low as mean grade of 40%. There has been a poor performance by CRE students in Machakos sub-county public secondary schools over the years. This has called for urgent measures to identify issues that may have been posing challenges in the teaching and learning of the CRE. Some key issues that affect the quality of education are curriculum, instructional media and equipment, and teachers, among others (MOE, 2011). Factors like learning resources and over-reliance on traditional methodology like the lecture method (Twoli, et al., 2007), cause students to perform unsatisfactorily. This study was meant to investigate whether the use of instructional media in teaching can have a positive effect on students' academic performance in CRE. Thus, the main concern of this study was to investigate, identify, and describe the availability of instructional media and the teachers' use of these media and whether their use enhance students' academic performance in Machakos Sub county.

In the area of technology integration in education several studies have been conducted. For instance, Wambui (2013) examined the effects use of instructional media on learner participation in science classroom in pre-school in Kiine zone Kirinyaga County. Studies have not looked at the effect of instructional media on academic performance in CRE. Therefore, there is a gap to be filled by this study.

## **CHAPTER THREE**

### **3.0 RESEARCH METHODOLOGY**

#### **3.1 Introduction**

This chapter is sub divided into several sections as follows: research design, location of the study, description of the target population, sample size and sampling procedures, research instruments, reliability and validity, data collection procedure and data analysis.

#### **3.2 Research Design**

The study adopted a descriptive survey design to investigate on how instructional media affects the academic performance of CRE students. This design was used to analyze and report events as they occur (Mugenda & Mugenda, 2003). Mugenda & Mugenda (2003) argues that descriptive surveys are used to describe some aspects or characteristics of human population such as opinions, attitudes, beliefs or even knowledge of certain phenomenon. Descriptive study design was therefore suitable for this study because it sought to find out opinion of CRE teachers and students on effect of instructional media on academic performance of CRE students in Machakos Sub County.

#### **3.3 Location of the Study**

The study was located in Machakos Sub County. Machakos sub - county is one of the eight sub – counties in Machakos County. It borders Kathiani sub – county on the east and Mavoko sub – county on the west. 10 public secondary schools in Machakos Sub-County will be used in the study. This is because carrying this study in all public secondary schools can be very expensive (Kombo & Tromp, 2006). The research involved; CRE teachers and students taking CRE. Machakos Sub-County has a total of 75 registered public secondary schools.

### 3.4 Target Population

Machakos Sub - county has a total of 75 public secondary schools (Machakos Sub – County Education office, 2018). The target population for this study was 3750 Form Three CRE students and 100 CRE teachers from Machakos sub - county, Machakos County. This target population was obtained by getting a list of the CRE students and teachers from Machakos Sub-County Education Office.

### 3.5 The Sampling Procedure and Sample Size

According to Mugenda and Mugenda (2003), to select a sample, the researcher must first have a sampling frame. This is a directory or index of cases from which a sample was selected. Sampling is a process of selecting sub-set of cases in order to draw conclusions about the entire set (Mugenda & Mugenda, 2003). The researcher used simple random sampling techniques to sample 10 schools that were used in the study out of the 75 secondary schools in Machakos sub-county. Proportional stratified technique was used to select a total of 300 CRE students from the 10 selected public secondary schools. Purposive sampling was applied to sample 10 Form Three CRE teachers.

**Table 3.1. Sampling Frame**

<b>Target population</b>	<b>Total population</b>	<b>Sampling technique</b>	<b>Sample size</b>
CRE teachers	155	Purposive sampling	10
CRE students	3750	Proportional stratified technique	300
Public secondary schools	75	Simple random sampling	10

**Source: Author (2018)**

### **3.6 Research Instruments**

The study used questionnaires as the research instruments. Two sets of questionnaires were used for collecting data from the students and the teachers. Closed and open ended questionnaire was used to collect data in respect to effect of instructional media and students' performance in Christian Religious studies in Machakos sub County.

#### **3.6.1 Pilot study**

The pilot study was done in one public school in Kathiani sub - county. The pilot study enabled the researcher to establish the validity and reliability of the instruments where the unclear instruments, vague questions, insufficient writing space and wrong numbering was reviewed and corrected. The findings from the reliability analysis were used to enhance the reliability of the instruments to adjust, alter and delete certain items as a way of improving the reliability of the questionnaire.

#### **3.6.2 Validity of Research Instruments**

According to Kothari (2004), validity refers to the accuracy and meaningfulness of inferences, which are based on the research results. It is the degree to which results obtained from the analysis of the data actually represent the phenomenon under study. The content and construct validity of the research instruments was determined by the researcher discussing the items in the research instruments with the supervisors and other lecturers in the Department of Educational Communication and Technology. The advice given by these supervisors helped the researcher to determine the validity of the research instrument.

### **3.6.3. Reliability of Research Instruments**

Mugenda and Mugenda (2003) define reliability of an instrument as the degree of consistency with which it measures a variable. It is concerned with estimates of the degree to which a research instrument yields consistent results or data after repeated trials. The questionnaire combined both open-ended and close-ended questions which were administered to the respondents. Reliability was computed for a combination of all sections of the questionnaire. The Cronbach's alpha coefficient obtained was  $r = 0.8$ , meaning the research instruments were reliable. Cross-checking of the research instruments was done with the guidance of the supervisors. Test-retest method was used to test reliability.

### **3.7 Data Collection Procedures**

The researcher first collected a research permit from National Commission for Science and Technology and innovation (NACOSTI) and later got permission from the County Directors of Education in order to visit the sampled schools for the study. Thereafter, the researcher visited all the sampled schools and then made all the necessary arrangements for the study. The researcher personally administered the research instruments.

### **3.8 Ethical Considerations**

Prior to data collection, the respondents were informed of the purpose of the study and were assured of confidentiality of the information provided by them through written and / or verbal communication. The consent of the respondents was sought and they were not coaxed to participate in the study. They were not to write their names anywhere to ensure confidentiality.

### **3.9 Data Analysis**

Data collected was edited, coded, classified and tabulated with regard to the type and source. During the editing process, the researcher carefully scrutinized the raw data collected from all the

respondents with a key objective of ensuring that it was accurately, uniformly and completely entered. The researcher corrected all the errors and omissions that were detected. The edited data was then coded according to the research themes. Data was analyzed and interpreted both qualitatively and quantitatively in the light of the research objectives. Analysis of data was conducted with the aid of the Statistical Package for Social Sciences (SPSS) version 21 and Microsoft Excel 2007 computer software. SPSS was used for analysis while Microsoft Excel 2007 was used for ensuring quality presentation of results. The analysis entailed computation of descriptive statistics (mean, mode, median, frequencies and percentages).

## CHAPTER FOUR

### DATA ANALYSIS, INTERPRETATION AND DISCUSSION OF FINDINGS

#### 4.1. Introduction

Chapter four focuses on data analysis, interpretation and discussion of findings. The findings are based on data collected using questionnaires and observation from teachers and students on the effect of instructional media on students' academic performance in CRE in public secondary schools in Machakos sub-county, Machakos County. The purpose of the study was to investigate the effect of instructional media on students' academic performance in CRE in public secondary schools in Machakos sub-county. The study sought to answer the following questions: What are the different types of instructional media available for teaching CRE in public secondary schools in Machakos Sub-County? How often do the CRE teachers use instructional media in teaching CRE in Machakos Sub-county? What is the teachers' perception on instructional media and their effect on academic performance of CRE students? What are the challenges faced by CRE teachers when using the available instructional media?

#### 4.2 Questionnaire Return Rate

The study collected data from 10 teachers and 300 students in public secondary schools in Machakos sub-county. The researcher collected the questionnaires from the respondents after completion. The return rate of the questionnaire is tabulated on **Table 4.1**.

**Table 4.1. Questionnaire Return Rate**

<b>Respondents</b>	<b>Sample size</b>	<b>Questionnaires returned</b>	<b>Percentage</b>
Teachers	10	10	100
Students	300	250	83.3

Data presented in **Table 4.2**, shows that the questionnaire return rate was above 70 percent from each category of respondents. Babbie (2007) explains that a response rate of 70 percent is considered to be very good and sufficient for analysis. The questionnaires were, therefore, considered sufficient for analysis.

### **4.3. Demographic Data**

This section presents demographic data of the respondents. The demographic data discussed includes professional qualification, gender and age of the respondents. This was important so as to understand suitability of the respondents in giving their views.

#### **4.3.1. Distribution of Participants by Gender**

Information on the teachers' and students' gender was collected. The findings are as shown in the **Table 4.2**.

**Table 4.2. Distribution of Participants by Gender**

	Teachers		Students	
	Frequency	Percentage	Frequency	Percentage
Male	3	30	135	54
Female	7	70	115	46
<b>Total</b>	<b>10</b>	<b>100</b>	<b>250</b>	<b>100</b>

According to the findings in **Table 4.2**, (70%) of the teachers were females. In addition, majority (54%) of the students were males. This implies that majority of teacher respondents were female while majority of the student's males implying that there was gender disparity between the teachers and the students.

### 4.3.2. Type of School

The student respondents were requested to indicate the type of school. The findings are as shown in **Table 4.3**.

**Table 4.3. Type of School**

Type of school	Frequency	Percentage
National school	5	2.0
Extra county school	8	3.2
County school	42	16.8
Sub-county school	195	78
<b>Total</b>	<b>250</b>	<b>100</b>

From the findings in **Table 4.3**, (78%) of the respondents indicated that their school was a sub-county school, 16.8% indicated a county school, 3.2% indicated extra county school, while 2% indicated a national school. this depicts that most of the schools were sub county school.

### 4.3.3. Highest Professional Qualification

The teacher respondents were requested to indicate their highest professional qualification. The findings are as shown in the **Table 4.4**.

**Table 4.4. Highest Professional Qualification**

<b>Highest Professional Qualification</b>	<b>Frequency</b>	<b>Percentage</b>
Diploma level	2	20
Degree level	8	80
Masters degree level	0	0
<b>Total</b>	<b>10</b>	<b>100</b>

From the findings in **Table 4.4**, (80%) of the teacher respondents had degree level as the highest professional qualification, while 20% had diploma level as the highest professional qualification. This depicts that majority of the respondents were learned and thus could offer quality information in relation to the subject of the study.

#### **4.3.4. Training on the Use of Instructional Media**

The teacher respondents were requested to indicate whether during their professional training, they were trained on how to use instructional media to teach in a secondary school. The findings are shown in **Table 4.5**.

**Table 4.5. Training on the Use of Instructional Media**

	<b>Frequency</b>	<b>Percentage</b>
Yes	7	70
No	3	30
<b>Total</b>	<b>10</b>	<b>100</b>

From the findings majority (70%) of the teacher respondents indicated that during their professional training, they were trained on how to use instructional media to teach in a secondary school while 30% were of contrary opinion. This depicts that the respondents during their professional training were trained on how to use instructional media to teach in secondary school.

#### 4.3.5. Teaching Periods in a Week

The teacher respondents were requested to indicate the number of periods they teach in a week. The findings are shown in **Table 4.6**.

**Table 4.6. Teaching Periods in a Week**

Number of periods	Frequency	Percentage
0-10	6	60
11-20	0	0
21-30	4	40
<b>Total</b>	<b>10</b>	<b>100</b>

From the findings in **Table 4.6**, (60%) of the teacher respondents indicated they taught between 0-10 periods in a week, while 40% indicated that they taught between 21-30 periods in a week. This depicts that majority of the respondents taught between 0-10 periods in a week. This workload is not overwhelming for a teacher to deliver in CRE subject.

#### 4.4. Performance of CRE

This section presents findings on performance of CRE. The findings are presented in sections.

##### 4.4.1. Performance Rate of CRE

The teacher and the student respondents were requested to rate the CRE performance in their school. The findings are shown in **Table 4.7**.

**Table 4.7. Performance Rate of CRE**

	Teachers		Students	
	Frequency	Percentage	Frequency	Percentage
Excellent	0	0	3	1.2
Very good	5	50%	70	28.0
Good	3	30%	140	56.0
Average	2	20%	32	12.8
Below Average	0	0	5	2.0
<b>Total</b>	<b>10</b>	<b>100</b>	<b>250</b>	<b>100</b>

From the findings in **Table 4.7**, (50%) of the teachers indicated the CRE performance in their school was very good. In addition, majority (56%) of the students indicated that the CRE performance in their school was good. This depicts that the performance of CRE was good. The findings contradict a study by Erin & Sumranveth, (1995) who stated that a significant role for teachers is to address their students' slow reading rates and attitudinal barriers through the use of appropriate instructional strategies. Christian Religious Education is an educational subject at all levels of learning i.e. primary, secondary and university level. Earlier research has shown that a big percentage of students do not perform very well in CRE. Though there may be many numerous challenges facing the performance of CRE

#### 4.5. Types of Instructional Media used in Teaching CRE

This section presents findings on types of instructional media used in teaching CRE. The findings are presented in the subsequent sections

##### 4.5.1. Instructional Media Teacher Use in Teaching CRE

The teacher respondents were requested to indicate the instructional media they use in teaching CRE in their school. The findings are shown in **Table 4.8.**

**Table 4.8. Instructional Media Teacher Use in Teaching CRE**

Type of item	Mean	STD
The Over- head projector	2.33	0.679
Boards	3.51	0.987
Film projector	1.23	0.879
Slides	1.82	0.231
Picture	2.61	0.567
Cassette recorder	1.12	0.578
Video tape	2.21	0.478
charts	2.76	0.499
Models	2.12	0.678
Cameras	1.22	0.923
Radio	1.24	0.678
Television	1.12	0.526
Text- book	3.45	0.532
Hand-out	2.87	0.651

The teacher respondents indicated that the following items were used for teaching and were adequate; boards (3.51), text books (3.45), handout (2.87), charts (2.76), picture (2.61), the overhead projector (2.33), video tape (2.21), models (2.12), slides (1.82), radio (1.24), film projector (1.23), cameras (1.22), and cassette and television (1.12) respectively. This depicts that the instructional media the teacher mostly used in teaching CRE was boards followed by textbook. It is therefore clear that the schools in Machakos have inadequate instructional materials needed for learning.

The student respondents were requested to indicate the instructional media the teacher use in conducting CRE lessons. The findings are shown in **Table 4.9**.

**Table 4.9. Instructional Media the Teacher Use in Conducting CRE Lessons**

<b>Instructional media</b>	<b>Mean</b>	<b>STD</b>
Films	2.45	0.152
Over Head Projector	2.03	0.187
Pictures	3.61	0.142
Charts	4.09	0.253
Textbooks	4.12	0.169
Blackboard	4.23	0.148
Radio cassettes	2.19	0.221
Hand-outs	3.33	0.158
Video and T.V	2.12	0.153
Slides	2.35	0.144

The students' respondents indicated to a great extent that the instructional media the teacher used in conducting CRE lessons was blackboard (4.23), followed by textbooks (4.12), charts (4.09), pictures (3.61), handouts (3.33), films (2.45), slides (2.35), radio cassettes (2.19), video and TV (2.12), and over head projector (2.03). This depicts that the instructional media use by teacher use in conducting CRE lessons was the blackboard.

#### **4.5.2. Instructional Media Available in Schools**

The student respondents were requested to indicate the instructional media available in their school for teaching CRE. The findings are shown in **Table 4.10**.

**Table 4.10. Instructional Media Available in Schools**

<b>Instructional media</b>	<b>Percentage</b>
Printed materials e.g. books	95%
Audio e.g. tapes	5%
Visual aids e.g. Video	10%

From the findings majority (95%) of the students' respondents indicated that printed materials such as books were the instructional media available in their school, 10% indicated visual aids e.g. video, while 5% indicated audio e.g. tapes. This depicts that the most available instructional media in school was printed materials such as books.

#### **4.6. Use of Instructional Media**

This section presents findings on the use of instructional media in schools. The findings are presented in the subsequent sections.

##### **4.6.1. Use of Instructional Media in teaching CRE**

The teacher respondents were requested to indicate whether they use instructional media in teaching CRE. The findings are shown in **Table 4.11**.

**Table 4.11. Using Instructional Media in teaching CRE**

	<b>Frequency</b>	<b>Percentage</b>
Yes	9	90
No	1	10
<b>Total</b>	<b>10</b>	<b>100</b>

From the findings, majority (90%) of the teacher respondents indicated they used instructional media in teaching CRE while 10% were of contrary opinion. This depicts that instructional media was used in teaching CRE. Dececco and Crawford, (1974) stated that any instructional situation there is a message to be communicated. The message is usually the subject-matter or content that is directed to the learners, questions about the content, feedback on the appropriateness of responses or other information. Therefore, the CRE teacher can use instructional media to pass CRE content to the students.

#### **4.6.2. Rate of Use of the Instructional Media**

The teacher respondents were requested to indicate how often they use each of the instructional media in their school. The findings are presented in **Table 4.12**.

**Table 4.12. Rate of Use of the Instructional Media**

<b>Type of item</b>	<b>Mean</b>	<b>STD</b>
The Over- head projector	3.44	1.579
Slides	3.51	1.787
Film projector	2.61	1.679
Boards	4.12	1.431
Charts	3.99	1.267
Cassette recorder	2.65	1.678
Video tape	2.52	1.378
Pictures	3.55	1.299
Models	3.61	1.178
Cameras	2.41	1.223
Radio	2.53	1.778
Television	2.87	1.626
Textbook	4.07	1.432
Handout	3.85	1.252

The teacher respondents indicated to a great extent that the use; boards (4.12), text books (4.07), charts (3.99), handout (3.85), models (3.61), picture (3.55), slides (3.51), the over- head projector (3.44), television (2.87), cassette recorder (2.65), film projector (2.61), radio (2.53), and video tape (2.52). This depicts that the instructional media that is used very often used in teaching CRE was boards followed by textbook. According to Slavin (2000), instructional or audio-visual materials such as text book, pictures diagram's, flashcards, posters, television & others are materials or devices that help in the teaching learning process because they influence the senses of

seeing and hearing, but its utilization must depend on proper planning. Therefore, this means that for a teacher to succeed in his work of instruction he must plan well on how and where to use instructional resources or else he won't achieve lesson objectives.

#### **4.7. Teachers perception on Instructional Media in Teaching CRE**

The third objective was to find out the perception of teachers on instructional media and how they affect CRE performance. The findings are presented in the subsequent sections

##### **4.7.1. Teachers perception on how instructional media affect teaching and learning of CRE**

The teacher respondents were requested to indicate the extent of agreement with the following statement on effect of instructional media on teaching and learning CRE. The responses were placed on a five likert scale from 1-5 where 1-strongly disagree, 2-disagree, 3-neutral, 4-agree, and 5-strongly agree. The findings are shown in **Table 4.13**.

**Table 4.13. Teachers perception on instructional media on teaching and learning CRE**

<b>Statement</b>	<b>Mean</b>	<b>Std. Dev</b>
CRE teacher always use instructional media always in teaching	3.50	0.9864
Use of instructional media has effect on students' academic performance	3.77	0.8976
Use of instructional media in teaching motivate learners in class	3.69	0.8639
School administrators encourages use of instructional media in teaching CRE	3.55	0.8621
CRE instructional media are available for teaching/learning in school	3.71	0.8712
Different instructional media affect students' academic performance	3.89	0.9187
Use of instructional media has perfected the student learning skills thus improving their academic performance	3.99	0.8871

From the findings the teacher respondents agreed that use of instructional media has perfected the student learning skills thus improving their academic performance (mean=3.99), followed by different instructional media affect students academic performance (mean=3.89), use of instructional media has effect on students academic performance (mean=3.77), CRE instructional media are available for teaching/learning in school (mean=3.71), use of instructional media in teaching motivate learners in class (mean=3.69), school administrators encourages use of

instructional media in teaching CRE (mean=3.55), and that CRE teacher always use instructional media always in teaching (mean=3.50). This depicts that use of instructional media has perfected the student learning skills thus improving their academic performance. Adefuye (2006) found out that when various learning resources are used in learning institutions like secondary schools they arouse students' interest towards learning and definitely might have positive effects on performance. That is why Neo (2007) emphasized on the need for adequate supply learning materials in schools. Supply of quality textbooks for example in schools can be of immense importance towards the academic development or performance of the students.

#### **4.8. Challenges when using Instructional Media to teach CRE**

The fourth objective sought to find the challenges faced by teachers when using Instructional Media to teach CRE. The findings are presented in subsequent section

##### **4.8.1. Challenges of Using Instructional Media**

The teacher respondents were requested to indicate whether they face challenges when using instructional media in teaching. The findings are shown in the **Table 4.14**.

**Table 4.14. Challenges of Using Instructional Media**

	<b>Frequency</b>	<b>Percentage</b>
Yes	4	40
No	6	60
<b>Total</b>	<b>10</b>	<b>100</b>

From the findings majority (60%) of the teacher respondents indicated that did not face many challenges when using instructional media in teaching while 40% were of contrary opinion. This depicts that teachers do not face challenges when using instructional media in teaching.

#### **4.8.2. Challenges Faced When Using Instructional Media**

The teacher respondents were requested to indicate some of the challenges they faced when using instructional media. The respondents stated that some of the challenges included lack of charts in certain schools which are located in the interior within the sub county. Some topics are not structured to use instructional media. The ratio of the instructional media to that of the student is not directly proportional and students end up sharing which distract their comprehension of the content. In addition, the respondents indicated that teacher may be lacking knowledge on how to operate the instructional media like the projectors, video tape among others. The time for using instructional media is limited and thus less content is covered hence syllabus coverage become an issue when using instructional media. According to Archibald (2006) when learning materials are not enough for teaching/learning process can lead learners having their lessons carried out in places such as laboratories, libraries, out-door spaces and school dining-hall that are not designed to be classrooms. Bandiera, Larcinese, and Rasul (2010) noted that the number of students in a class can affect academic performance of students. The teacher-student ratio determines how teachers attend to individual students because if an average student is moved to a large class his or her performance will necessarily drop.

#### **4.8.3. How to Deal With the Challenges**

The teacher respondents were asked to indicate how challenges on using instructional media can be addressed. They stated that the instructional media must be well integrated into the lesson and logistics involved in putting it up should be well prepared before the lesson. The instructional

media should always be put away when not in use to avoid distractions. Teacher should be trained on the use of instructional media and relate it to the content being taught. The government should ensure that all the instructional media are readily available to all schools so that they can have a relation between the content and the media applied.

#### **4.9. Chapter Summary**

The study aimed at investigating effect of instructional media on students' academic performance in CRE in public secondary schools in Machakos sub-county, Machakos County. The effect was based on different types of instructional media available, use instructional media in teaching CRE, effect of instructional media on the academic performance, and challenges faced by CRE teachers when using the available instructional media.

## **CHAPTER FIVE**

### **SUMMARY, CONCLUSIONS AND RECOMMENDATIONS**

#### **5.1. Introduction**

This chapter summarizes the findings of the study and presents conclusions, recommendations and the suggestions for further research in line with effect of instructional media on students' academic performance in CRE in public secondary schools in Machakos sub-county, Machakos County.

#### **5.2. Summary of the Study**

The purpose of the study was to investigate to investigate the effect of instructional media on students' academic performance in CRE in public secondary schools in Machakos sub-county, Machakos County. The study was guided by the following objectives: to identify the different types of instructional media available for teaching CRE in public secondary schools in Machakos Sub-County, to find out how often instructional media are used in teaching CRE in public secondary schools in Machakos Sub-County, to examine the effect of instructional media on academic performance of CRE students in public secondary schools in Machakos Sub-County and to establish the challenges faced by CRE teachers when using instructional media in Machakos Sub-county. The study was guided by the system theory. Descriptive research design was adopted in this study. A questionnaire for teachers and students was used to collect data for the study.

### **5.2.1. Performance of CRE**

The study established that majority (50%) of the teachers indicated the CRE performance in their school was very good. In addition, majority (56%) of the students indicated that the CRE performance in their school was good.

### **5.2.2. Type of Instructional Media**

The first objective was to identify the different types of instructional media available for teaching CRE in public secondary schools in Machakos Sub-County. The study found that the instructional media the teacher mostly used in teaching CRE was boards (3.51), followed by text books (3.45). It is therefore clear that the schools in Machakos Sub County have inadequate instructional materials needed for learning. The study also found that the instructional media use by teacher use in conducting CRE lessons was the blackboard. The study established that the most available instructional media in school was printed materials such as books. There is a great variety of materials that can be used to make learning more vivid and more interesting. The role of instructional materials in teaching and learning has neither changed nor ceased and where these vital resources are not used to the optimum, students' learning may be compromised (Farrant, 1964)

### **5.2.3. Use of Instructional Media in teaching CRE**

The second objective was to find out how often the CRE teachers use instructional media in teaching CRE in Machakos Sub-county. The study found that majority (90%) of the respondents used instructional media in teaching CRE. The study further established that to a great extent that the boards were the most used instructional media in teaching and learning of CRE in schools. A significant role for teachers is to address their students' slow reading rates and attitudinal barriers through the use of appropriate instructional strategies. The study established that teachers used

instructional media to teach CRE subject. This study is in agreement with the finding of Monda (2012) that frequent use of Instructional media is an added advantage to facilitate and help the teacher explain concepts in more concrete approaches. Teacher use instructional materials for effective teaching. These materials assist both the teacher and the learner to acquire the prescribed knowledge, skills and ideas. Students need enough instructional media and qualified teachers to help them comprehend the content in teaching and learning. The finding of this study concur with Tairu (1987) that use of resources in teaching and learning may have some impact on the students which may lead to improvement in the students' academic performance.

#### **5.2.4. Effect of instructional media**

The third objective was to examine the effect of instructional media on the academic performance of CRE students. The study found that use of instructional media has perfected the student learning skills thus improving their academic performance. The study further established that majority (71.2%) of the respondents indicated that instructional media enhances the learning of CRE subject. This is because the instructional media enables the learners to grow spiritually and to understand Gods culture. Further the respondents indicated that the media makes them understand more on the content being taught as they are able to relate learned issues and the real life situations. Further the instructional media facilitate comprehension and that the students are able to answer question after every study topic. The study finds concur with use (Ayot, 1984) who argues that instructional media makes the learning process more effective because it builds greater understanding, reinforcement and retention of the subject matter. Further, Karanja (2015) asserts that teaching and learning resources are important in education because they motivate and encourage learners to utilize more than one sense hence increasing their attention and retention capacity. This study is in agreement with Monda (2012) when he argues that teaching and

learning resources create motivation in learning. Thus, it can be said that combination of various instructional media is vital when ones need to achieve the desired objectives in any leaning aspect particularly CRE.

#### **5.2.5. Challenges Faced Using Instructional Media**

The fourth objective was to establish the challenges faced by CRE teachers when using the available instructional media. The study established that majority (60%) of the respondents indicated that they did not face challenges when using instructional media in teaching. The challenges faced included lack of charts in certain schools which are located in the interior within the sub counties. Another challenge is that most topics are not centered to accommodate the instructional media. The ratio of the instructional media to that of the student is not directly proportional and students end up sharing which distract their comprehension of the content. In addition, the respondents indicated that teacher may be lacking knowledge on how to operate the instructional media like the projectors, video tape among others. The time for using instructional media is limited and thus less content is covered hence syllabus coverage become an issue when using instructional media.

On how to deal with the challenges the study found that instructional media must be well integrated into the lesson and logistics involved in putting it up should be well prepared before the lesson. The instructional media should always be put away when not in use to avoid distractions. Teacher should be trained on the use of instructional media and relate it to the content being taught. The government should ensure that all the instructional media are readily available to all schools so that they can have a relation between the content and the media applied.

### **5.3. Conclusion**

#### **5.3.1. Performance of CRE**

The study concluded that the performance of CRE was good due to the use of instructional media in teaching and learning.

#### **5.3.2. Type of Instructional Media**

The study also concluded that the instructional media the teacher mostly used in teaching CRE was boards followed by textbook. It is therefore clear that the schools in Machakos have inadequate instructional materials needed for learning. The study further concluded that the instructional media use by teacher use in conducting CRE lessons was the blackboard. In addition, the study concluded that the most available instructional media in school was printed materials such as books.

#### **5.3.3. Use of Instructional Media in teaching CRE**

The study concluded that majority (90%) of the respondents used instructional media in teaching CRE. The study further established that to a great extent that the boards were the most used instructional media in teaching and learning CRE in schools.

#### **5.3.4. Perception of teachers on instructional media**

The study concluded that use of instructional media has perfected the student learning skills thus improving their academic performance. The study further concluded that majority (71.2%) of the respondents indicated that instructional media enhances the learning of CRE subject. This is because the instructional media enables the learners to grow spiritually and to understand Gods culture.

#### **5.3.5. Challenges Faced Using Instructional Media**

The study concluded that majority (60%) of the respondents indicated that they did not face many challenges when using instructional media in teaching. The challenges included lack of charts in

certain schools which are located in the interior within the sub county. Another challenge is that most topics are not structured to accommodate the use of instructional media. The ratio of the instructional media to that of the student is not directly proportional and students end up sharing which distract their comprehension of the content.

#### **5.4. Recommendations**

From the findings and conclusions of the study, the following recommendations were made;

1. The principals should emphasis the importance of instructional media with the aim of raising the academic performance of the school as it has been proved that instructional media in teaching and learning enhanced the performance of the students.
2. Teachers should make it an habit to use instructional media when teaching CRE.
3. The government should make it a policy requirement that all the instructional media are inspected regularly by the school principals.

#### **5.5. Suggestions for Further Research**

From the findings of the research, since the study was conducted in one county:

1. A similar study should be replicated in the whole country in order to generate a nationwide perspective touching on effect of instructional media on students' academic performance in CRE in public secondary schools.
2. In addition, a similar study should be conducted in other subjects to find out whether the use of instructional media may be effective in improving students in the subjects

## REFERENCES

- Adefuye, M. (2006). *Teacher's Awareness and Extent of Utilization of Information Communication Technologies for Effective Science and Health Education in Nigeria*. Singapore Journal of Scientific Research, 5, 26-58.
- Adeyemo, S.A (2011). *The Effect of Teachers' Perception and Students' Perception of Physics Classroom Learning Environment on their Academic Achievement in Senior secondary schools Physics*. International Journal of Educational Research and Technology, 2 (1), 74 – 81.
- Aggarwal, J. C. (1995), *Essentials of Educational Technology: Teaching Learning, Innovations in Education*. New Delhi: VIKAS Publishing House PVT Ltd.
- Archibald, S. (2006). *Narrowing in on educational resources that do affect student achievement*: Peabody Journal of Education, 81(4), 23-42.
- Asadi, F. & Berimani, S. (2015). *Effect of Audio-visual materials on Iranian school grade eight schoolstudents' language achievement*: International Journal of Language and Linguistics, 3(3), 69- 75
- Ayot, H. O, & Patel, M. M. (1987). *Instructional Methods*. Nairobi: Kenyatta University.
- Ballard, K. & Bates, A. (2008). *Making a connection between students' achievement, teacher accountability and quality classroom instruction*. The Qualitative report, 13 (4), 560-580. Retrieved from <http://www.nova.edu/ssss/OR/OR 13- 4/ ballard pdf>
- Bandiera, O., Larcinese, L., & Rasul, I. (2010). *The impact of class size on the performance of university students*, VOX, CEPR Policy Portal, Retrieved from <http://voxeu.org/article/impact-class-size-performance-university-students>
- Bransford, J. D., Brown, A. L., & Cocking, R.R.(Eds.). (2010). *Executive summary of how people learn*: National Academy Press  
Brown, J. W. and
- Callahan, J. F.& Clark, L. H. (1990). *Teaching in Middle and secondary schools*, Planning for Competence. New York: Macmillan Publishing Company.
- Castle, W. (1984). *Audio-visual materials* MCP up Ltd, Instructional media journal vol, 17, Iss: 2. Advances in Social Sciences Research Journal(ASSRJ) Vol.4, Issue 25 Dec-2017.
- Chinooneka, T.I. & Mupa, P. (2015). *Factors Contributing to Ineffective Teaching and Learning in Primary Schools: Why Are Schools in Decadence?* J. Educ. Pract., 6(19):125- 132.
- Christensen, R., Knezek, G. & Tyler-Wood T. (2014). *Student perceptions of STEM content and careers*. *Computers in Human Behavior*, 3(4) 173-186.
- Dececco, J.P. & Crawford, W.R. (1977). *The Psychology of learning and Instruction*: Educational Psychology. New Delhi. Prentice Hall. India Ltd.

- Corn, A. L., Wall, R. S., Jose, R., Bell, J., Wilcox, K., & Perez, A. (2002). *An initial study of reading and comprehension rates for students receiving optical devices*. *Journal of Visual Impairment & Blindness*, 96, 322-334.
- Davies, A. & Elder, C. (2008). *Computer assisted language learning: The Handbook of Applied Linguistics*. 21st January.
- Dick, W. & Carey, J. O. (2001). *The systematic design of instruction*. New York: Longman Publishers.
- Dinama, B. (2010). *Implementing a multi-faith Religious Education curriculum in Botswana junior secondary schools*, *Perspectives in Education*, 28(1), 16-23.
- Douglass, H. (1964). *The high school curriculum*. USA: Ronald Press Company.
- Erin, J. & Sumranveth, P. (1995). *Teaching reading to students who are adventitiously blind*. *Review*, 27, 103–112.
- Geiser, S. & Santelices, M.V. (2007). *Validity of high school grades in predicting students' success beyond the freshman year*. Research and Occasional Paper Series CSHE.607.
- Godfrey, S. (2012). *Exorcising the colonial jinx: Towards reconciling diversity and pedagogy in Zimbabwe's Religious Education curriculum*. *Journal of Pan African Studies*, 5(1), 1-6.
- Farrant, J.S. (1964). *Principles and practice of education*. England: Longman Group UK Limited.
- Fellenius, K. (2001). *Reading competence of visually impaired pupils in Sweden*. *Journal of Visual Impairment & Blindness*, 90, 237–248.
- Fidanboylu, K. (2014). *Teaching Language with Visual Aids*. Retrieved from <https://colorsofteaching.wordpress.com/about/>
- Gathumbi A. W. (2008). *Benchmarks for English language education practitioners*. Nairobi: Phoenix Publishers.
- Henrich, R. (1990). *Instructional Media*. Singapore: Macmillan Publishing Co.
- Idris, A. O. (2015). *The effect of Audio-visual materials in teaching and learning of speaking of skills in junior secondary schools in Katina State Nigeria*. *International journal of social science and humanities research* 3 (3), 50-58
- Kamunge, (1988). *The Kenya presidential working party on the education and manpower development for the next decade and beyond*: Nairobi: Government Printer.
- Karanja, P.M. (2015). *Management of Teaching and Learning Resources in Primary Schools in Kandara Division, Kandara District, Muranga County, Kenya*. Master of Education Unpublished Dissertation, Kenyatta University.

- Karemera, D., Reuben, L.J., & Sillah, M.R. (2003). *The effects of academic environment and background characteristics on student satisfaction and performance: The case of South Carolina State University's School of Business*. *College Student Journal*, 37(2), 298-309.
- Kenya Institute of Education (KIE) (2000). *CRE Form Three Teacher's Guide*. Nairobi: Kenya Literature Bureau.
- Kenya National Examination Council, (2006). *Secondary School Examination*. Report Book.
- Kimui, W. (1990). *A study of availability and use of learning and teaching resources in PTCs in Kenya*. Nairobi: Unpublished PhD Thesis. KU.
- Kocchar, S. (1990). *The teaching of History*. New Delhi: Sterling publisher Ltd.
- Kombo, D. K. & Tromp, D. L. (2006). *Proposal and thesis writing*. Nairobi: Paulines Publications of Africa.
- Kothari, C. R. (2004). *Research Methodology: Methods and Techniques*. New Delhi: New Age International (P) Ltd.
- LaGrow, S. (2000). *Effects of training on CCTV reading rates of visually impaired students*. *Journal of Visual Impairment & Blindness*, 75, 368-372.
- Lowther, D. L., Inan, F.A., Daniel, J., & Ross, S.M. (2008). *Does technology integration 'work' when key barriers are removed?* *Educational media international*, 45(3), 195-213.
- Makewa, L.N, Role, E., Ngussa, B. (2012). *Usefulness of Media Resources in English Instruction: A Case of Adventist secondary schools in Tanzania*. *J. Educ. Pract.*, 3(15):163- 172
- Miranda, H., & Russell, M. (2011). *Predictors of teacher-directed student use of technology in elementary classrooms: A multilevel SEM approach using data from the USEIT study*. *Journal of Research on Technology in Education*, 43(4), 301-323. Retrieved from EBSCO host.
- Mizoguch. R., Dillenbourg, P & SHU, S. (2006). *Learning by effective utilization of technologies*.
- Monda, T.M (2012). *Influence of Teaching and Learning Materials on Children Performance in Pre-schools in Borabu district, Nyamira County, Kenya*. Master of Education Unpublished Dissertation, University of Nairobi
- Monks, J. & Schmidt, R. (2010). *The impact of class size and number of students on outcomes in higher education*, Cornell University, School of Industrial and Labor Relations, Retrieved from <http://digitalcommons.ilr.cornell.edu/workingpapers/114>
- Mugenda, M. O. & Mugenda, A. G. (1999). *Research methods: Qualitative and Quantitative approaches*. Nairobi: Acts Press.

- Mugenda, M. O. & Mugenda, A.G (2003). *Research methods: Qualitative and Quantitative approaches*. Nairobi: Acts Press.
- Mukwa, C.W. & M.M. Patel, (1986). *Design and use of Education Media*. Nairobi: Government Printer Kenyatta University.
- Ministry of Education, (2003). *Secondary education syllabus*.
- Ministry of Education, (2007). *Kenya education sector support programme: Procurement procedures manual for secondary schools and colleges*. Nairobi: Government Printer.
- Naumy, J. (2012). *Efficiency in the use of Instructional Resources in Public Primary Schools: A Case of Kapseret Zone, Wareng District, Kenya*. Master of Education Unpublished Dissertation, Kenyatta University.
- Naz, A.A., Akbar R.A (2010). *Use of Media for Effective Instruction and its importance: some consideration*. J. Element. Educ., 18(1-2):35- 40.
- Neo, M. (2007). *Learning with multimedia: engaging students in constructivist learning*. International Journal of Instructional Media, 34(2), 149-158.
- Owusu, K.S. (2009). *Instructional Media as a tool for ensuring quality teaching and learning for Pupils in the Junior High Schools (Selected Schools In The Kumasi Metropolis) (Master's thesis, Kwame Nkrumah University of Science and Technology, Kumasi)*. Retrieved from <http://ir.knust.edu.pdf>.
- Regier, J. (2011). *Applied Science and Technology Scholarship: Why is Academic Success important?* Regina: Saskatchewan School Boards Association.
- Scott, R. W. (2008). *Organizations and organizing: Rational, natural, and open systems perspectives*. Upper Saddle River, NJ: Prentice Hall.
- Senge, P. (2006). *The fifth discipline: The art and practice of the learning organization* New York, NY: Currency/Doubleday.
- Seth, O.K. (2009). *Instructional Media as a Tool for Ensuring Quality Teaching and Learning for Pupils in the Junior High Schools (Selected schools in the Kumasi Metropolis)* Master of Education Unpublished Dissertation, Kwame Nkrumah University of Science and Technology, Kumasi).
- Slavin, R.E. (2010). *A synthesis of research on language of reading instruction for English Language Learners*. Review of Educational Research, 75(2), 247-254
- Taylor, W. C. & William, F. E. (1966). *Instructional media and creativity*. London: John Willey and Sons, Inc.
- Tairu, B. (1987). *Visual aids appeal to the sense of sight audio- visual appeals to the both senses of learning*.

Talabi, J. K. (2001). *Educational Technology*. Accra Universal Press.

The World Book Encyclopedia (2001). U.S. A: Onyx

The Germany Agency for Technical corporation (GTZ), (1979). *Basic Training Course in Systematic Curriculum Development Course Five: Curriculum Implementation*

Twoli, N. W., Maundu, J. N., Muindi, D. M., Kiio, M. (2007). *Instructional methods in education*. Nairobi: KIE.

University of Nairobi and Agency for Technic Corporation (GTZ), UON. UNESCO (1975). *Recommendation concerning the status of teachers*. Paris: UNESCO.

Unwin, D. (1978). *Media and methods: Instructional technology in higher education*. London: McGraw-Hill Publishing Company.

Wamalwa EJ, (2016). *Towards the Utilization of Instructional Media for Effective Teaching and Learning of English in Kenya*. J. Educ. Pract., 5(31):140- 148

Wambui,S.E. (2013).*Effects of Use of Instructional Material on learner participation in Science Classroom in Preschool in Kiine Zone Kirinyaga County Kenya*. (Master 's Thesis, University of Nairobi). Retrieved 11/11/2017 from cees.uonbi.ke/site.

Wambura C (2017). *The Extent of Computer Usage among School Teachers and Students in Ilala Municipality, Dar es Salaam*. Master of Education Unpublished Dissertation, The Open University of Tanzania.

WootingPong, K. (2014). *Effective of using video materials in teaching and learning skills for University Students in Thailand* – International Journal of Linguistics 6(4) 200- 212

Young,S,H. (2006) *A study of innovative uses of ICT in primary education in Facilitating intercultural understanding*. Amsterdam: 15 press.

## APPENDICES

### APPENDIX A: LETTER OF INTRODUCTON TO THE RESPONDENTS

SHARON MUEKE KASILIA

P.O. BOX 39-90100

#### Machakos

Dear Respondent,

#### **RE: REQUEST TO VISIT YOUR SCHOOL FOR DATA COLLECTION**

I am a post-graduate student at the Machakos University, pursuing Masters of education in Department of Communication Technology. I am conducting a study on the *effects of instructional media on student academic performance in CRE in public secondary schools in Machakos Sub County.*

I am requesting for permission to visit your school to collect data, your assistance and cooperation will be highly appreciated. Please comply and give your honest and accurate information as per the questionnaire.

Thank you in advance.

Yours Sincerely,

**SHARON MUEKE KASILIA**

**Mobile No. 0716-721542**

## **APPENDIX B: STUDENT QUESTIONNAIRE**

This questionnaire is designed to gather information to be used in the study on the effect of instructional media on student academic performance in CRE in public secondary schools in Machakos Sub County. All data collected will be treated with strict confidence and will only be used for research purposes. Please tick in the correct ellipse that applies to your answer and fill in the blank spaces given with the answers you may wish to give. Do not put your or any other form of identification.

### **SECTION A: Demographic information**

1(a). What is your gender?

(i) Male [ ]

(ii) Female [ ]

(b). What is the type of your school?

(i) National school [ ]

(ii) Extra County School [ ]

(iii) County school [ ]

(iv) Sub – County School [ ]

### **SECTION B. Performance of CRE**

2. How do you rate the performance of CRE in your school?

Excellent (Grade A), Very Good (Grade B) Good (Grade C+), Average (Grade C), Below  
Average (Grade C)

Excellent [ ]

Very Good [ ]

Good [ ]

Average [ ]

Below Average [ ]

**SECTION C: Types of Instructional Media used in Teaching CRE**

3. Which Instructional media (learning materials) among those listed below does your teacher use in conducting the CRE lessons?

a) Films [ ]

b) Blackboard [ ]

c) Video and T.V [ ]

d) Radio cassettes [ ]

e) Text books [ ]

f) Pictures [ ]

g) Hand-outs [ ]

h) Charts [ ]

i) Over Head Projector [ ]

j) Slides [ ]

k) Any other .....

**SECTION D. Use of Instructional Media in Teaching CRE**

4. How often does the teacher use the media you have just ticked above?

<b>Instructional media</b>	<b>Very often</b>	<b>Often</b>	<b>Less often</b>	<b>Rarely</b>	<b>None at all</b>
Films					
Over Head Projector					
Pictures					
Charts					
Textbooks					
Blackboard					
Radio cassettes					
Hand-outs					
Video and T.V					
Slides					

(k) Any

other.....  
.....

**SECTION E. Effect of instructional media in teaching CRE**

5. (a) Does the use of instructional media in Question four (4) above enhances your learning of CRE subject?

Yes [  ]

No [  ]

(b) If your answer for 5 (a) is YES, in what way does the use of the resources by the teacher make a difference to your learning of the subject?

.....

.....

.....

## APPENDIX C: TEACHERS' QUESTIONNAIRE

The questionnaire below aims at gathering information from the CRE teachers on their use of instructional media in teaching of the CRE during lessons in enhancing the learning of their students in CRE subject.

### SECTION A. Demographical Information

1. What is your gender?

Male [  ]

Female [  ]

2. What is your highest professional qualification? (Please tick)

DIPLOMA LEVEL [  ]

DEGREE LEVEL [  ]

MASTERS DEGREE LEVEL [  ]

3. During your professional training, were you trained on how to use instructional media to teach in a secondary school?

Yes [  ]

No [  ]

4. How many periods do you teach in a week?

.....lessons

**SECTION B. Performance of CRE**

5. How do you rate the performance of CRE in your school?

Excellent (Grade A), Very Good (Grade B) Good (Grade C+), Average (Grade C), Below

Average (Grade C)

Excellent [ ]

Very Good [ ]

Good [ ]

Average [ ]

Below Average [ ]

**SECTION C. Types of Instructional Media used in Teaching CRE**

6. (a) which Instructional media below do you use in teaching CRE in your school?

Type of Item	(Please tick)
The Over- head projector	
Boards	
Film projector	
Slides	
Picture	
Cassette recorder	
Video tape	
Pictures	

Charts	
Models	
Cameras	
Radio	
Television	
Text- book	
Hand-out	

(b) Which Instructional media below is available in your school for teaching CRE? (Tick)

(i). Printed materials e.g. books

(ii). Audio e.g. tapes

(iii) Visual aids e.g. video

(v). Any other (specify) .....

**SECTION D. Use of Instructional Media**

7. Do you use instructional media in teaching CRE? (Please tick)

Yes

No

8. How often do you use each of these instructional media?

Type of Item	Very often	often	Sometimes	Rarely	Not at all
Over- head projector					
Slides					
Film projector					
Boards					
Charts					
Cassette recorder					
Video tape					
Pictures					
Models					
Cameras					
Radio					
Television					
Text-book					
hand-out					

**SECTION E : Effect of Instructional Media in Teaching CRE**

9. Indicate the extent of agreement on the following statement on effect of instructional media on teaching and learning CRE

Statement	SA	A	N	D	SD
CRE teacher always use instructional media always in teaching					
Use of instructional media has effect on student's academic performance					
Use of instructional media in teaching motivate learners in class					
School administrators encourages use of instructional media in teaching CRE					
CRE instructional media are available for teaching/learning in school					
Different instructional media affect student's academic performance					
Use of instructional media has perfected the student learning skills thus improving their academic performance					

**SECTION F. Challenges when using Instructional Media to teach CRE**

11. Do you face challenges when using Instructional media in teaching CRE?

Yes [ ]

No [ ]

12. If “Yes” in question 12 above, mention the challenges

.....

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13. Give suggestions on how to deal with the above challenges.

.....

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.....

## APPENDIX D: WORK PLAN

<b>Activity</b>	<b>Duration in Months</b>
Problem identification and review of the related literature	July 2017
Proposal write-up	December 2017
Submission of the proposal to the department for examination	February 2018
Defense	May 2018
Data collection, Piloting and review of research instruments	July 2018
Data analysis	August 2018
Submission of proposal for examination	September 2018
Defense	October 2018
Corrections and Submission of final draft to Graduate School	October 2018
Graduation	November 2018

## APPENDIX E: RESEARCH BUDGET

<b>SNO</b>	<b>ITEM</b>	<b>AMOUNT</b>
<b>1</b>	Printing paper (10Reams)	<b>5,000</b>
<b>2</b>	Typing expense	<b>8,000</b>
<b>3</b>	Binding	<b>10,000</b>
<b>4</b>	Photocopying	<b>5,000</b>
<b>5</b>	Laptop	<b>50,000</b>
<b>6</b>	Transport	<b>20,000</b>
	<b>GRAND TOTAL</b>	<b>98,000</b>



**APPENDIX G: RESEARCH PERMIT**

**THIS IS TO CERTIFY THAT:**  
**MS. SHARON MUEKE KASILIA**  
**of MACHAKOS UNIVERSITY, 39-90100**  
**Machakos, has been permitted to**  
**conduct research in Machakos County**

**on the topic: EFFECTS OF**  
**INSTRUCTIONAL MEDIA ON STUDENT**  
**ACADEMIC PERFORMANCE IN CHRISTIAN**  
**RELIGIOUS EDUCATION IN PUBLIC**  
**SECONDARY SCHOOLS IN MACHAKOS**  
**SUB-COUNTY, KENYA.**

**for the period ending:**  
**19th July,2019**

**Applicant's**  
**Signature**

**Permit No : NACOSTI/P/18/46671/23951**  
**Date Of Issue : 20th July,2018**  
**Fee Received :USD 9**



*[Signature]*  
**Director General**  
**National Commission for Science,**  
**Technology & Innovation**

**CONDITIONS**

1. The Licence is valid for the proposed research, research site specified period.
2. Both the Licence and any rights thereunder are non-transferable.
3. Upon request of the Commission, the Licensee shall submit a progress report.
4. The Licensee shall report to the County Director of Education and County Governor in the area of research before commencement of the research.
5. Excavation, filming and collection of specimens are subject to further permissions from relevant Government agencies.
6. This Licence does not give authority to transfer research materials.
7. The Licensee shall submit two (2) hard copies and upload a soft copy of their final report.
8. The Commission reserves the right to modify the conditions of this Licence including its cancellation without prior notice.

  
**REPUBLIC OF KENYA**

  
**National Commission for Science,**  
**Technology and Innovation**

**RESEARCH CLEARANCE**  
**PERMIT**

**Serial No.A 19615**  
**CONDITIONS: see back page**

## APPENDIX H: NACOSTI AUTHORIZATION



### NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY AND INNOVATION

Telephone: +254-20-2213471,  
2241349, 3310571, 2219420  
Fax: +254-20-318245, 318249  
Email: dg@nacosti.go.ke  
Website: www.nacosti.go.ke  
When replying please quote

NACOSTI, Upper Kabete  
Off Waiyaki Way  
P.O. Box 30623-00100  
NAIROBI-KENYA

Ref. No. **NACOSTI/P/18/46671/23951**

Date: **20<sup>th</sup> July, 2018**

Sharon Mueke Kasilia  
Machakos University  
P.O. BOX 136 – 90100  
**MACHAKOS.**

#### **RE: RESEARCH AUTHORIZATION**

Following your application for authority to carry out research on *“Effects Of Instructional Media On Student Academic Performance In Christian religious education in public secondary schools in Machakos Sub-County, Kenya”* I am pleased to inform you that you have been authorized to undertake research in **Machakos County** for the period ending **19<sup>th</sup> July, 2019.**

You are advised to report to **the County Commissioner and the County Director of Education, Machakos County** before embarking on the research project.

Kindly note that, as an applicant who has been licensed under the Science, Technology and Innovation Act, 2013 to conduct research in Kenya, you shall deposit **a copy** of the final research report to the Commission within **one year** of completion. The soft copy of the same should be submitted through the Online Research Information System.

  
**BONIFACE WANYAMA**  
**FOR: DIRECTOR-GENERAL/CEO**

Copy to:

The County Commissioner  
Machakos County.

The County Director of Education  
Machakos County.

*National Commission for Science, Technology and Innovation is ISO9001:2008 Certified*