



**ADDIS ABABA UNIVERSITY**

**COLLEGE OF EDUCATION AND BEHAVIOURAL STUDIES**

**DEPARTMENT OF EDUCATIONAL LEADERSHIP**

**PRACTICES AND CHALLENGES OF UTILIZING OF INSTRUCTIONAL  
MEDIA IN SECONDARY SCHOOLS OF HALABA SPECIAL WOREDA  
IN SOUTH NATION NATIONALITY REGION**

**M.A THESIS**

**BY: SOLOMON HANDISO**

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**EXAMINERS APPROVAL SHEET**

As members of the Examining Board of the Final MA Thesis Open defense, We certify that we have read and evaluated the Thesis prepared by Solomon Handiso entitled “ Practices and Challenges of Utilization of Instructional Media in Secondary Schools of Halaba Special Woreda in South Nation Nationality Region” and examined the candidate. We recommended that it be accepted as fulfilling the thesis requirement for the Degree of Masters of School leadership.

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Name of Chairperson

Signature

Date

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Name of Internal Examiner

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Date

-----

Name of External examiner

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Date

Final approval and acceptance of the thesis is contingent upon the submission of the final copy of the thesis to the Council of Graduate Studies through the school of graduate Studies, Graduate Committee of the candidate 's department.

As thesis research advisor, I here by certify that I have read and evaluated this thesis prepared , under my guidance and recommend that it can be accepted as fulfilling the Thesis requirement.

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Advisor Name

Signature

Date

## **Approval sheet (for theses)**

This is to certify that the Thesis titled “ practices and challenges of utilization of instructional media in secondary schools of Halaba Special Woreda in SNNPRG ” is the original work of SOLOMON HANDISO done under my close supervision and submitted for examination with my knowledge as a university Advisor.

ATO TILAHUN FANTA

Signature -----

Date -----

## DECLARATION

I, the undersigned, declare that the work described in this thesis has been carried out entirely by me in the department of Educational Leadership, Addis Ababa University during the period 2018 – 2019 is my original work, has not been presented for Degree or Diploma in any other University and that all sources of material used for the thesis have been duly acknowledged.

Declared by

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Solomon Handiso

Signature

Date

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## ABSTRACT

*The purpose of study was investigated the practices and challenges of utilization of instructional media in secondary schools of Halaba special woreda in south nation nationality region. A descriptive survey design was used. The total sample size of the study respondents from 4 secondary schools 96 teachers and 10 principals . 10 principals were interviewed, and 96 teachers were participated for questionnaire and observation checklist reared for qualitative survey. The analysis of the data revealed that there is a significant practices of instructional media during the class and challenges that discourage teachers from using instructional media. The study found instructional media like electronic media, charts, pictures, models, local teaching materials, real objects, flip charts, globs, maps were used in low extent with 68.8%, 50, 67.7, 62.5,60.4, 64.6, 60.4, 62.5, 56.25, responses rate respectively. Besides this, the knowledge and practice of using instructional media is limited to the usage. Even though the school government and school administration declared planning as utilization of instructional media in this study. The major constraints were low encouragement, lack of commitment, low attention, lack of time, lack of interest, lack of facilitate and lack of material resource. Generally the issue under discussion needs to be improved through training, community sensitization, ,coordination, motivation, experience sharing, and maintaining adequate resources are recommended for the betterment.*

## CHAPTER ONE

### 1. INTRODUCTION

#### 1.1 Back ground of the study

Instructional media is modes of communication in which teaching take place , such as instruction by face to face interaction , lesson by radio , deployment of curricula or interactive learning via the internet , and so forth .It is used to refer to a means of transmitting knowledge and skill to the adult learns using electronics devices to easy teaching – learning process . 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 material such as chalk boards handouts, charts , slides , over heads , real objects , and video tape or film as new material and methods such as computers , DVDs CD ROMs ,internet and interactive video conferencing .

An important aspect in secondary school teachers is the use of instructional media to reinforce learning. Such instructional media include three dimensional objects ,for example real objects, specimens, models, television boxes , audio-visuals, projectors, graphic designs, template maps ,chalk boards ,digital equipment among others.

According to Means (1994), the use of instructional media by teacher helps teachers develop new models of teaching the required content areas. As observed by Zhao and Frank (2001), instructional media help teachers put together different aspects of the curriculum, direct student learning, model real world tasks. Confirming the same, Worth, (1986) notes that every hour a teacher speaks only 8- 10 minutes of the information given is retained in the learner mind.

The inclusion of instructional media by teacher during teaching enables the student to access new ideas such as way to study themes, how to access information that is difficult to find and how to present information using different instructional media .Besides instructional media can provide continuing support for teachers during the class (USA congress Office of Technology Assessment; 1995). Many teachers who use instructional media find that it can help them improve motivation and learning, address students with different learning abilities, expose students to a wider world of information and experts and implement new teaching techniques.

People acquire much of their knowledge by use of their senses (Narayan,1995) psychologists have matched human senses with the respective percentages of learning that takes place.

According to Mwololo (2009), the sense of taste accounts for 1 percent, touch 1.5 percent, smell 3.5 percent, hearing 11 percent, and sight 83 percent of total learning. Most learners engage the sense sight in communicating and gaining learning experience. It is suggested that teachers need to engage use of instructional material during teaching as this prompt learners to use their eyes during instruction. Berndt (1977) suggests that teachers should stimulate learners sense for attention to what can be seen researchers have called for futures teachers to improve their teaching practices in classroom situations (Mangal and Mangal, 2010). By using a learning method which encourages students to design and produce instructional media. The study contains that instructional media form a focal point and attract attention arose interest hence promoting a desire to learn and supplement description. This helps to explain words and processes, stimulate the learner's imagination, illustrate relationships and promote retention and memory besides saving teaching time.

In a study of primary school teachers training colleges in Nigeria, Onasanya (2008) confirmed that instructional materials stimulate learning because firstly student teachers get more attentive and secondly, student teachers positive attitude generates more interest for lessons they learn or teach. This enhances student teachers participation in class activities, promote their performance in trainee teacher examination and improve their teaching process (Adeyanju, 2003; Kadzera, 2006; Onasanya; 2002).

The vital role of instructional media (I.M) in the successful implementation of teacher training curriculum cannot be over emphasized. jimo (2009) noted that the use of instructional media ,in teaching in necessary practice for effecting learners behavior change In all fields of learning ,with a variety of these in the class room , both teaching and learning becomes pleasant experiences where learners enjoy to maximum .Teacher goes through less stressful moments since instructional media brings reality in classroom.

In Halaba special woreda in the selected schools there is low use of instructional media. The current study would be conducted in Halaba special woreda selected secondary schools to use different types of instructional media. As observed, studies on teacher's use of instructional

media during teaching most are not ready to use effectively. Some of the challenges impeding utilization of instructional media are inadequate: teachers to prepare materials, personal knowledge about instructional media . It is the challenges that the current study intended to fill this gap.

## **1.2 Statement of problem**

The major aim of education is to bring about socially and mental change in children personality. This every increasing social demand for education has led to the perpetual extension of education services. This extension is not simply limited to increase the number of educational personal ,extension of education system. When appropriately used with students, instructional media can provide variety of ways to help students be more productive/became more engaged in instructional activities and learn more effectively (2002) cited in Ra (2002).

In secondary schools the subjects that are given to learner should be more realistic to make it as so in accordance , media not only make learning more in retesting and , but also accustom students to the reality and immediacy In their everyday lives and enables students to read critically , listen critically , and observe critically .

Garrett (2002) cited in Rao (2002) recognize the power of media integration in erasing the line between theory and practice. Asegedom (1998) observation in the earlier study in Ethiopia which noted the lack of required instruction media resources is one of the reasons for teacher's limited use of instructional media.

In Halaba special woreda there are eight secondary schools. According to the woreda education office information center most of the secondary school teachers did not practice utilization of instruction media .So the existed problem decreased students performances. Thus, the purpose of this study is to identify the problems that prevent the secondary school teachers from using instructional media in the class room.

Based on practice and challenges of utilization of instructional media the researcher tries to answer the following questions

- 1 To what extent the available instructional media are utilized secondary schools of Halaba special woreda teachers ?
- 2 To what extent teachers affected in utilizing teaching media appropriately?
- 3 What are the factors that discourage teachers from using instructional media?
- 4 What roles are played by school principals, teachers, school pedagogical center to overcome utilizing of instructional media?

### **1.3 Objectives of the study**

The main objectives of the study is to assess and investigate the practice of instructional media in Halaba special woreda particular emphasis to selected secondary schools from grade 9- 10 specifically the research aimed to :

- Analyze the available practices and challenges of utilization of instructional media.
- Explore the contribution of instructional media during the class
- Assess what role to teachers and principals play in utilization of instructional media.

### **1.4 Delimitation of the study**

The researcher confined to conduct the study in four first cycle secondary schools (9- 10) of Halaba special woreda:-

Kulito secondary school guba secondary school ,Abokicho secondary school ,Halaba secondary school in addition the study delimited itself to address the major problems and current practice of utilization of instructional media .The study was conducted only on governmental secondary schools .

### **1.5 Limitation of the study**

It is clear that researcher work cannot be free from constraints. For the matter, limitations were observed in this study. Lack of adequate time to accomplish the study in a smooth manner. Lack of adequate literature related to the topic understudy, which could have support the researcher to enrich the study, lack of adequate financial support were the major limitation of the study.

## 1.6 Significance of the study

The researcher believed that the outcome of this study provided information on the utilization of instructional material by secondary school teachers. A description of the factors influencing utilization of instructional media in teaching may serve as a basis of recommendations for policies and practices to be put in place by the Ministry of Education to enhance the teachers use of instructional media in teaching. Determining teachers' usage levels of instructional media in the class room. It is further expected that the study enrich secondary school teachers 'skills in selection and integration of instruction media in teaching. Finally the study was add valued data to the existing literature in teacher education

## 1.7 Definition of key terms

**Instructional media** - Teaching and learning aids used by secondary school teachers for instruction which include : print media , chalk board ,flip chart , computers , slide projects , and locally available resources such as globe made from clay and articulated by a bamboo , which can be illustrate rotation of the earth .

**Motivation** -- This refers to that an inner drive secondary school teachers to use instructional media which include: time, support, encouragement, appreciation and rewards during graduation provision of technical support to help teachers when problems occur while using instructional media.

**Time support:** - time availed in the syllabus to be used by secondary school teachers to facilitate production and use of instructional media.\

**Utilization of instructional media:** - refers to the frequency with which secondary school teachers use instructional media when teaching.

### **1.8. Organization of the study**

The research consisted of five main chapters. Chapter one deals with introduction and statement of the problem .The second chapter treats review of related literature. In the third chapter the methodology of the research design was described. In the fourth chapter the analysis of data and interpretation was presented; finally the last chapter comprises the conclusion and recommendations.

## CHAPTER TWO

### 2 REVIEW OF RELATED LITERATURE

#### 2.1 INTRODUCTION

This chapter presents the reviewed literature related to this study .The specific areas discussed include :

Types of instructional media , Teachers utilization of instructional media in teaching , factors influencing the use of instructional media , strategies that could enhance utilization instructional media , use of instructional resources in teaching and learning , selected instructional resources used in teaching and summery of related literature .

#### 2.2 Types of instructional media

Instructional media is designed to provide realistic images and substitute experience to reach curriculum experiences . The media is considered the most efficient facilitators in the education set up .

This media is not a substitute for the teacher . Its utilization however ,calls for imaginative approach by the teacher who needs to constantly be on the alert for new ideas and techniques to make lessens presented with different instructional media achieve effective outcomes (Talabi, 2001) .

##### 2.2.1 Chalkboard

Literature reviewed in this study noted various instructional media identified by other scholars that have been used in teacher training . such media include chalkboards flip charts ,computers ,slides ,real objects ,print media including books and charts (Aila , 2005; Begi 2007; Blythe – Lord, 1991 ;Kadzera, 2006;Mwololo, 2009 Ngaroga ,1996 ;Onasaya ,2008 ; Wankat and Oreovicz , 2001 ;Willians ,2003 ) .The studies further elaborated the advantages of using the chalkboard for example ,it enhance teachers “classroom presentation in all subject , it is freely available in most classrooms , it needs no power (apart from electronic white boards ) ,it is user

friendly ,it can use a variety of color and can be used with a variety of other materials for a board ranges of teaching strategies ( Kadzera ,2006 )

Next to the text book , the most commonly used aid by the mathematics teacher is the chalk board . A chalk board is a teaching and learning aid which, in the hands of teacher , can be made to convey a visual message . Since the teacher makes his own impressions on it , the manner in which he uses the chalk board is regarded as a guide to his efficiency . Compared to other teaching and learning aids the chalk board provides an opportunity for creativity and initiative (Patel , 1993). Mathematics teachers can creatively use the chalk board to organize class discussions. However, when used poorly, the same chalk board can obscure instructional objectives and make students frustrated . This may happen if a teacher does not organize his/her work well on the chalk board or if work is erased before learners have taken notes or followed the steps.

The chalk board as a visual aid provides an immediate mode of presentation of material. This is because most aspects of mathematics can be clarified only through writing on the black board . Its uses are wide and varied and teachers should consider these uses in developing and executing their plans . The chalk board is uniquely suited to make the following contribution: providing a medium participation of the students in class activities emphasizing on major points by giving outlines and summaries, it permits point by point development and a reference as the lesson progresses , present assignments , problems, or discussion questions and combine visual and oral presentation of ideas (Mutunga, 1992). As a medium for participation of the students in class activities the teacher may allow students to work out mathematical problems or draw mathematical shapes on the chalk board . This helps students to develop confidence in their work as the teacher notes the students' weak area that need further clarification. Students also challenge one another as they solve mathematical problems on the chalk board and this motivates and excites them making mathematics lessons more interesting.

There is need for mathematics teachers to improve on their chalk board use for them to do effective chalk board work. This is because the chalk board is a vehicle for the teacher's instructions information and illustrations he/she wishes to convey to his students. The use of chalk board can be improved in many ways. First, by writing clearly neatly, and correctly,

combining writing and speaking , not erasing the board too quickly , using very large figures so that all class members can see . Secondly, by ensuring drawings are made simple and accurate using stencils and drawing instruments to give pleasing, accurate figures. It makes presentations realistic by giving attention to perspective and color thirdly, by arranging frequent student participation in chalk board

work . Board work has the advantage of requiring physical and emotional involvement as well as mental activity. Fourth, using colored chalk to identify key ideas, to add attractiveness, and relationships. For example, use of color to distinguish between symbols of operations and signs of positive and negative numerical . Lastly, by ensuring

that there are adequate materials ; a variety of available chalk board tools that can be used improve chalk board work .

### **2.2.2 Flip charts and Pictures**

Flip charts are certainly one of the most popular instructional media though not the most sophisticated visual aids available today .They are simple inexpensive ,versatile and when used with thoughtful creativity , they are highly effective (Naimova ,2008 ) . Also materials for flip charts production in the Kenyan context are inexpensive ,readily available and can be easily improvised from old calendars and other plain paper , teachers donot exploit there knowledge and creativity to improvise them as trained

(Ngaroga , 1996 ) .

Pictures are drawing real objects and can be used to teach mathematics topics like common slides , three dimensional geometry , surveying and many others . Drawing walls for teaching different concepts .charts are essential visual summaries of information in the teaching learning process . charts can bring out steps in mathematics problem solving . pictures and charts serve different purposes in teaching . Whereas pictures help to illustrate and bring a sense of reality to what it taught , charts contain the. Lesson materials it self. While pictures are used to stimulate interest , create correct impressions and bring lessons to life , charts are more useful as a means of presenting the material that is to be learn in a memorable form and as such often play a central role in a lesson or a concluding part (farrant, 1964) . This study sought to establish whether

mathematics teachers in public secondary schools were using pictures and charts in teaching and if not find the possible challenges .

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### **2.2.3 Improvised Slides**

Another set of instructional media include improvised slides which are prepared on strips of paper rolls that are divided in to sections to tell parts of story . Sequenced pictures of stories are drown on the long rolls which are then fixed in closed carton boxes using road sticks either end .

### **2.2.4 Print media**

Onasanya (2008) explance that print media is one of the oldest and most widely used media in education . such media are useful informational or motivational purposes .They include text books , syllabuses ,course books ,pre – school guide lines ,periodicals ,encyclopedia ,newspapers ,and magazines , file records and minutes and meetings . They can provides a good resource for pre – primary school college tutors to structure their schemes of work ,lesson plans and notes . This can be emulated by the secondary school teachers during in their class room practice. Sometimes print media organize instructional content and they can be used as basic instructional guide .

### **2.2.5 Local resources**

The use of local resources is usually associated with improvisation where the teacher devise a substitute original material is not available .Kadzera (,2006) give an example of a globe made from clay and articulated by a bamboo ,which can be used to illustrate rotation of the earth .

Improvisation here emphasizes the ability to make the item look like and function in the same way as the original material this helps students have true picture of the situation

Pre – primary school college tutors need creativity and skills to enable the use available materials to produce instructional media. Real eliminates distortion a student’s “on topics being thought ” .

### **2.3Teachers utilization of instructional media in teaching**

Instructional media is perceived as a very important teaching – learning process

( Kadzera, 2006) . The use of instructional media in teaching stimulates learning because students become more attentive .It also process students interest and enhance their participation in class activities .

It also rouses students interest and enhances their participation in class activities. Consequently it improves the teaching process since it promotes performance in class room situations . This is confirmed in a study by Alssen (2012)which investigated university students perceptions of learning English for taught languages Centers . Instead of teacher- centered methods ,the courses used a student- centered method where by small groups of students designed ICT –enhanced instructional materials for learning English for specific purposes (ESP) .The materials were published on the internet where they were writing as well as in domain – specific vocabulary . This supposes that student teachers who are exposed to preparation and utilization of instructional media would post improved performance and hence tutors are called upon to use instructional media to reinforce learning .

The utilization of media in instruction can provide teachers "access to new idea such as a ways to study themes , how to access information to that is difficult to find clarification of difficult or concepts and how to present information using different instructional media besides , media can provide continuing support after courses end ( USA Congress office of Technology Assessment , 1995 ) .

Many teachers who use instructional media find that it can help them improve student learning and motivation , addresses students with different learning abilities exposes students to a wider world of information and experts and implement new teaching techniques in all levels in learning colleges . Means (1994) reports that the use of instructional media in teacher training college helps trainees new models of teaching learning content areas many researches have therefore called for emphasized , the importance of utilization of instructional media in teacher training ,(Begges, 2000 , Clark et al, 2006 ). This inclusion has the potential for future pre - primary teachers to improve their teaching practices .interactive instructional media has been used with pre- service teachers to improve their training and hence the quality of elementary education (Bitner and Bitner , 2002 ; Clark et al 2006 ). The potential of interactive multimedia for teaching has been discussed extensively. Palk and Carlson (1991) in study of a group pre-service teachers using multimedia program , found multimedia to be an effective approach providing pre - service teachers .

A study conducted by Begi (2007) reveler that the difference between pre - school and lower primary school male and female teachers ; instructional computer use was not significant Clark and Wiebe (2001) found that their was no significant difference in computer usage by gender and race . Reinen and Plomp (1997) reported that males were using computers more than females . A study Becker (2000) also revealed that male teachers were using computers more than female teachers . This was because male teachers used school computers twice as many hours per week as the female teachers did. .

#### **2.4 Factors influencing the use of instructional media**

Some of the factors which appeared to influence the use of instructional media are tutor motivation, availability of instructional media , and attitude towards instructional media as discussed.

### **2.4.1 Teaching experience**

The number of teachers years of teaching experience influences the use of instructional media .in a study on how personal familiarity with instructional media influences its implementation , Barnard (2007) found that “ acquisition of computer skills is neither smooth , nor linear ; it takes time and aspiration “. Barnard (2007) further explains that the more experienced a teacher is with any of instructional media the more he/she will appreciate in it and implement it his/her field . A study done by Moore,Morales and Carel (2004) found that more than 50% of the 298 teachers with zero to two years of experience in teaching received high scores on the section concerning implementation of instructional media . The authors assert that the factor could be attributed to recent graduation from teachers training and exposure to instructional media than their senior colleagues . The current study set to establish whether the use of IM during training of pre-primary school teachers has any influences on their utilization of instructional media.

### **2.4.2 Teachers Motivation**

Tutor motivation refers to the application certain measures that tend to energize the teacher in the work place and which in turn encourages the use of instructional media. Motivators are the factors that energize workers to perform in order to achieve set objectives (Herzberg, 1968) . For instance how interesting it is ,how much opportunities does it avail for success , how much does it yield to recognition and promotion of the worker.

In a survey to establish how many teachers prefer to remain in the teaching profession , Moore, Harrison, and Donaldson (2005), report that teachers , who already have too much class work and school responsibilities , may find that instructional media require additional time to learn and prepare them for using in the classroom . The study which involved 276 respondents found teachers confirming that they have may feel they have no adequate time to use instructional media .Sammons (1994) reports that lack of time for teachers to learn about computers instruction in schools may de motivate them from computer use .

### **2.4.3 Availability of instructional media**

Availability of instructional media encourages its usage . According to Majed (1996) , for technology to be exploited in an environment , it must first exist . This means that if college tutors are to use instructional media in their teaching , then the resources should be made available in the college environment . The qualitative study which was conducted on 143 student teachers on their use of instructional media found that more than half of the respondents indicated unavailability of instructional media in classrooms . This was echoed by Kadzera (2006) in a survey on use of instructional technologies in five teacher training colleges in Malawi where classroom facilities like power sockets were vandalized or were not there at all for use with instructional media . Kadzera (2006) further reports that lack of instructional media resources is one of the reasons contributing to minimal use of instructional technology in teachers training in Malawi. This was also confirmed by Asgedom (1998) observation in an earlier study in Ethiopia which noted the lack of required instructional media resources is one of the reasons for teachers limited use of instructional media. When instructional media is available and the management is committed to implementation , change effects can be seen . This would exhibit the administrations commitment and hence facilitate the change process making it easily acceptable by the subordinates (Kadzera , 2006) . Even when the resources are available or the management shows commitment and the implementers (pre- primary school college tutors ) do not see the need for these instructional media no use can possibly occur .

A study conducted by Ginsberg and McCormick ( 1998 ) in which 1163 secondary school teachers were asked what factors prevented technology implementation in their classes , the most popular response given was lack of access to technology . Bitner and Betner (2002) also found that availability of and access to instructional technology resources and technical support were important factors that determine the frequency in which teachers use instructional materials .Holloway (1996) reaffirms that the frequency in which elementary school teachers use instructional technology is related to the availability of technical hardware in the classrooms. Further , Flick (2007) in a study on math teachers and instructional media which focused on 60 high school and middle school teachers in some selected states in USA found that unavailability of computers for instruction was among the main factors that impeded that access to and unavailability of a computer and projector were real hurdles to their use.

#### **2,4,4 Training towards instructional media.**

According to Yaghi (1996) in a survey to establish the role of computer in school, he confirmed that well trained teachers tend to be more comfortable and efficient with instructional media while poorly trained teachers may model bad experience that could cause negative attitude towards instructional media among students. Teachers in high school need properly organized micro-teaching lessons ,workshops and seminars with several presenter for handle on experiences. The mandate of this study was to find out the factors level of utilization of instructional media .

In addition to the initial training on use instructional media in the classrooms in orange country, California which increased teachers instructional skills and assisted them in meeting their own individual learning goals, teachers were also responsible for attending any additional technology work shops or seminars provided by district or any organization (Ivers,2002).The study contends that <<the more confident teachers feel about using technology>>.

#### **2.4.5 Attitude change**

To embrace the use instructional media by teachers would have to appreciate the importance of media themselves and the students. This appreciation and desire to start using instructional media calls for teachers change attitude towards use of instructional media positive values towards instructional media by the change agents (Hope,1997),(Weller 1996) viewed this change as a process of transforming peoples knowledge, behavior and attitude about the value embracing something more beneficial. Onasanya (2008) observes that this change of attitude and behavior from the tutors towards instructional media would influence them directly to prepare and use them.The innovative tutors would spend time to prepare and use instructional media in their instruction while those with negative attitudes towards instructional media might not make any effort to prepare and use the instructional media during instruction (Begi, 2007; Kadzera, 2006) .

#### **2.5 Strategies That Could Enhance Utilization of Instructional Media**

The literature reviewed has revealed very articulate strategies that were recommended by scholars in other regions of the world for application to enhance utilization of IM and technology by teachers. In a study on the concept of teacher –directed instruction regarding motion media

and how it can help learners in practicing the visualization of a problem , Flick, J. (2012) recommended that since teachers reported limitation of planning time , ways to make media resources Known to teachers should be put in place so that they do not have to keep searching for them . This called for equipping them with skills which are acquired during training and refresher courses . The study will conclude that some important strategies that should promote the use of media for instruction in high school during classes included provision of appropriate resources , ease of use of IM and accessibility of the IM .

Secondly , the management of institutions should find ways to engage teachers in the selection and development of media resource because this ensures the learning outcomes are regarded . Further , an equal effort need to be made to provide more resources in the classrooms like computers and other electronics technology to support teachers utilization of motion media .

A similar view was held by Abdo and Semela (2010) in a study on IM use in primary schools in Gedeo zone , Ethiopia who recommended that management should provide media resources to teachers because they do not have time to search them on their own .

Fuller, (2000) in a study on supporting teachers in technology and computer use in academic subjects concluded that availability of learning materials and their accessibility to them determined the frequency with which teachers use IM .

Thirdly , teachers viewed the level of administrative support and encouragement by the college management as key factor in implementing IM use . Fuller (2000) reported that teachers are encouraged to use technology in the classroom if they are given technical support . In this connection , if management adjusts the nature of teaching tasks which include assigning manageable work load and number of students in class , adequate planning time would encourage teachers to use IM (Tearle-2003). In the study , teachers perception of the level of management support was negative and hence related to their frequency of IM use .

Considering the inherent complexity of technology integration in teaching . Wang and Reeves (2003) recommended that instructional designers consider teachers views when planning to integrate IT in schools . This view , the author feels , together with an intertwine relationship between research and practice would inform teachers and college administrators about utilization of IM .

There is evidence to suggest that school leadership is an important strategy that influence successful integration of IM . A fshari et al (2008), in a baseline data gathered from 30 secondary school principals in Tehran, Iran, the use of computers for instructional and administrative purposes has a transformational effect that enhances computer use in schools . In another survey on the influence of principals technology training on the integration of technology in schools by Dawson and Rakes (2003), it was established that the principals own knowledge of computer technology influenced the levels of integration in the restof school curricular . This then would be an effective strategy for application in PPS colleges to encourage tutor utilization of IM since the principals would provide leadership for tutors to follow and impart the same on the PPS teachers trainees . This was further confirmed by a study conducted in British school system by Tearle (2003) which found that the principals strong leadership is important in ICT implementation in schools . This strategy encourages teachers to use technology in the classroom. Abdo and Semela (2010) also concluded that teachers' ability to integrate IM is affected by the strength of school leadership.

## **2.6 Use of Instructional Resources in Teaching and Learning**

Abimbade, (1997) found out that the use of instructional resources in teaching and learning make students to learn more and retain better what they have been taught and that it also promotes and sustains students interest . It also allows the learners to discover themselves and their abilities. Schramn (1977) notes that instructional materials enrich learners knowledge and touching than through hearing only.

Research report by Afolabi(2008) indicates that availabilities instructional materials and ability of mathematics teachers to use them are vital determinants in the selection of the teaching methods to be used by mathematics teachers and consequently , mathematics achievements . The ability to use instructional materials in teaching mainly depends on training which has to be continuous in the profession professional development can be done through INSETs where teachers share experiences and are continuously exposed to new ideas that keep them abreast with developments in the teaching profession . The changes have been in evitable due to the rapidly changing world and growing technology

Oyeniran (2003) argues that students learn best if they are given the opportunity to see and make observations of what they are thought . He observes that a good instructional

Material serves as a substitute for real life objects in the classroom as against the use of exploratory method; teachers have to construct models, along with their students using local materials to represent the real objects to be studied. Construction of instructional materials also known as improvisation requires creativity which is likely to be a challenge to some teachers. It is time consuming and teachers with heavy workloads may end up not using improvised materials at all. There was inadequate information on the use of improvised instructional materials.

The inevitability of instructional materials/resources in learning outcomes are also emphasized by Adedayo (2000). In spite of this , many of these materials are lacking in our schools . Hassan (2000), in his study of evaluation of mathematics teaching in Nigeria reported a 100% of his sample from Zamfara state in favor of adequate resources and instructional materials in the teaching mathematics . The situation in public secondary schools in Kenya also needed evaluation and documentation.

In order to create interest and motivation in students teachers have to use printed materials like text books , audio-visuals models, pictures ,charts and diagrams, electronic calculators, video tapes and computer software . Improvised or locally available instructional media include students shoes, schools, flag posts , wall clocks, colored beads ,playing cards , dice, marbles, beans and maize seeds, match sticks, school water tank, strings, stair case, class room floors and walls ,coins and currency notes among others. All these forms of instructional media are used to provide students with a situation near to reality . For resources to enhance understanding of concepts ,it is important for the teacher to consider some factors . The first factor is the appropriateness or suitability of the resources to accomplish the task . The second factor is the level of sophistication ; whether it is at the correct level of understanding for the learners . The third factors is the cost element ; where it is the cost effective and has the potential for the intended learning.

The fourth factor is the availability of the resources ; its availability when needed and learners familiarity with it .The fifth factor is the technical quality ; the quality of material that is whether legible, visible and or audible .The sixth factor is time; that is, the activities should be planned to fit in to a forty minutes lesson if not eighty minutes and that the resources should not take to long to prepare.

## **2.7 Selected instructional resources used in teaching**

This study looked at selected instructional resources commonly used in teaching . These included text books, models, pictures, charts and the chalk board .

### **2.7.1 Text book**

They are used as the basis of instruction and can be considered as an entire course of study in print . Text books are highly organized , contain a summary (often simplified body of knowledge and usually they contain learning activities or suggestions for further study (Miheo , 2004). Thus , their design which is meant to summarized a subject means that they do not encourage in depth learning . Because of their highly structured nature , text books tend to encourage rote learning rather than creative inquiry. They are often not responsive to the needs and abilities of individual learners . Text books have also been criticized for the inclusion of racial , ethnic and sexual stereotypes at odds with our changing multiethnic and multi cultural society (Miheo, 2004) , On the other hand ,mathematics text books occupy an important place in the teaching and learning process

in our schools. They are looked at as alternative sources knowledge that teachers communicate to the learners , and also as a medium for presentation and ordering (though subject to teachers opinions ) of the subject for purposes of teaching . Text books however , need to be selected carefully and used with great skill if they are to assist teachers and learners to accomplish meaningful learning and achieve important objectives . Although some of criticism leveled at text books can be traced to content or structural limitations, others are as a result of in appropriate or insensitive applications.

Due to this, teachers have a special responsibility to understand the nature of their text books and to use them creatively and affectively. According to Miheso, (2004), a good text has: quality topics that will attain the objectives of the course , interesting and thought provoking language , enrichment aids to learning and attractive physical characteristics like the use . In some cases text books have come to replace the syllabus often resulting in the loss of focus on important learning objectives. The text should be seen as an instrument for organizing curricula and as a basic tool for teaching and learning . The content of the text should not become the total content of the course with rate and sequence rigidly prescribed.

Text books should not replace the important responsibility of the teacher as far as scheming and planning of lessons are concerned (Miheso , 2004) . The tendency of the text book to emphasize some given rules and procedures, defeats the possibilities for discovery, independent thought and intellectual curiosity. Even where discovery questions are included, the answers usually appear on the next page and students find it easier to a head rather than to discover the concepts. Student's memorization of the language of the text and stated definitions and rules do not nourish skill in communication or the development of understanding. Students need experiences in starting generalizations in their own words even though these may lack precision. The constant use of text books kills interest by its monotonous formal treatment. Learning needs variety of meaningful and interesting experiences which can be provided through the use of a variety of instructional resources.

It is a discouraging experiences to see teachers using the same text samples and exercises for all students in a given class . The narrow emphasis of the text ignores the importance of objectives such as attitudes, problem solving, creativity ,appreciation or values . These are the objectives that seem to be of greatest importance today.

They are seldom attained and rarely tested by the text books. It is therefore apparent that text book teaching is highly unsatisfactory. Dependence on the text and only the text is one mark of an unsuccessful teacher (Miheso, 2004) .

### 2.7.2 Models and Manipulative Materials

Models may be sketches on paper or chalk board , concrete devices like models of common solids or mathematical formulae . Models furnish the basis for solving a problem, discovering a new idea ,or creating a new system . They are links between the thought processes of a man and the reality of nature . They help make transitions from one level of abstraction to another and are means for expressing ideas and providing stepping stones to new relationships . They add reality to abstract ideas and facilitate creative thinking . They are a means of relating past experience to a new situation(Johanson, 1972) .

There are inherent dangers in the use of physical models to representation adds qualities that are not mathematical and by so doing may led to misconceptions . For example , comparing wheel and circle , where a circle is a mathematical conception . The abstraction can not be accurately represented by a concrete model , for it is a set of dimensionless points . The wheel can be manipulated as it can be seen as well as felt , clarify certain ideas about circles , it may also mislead the student in to thinking of a circle as a disc or a circular region . when teachers utilize models they must be constantly alert to the dangers of misleading students by false constructions . The model lays the foundation for learning and abstract concept , but the concrete representation may not give a complete conception or definition of the abstract idea .

Models are of course, of special value in the study of geometry , where spatial relationships are the basic concern . However , teachers should not restrict their thinking about models to this area , since models of algebraic and arithmetic relationships can provide students with bases for understanding concepts in these subjects . An example of the use of a model in algebra is in exploring the terms of the square of a binomial made out of toy parts as shown in figure . It is easy for the student to see that  $(x+y)^2$  gives the area of outer square . This square is made up of regions whose areas are  $x^2$ ,  $xy$ , and  $y^2$ .

Consequently  $(x+y)^2 = x^2+2xy+y^2$  . This is a simple example of how a model adds reality and meaning to an abstract , symbolic representation . The teacher may involve students in this by asking them to cut pieces of manila paper as per the diagram and fix them using

glue . This will in hence the understanding of how binominal is expanded to give three terms . In the ensuing discussion , the word model was restricted only to those concrete devices utilized by teachers and students to demonstrate mathematical concepts .

Each time a model is used in the classroom , it should play a positive role in providing deeper student understanding of mathematics . The model may illustrate a specific concept for example a wooden conic section ; it may provide the basis for a development for example , unit cubes for building solids ; It may be used as a vehicle for student's discovery, for example right angled triangles for Pythagoras theorem . In each case the teacher should know the purpose and appropriate use of model .

The primary purpose of a model is to provide a concrete visualization for thinking about and discussing an idea .for example , a model that allows a student to transform a rectangle physically in to a triangle provides a basis for developing the formula for the area of a triangle . The model provides experiences which can then be used for thinking about an idea by providing a frame of reference for sense perceptions and experiences .

such transformations from the abstract to concrete re often difficult to achieve . They must be supported at all stages by thoughtful teaching which could pose a great challenge to a teacher . The teacher must recognize and anticipate the level of insights that occur to individual students as a result of experiences with physical models . The teacher should be able to rapidly create a bridge between the concrete and abstract and make the students to understand the conceptual model . A slower student may be encouraged to work with the model at his desk , for the sense of touch may provide him with the needed bridge to the conceptual level . The model should be kept available to reinforce the concept if and when students regress in understanding .

According to Sidhu (1982), models are very useful as teaching aids because they can be handled and manipulated. Their main merit is that they afford pleasure in their making . They have a creative value for anyone who may make them . He further notes that even a square piece of card board is a model. This because all other geometric forms can be cut out of such cardboard or a tick paper and used as models .planes of three dimensional objects can be cut and then fixed together. A dismantled is most helpful in showing how the various planes have been fixed together.

Models are most useful when the shape of the object is complex and must be shown, the inside detail must be observed and cannot be better shown by a cross section diagram, for example, the spherical earth when there is so much detail and relevant and when pictures and diagrams are unclear or misleading. In general, models should therefore be employed when the use of the third dimension aids communication. Only details relevant to the message being communicated should be included. Too much unnecessary realism may reduce effective communication.

There is a little to be gained in terms of learning efficiency by going for model if the teacher can picture the object, concept or phenomenon adequately, in two dimensions (Romizowiski, 1968). Teachers who use models are enthusiastic about the contributions they make. They suggest in summary, that models are effective because they perform the following functions, they give concrete representation of abstract ideas, they relate new ideas to previous experience or previously learned ideas they enhance active participation of the learner in the learning activity and thus provide additional motivation to the learning of mathematics, they concentrate attention on the concepts involved and stimulate interest in these concepts, they teach how to solve problems and how to explore new ideas, they speed up communication, they consolidate details that new related to the generalization being sought they lend variety to classroom activities and provide a useful change of pace, they provide a program of enrichment and acceleration for individual students, they provide successful, meaningful activities for the solve learner and that they encourage the participation of practical minded students who need this continuing contact with the concrete world (Johanson, 1972). However, models are sometimes misused or used at inappropriate times. At the same times, it should be noted that the most frequent miss use of models is failure to use them at all some of the principal abuses and miss use of models are excessive and indiscriminate use merely for the purpose of using a model failure to transfer from the concrete representation, to a generation or abstract representation, failure to use the right model at the right time or for a sufficient length of time to establish the concept involved use of an inadequate, model that is too

small, too crude, too complex, and failure to adapt the model to the needs of the students or to the objectives involved it is not well documented if mathematics teachers in the Kenyan context face any challenges in the use of models thus the need for this study.

### **2.7.3 The electronic calculator**

To ease the problems of manual computation, and to facilitate accuracy and speed, people have always tried to find quick methods of calculations. The electronics calculator has come in handy as a device that can handle calculations with great speed and accuracy. According to Macnab (1986), electronic calculators can be used in school mathematics to reduce reliance on numerical computational algorithms and to stimulate and facilitate mathematical thinking. If one wishes to calculate  $(345626/56.7) (1) (56.7) (=)$  will produce the answer which is 60.956966 immediately with an accuracy of at least

6 significant figures.

Thus , use of calculator allows even the mathematically weak learners to undertake realistic calculations rather than those artificially contrived to keep the arithmetic simple . However, these processes may not enhance learning of the skill involved in such a computation. The calculator only provides the correct answer but does not teach the process leading to this answer. It is therefore the role of the teacher to make students understand the processes involved in any operation and it was the interest of this study to find out it mathematics teachers faced any challenges in this .

The argument propounded in favor of the calculator is that by removing the problem of calculation, students would be able to concentrate on solving problems from the world outside the classroom. These are types of problems that apply to their real life situations and which test application from the cognitive domain. On the other hand, teachers will have time to cover the ever wide mathematics syllabuses. The value of the calculator in stimulating or aiding mathematical thinking is that it allows one to perform many calculations quickly and without effort , so that , one's energizes can be devoted to the mathematics involved rather than be dissipated in carrying out extensive routine written work .

Some of the reasons given by students and tutors in the mathematics tutor support module 101 (1989) in Ghana on reasons for using calculators were that it keeps students abreast with the modern world and technological age, helps pupils understand mathematical concepts and properties, reduce students' anxiety, assists and improves the teaching of mathematics in the classroom, reduces the complexity of some topics, like decimals,

which students often find difficult, helps to develop fluency in mental and written calculations hence improving students' performance in computations makes the use of large and many numbers possible, for example, in statistics and that it motivates and sustains positive attitudes towards the learning of mathematics.

Since 1974, there have been numerous studies mostly confirming that the use of calculators enhances rather than inhibits students' skills and attitude in mathematics. A study that found just the opposite was by Ferretti (1996) in the United States of America who found most students who had used calculators since grade four, intelligent and conscientious. Among students and who had completed at least algebra 2 in high school, very few would work accurately with fractions and more than 40% had not mastered their basic multiplication facts. It was his experience however that the unlimited use of calculators in pre-college mathematics has detrimental effects on a large number of students in the US (Mathematics tutor support Module 101, 198).

Mathematics teachers have to guide their students on the use of the calculator to avoid overuse. For example, one would not expect a student to reach for a calculator to multiply 9 and 7 but one would not object if the student used a calculator to multiply 9.3 and 7.4. During the time of the study, students in Kenya were allowed to use calculators as from three when they had already mastered basic written and mental algorithms. However, calculators can be introduced as early as from one and only used as alternatives with the guidance of the teacher.

The use of calculators should depend on the purpose of the lesson. For example, if the teacher's purpose is to practice a pencil and paper algorithm for multiplications like  $83.9 \times 53.7$ , there would be no advantage in using a calculator. However if the teacher wanted the students to discover that multiplying two numbers each containing one decimal

place usually gives an answer with two decimal places , it is an advantage that a calculator can quickly do  $83.9 \times 53.7 = 4505.43$  as part of an exploration of many multiplications . Students could quickly produce many correct results from which they could discover a new mathematical rule . Teachers need to prepare in advance to get the problems that require the use of calculator .

There should also be provision for a mathematics room where students can discover things with the calculator . Teachers should help students to avoid over reliance on the calculator and teach processing . This will help the students not to stop thinking .students should know when to use a calculator . The extent of use of calculators is not adequately documented at least in the Kenyans context. Therefore, this the study sought to establish the extent of the use of calculators and any possible challenges faced.

#### **2.7.4 Improvised media**

These are locally available materials that a mathematics teacher may use as concrete objects or teaching aids to help students understand mathematical concepts . These include coins , playing cards , students ’ shoes, school’s tank, money , dice, flag post, strings, match sticks , marbles , cans and many others .Some of their uses are discussed in section 2.4.2 as possible interventions to inadequacy of instructional resources in schools.

#### **2.7.5 ICT integration in teaching and learning**

Information communication and technology (ICT) in abroad sense refers to the processes, applications and equipment’s by which we access , organize analyze , evaluate and present information (SMASSE) PROJECT , 2011) . Technological advancement has brought with it the information technology (IT) revolution . It is becoming evident that any society that will be left out of this revolution risks total isolation from the global family. Technology has also found considerable use in education .However , not many mathematics teachers have the necessary IT knowledge and skills. Capacity building in this critical area can be achieved through in-service training to enable mathematics teachers to adopt technology. (SMASSE project, 2012) .

ICT integration in education is a policy priority by the ministry of education (Ministry of Education, 2006) .The ICT options were based on Sessional paper No .1 of 2005 and

outlined among others , priorities on improving quality teaching and learning , improving educational policy and coordination and considering costs and benefits of educational interventions . There are eight options which included quality teaching and learning through ICT with a focus on e-content development; ICTs in teacher training colleges; computers in secondary schools; computers in primary schools cluster centers ; ICT for in-service teacher training ; and video for in-service teacher training among others .

On computers for secondary schools , the paper recognized the challenge of poor performance in mathematics and science and outlined potential benefits of ICT integration to enhance greater critical thinking skills , scientific inquiry , and analytical creative and collaborative power of computers . ICT was seen to be a tool for helping address teachers’ professional needs and challenges and thus in –service training should incorporate activities that increase efficiency in the Teachers’ work load and integrate ICT s to improve curricula teaching and learning objectives .many people consider ICT integration as having a computer in the classroom “ or during the basic operations on the computer” . These , however , are common misconceptions about integration of ICT in

teaching and learning . often, teachers are just expected to integrate technology without having a working definition of the concept (Dias, 1999). Information Technologies (ICTs) are commonly defined in education as “ adverse set of technological tools and resources used to communicate , create , disseminate , store and manage information “(Blurto, 2002) . These technologies include computers , the internet , broadcasting technologies (radio and television) , and (mobile) telephones .

In Kenya the older technologies , such as the telephone , radio and television , although now given less attention , have a long and richer history as instruction tools (Cuban, 1986). KIE has been using radio and video tapes for content delivery . In 2006 KIE started developing digital content and in 2009 a digital broadcasting center was launched (current span limited to Nairobi and its environs) In Kenya the different technologies are used in combination rather than as the sole delivery mechanism . The use of computers

and the internet was still in its infancy in Kenya at the time of this study as was the case in other developing countries due to limited infrastructure and the attendant high costs of access.

Whether there is any added value of ICT in teaching and learning is a question that is not adequately answered . From experiences in other countries (and from some schools that were using ICT in Kenya )we can learn that the “and on “ approach of ICT in education is neither productive nor effective . using computers or technology as and add-on means that teachers are going to use the toolsto reproduce the way they were always teaching without any quality improvement . Furthermore , provision of computers in a classroom does not mean they are going to be used in a pedagogical way (if used at all). Since computers and technological infrastructure are expensive , it needs to go hand in hand with enhancement of quality of teaching and learning . The use of ICT can support the new instructional approaches that go hand in hand with the shift towards learner centered learning and make hand to implement instructional methods such as simulation or cooperative learning more feasible . ICT can also play a role in helping a teacher explain abstract concepts .Generally ,research shows there are three critical benefits of ICTs , when used in the right way . More effective teaching/learning using ICT can help improve pupil performance and skills , maintain the quality of teaching /learning while cutting down on teaching time and using cheaper aids .

One example is the use of digital learning materials that allow pupil to learn independently and that enable the teacher to devote time to pupils who require individual attention . This may allow a teacher to accommodate all type of learners (bright, average or slow) in his/ her class .

The world is becoming a global village due to the impact and influence of technology and the provision of both skills and the facilities in ICT to all the teachers and all the schools in Kenya is no longer a choice but a key component to effective learning and teaching . This will promote innovative teaching and learning methodologies that are relevant for global competitiveness , interactions and information sharing which promote

global citizenship . There are two reasons to use this technology in our schools.

1) Technology can reduce the effort devoted to tedious computations and increase students “focuses on more important mathematics .

2 )Technology can present mathematics in ways that help students understand concepts . In combination the two features can enable teacher as to improve both how and what students learn .The computer as a mathematics instructional resource was not widely used in Kenyan schools at the time of this study and there was little evidence of this in the learning process . Only 2% of schools in Kenya had necessary ICT infrastructure by the time of this study (Wilson, 2014). Factors which were likely to have hindered the effective use of computers included ; 1)The cost of purchasing and maintain the computer facility and 2) Mathematics teachers had not been trained on ICT integration in education . ICTs were therefore not included in this study .

#### **2.7.6 Improvisation of instructional resources**

Schools may not always be in position to provide all the teaching materials that mathematics teacher would require . In education , we are in the business of learning and it is mandatory for teachers to do whatever is needed using whatever materials and resources they can to best meet students” needs, whether it involves technology or not . As the proverb goes” necessity is the mother of invention “mathematics teachers have to use their innovative skills to improvise instructional resources for effective teaching learning .

A teacher using a learning activity should be well versed with knowledge on how to back it up with the right and relevant media .Concrete examples should always be provided if possible . The teacher also needs to know how every media used enhances learning . To cope with the challenge of inadequate instructional resources, mathematics teachers can use improvised media to teach abstract mathematical concepts . Some common types of improvised media include; playing cards, geo boards, students shoes, school tank,coins and currency notes , dice , schools flag post , strings, match sticks , marbles , beans and

maize seeds , stair cases , classroom floor and walls and many others. Strings may be used to teach sequences in the following manner: learners are divided in to groups of four each and each group given one piece of string.

They are then asked to fold and cut the pieces of string at the center successfully and fill in a table of two columns the number of folds and the number of pieces of strings generated. The teacher may then bridge to the concept by asking the students to make a deduction from the list of numbers generated by the number of pieces. He/she may then define a sequence using the pattern formed.

Coins and dice may be used in teaching combined events in probability where students are put in to groups of three .In one group a student tosses the coin once , one reads the observation while the third records . In another group , one student rolls a die the other reads the observation and the other records . Using the sample space , students find the probability of getting a head and a six . Coins may also be used to teach binomial expansion where students toss a coin four times and recorded 16 different ways in which a sequence of heads (H) and tails (T) could occur . Four heads may occur once , 3 heads 4 times , 2 heads 6 times , 1 head 4 times and 0 head once . The pattern formed is thus 1, 4,

6, 4, 1. The number of arrangements corresponds to the fifth row of pascal's triangle . The teacher may then ask the students to investigate arrangements with a coin tossed twice , thrice and five times and repeat the procedure . (Kamau, 2004).

Indirect proportionality may be taught using manila sheet , masking tape and meter rules . learners subdivide a manila sheet strip into six equal parts . They shade one part to show a person's fraction of work in one day . They then subdivide another manila sheet same size as the first one into six equal parts . They shade two parts to represent a second person's fraction of work . Finally they combine the two person's fractions of work to find amount of work they do in one day .learners may use the combined answer to find the time taken to complete the task . It is difficult to compare fractions with different denominators directly. A mathematics teacher may demonstrate this by asking three

students to run round a track as the others recorded their speeds. One student makes 3 laps in 6 minutes, the second one makes 4 laps in 10 minutes while the third one makes 5 laps in 15 minutes . The students are then asked to write down the ratio of the number of laps to the number of minutes for each in form of fractions. The teacher may then ask the students to say who jogged faster and who jogged slower.

The students will find it difficult to answer the questions and teacher may capture their curiosity and teach comparison of fractions using equivalent fractions (Kamau, 2004) To teach interest gained on some amount of money, a teacher may ask one student to give out sh100 to another student and demand an additionalsh10 as he receives back his money . He is asked to repeat the same to four other students as the class records the interest gained . The students finally realize that the interest gained from the five students is sh550. The teacher is then able to bridge from the activity to the concept of simple interest by using the formula ( $I = \frac{PRT}{100}$  ) and arrives at the same answer as the students

When introducing Three Dimensional Geometry to students , a mathematics teacher may ask them to look around and name all the things they see in the environment . Wherever they look, they see three dimensional shapes; length, width and height . Drawings that are created to represent the idea of these three dimensions are often called “3-D drawings” (Kamau, 2004) .mathematics teachers are therefore expected to have skills of drawing in three dimensions . This study would find out if teachers faced any challenges in this .

From the discussed examples , it is noted that there are numerous locally available materials that a mathematics teacher may improvise and use as instructional resources to teach different mathematical concepts . The activities generated by the use of resources are also quite meaningful in that they all bring about the discovery or development of a certain concept .However , the preparation and the execution of each activity requires time and this could be a possible challenge faced by mathematics teachers in their efforts to create meaningful teaching and learning activities . This study sought to establish other possible challenges .

## **2.8 Summary of reviewed literature**

Instructional media is utilized in teaching to make learning interesting and improve quality of training among other benefits. The reviewed literature has shown the type of instructional media used in instruction which include chalk boards, flip charts, computers, slides, real objects and print media. The mandate of this study will be to fill this gap. Secondly, several factors appear to influence the use of instructional media in other level learning like the availability of instructional media, attitude toward instructional media, access to instructional media, motivation, teacher training, teachers; teaching experiences, time and technical support. This study will set to establish whether some of these factors influenced instructional media utilization by schoolteachers. It will also be within the mandate of this study to establish the types of instructional media available for use in secondary schools and how they are utilized in the teaching and learning process by teachers. The extent to which the utilization of IM, availability of IM and teacher attitude to IM predicted use of instructional media in instruction would also be investigated.

## CHAPTER THREE

### 3. Research design and Methodology

#### 3.1 Research design and Method

The selection of research design believed to depend on problem to be investigated therefore, descriptive survey design employed in the study. It is believed that descriptive survey design helps to get firsthand information. It also permits the researcher to collect data via different tools such as interviews and questionnaires, since they are commonly used in educational research. In such a design the researcher asks questions concerning utilizing practice and challenges of instructional media to collect factual information.

Of the two survey designs, cross sectional design was employed. This was chosen since it enables to collect data at one point in a time regarding people's beliefs and opinions (Best and Khan, 1989). It also enables to obtain current information about the encountered in the school the actual practices they perform and their commitment regarding utilization of instructional media in short, descriptive survey, cross section design, was employed because it is believed to be the most suitable finding study with adequate and accurate interpretation of the findings

#### 3.2 Population, sampling size and sampling techniques

Target populations for this research would comprise of secondary schools principals and teachers of Halaba special woreda .The sampling frame for the schools were determined on the bases of the year 2017 annual report of Halaba special woreda educational office.

Due to disperse of school location, the research intends to select four secondary schools from eight secondary schools of Halaba special woreda. There are eight secondary schools in woredas , then four schools were selected on simple random sampling techniques by using the lottery method .The sampling selected secondary schools are : kulito secondary school ,Halaba secondary school , Guba secondary school and Abokicho secondary school .

Available sampling techniques employed in this research. According all the principals were selected from all sampled schools. Total principals from selected schools are 10 in

number and selected all principals, because researcher intends to get in depth information from principals who can give optimal input for the findings. The total numbers of teachers in four selected schools are 192. From the total number of 192 teachers 96 teachers selected on simple random sampling techniques using lottery method. In the study the researcher believes that this are the actors in the issue under investigation there, a total sample of 106 participants were chosen for the study.

The table below displays the total population sample size and sampling techniques was employed for this study.

**Table 3.1 sampling schools and participants of the study**

No	Sample schools	Total principals	Selected principals available sampling	Total teachers	Selected teachers Stratified random sampling
1	Kulito secondary	3	3	62	31
2	Halaba secondary	3	3	90	45
3	Guba secondary	2	2	22	11
4	Abockicho secondary	2	2	18	9
	Total	10	10	192	96

### **In the sampling of teachers :-**

**The gender proportion** –Total population of teachers were male 140 and female 52. From total population selected sampling teachers were male 70 and female 26 .

**The experience proportion** – Total population of teachers were male 140 and female 52 From total population selected sampling 1-10 service year teachers were male 29 and female 10 , and 11-20 service year teachers were male 31 and female 14 and above 20 service year teachers were male 10 and female 5.

**The qualification proportion** – Total population of teachers were male 140 and female 52 . From total population selected sampling BA degree teachers were male 63 and female 23 and MA degree teachers were male 7 and female 3. This means the researcher sampling techniques needs to be stratified random sampling than simple random .

### **3.3. Data gathering Tools**

During conducting this research for the purpose of this study, three data collection tools were used, these are: questionnaires, semi - structure interview and direct observation. It is believed that using these tools is vital to triangulate the data collected and to combine the strengths of each instrument and minimize their weaknesses. The data collected through that would be reliable (Dawson; 2002).

Questionnaires – used as the data gathering tool to obtain sufficient and reliable primary data close ended questions were prepared for teachers.

The data collection instrument for qualitative information included a structured questionnaire guided by the researcher was used to collect information from four selected sampling secondary schools . Selected sampling teachers were 96 in number and aged from 25 up to 55 years. Questionnaire was prepared in English and the questions were clear and could be understood by the respondents and modified based on the basic research questions and a final versions of the questionnaire was produced information collected included factors assess teachers role in utilizing instructional media and challenges that discourage teachers from using instructional media during the class .

A half of orientation was given to data collectors on the objectives of the study, the contents of questionnaire, particularly on issues related to the confidentiality of the responses and the rights of respondents.

Interviews – to triangulate the data gathered through other instruments and to get in depth information interview questions were prepared to principals and face to face communications was interview guide questions prepared with the main focus to get detail information in relation to the research questions .

Interviews permits greater depth of responses which is not possible to be obtained through any other means . The researcher designed a semi-structured interview .The purpose of interview was to gather data on practice of instructional media and the role of teachers, principals and challenges of instructional media. Interviews for four selected sampling schools principals. Totally 10 principals were taken.

The reason behind using the semi-structured interview were the advantage of its flexibility in which new questions forwarding during the interview based on the responses of interview questions. The process of interview was conducted in English. The researcher conducted the interviews for the interviewees at their schools during the work time and by taken notes used to written the relevant data qualitatively.

An observation – is the actual participation of researcher as a participant or as an external felid observer based on checklist in some selected sites. Some selected sites were four secondary schools pedagogical centers documents, attendance in using instructional media during class learning. A checklist was used to facilitate the observation process .

### **3.4 Procedures of data collection**

The researcher was made direct contact with secondary school teachers and the school principals were interview and fill out open – ended questions. To insure high response rates, the researcher explained each of selections of questionnaire to the respondents to ensure that they fully understand the questions before answering. After the questionnaire the respondents, enough time given to sample respondents. And was collected thoroughly from sample schools.

### **3.5 Data analysis**

The researcher collected both quantitative and qualitative data from sample respondents, the data collected through close ended by a tallied and tabulated. The interpretation was made with using frequency, mean and percentage.

Quantitative data was coded, tabulated and analyzed by descriptive statistics such as percentage, frequency and means Qualitative data (the responses of interview) was organized by taking notes.

The responses organizing themes was selected sampling secondary schools principals.

To check the significance of the qualitative data and to interpret the closed-ended questions was used. As the indicated sampling strategy selection, the data collected from different sources was summarized and coded to suite for analysis.

The open ended questions was summarized and presented as it is, while the closed ended questions was coded and analyzed using mean, percentages and frequencies.

### **3.6 Ethical consideration**

The researcher professional ethical considerations for getting the willingness of respondents and to get relevant data by keeping sensitive information of the organization. Confidentiality was the best principle of the researcher . Individual identifying information should be avoided or names and address may be placed by identifying number and reports are reported in aggregated and honesty in all components of the activities.

## CHAPTER FOUR

### 4. Presentation, Analysis and Interpretation of the data

Analysis and presentation of the data collected from selected participants via questionnaires, interviews and observation checklists are made in this chapter. The study was mainly aimed at investigating the current practice of utilization of instructional media..In order to achieve this purpose, 96 questionnaires were distributed to selected secondary school teachers, out of the 96 distributed questionnaires were properly filled and returned by 100% of the respondents, 10 principals were interviewed.

#### 4.1 Characteristics of respondents

Under this section, the background information of respondents was presented.

**Table 4.1 Characteristics of respondents**

No	Variable	Category	No(Frequency)	Percentage(%)
1	Sex	Male	78	73.58
		Female	28	26.42
		Total	106	100
2	Age	20- 25 years	-	-
		26-30 years	18	16.98
		31-35 years	34	32.07
		36-40 years	31	29.24
		41-45 years	16	15.09
		Above45 years	7	6.6
		Total	106	100
3	Educational level	Diploma	-	-
		BA/BSC	94	88.68
		MA/MSC	12	11.32
		Total	106	100

4	Service years	1-5 years	-	-
		6-10 years	33	31.13
		11-15 years	34	32.07
		16-20 years	24	22.64
		21-25 years	10	9.4
		Above 25 years	5	4.71
		Total	106	100

Table 4.1 shows the gender proportion was female 26.42% and male 73.58% . So the researcher observed that there was distribution of both genders. But, the number of female respondents were not equal to male.

Regarding to educational level BA/BSC respondents were 88.68%, MA/MSc 11.32% . As researcher observed, that the contribution of different educational level of participants in the study. But the number of MA/MSc participants were limited in number.

## **4.2 General and Demographic information**

The study involved 96 teachers from 4 secondary schools and 10 principals their demographic characteristics are discussed as presented in the table that follows.

### **4.2.1 Demographic Characteristics of the teachers respondents**

The teachers sample for this study was 96 teachers of both genders who recorded their respondents as shown in the table 4.2 and discussed as follows.

#### 4.2.2 Gender of teachers

The study investigated both male and female teachers result are shown in the table 4.2

**Table 4.2 Gender of teachers**

Gender	Frequency	Percentage (%)
Male	70	73
Female	26	27
Total	96	100

From table 4.2 it was established from questionnaires that male teachers were 73% (N70) of the total 96 teachers sample whereas the female teachers were 27% (N26) of the total 96 teachers. This implies that there was distribution of both genders . From 96 teachers the number of female teachers were 26. As a researcher observed that the female teacher respondents number was not equal to male teacher respondents.

#### 4.2.3 Professional qualification of teachers

A total number of 96 teachers were issued with questionnaires to respond . Results are shown in table 4.3

**Table 4.3 professional qualification of teachers**

Educational level	Frequency	Percentage(%)
Diploma	-	-
Degree	86	89.58
MA/MSC	10	10.42
Total	96	100

The result in table 4.3 show that 89.58% (N86) have degree and 10.42% (N10) have MA/MSC. Of the total teachers sample 89.58% are degree teachers.

#### 4.2.4 Professional qualification of principals

A total number of 10 principals were interviewed results shown in table 4.4

**Table 4.4 professional qualification of principals**

Educational level	Frequency	Percentage(%)
Degree	8	80
MA/MSC	2	20
Total	10	100

Table 4.4 results show that 80% (N8) have degree 20% (N2) have MA/MSC . The result show that the qualified principals were competent in leading in the school . Finally, combination of different educational level of participants in the study are was found to be satisfactory to get reliable data for the study.

### 4.3 Analysis of Data

#### 4.3.1 School relation to utilization of instructional media

Interview response from principals concerning school relation to utilization of instructional media Kulito secondary school principal responded “ All teachers included the idea of using instructional media in their yearly plan, but particularly there was low utilization of instructional media”

Halaba secondary school principal responded that “ Even so the school has some instructional media, like radio, models, maps, glob etc., but teachers utilization rate is very low .”

Abokicho secondary school principal said that teachers have low attention in using instructional media this is because of low understanding about its advantage.

According to guba secondary school principal ” The school relation to utilization of instructional media was low . This is because of different factor such as lack

of commitment, low follow up from school administration, backward handling culture and lack of interest concerning teachers .’’

#### **4.3.2 The role of teachers in utilization in instructional media**

Kulito secondary school principal said that “ the teachers role is not satisfactory in utilization of instructional media . Teachers commitment was low, they are not interested to use instructional media effectively accordingly .

Halaba secondary school principal said that “ Teachers role is very important and mandatory in utilization of instructional media . But in our school teachers didn’t fulfilling their role in expected they are not seen with instructional media out of chalk board and text book .’’

Abokicho secondary school principal said that “ Teachers have low interest in utilization of instructional media . Also there was no continual utilization of instructional media culture , teachers want to only cover there class by using took and talk rather than using instructional media .’’

Guba secondary school principal said that “ Teachers are not Appling instructional media utilization in each days teaching learning process as expected , teachers commitment was very low, generally learning is not integrated with instructional media .’’

#### **4.3.3 Challenges that negatively affected utilization of instructional media**

Kulito secondary school principal responded that “ shortage of electronics materials, lack of interest among teachers and backward handling of instructional medias are challenges .’’

Halaba secondary school principal responded that “ Teachers lack of interest, low encouragement in using instructional media and other problems and challenges .’’

Abokicho secondary school principal responded that “ low encouragement, low attention to words instructional media is some challenges that affects utilization.

#### **4.3.4 What possible measures should be taken to avoid such challenges .**

Kulito secondary school principal responded that as a solution “ Enriching teachers awareness , modernizing handling system of instructional media ,allocating enough budget, employing well trained personnel may be solution .”

Halaba secondary school principal responded that a solution “ Allocating enough budget , developing teachers understanding through training and workshop , modernizing instructional materials may be solution .”

Abokicho secondary school principal responded that as a solution “ Changing teachers understanding through training , motivating teachers who are using instructional media during the class .”

Guba secondary school principals responded that “ motivating teachers who are using instructional media during the class , giving practical training in advantage side of instructional media , encouraging teachers to use instructional medias continually .”

#### 4.4 To what extent the available instructional media are used

Table 4.5 shows to what extent instructional media are used

No	Description item	VL		L		M		H		VH		Total	
		F	%	F	%	F	%	F	%	F	%	N	%
1	The extent of teachers in using electronics instructional media like projector, disc Cassette etc.	10	10.4	67	69.8	10	10.4	7	7.3	2	2	96	100
2	The extent of teachers in using charts	19	19.8	48	50	14	14.6	10	10.4	5	5.2	96	100
3	The extent of teachers using pictures in teaching learning process	11	11.5	65	67.7	10	10.4	5	5.2	5	5.2	96	100
4	Extent of teachers in using models	12	12.5	60	62.5	7	7.3	5	5.2	2	2	96	100
5	The extent of teachers in using local teaching instructional materials	10	10.4	57	60.4	22	22.9	4	4.16	3	3.12	96	100
6	The extent of teachers preparation of instructional media for their daily lesson	19	19.8	49	51	13	13.5	11	11.5	4	4.16	96	100
7	The extent of teachers committed to use and produce instructional media	10	10.4	42	43.7	24	25	7	7.3	3	3.12	96	100
8	To what extent teachers using real objects	22	22.9	58	60.4	12	12.5	2	2	2	2	96	100

	Description item	VL		L		M		H		VH		Total	
		F	%	F	%	F	%	F	%	F	%	N	%
9	The extent of teachers encouragement in using instructional media	9	9.37	39	40.6	22	22.9	4	4.16	3	3.12	96	100
10	The extent of teachers sharing experience with each other in using instructional media	15	15.6	59	61.5	13	13.5	6	6.25	3	3.12	96	100
11	The extent of teachers using flip charts	10	10.4	60	62.5	10	10.4	11	11.5	5	5.2	96	100
12	The extent of teachers in using globs and maps	10	10.4	54	56.3	15	15.6	10	10.4	7	7.3	96	100

Table 4.5 shows respondents response the extent of the available instructional media are teachers in using electronics instructional media like projector, disc cassette etc. From 96 respondents 64.6% (62) respondents responded low. The extent of teachers in using charts, 50% (N48) respondents responded low. The extent of teachers using pictures in teaching learning process 37.5% (N36) respondents responded low. The extent of teachers in using models 62.5% (N62) respondents responded low. The extent of teachers in using local teaching instructional materials 60.41% (N57) respondents responded low. The extent of teachers preparation of instructional media for their daily lesson 51% (N49) respondents responded low. The extent of teachers commitment to use and produce instructional media 43.75% (N42) respondents responded low. To what extent teachers using real objects 60.41% (N58) respondents responded low. The extent of teachers encouragement in using instructional media 40.62% (N39) respondents responded low. The extent of teachers sharing experiences with each other in using instructional media 61.45% (N59) respondents responded low. The extent of teachers using flip charts 62.5%

(N60) respondents responded low. The extent of teachers in using globs and maps 37.5% (N 36) respondents' responded medium.

As a researcher observed from borrowing format, only 10 teachers borrowed and used some instructional materials out of 96 teachers. As a researcher observed the staff members have conducted many meeting about utilization of instructional media. But all most all teachers were not used instructional media particularly.

#### 4.5 Teachers affected in utilizing teaching media appropriately

Table 4.6 shows teachers affected in utilizing teaching media appropriately

No	Description item	SD		D		U		A		SA		Total	
		F	%	%	%	F	%	F	%	F	%	N	%
1	Teachers encouragement is low to words using instructional media	5	5.2	6	6.25	10	10.4	65	67.7	10	10.4	96	100
2	Teachers have lack of commitment in using instructional media	3	3.12	5	5.2	6	6.25	67	69.8	15	15.6	96	100
3	Teachers didn't give attention to instructional media	3	3.12	10	10.4	7	7.3	60	62.5	13	13.5	96	100
4	Teachers interest is very low to words using instructional media	3	3.12	6	6.25	11	11.5	57	61.4	19	19.8	96	100
5	Teachers haven't time to use instructional media	10	10.4	62	64.6	9	9.37	62	64.6	4	4.16	96	100
6	Teachers always facilitate practices of media	2	2	10	10.4	10	10.4	70	72.9	4	4.16	96	100
7	Teachers haven't material resources to use instructional media	10	10.4	10	10.4	12	12.5	62	64.6	2	2	96	100

Table 4.6 shows to what extent teachers affected in utilizing teaching media appropriately. From 96 respondents 67.7% (N65) teachers encouragement is low to words using instructional media responded agree. Teachers have lack of commitment in using instructional media respondents responded 69.8% (N67) is agree . Teachers didn't give attention to instructional media respondents responded 62.5% (N60) is agree.

Teachers interest is very low to words using instructional media respondents responded 60.4% (N57) is agree . Teachers haven't time to use instructional media respondents responded 64.6% (N62) is disagree . Teachers always facilitate practices of media respondents responded 72.9% (N70) is disagree. Teachers haven't material resources to use instructional media respondents responded 64.6% (N62) is agree.

As researcher observed from respondents response only 9 teachers committed, encouraged, give attention and interested to used instructional media out of 96 teachers. As a researcher observed the staff members have oriented many time about utilization of instructional media. But, all most all teachers are not used instructional media practically.

#### 4.6 The major factors that discourage teachers from using instructional media

Table 4.7 shows the major factors that discourage teachers from using instructional media

No	Description item	SD		D		U		A		SA		Total	
		F	%	F	%	F	%	F	%	F	%	F	%
1	Teachers don't support each other in using instructional media	3	3.12	4	4.16	10	10.4	71	74	8	8.3	96	100
2	Daily plan didn't include instructional media	15	15.6	19	19.8	5	5.2	49	51	8	8.3	96	100
3	Teachers have lack of experiences to words using instructional media	5	5.2	6	6.25	10	10.4	56	58.3	19	19.8	96	100
4	Teachers have not taken relevant training to words using instructional media	5	5.2	5	5.2	7	7.3	60	62.5	19	19.8	96	100
5	Teachers are incompetent to help other teachers	7	7.3	9	9.37	10	10.4	58	60.4	13	13.5	96	100
6	There is insufficient allocated budget for the utilization of instructional media	1	1	2	2	3	3.12	75	78.1	15	15.6	96	100
7	Teachers are against the use of instructional media	7	7.3	13	13.5	10	10.4	61	63.5	5	5.2	96	100

Table 4.7 shows respondents response the major factors that discourage teachers from using instructional media.

Teachers don't support each other in using instructional media 74% (N71) respondents responded agree. Daily plan didn't include instructional media 51% (N49) respondents responded agree. Teachers have lack of experience to words using instructional media 58.3% (N56) respondents responded agree. Teachers have not taken relevant training to words using instructional media 62.5% (N60) respondents responded agree. Teachers are incompetent to help other teachers 60.4% (N58) respondents responded agree. There is in sufficient allocated budget for the utilization of instructional media 78.1% (N75) respondents responded agree. Teachers are against the use of instructional media 63.5% (N61) respondents responded agree.

As researcher observed from respondents response only 14 teachers included instructional media in daily plan , experienced teachers in using instructional media, teachers taken relevant training, competent to help other teachers. As a teacher observed that, the staff members have conducted and discussed about help other teachers to use instructional media. But many teachers were not used instructional media practically.

#### **4.7 From document observation, instructional media used during the class by the teachers.**

Teachers attendance from pedagogic center:

Kulito secondary school pedagogic center : There was teachers attendance in pedagogic center ,but there was small number of teachers signature on attendance. There was small number of teachers borrowed, that means from 62 staff members only 20 teachers used instructional materials. And there was small number of teachers produce some instructional materials. There was insufficient allocated budget for instructional materials.

Halaba secondary school pedagogical center : There was teachers attendance in pedagogical center, but there small number of teachers borrowed, that means from 90 staff members only 27 teachers used instructional materials. There was sufficient

allocated budget for instructional materials but there was small member of teachers produce some instructional materials.

Abokicho secondary school pedagogic center : There was teachers attendance in pedagogic center, but there was only 8 teachers borrowed some instructional materials. There was insufficient allocated budget of instructional materials. There was small number of teachers produce some instructional materials.

Guba secondary school pedagogic center: There teachers attendance in pedagogic center. There was small number of teachers signature, and small number of teachers produce some instructional materials. There was insufficient allocated budget . There was small number of teachers produce and used instructional materials.

As a researcher observed from borrowing format, only 28.6% of teachers borrowed some instructional materials, but 71.4% of teachers didn't borrowed instructional materials. As a researcher observed the staff members have conducted many meeting about utilization of instruction media. But all most all teachers all teachers are not used instructional media particularly.

## **CHAPTER FIVE**

### **5. SUMMARY, CONCLUSION AND RECOMANDATION**

#### **5.1 Summary of the findings**

The main purpose of this study was to find challenges facing teachers in practices and utilization of instruction media in public secondary schools (9-10) of Halaba special woreda . The study was guided by the following objectives: To analyze the available practices and utilization of instructional media. To assess teachers interest in utilizing instructional media. To analyze teachers affected in utilizing teaching media appropriately. To find the main challenges that discourage teachers from using instructional media during the class. To assess what role to teachers and principals play in utilization of instructional media in Halaba special woreda selected public secondary schools and make possible recommendations from the finding of the study. The study employed descriptive survey research design.

To what extent the available instructional media are utilized: The study found that the available instructional media like electronic media, charts, pictures, models, local teaching materials, real objects, flip charts, globs, maps, real objects, were used in low extia with 69.8%, 50%, 67.7%, 62.5%, 60.4%, 60.4%, 62.5%, 56.25% response rate respectively.

Regarding to teachers affected in utilizing teaching media :

The study found that teachers affected in utilizing teaching media like low encouragement, lack of commitment, low attention, lack of interest, use of time, lack of facilitate, lack of material resource with 67.5%, 69.8%, 62.5%, 60.4%, 64.6% , 72.9%, 64.6% response rates respectively.

Challenges that are discourage teachers from using instructional media during the class. The study found that: low encouragement, , lack of experience, lack of training, lack of commitment, shortage of budget, lack of interest to words instructional media are challenges according to response of respondents.

The roles should be played by teachers and principals to avoid such challenges

The study found that: Enriching teachers' awareness, encouraging teachers, establishing continuous follow up system, allocating enough budget, facilitating training program, modernizing handling system are roles to be played teachers and principals to avoid challenges responded by respondents.

## 5.2 CONCLUSION

Based on the above findings the following conclusions were drawn:

The result of study revealed that the extent of utilizing instructional media was found to be low level. Thus, it is possible to conclude that the practice of utilization regarding to teachers affected in utilizing instructional media was found to be : low commitment, low encouragement, low attention to words using instructional media, backward handling and low follow up from school. Therefore, it is possible to conclude that the selected secondary schools of Halaba special woreda teachers are not utilizing instructional media that can enhance the students, engagement in education and teachers, commitment in teaching the students through adequate instructional support in the way they can achieve the intended goal of education at the secondary school level.

Among the various challenges that discourage teachers from using instructional media during the class were: shortage of electronic media, lack of commitment, low encouragement from school, low follow up from school, low attention towards instructional media and backward handling were identified challenge. Therefore, it is possible to conclude the interest of teachers was low towards utilization of instructional media.

### 5.3 RECOMMENDATIONS OF THE STUDY

The following recommendations were made based on the finding of the study:

1)The result of study revealed that the utilization of available instructional media was low in the secondary schools. Therefore, supervisors, principals and school management bodies are required to work hard jointly with teachers to use available instructional media in their schools efficiently and effectively in the teaching learning process. Also orientation should be given to all academic staff and administrative staff regarding the utilization of educational media for educational purpose by school principals.

2) Evidences from respondents show teachers interest towards instructional media was low. The reason for this according to the respondents opinion was teachers, low commitment, low encouragement low attention towards instructional media, backward handling and low follow up from school. Thus, the school administration should motivate, encourage the school teachers modernizing handling system. They should allow teachers to attend workshops and seminars whenever they are organized and called for.

3)The school should work seriously on identified challenges. Thus, electronic instructional media should be fulfilled, teachers should be encouraged through training workshop seminar, the school should prepare means of follow up the school should modernize handling system. Moreover teachers, members of the school community and others should develop sense of belongings on the utilization of instructional media.

4)The school should work with department heads, and teachers to achieve optimal productivity and efficiency in the area of utilization of instructional media. Principals ought to make guidelines and policies in each school accessible and available enough to all empower the entire staff with the knowledge and Woreda education bureau. Education office should monitor and support the activities of school leaders to make sure that allocated educational medias are properly and timely utilized.

5 )Respect the role played by teachers and principals to avoid such challenges were: enriching teachers awareness, encouraging teachers, establishing continuous follow up system, allocating enough budget, modernizing handling system, to play principals and school administration.

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**Appendix I**  
**ADDIS ABABA UNIVERSITY**  
**COLLEGE OF EDUCATION AND BEHAVIORAL STUDIES**  
**DEPARTMENT - EDpM**

Questioner to be filled by teachers

Dear respondents,

The purpose of this questionnaire is to collect data for the study entitled the Practices and Challenges of Utilization of Instructional Media in Secondary Schools of HalabaSpecialWoreda . Your responses are vital to success the study .So, you are kindly requested to read all questions and fill the questionnaire with genuine responses . Be sure that the responses you may give, are used only for educational purpose and the information is kept confidential .

Please note the following points before you start filling the questionnaire :

1. Do not write your name on the questionnaire
2. Provide appropriate responses by using tick (✓) mark to choose one of the selected ratingscales .
3. Please, give appropriate response for all questions based on your work experience

**Part One:** General information and personal data

Indicate your response by using tick (✓) in the box provided.

1. School -----
2. Sex : Male  Female
3. Age : A) below 30 years  B) 31-40 years  C) greter than 40 years
4. Work experience : 1- 5 years  6-10 years  11-15years  16-20years   
21- 25years  26-30 years  31and above
5. Educational back ground : Diploma  First degree  MA degree
6. Current work position : School principal  Vice principal   
Department head Teacher

## Part TWO- Questions on Media Application

### Teacher's Questionnaire

The questionnaire below aims at gathering information on the extent to which instructional media are used during the class by the teachers indicate the appropriate numbers on the scale below

1 .Very Low 2.Low 3 .Medium 4.High 5. Very High

To what extent the available instructional media are used

R.No	Description of items	Rating scale				
		VL	L	M	H	VH
		1	2	3	4	5
1	The teachers in using electronics instructional media like projector, disc cassette etc					
2	The extent of teachers in using charts					
3	The extent of teachers using pictures in teaching learning process					
4	Extent of teachers in using models					
5	The extent of teachers in using local teaching instructional materials					
6	The extent of teachers to prepare instructional media with daily lesson plan					
7	The extent of teacher's commitment to use and produce instructional media					
8	To what extent teachers' using real objects					
9	The extent of teachers encouragement to words instructional media					
10	The extent of teachers share experience to each other to words using instructional media					
11	The extent of teachers using flip charts					
12	The extent of teachers in using globs and maps					

1. The major factors that discourage teachers from using instructional media?

1- Strongly Disagree(SD) 2 – Disagree( D) 3- Undecided(U) 4 – (Agree)(A)  
5-Strongly agree(SA)

R.No	Description of items	Rating scales				
		SD	D	U	A	SA
		1	2	3	4	5
1	Teachers encouragement is low to words using instructional media .					
2	Teachers havelack of commitment in using instructional media.					
3	Teachers didn't give attention to instructional media .					
4	Teachers interest is very low to words using instructional media.					
5	Teachers haven't time to use instructional media.					
6	Teachers always facilitate practices of media.					
7	Teachers haven't material resources to use instructional media.					
8	Teachers don't support each other in using instructional media.					
9	Daily plan didn't include instructional media .					
10	Teachers have lack of experience to words using instructional media					
11	Teachers have not taken relevant training to words using instructionalmedia.					
12	Teachers are incompetent to help other teachers.					
13	There is insufficient allocated budget for the utilization of instructional media.					
14	Teachers' resist against the use of instructional media.					

## **Appendix – II**

### **Interview Questions for Principals**

Dear respondents, the purpose of this interview is to collect relevant data on the study entitled “An Assessment of the Practice and Challenges of Utilization of Instructional Media in Some Selected Governmental Secondary Schools of Halaba Special Woreda. Your responses are vital for sure that they will not be used for any purpose other than academic purpose your participation is volunteer based. No need of writing your name.

Thank you in advance for your genuine and kindly cooperation

#### **Part One: General information**

1. Sex -----
2. Age -----
3. Academic qualification -----
- 4 . Work experience -----
- 5 Current position -----

#### **Part Two: Guideline questions for the interview**

1. How do you evaluate your schools relation to utilization of instructional media?
- 2 How do you evaluate the role of teachers in utilization of instructional media?
- 3 What are the major challenges that negatively affect utilization of instructional media in your school? What possible measures should be taken to avoid such challenges? Please make a detail clarification.
- 4 What possible measures should be taken to avoid such challenges? Please make a detail clarification.

## Appendix- III

### Document Observation Checklist

The Document Observation Checklist is filled by the researcher during observation

<b>No</b>	<b>Items</b>	<b>Yes</b>	<b>No</b>
<b>1</b>	There is teachers attendance in pedagogical center.		
<b>2</b>	There is many numbers of teachers borrowed some instructional materials.		
<b>3</b>	There is small number of teachers produce some instructional materials.		
<b>4</b>	There is insufficient allocated budget for utilization of instructional media.		