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## Instructional Technology Implementation in Haramaya University Community School Grade 11-12 in Focus: Challenges and Opportunities

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### Abstract

This study was intentional to engross in the Implementation of Instructional Technology in Haramaya University Community Model School Grade 11-12. It was employed mixed research design, and approach. The data was collected from 30 teachers and 29 students selected by using availability sampling and random sampling techniques particular lottery method and data collected through questionnaires, interview, and observation. To analysis data SPSS Version 20 was used and frequency and percentage were used. The study revealed that practices of instructional technology is low, in line with opportunity on the implementation of instructional technology in the school there is same availability of instructional technology like computer, laboratory equipment ,map, chart, model ,poster, glob, nevertheless, in line with this the implementation of instructional technology is very low .The challenges of instructional technology implementation is facing lack of awareness about the importance of instructional technology; lack of motivation from both teacher and students; lack of technician or human resources; lack of attention from administrative of the school; lack of team spirit from teacher-to-teachers ,school-to-student parents, unproper uses of resources; lack of time from teachers; lacks of enough resources; lack of commitment to implement from the top to down leader ,and lack flow up.

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In line with techniques to minimize those challenges the results showed as it is better if giving training and awareness creation on instructional about the use and importance instructional technology for both teachers and students in quality education; motivating and rewarding teachers based on their performance in line with instructional technology activates and process of its implementation; attention to be given to the instructional technology planning, implementation, evaluation, feedback, and improvement of each teacher in the school by school leader, unit leader, department head, and teachers them self to develop their capacity with this subject matter; creating team work or coordination among school teachers, department, streams to share their experiences ; flow up the scientific producers of instructional technology practices evaluation stages in which it involves planning, implementation, evaluation, feedback, and taking improvement on the weakness side; allocating enough resources for teaching and learning as well as giving orientation how to use those materials in the school are forwarded based the results of the study. Thus it is recommended that the implementation and practices of instructional technology in the school is need leader attention in addressing determinants factors that motivate and encourage the commitment of school teachers and students.

**Keywords:** Implementation; Practices; Challenges; Instructional technology.

## **1. Introduction**

Education is not exactly innovative to a country that is home to an ancient civilization. In Ethiopia, since the advent of Orthodox Christianity in the 4<sup>th</sup> A.D century religious education, including writing as part of its curriculum as well as Qur'anic education has been given by Islamic educational institutions, particularly among communities inhabiting the eastern and western parts of the country and Oromo Gada system as well [1]. In 1908, the first modern school was opened bearing the name of Menelik II. The school first opened its door to about one hundred children of the aristocracy, so as to set a good example for the general community [1; 2] Moreover, education is a powerful instrument that unlocks the door to prosperity of a nation. It is one of the main keys to the development and the improvement of mankind. Since education is regarded as the foundation for nation building. Its quality management is essential. It is the most famous factor that affects the overall development and wealth of any nation. It is the acquisition of knowledge that empowers a person towards a better and higher way of life. Confirming the above idea Minister of Education [3] noted that education is a means for developing sense of belongingness and role of the society in the environment works and increasing the supply of productive materials and assists the acquiring knowledge by technological inputs. Education is currently used as the important tool for the reduction of poverty in our country and the improvement of school level learning – teaching activity as a national policy in Ethiopia. Besides of this, one of the well known important educational goals in the schools is promoting the development of an instructional media and technology for insuring quality of education in line with skills, knowledge and to make education a supportive tool for developing traditional technology, and for utilizing modern technology learners among students [4]. In the same way [5] is deep-rooted that education is believed to be one of the greatest forces that shape the task of giving the speed of economic, social, and political advancements of a society and it plays a major role in establishing suitable conditions for development by producing skilled manpower and raising the human capital for national development. Education helps to foster changes in technology. And the main objective of MOE [6] is to make sure that technology is an integral part of the national education system, improve and expand access

to quality technology education, and make the educational system responsive to the changing needs of the country consistent with the demands of a knowledge- and information-based economy and society. Nevertheless, technology in education as things or tools used to support teaching and learning. Thus computers, software programs such as a learning management system, or a transmission or communications network, are all technologies. A printed book is a technology. Technology often includes a combination of tools with particular technical links that enable them to work as a technology system, such as the telephone network or another instructional material [7]. According to Henich [7] “The palace of instructional technology in today especially 21<sup>st</sup> century our era could be characterized as the age of media and technologies. As conduits for information and entrainment, the mass media factually surrounded us day and night. Technology in digital communication permeates our look and play. Media and Technology have transformed not only the worlds of work and spare time but the world of education well. As you think about the future in the world of education, consider these vignettes as sampling of the ways media and technology fact the processes of teaching and technology” This idea is show that the palace of instructional technology in 21<sup>st</sup> century. Now a day it is the age of media and technology especially digital communication. It has strong relation in line with human being daily life in terms of many dimensions such as sharing of information, skills, experiences, knowledge, and learning from each one another in global world general and in educational setting in particular .Media and Technology is the center of teaching and learning process for creating comfort environments for the learners and teachers in the school. Today we cannot separate from the use of technology and media because we use technology at any time without any boundaries or ristraction .We can use at school, after school, at home, at work, students and adults are enjoy the vitalization of technology and media through their life. It cover a wide range of different technologies, including blogs, wikis, You Tube videos, mobile devices such as phones and tablets, Twitter, Skype and Face book. Furthermore, instructional media and technology cater to learners of all ages. Schools have been trying to implement educational media and technology with or without the support of teachers, parents, and stakeholders. Not everyone believes that media should be an integral part of the school system. Research has been ongoing in an effort to learn whether media and technology facilitate learning or not. Teachers share their best practices on the value of using educational media and technology in the classroom. However, more research is required to learn about schools and their role in facilitating and creating learning environment in the school today because of different factors bundle quality education and try to improve these determinants. Ethiopia should to move into the knowledge and information age, and be integrated into the global economy, there is a need to immensely expand educational opportunities, modernize the educational system and improve its quality. Because, technology is used facilitate the development of educational system and enables both individuals and countries to meet the challenges presented by the knowledge and information age 21<sup>th</sup> century. The main factors that contribute to the implementation instructional technology in the school may related to lack of awareness, attitudes and both teachers and students capacity to use instructional technology in the schools. With this regard, this study was examined the implementation of instructional technology in Secondary School at Haramaya University Model school Grade 11-12<sup>th</sup>

### ***1.1 Statement of the Problem***

Instructional technology is a systemic application of strategies and techniques derived from behavioral, cognitive, and constructivist theories to the solution of instructional problems. In education, instructional

technology is “the theory and practice of design, development, utilization, management, and evaluation of processes and resources for learning. Instructional technology is often referred to as a part of educational technology but the use of these terms has changed over the years [8; 9]. More over, educational media and technology can be defined as all means of communication like prints, graphics, animations, audios and audiovisuals. It is also incorporates all the qualities of prints, graphics, animations, audio and audiovisuals and technology is defined as any object or process of human origin that can be utilized to convey media and multimedia. In this sense, technology includes phenomena as diverse as books, films, television, and the internet. In education, media are the symbol systems that teachers and learners utilize in representing knowledge and technologies are the tools that allow them to share their knowledge representations with others [10]. Additionally World Education Report [11] noted that in education worldwide is facing a significant challenge in preparing students and teachers for "our future knowledge-based' society" during a time when most teachers are not prepared to use technology and the bulk of existing school buildings, even in the majority of the developed countries, are not equipped to integrate the new information and communication Technologies in the schools. The strategic focuses of the technology policy of Ethiopia is promotion of technology in education one element and fundamental one and ensure that technology as an integral part of education and training at all levels. Design and implement computerized information systems and applications with emphasis on priority sectors such as agriculture, health, and education are area of attention in Ethiopia. The Education and Training Policy, in articles 2.2.8 and 3.6.7, position education as a encouraging tool for developing traditional technology and for utilizing modern technology. It provides that traditional education will be improved and developed by being integrated with modern education. This is an important provision, which gives due recognition to traditional knowledge and education. The policy favors the blending of traditional knowledge and education with modern knowledge and education in the country’s education system. All the necessities of modern life brought light to the fact that information for the modern education is a crucial resource and incalculable resource. It is no longer news that we are now in information age that is characterized by an ever-changing information technology uprising and an information expressway on which every mutual thing and profession must more, if it is to stay alive in the 21st century. The sector that has been most fundamentally affected by the information technology development and it is also educational sector specially schools starting from low level up to higher education. The information technology has become a critical resource because its absence could result in low quality education and ultimately students result failure. Technology has very vital tools in insuring quality education. It is absolutely known that technology can improve the teaching and learning process by provided that unique opportunities. Though, we also know that adaption of educational technology is a highly complex process. There are several levels of implementation that need to take place. It involves knowledge, know-how and understanding. Educational technology can be very challenging to implement. There are many possible barriers. For instance, from the researcher life experience, equipping schools with technology can be expensive. Also, teachers sometimes are resistant to technology adaption. Additionally, parents may see technology as a diversion from academic learning. These are just a few of the rationale of the study that may need to be addressed. Moreover, in the case of Information Communication Technology for Education projects, negative statements are found on the documents from [12]. For example, ‘the positive impact of ICT use in education has not been proven’ and ‘the use of ICTs in education in many developing countries, especially the “poorest of the poor” is associated with high cost and potential failure’. In

fact, in the case of the *School Net* project in Ethiopia, similar problems such as poor infrastructure, availability of sustainable power, low skills for maintenance, low motivation of teachers and language used in the contents are mentioned [12]. On the other hand, the implementation of instructional technology is limited in Ethiopian schools in general and in secondary school in particular. Some empirical researcher conducted on instructional technology in Ethiopia. For instance, Challenges and solutions when using technologies in the classroom [13]. Likewise, According to Renee Hobbs. at.[ 14] the Past, Present, and Future of Media Literacy Education conducted on instructional technology improvement and solution findings have not improved. In this light, the researcher designs the next basic questions and seeks achievable opportunities for the study.

### ***1.2 Basic Questions of the Study***

1. To what extent do the secondary schools practice in implementing instructional technology in school?
2. What are the key challenges encountered in the implementation of instructional technology school?
3. What are the major opportunities in implementing instructional technology in the school?
4. What, if any, impediments prevent the challenges implementing instructional technology in the school?

### ***1.3 Scope of the Study***

**Geographical Scope:** Haramaya University Secondary school particular grade 11-12<sup>th</sup> Respondent's students, teachers, and Principals. It is also restricted to Practices, impediment, opportunities and mechanism of overcome those impediments in implementation instructional technology. It does not include another grade and students of model school, because of time and other resources required for data collection.

**Conceptual scope:** In relation to aspects of instructional technology implementation in line with instructional material in terms of practices, key impediments, Opportunities, and techniques to tackles the challenges that influences on instructional technology implementation and it is does not include another issues except practices, key impediments, Opportunities and mechanizem of talking such problem.

**Methodological Scope:** Moreover, the design of this research was used the most popular mixed-methods designs that is the sequential explanatory mixed methods design, which contains two distinct phases. Purposive sampling was used for selection school and Principals, and students were selected by using available sampling techniques. Instruments of data collection were open ended and closed ended questionnaires, semi-structured interview and observation and another method and sampling techniques are excluded. Because of the purpose of the research is limit researcher in line with the objective of reaserch.

### ***1.4 Significance of the Study***

The findings of the research have for the following significance for different bodies.

**For Policy Makers:** It may address the gaps in utilization of instructional technology teaching and learning process and facilitate to take corrective measurement

**For practitioners:** It may be providing information for Secondary schools teacher, principals, students, and other stakeholders concerning instructional technology implementation. Specifically, Haramaya University Model School, Minister of education and Regional State Education bureau will get benefit from this study directly and indirectly in respectively. Moreover, it will be enables policy makers to give more attention during policy decision.

**For academician:** It contributes for another researchers for as starting point for further study .Hence, the researcher the study will have serves as a reference material for all concerned body and researchers who want to carry out further studies in this setting. Finally, this research may serve as a basis for detailed and further study in related to research problems.

### ***1.5 Limitations of the study***

It is obvious that research work cannot be free of limitations and constraints. To likewise, this study has some limitations. One of these were that some of secondary school principals and teachers were busy and did not have enough time to respond to questionnaires and interview. Another limitation was lack of recent and updated literature on the topic, especially bout instrctional technolgy in Ethiopian setting. In spite of these short comings, however, attempts were made to make the study as complete as possible. These attempts were arranging appropriate time schedule for data gathering, and using school principals for collecting questionnaire from the respondents, to minimize shortage of literature the researcher was use internet access as one source.

## **2. Materilals and Methods**

It is evidently and well known any kind of research design is based on the rationale or objective. Subsequently, the main intent of this study was to investigate the implementation of instructional technology in Haramaya University Model School Grade 11-12th. To this closing stage, a descriptive survey approach was intended. The design of this study is descriptive survey design. Descriptive survey is preferred over other methods as it enables to make investigations with predictions, narration of events, comparisons, and drawing of conclusions based on the information obtained from relatively large and representative samples of the target population [14] Moreover, the conceptual frame, a plan or a blueprint of how one intends conducting the research. It is a plan for research involving decisions about broad assumptions as well as detailed methods of data collection and analysis plans used to examine the question of interest. This study was used one of the most popular mixed-methods designs: The reason is to better understand a research problem by converging (or triangulating) both broad numeric trends from quantitative research and the detail of qualitative research; to explore participant views with the intent of using these views to develop and test an instrument with a sample from a population and to obtain statistical, quantitative results from a sample and then follow up with a few individuals to probe or explore those results in more depth.

### ***2.1 Sources of Data***

The present study utilized primary and secondary data sources. Primary data sources were used to collect first

hand information from the main concerning bodies on the current status of instructional technology implementation in Haramaya University Model School. Primary data were collected from school principals, teachers, and students. Data was sought through questionnaire and interview which consist of open and closed ended items. The decision to use these groups of respondents as a source of data was the anticipation that they are subjects with a better understanding and information about the current implementation of instructional technology status in school. The data sources were from Haramaya University Community model preparatory school teachers, students, and principals. The organizational characteristic of the school has been intentionally used to select the sample school.

### ***2.2 Population and Sampling Techniques***

The participants were selected be selected students selected by using random method particular by using lottery methods which gives equal chance for all participants, teachers, and principals were selected by using purposive sampling and available sampling techniques. The sampled school has been selected using purposive sampling, after determining the target population, a proportion of 1.82 have been used. Sections, sampled students and teachers have been then selected using availability a sampling technique. As a result, grade 11 has been sampled by 14, grade 12 has been sampled by 15 and teachers have been 30 were selected. Therefore, since their number is very small and manageable. Hence, students were selected by simple random sampling and teachers were selected by using availably sampling techniques were used.

### ***2.3 Instruments of Data Collection***

Relevant data for the study was collected through different instruments. Accordingly, questionnaire, document analysis and interview guide have been used to collect relevant information.

### ***2.4 Procedures of Data Collection***

Permission has been obtained from school principals before contacting teachers and students. Then, after securing consent teachers and other respondents were consulted to schedule suitable days for interview and to administrate the questionnaire as well. Accordingly, the Procedures by which data was collected from respondents involved distribution of questionnaire to respective class room by the investigator. Data from a sample class recollected on several days as the respondents were not of the same categories and cannot be available at the same time. Data from teachers in the school was scheduled to be collected in a single day but since all teachers could not be available in school at the same date, data collection has been taken a couple of days. Likewise, interview was conducted with school principal and arranging was made regarding interview schedule that suited the interviewees.

### ***2.5 Methods of Data Analysis***

Data collected from field through questionnaire, interview and observation were organized in frequency table for proper management. The quantitative data which were gathered through close-ended questionnaires were cleaned, coded and enter into a computer and analyzed using SPSS version 20. Accordingly, descriptive

statistics such as frequency, and percentage statistic were used to analysis data. Further analysis were made using correlation statistic to examine variable relationships. The recorded interview were transcribed; categorized and compiled together into theme. The result of document analysis and open-ended questions were summarized and organized by related category. Thus, data collected from the semi structured interview, document analysis and open ended questions were analyzed and interpreted qualitatively.

### 3. Data Analysis and Interpretation

In this section deals with data presentation, analysis, and discussion. The first section is presents characteristics of the respondents by sex, age, grade of students, qualifications, and teaching experience of the teachers. The second section explores data presentation, analysis, and discussions are provided. The data obtained from respondents were analyzed using the Statistical Package for the Social Sciences (SPSS version 20). SA =strongly agree, A=Agree=D=Disagree, UN= undecided, SD= strongly disagree. Hence, data are presented first, then analysis, discussion, conclusions, and forwards respectively.

**Table 1:** Responses of students on currents practice of instructional technology

N	Items	SA		A		DA		Undecide D		S D	
		F	%	F	%	F	%	F	%	F	%
29	I have learn by demonstration materials for teaching flip chart ,poster, map	10	34.5	5	17.	11	37.2	6.9	1	3.4	
29	I have learn instructional martial for Teaching model and audiovisual	3	10.3	12	41.	4	13.7	24.	3	10.	
29	Teachers support students in conducting practical activities in the class room The implementation	3	10.3	13	44.	3	10.8	27.	2	6.9	
29	of Instructional technology is applied in the school	2	6.9	7	24.	9	31.7	24.	4	13.	
29	We use enough instructional technology in our school	4	13.8	10	34.	7	24.4	13.	4	13.	

Regarding current practices of instructional technology in the school specially demonstration practices by using flip chart, poster and maps majority of the respondents 11(37.9) DA reconvened there is no practices instructional technology in the schools, but by contradicting this around ‘A’ 12(41.4%) and ‘A’ 13(44.8%) of the respondents were confirmed that there is practices of instructional material and teacher enhanced their students by conducting practically activities in the class room. However, A, 9(31%) of the respondents were confirmed that implementation of instructional technology is applied in the school and, A,10(34%) respondents there is sufficient instructional technology in our school but lack of practices and implementation in appropriate utilization in the school. On another hand, Observation and interview results were confirmed there is no instructional technology in the school to from this it is observed that majority of respondent were confirmed



there is less practice implementation of instructional technology in the school.

**Table 2:** Availability a of instructional materials and facilities (Students)N=29

N	Items	SA		A		DA		Undecided		SD	
		F	%	F	%	F	%	F	%	F	%
29	Computer and internet room are available in your school	9	31.0	10	34.5	5	17.2	3	10.3	1	3.4
29	We practice the utilization of Computer and internet in our school	6	20.7	12	41.4	5	17.2	3	10.3	2	6.9
29	laboratory equipments are available in the school	3	10.3	10	34.5	10	34.5	4	13.8	2	6.9
29	Laboratory library is available in the school and	2	6.9	13	44.8	8	27.6	5	17.2	1	3.4
29	Laboratory room available in the school										
29	Sufficien t instructional technology like Model, real object are available in the Map,and library	6	20.7	12	41.4	7	24.1	3	10.3	1	3.4

In line with the 1st item that planning the entire content of the program before the commencement of course 9(31%), 10(34%), 5(17%), 3(10.3%) and 1(3.4%) were responded strongly agree, agree, Disagree, and can decided were responded respectively .This is also most of students were agree on the availability of computer and internet room are available in your school specially 9( 31.5%) and 10(34.5%) were had positive response respectively. Relating to practice the utilization of Computer and internet in our 6(20.7. %), 12(41%), 5(17.5%), 3(10.3%), and 2(6.5%) were responded strongly agree, agree, Disagree, and can decided were responded respectively. This result also showed that 12(41%) of the respondents were a practice the utilization of Computer and internet in the school. However, the observation result was Confirmed this idea.

**Table 3:** Factor affecting the implementation of instructional technology

N	Items	SA		A		DA		Undecide d		SD	
		F	%	F	%	F	%	F	%	F	%
29	Lack instructional technology resources in the school.	9	31.0	14	48.3	3	10.3	3	10.3	3	10.3
29	Lack of teachers’ motivation, interest, & commitment to implement instructional Technology.	10	34.5	13	44.8	2	6.9	4	13.8	4	13.8
29	Lack of trained laboratory technician	14	48.3	7	24.1	4	13.8	3	10.3	1	3.4
29	Lack of in serve training for teachers on instructional technology?	8	27.6	8	27.6	8	27.6	4	13.8	1	3.4
29	Lack of attention from the higher officials	12	41.4	8	27.6	5	17.2	3	10.3	1	3.4

The data presented in the table 4 in line with item (1) which states the idea lack Instructional Technology Resources in the School The respondents were

9(31.1%),14(48%),3(10.3%) ,3(10.3%) were responded strongly agree, agree, Disagree, and can decided were responded respectively. This indicate that from 9(31%) 14(48%) of the students were confirmed shortage of instructional technology resources in the school is the challenge that affect implementation of instructional technology in the school. Were as 10(34.5%), 13(44.8% were represented strongly agree and agree responded respectively lack of teachers’ motivation, interest, & commitment to implement instructional technology in the school. Regarding to lack of trained laboratory technician, and lack of in serve training for teachers on instructional technology the respondents were 14(48%), 7(24), 4(13%), 3(10.3) and 1 (4.3%) were represented that strongly agree, agree, disagree, strongly disagree and undecided answered in relation to lack of trained laboratory technician and teachers on instructional technology . Finally, in line with the lack of attention from the higher officials 12(41.4%), 8(27.6%),5(17.2),3(10.3%) and 1(3.4%) were replied that strongly agree, agree, disagree, strongly disagree on the item. From this data we can understand that there is lack of attention in the implementation of instructional technology from the higher official.

**Table 4:** strategies to solve the challenge that affects the instructional technology implementation (Students N=29).

N Items	SA		A		DA		Undecided		SD	
	F	%	F	%	F	%	F	%	F	%
29 Giving attention by higher officials	14	48.3	12	41.4	2	6.9	1	3.4	1	3.4
29 Providing on job training for teachers on instructional technology	16	55.2	9	31.0	1	3.4	2	6.9	1	3.4
29 Providing necessary and adequate instructional technology equipments	19	65.5	7	24.1	2	6.9	1	3.4	1	3.4
29 Motivating both students and student towards considering of practical activities as assessment strategies learning instructional technology	22	75.9	4	13.8	2	6.9	1	3.4	1	3.4
29 Providing necessary instructional materials	29	65.5	5	17.2	3	10.3	1	3.4	1	3.4

As data depicts in the table 5 item 1 which is addressing about giving attention by higher officials on the mechanism in implementation of instructional technology 14(48.3), 12(41.4), 2(6.9), 1(3.4) and 1(3.4%) SA, A, D, SD and UN answered respectively. From the respondents results we conclude that most of the respondents 14(48%) and 12(41%) were confirmed giving attention on the implementation of instructional technology by higher official is the key mechanism in the implementation of instructional technology in the school. In relating the 2nd item which is state the issues of providing on job training for teachers on instructional technology 16(55%), 9(31%), 1(3.4%), and 2(8.7%) were responded that SA, A, D, SD, and UN consequently. From the

according to the respondents results 16(55%) and 9(31%) were confirmed providing on training for teacher is can the mechanism in enhancing the implementation of instructional technology in the school. In the same way on item 3 providing necessary and adequate instructional technology equipment 16(65.5%), 7(24), 2(6.9), 1(4.3) and 1(4.3%) SA, A, D, SD and UN answered respectively. From this 16(65%) of the respondents were confirmed that providing necessary and adequate instructional technology is the key techniques in implementation of instructional technology in the school. The observation and interview result also confirmed these findings.

**Table 5:** The current practice of instructional technology (Teachers N=30)

N	Items	SA		A		D		Un		SD	
		F	%	F	%	F	%	f	%	F	%
30	I used demonstration materials for teaching flip chart ,poster, map	2	6.7	21	40.0	9	30.0	4	13.3	3	10.0
30	I used instructional martial for teaching model and audiovisual	1	3.3	8	26.7	13	43.3	5	16.7	3	10.0
30	I support students in conducting practical Activities	3	10.0	11	36.7	9	30.0	5	16.7	2	6.7
30	The implementation of instructional technology is applied in the school	4	13.3	3	10.0	10	33.3	3	10	1	43
30	We use Suffient instructional technology in our School	1	3.3	8	26.7	11	36.7	6	20.0	4	13.3

The table 6 item 1 and item 2 clearly reveals that 21(40%), 9(30%) SA, A and 13(43.3%), 8(26.7%), D, A respectively opposing each another. This reveals or shows that demonstration materials for teaching flip chart, poster, and map are used in teaching and learning process in the school by opposing student idea. However, 2(6.7%), 4(13.3), 3(10%) were confirmed that SA, UN, SD respectively. In line with item number 2 which is tell us used instructional martial for teaching model and audiovisual 1(3.3%),8(26.8%),13(43%),5(16%),and 3(10 %) were responded that SA, A, D, SD and UN consequently. From this item we can observed that 13(43%) of the responds were confirmed that lack of using instructional technology for teaching model and audiovisual in teaching and learning in the school. On another hand item 3 which is illustrate that enhancing students practically, and implementation of instructional technology in the school 3(10%), 4(13%), 11(36.7%),

10(10%), 9(30%), SA, A, D, SD and UN consequently. From we can deduce that no practically activities were under taken in the school in line with instructional technology. In line with implementation 4(13.3%), 3(10%), 10(33.3%), 3(10%), 13(43%) were responded SA, A, D, SD and UN consequently. From this about 13(43%) of the respondents were confirmed there is no implementation of instructional technology in the school and this also confirmed by the students and observation results. Even there is no enough instructional technology in our school.

**Table 6:** Availability a of instructional materials and facilities (Teachers, N=30)

N	Items	SA	A	D	Un	SD				
9		30.0								
		F	%	F	%	f	%	f	%	f
30	Computer and internet room are available in your School	9	30.0	8	26.7	9	30.0	3	10.0	1
30	We practice the utilization of Computer and internet in our school	7	23.3	10	33.3	9	30.0	3	10.0	1
30	laboratory equipments are available in the school Laboratory	7	23.3	10	33.3	9	30.0	2	6.7	2
30	library is available in the school and Laboratory room available in the school	2	6.7	13	43.3	12	40.0	1	3.3	2
30	Sufficient instructional technology like Model, Map, and real object are available in the library	3	10.0	11	36.7	10	33.3	4	13.3	2

From the table 7, item I the results reveals that 9(30%), 8(26.7%), 9(30%),3(10%),and 1(3.3%) in line with computer and internet room available in your school SA,A,D,UN, and SD respectively . Opposing results were happened that 9(30%) and 9(30%) are on the same way SA and D respectively however, computer and internet room were available in the school that was confirmed by the researcher. On another hand item 2 indicates that 7(23.3%),10(33.3%),9(30%),3(10%),1(1.3%) are SA,A ,D, UN, and SD respectively . Item 3 and 4 are results reveals that 10(33.3%), and 13(43%), A on two items .This is positive response in line with laboratory and laboratory materials in the school respectively. Hence, they were instructional materials however; the problem of utilization is there.

**Table 7:** Factors affecting implementation of instructional Technology in school (Teachers N=30).

N	Items	SA		A		D		Un		SD	
		F	%	F	%	F	%	F	%	F	%
30	Lack instructional technology resources in the school.	9	30.0	7	23.3	10	33.3	1	3.3	1	3.3
30	Lack of teachers' motivation, interest, & commitment to implement instructional Technology	9	30.0	8	26.7	7	23.3	4	13.3	2	6.7
30	Lack of trained laboratory technician	14	46.7	7	23.3	7	23.3	1	3.3	1	3.3
30	Lack of in serve training for teachersOn instructional Technology	15	50.0	7	23.3	4	13.3	1	3.3	2	6.7
30	Lack of attention from the higher officials	14	46.7	4	13.3	4	13.3	8	26.7	1	3.3

From the table 4, it can be seen that the computed percentage for the item 1 indicates that 9(30%),7(23.3%),10(33.3%),1(3.3) and 1(3.3%) were responded respectively . About 10(33%) were replayed that lack of resources are do not factors in the implementation of instructional technology in the school. On another hand, item 2 lack of teachers' motivation, interest, & commitment to implement instructional technology 9(30%), 8(26.7%),7(23.3%),4(13%),and 2(6.7%) against the answer .From this most of the respondents 9(30%) agreed that lack of teachers' motivation, interest, & commitment to implement instructional technology is the factors for the implementation instructional technology in the school.In line with item 3.4 and 5 most of the respondents were strongly agreed on lack of trained laboratory technician, lack of training on services and lack of attention from higher official for implementation of instructional technology in the school. The responses were 14(46%),15(50%), and 14(46.7%) strongly agreed on factors affecting implementation of instructional Technology in school.

**Table 8:** Strategies to solve affect the instructional technology implementation (Teachers N=30)

N	Items	SA		A		D		Un		SD	
		F	%	F	%	F	%	F	%	F	%
30	Giving attention by higher officials	15	50.0	6	20.0	4	13.3	2	6.7	2	6.7
30	Providing on job training for teachers on instructional technology	12	40.0	5	16.7	9	30.0	1	3.3	3	10.0
30	Providing necessary and adequate instructional technology equipments	13	43.3	2	6.7	3	33.3	1	3.3	1	3.3
30	Motivating both students and student towards considering of practical activities as assessment strategies learning instructional technology	16	53.3	5	16.7	6	20.0	1	3.3	2	6.7
30	Providing necessary instructional materials	18	60.0	2	6.7	6	20.0	2	6.7	2	6.7

As observed from the table 6 item 1 related to attention of higher official is techniques tackling the challenges of instructional implementation of technology in the school the respondents were responded that 15(50%), 6(20%), 4(13%),2(6.7%) and 2 (6.7 %) SA, A, D, SD and UN in respectively. From the highest is 15(50.2%) of the respondents were confirmed is vital for the tackling of challenges in the implementation of instructional technology. In the same way on item 2 which is state that Providing on job training for teachers on instructional technology is the tackling the challenges of instructional technology implementation the respondents were 12(40%), 5(16.7%), 9(30%), 1(3.3%) and 1(3.4 %) SA, A, D, SD and UN respectively. From the highest is 12(40%) of the respondents were confirmed that that Providing on job training for teachers on instructional technology implementation the respondents do not is vital for the tackling of challenges in the implementation of instructional technology in the school. Items 3, 4, and 5 13(43.3%),16(53.3%),and 18(60%) were strongly agreed on Providing necessary and adequate instructional technology equipment, Motivating both students and student towards considering of practical activities as assessment strategies learning instructional technology and Providing necessary instructional materials are the key I techniques tackling the challenges of instructional implementation of technology in the school . To summarize this, the results from interview and questionnaires there are many impediments according to the findings. Specially the techniques that use to minimize the challenges of instructional technology implementation in the schools; Giving training and awareness creation on instructional technology ; Motivating and rewarding teachers based on their performance . line with

instructional technology, giving attention to the instructional technology ; Creating team work or coordination among school teachers, department, streams and involves planning, implementation, evaluation, feedback and taking improvement on the weakness side; and allocating enough resources for teaching and learning as well as giving orientation how to use those on instructional technology materials.

#### **4. Findings, Conclusions, and Forward**

##### ***4.1 Findings***

This final part of the paper deals with the major findings and conclusions of the paper. The central intention of this paper was investigating current practices and challenges of instructional technology implementation in the school. Under this section finding, conclusions, and forward on the key point on current practices of instructional technology, availability of instructional technology, challenges in the implementation of instructional technology, and forwarding techniques how embark upon challenges of instructional planning are provided.'

##### ***Current practices of instructional technology***

Information or evidences from teachers, students, and document and observation from the school have shown that practices of instructional technology in the school are very low from both teachers and students. However, the view of the respondents discovered that demonstrations by using chart, map, practices, implementation, evaluation, and some indicator are there in the school. In the Observation and interview results were confirmed there is low instructional technology practices in the school to from this it is observed that majority of respondent were confirmed there is less practice implementation of instructional technology in the school.

##### ***The Availability of instructional technology in the school***

The observation and interview result also indicates that the availability of instructional technology in school .In line with this availability of instructional technology in the school, Computer and internet room , laboratory equipment, and like model, charts, maps, and another real objects are available in your schools. However, there is no enough practices and implementation in line with those instructional materials. This is indicates that lack of attention from the concerning, school leader, department head and lack of interest and lack of commitment to practices in to action to develop their students in technological advance. Therefore, it is very difficult for plan, implement, evaluate, and improvement especially those who are the schools, and cultivate new generation for future.

##### ***The challenges of instructional technology implementation***

The results shows that the challenges of instructional technology implementation in the schools were lack of adequate training on instructional technology, lack of trained laboratory technician, lack of training on services and lack of attention from higher official for implementation of instructional technology in the school. According to their point of view on challenges in the implementation of instructional technology in the school

were :lacks of enough resources; lack of training on issues of education; lack of attention an lack of mentoring and evaluation; lack of motivation from the teachers, lack of commitment to implement from the top to down leader and lack flow up.

#### **4.2 Conclusions**

This study set out that the practices and challenges in the implementation of instructional technology in Haramaya University Model school Grade 11th – 12 in focus. The reason is that school is Model and is also under the administration of the university and investigates how it practices and implementation of instructional technology in the school. There are no practices of instructional technology but, there are materials in line with instructional technology in the school but no utilization and implementation. There are many factors that affect the implementation instructional technology in the school like lack of attention, lack of interest and commitment of the teachers, school principals, and lack of trained laboratory technician, lack of training on services and lack of attention from higher official for implementation of instructional technology in the school. . Moreover, School have failed to understand that instructional technology implementation practices are used to (1) give attention to instructional technology implementation in line with practices , (2) Motivating and rewarding teachers based on their performance in line with instructional technology, and (3) be a facilitate approach to school issues of instructional technology in the school. Therefore, school principals, supervisors, need to provide supporting, encouraging and motivating teachers and student teachers on instructional technology practices and implementation in the school to attract both teachers and students on using and implementation of instructional technology in the school. At whatever time university give special attention and can bring fundamental changes in the school for generating good and competent generation.

#### **4.3 Forwarding or suggestions**

Techniques of tackling the challenges of instructional technology implementation in the school is better if to summarize this, the results from interview and questionnaires there are many impediments according to the findings. Specially the techniques that use to minimize the challenges of instructional technology implementation in the schools; Giving training and awareness creation on instructional about the use and impotence instructional technology for both teachers and students in quality education; Motivating and rewarding teachers based on their performance in line with instructional technology activates and process of its implementation; Giving, attention to the instructional technology planning, implementation, evaluation, feedback and improvement of each teacher in the school by school leader, unit leader, department head, and teachers them self to develop their capacity with this subject matter; creating team work or coordination among school teachers, department, streams to share their experiences, skills, positive attitude on instructional technology and knowledge each other on issues of instructional technology ; flow up the scientific producers of instructional technology practices evaluation stages in which it involves planning, implementation, evaluation, feedback and taking improvement on the weakness side; allocating enough resources for teaching and learning as well as giving orientation how to use those materials in the school are forwarded based the results of the respondents .



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