

University Students' Perception and Utilization of Technology for Learning: The Case of Haramaya University

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Abstract

As technology has become more prevalent and accessible to students in their personal lives, learning experiences and interaction, it has encouraged students to engage and generate innovative and creative ideas and sharing learning experiences. This paper examines university students' perceptions and utilization of technology for learning at Haramaya University in Ethiopia. The researcher used survey research design with a questionnaire as principal data collection instrument. The participants (n=298) were sampled using purposive, heterogeneity and systematic random sampling techniques. The finding of the study revealed that there was no statistically significant mean difference between male and female students' perceptions towards technology utilization for learning ($t(296) = t -.102, p>0.05, p=0.919$). This was the same for students who came from rural and urban areas ($t(296) = t = -.126, p>0.05, p=0.900$) and students have positive perception towards technology assisted learning.

Key Words: Technology Utilization for Learning; Students' Perception

Introduction

Information and communication technology (ICT) encompasses the effective use of equipments and programs to access, retrieve, convert, store, organize, manipulate and present data and information (Gay & Blades, 2005). Education is one of the public sectors highly influenced by technological development (Kozman, 2005). Using ICT in higher education teaching and learning is a global phenomenon and the center of investment in various universities around the world (Selwyn, 2007). The increase in computer application and utilization in college education is likely to have important effect in teaching and learning of various subjects (Liu et al., 2010).

Instructional technologists believe that utilizing technology in teaching and learning in classroom can greatly enhance the efficiency of students learning and academic achievements. In higher learning institutions, ICT is dominantly used for distance instruction (Clegg et al., 2003; Hazemi&Hailes, 2002; Christina& Lars, 2002) and it is not considered as a new experience. In the 1980s online methodologies were developed to support campus-based and distance education, under the headings "computer-based or "computer-managed learning" e.g. bulletin board system, electronic mail and computer- mediated conferencing (William et al., 1999). In recent years utilizing technological tools such as graphics, videos, three-dimensional objects, animation,

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audio-visual materials and e-video conferencing to support distance, and e-learning programs, accessing distinguished professors are prevalent across the world. E-Learning, which is described as the use of ICT to enhance or support learning and teaching in education, has become increasingly important in tertiary education (Adedeji, 2010).

Teachers in higher education institutions use a combination of methods to teach different courses from the traditional lecturing methods that make students passive recipients to constructivist methods of teaching that recognizes the ability of students in constructing his/her own world. Recently, technology mediated teaching such as Projector, PowerPoint, Video, Internet, E-learning and teaching are familiar in academia. Students use the Internet to visit websites of business and professional organizations cited in textbooks, conduct computer searches for academic and professional journals, prepare case studies and research papers, and use free online tutorials assistance, study guides with practice test, and so forth (Thomas & Jill, 2009). The Internet also provides access to current events, news, and many other types of information since it is the largest library and laboratory and it becomes a popular tool for instruction. Furthermore, the students' use of technology in school and university today will change the future employees' effectiveness and efficiency in using the different types of technology on jobs in the competitive world of work. Despite the essential role of technology in simplifying the lives of humans, technology may have negative effects: for example, cyber cheating, technology based cheating, plagiarism and information overload that results in less learning (Austin & Brown, 1999; Rockwell & Singleton, 2007; Thomas & Jill, 2009).

Research findings regarding students' perception may have significant implication for university managements, faculty members, teachers, students and employers to enhance the delivering of education to students in higher learning institution and students' application of the experienced knowledge and skills in the real world of work. However, very little research has addressed students' perception and reaction to multimedia education, models and methodologies for the study of technology-assisted learning (Webster & Hackley, 1997; Connel, 2006; Schmid, 2008; Thomas & Jill, 2009). Therefore, the intention of this paper is to investigate university students' perception and utilization of ICT for learning purposes.

Statement of the Problem

The attitude and perception of teachers and students towards educational technology may affect its implementation and utilization for teaching and learning processes and purposes. Researchers have shown that students' perceptions and their readiness to accept computer technology in teaching are critical to the success of their learning (Buabeng & Yidana, 2015). According to Dorup (2004), students' preferred the use of ICT in learning and they showed positive attitudes towards the technology. However, the nature of classroom organization, classmates, teachers, availability of resources,

could influence these positive attitudes (Kennewell, 2001). Several studies on students' attitudes towards ICT and their relationship with gender have revealed conflicting results. Kubiatio and Halakova (2009) conducted a study on high school students' perception of using ICT in studying Biology. The results revealed that male students had more positive perception towards the use of ICT than female students did. Furthermore, the studies of Papaioannous and Charalambous (2011), Buabeng and Yidana (2015) revealed that male students had more positive attitudes towards ICT than their female counter part. Seyal, Rahim and Rahman's (2002) study on computer attitudes of 268 students in contrary revealed no significant differences in attitudes with regards to gender. In addition, Mizrachi and Shoham (2004) studied students' attitudes in schools. The study also found no significant differences in attitudes concerning gender. This controversy has not yet been investigated in depth in the African higher learning institution context. Furthermore, it would be progressively imperative to consider students' perceptions of ICT and the way they use ICT in higher education institutions because they are the key stakeholders in the teaching and learning processes.

Notwithstanding, significant progresses in technological development, a number of important physical, cultural, social, economic and pedagogical factors hinder the use of ICT by teachers and students in sub-Saharan Africa, particularly in rural schools. These include lack of electricity and frequent power outages/shortage, poor technology infrastructure, connectivity problems, problem in software license and equipment maintenance, insufficient and inappropriate software penetration in the markets, non-competitive and government dominated telecommunication policies and regulations may impede connectivity and sustainability (Hawkins, 2002).

Educators have consistently made various assumptions about the relationships between technology utilization and students' learning. Some scholars assumed that students who learn in classes where staff members frequently utilize technology in to instruction are likely to exhibit positive perceptions about computer technology and enhance their learning. Various researches conducted about teachers' perception towards technology-assisted teaching (TAT); however, little attention has been given to technology utilization for learning and perception of students towards it. Therefore, this study intended to examine the perception of students towards technology and utilization for learning purposes. For the current research, the researcher considered ICT as the combination of more than one media device such as Internet, Mobile, Laptop, Desktop computer, LCD projector and PowerPoint in an effort to investigate the perception of students towards technology utilization for learning. The researcher designed and answered the following basic questions:

- 1) To what extent do students utilize technology for learning in higher learning institution?
- 2) Do differences exist across localities and sex in students' perception towards utilization of technology for learning?

3) What are the major challenges that may be faced by students in utilization of technology for learning at Haramaya University?

Hypotheses

1) “ H_{01} ”: There is no statistically significant mean difference between Male and Female students’ perception towards utilization of technology for learning.

2) “ H_{02} ”: There is no statistically significant mean difference between students’ perception towards utilization of technology for learning based on their locality (Rural and Urban)

Review of related literature

Computer assisted learning (CAL) can play both a supplantive role and supportive role (Huczynski & Johnston, 2005; Sangster, 1992; Belal, 2011). In a supplantive role, CAL replaces the lecturer/tutor. On the other hand, in a supportive role it does not substitute the lecturer/tutor rather it gives an opportunity for practice, for self-assessment, and to reinforce the points made by the lecturer/tutor. The need to incorporate technology in to curriculum has been recognised for many years in different parts of the world. According to Miranda and Russell (2011), “Since the early 1990s, schools, districts, and the federal government have invested heavily in instructional technology (IT). Teacher and student access to technology in school has improved dramatically.

According to UNESCO (2004), there are three main approaches to use ICT by teachers. The first one is an **integrated approach**, which means planning the use of ICT within the subject to enhance particular concepts and skills and improve students’ attainments. The second is an **enhancement approach**, which means planning the use of ICT resources that will enhance the existing topics through some aspect of the lessons and tasks. The third is a **complementary approach**, which involves using ICT resources to empower the students’ learning. All the three approaches can enhance attainment, but the effects may be different. In the integrated approach, students’ learning is enhanced because they are confronted with challenges to their existing knowledge and given deeper insights in to the subject being studied. The enhancement approach presents knowledge in new ways; encouraging learners too formulate their own explanations. The complementary approach frees the learner to focus on more challenging subject-focused tasks.

It has been believed that ICT has a very strong effect in education. There are many studies that recognise the role of technology in facilitating the interaction between students-students, students- materials, students-teachers, accessing both personal and educational information. ICT can have a useful effect on teaching and learning if it is utilized properly under the right conditions including proper training, resources, sup-

port and perception. It also offers the potential to meet the learning needs of individual students, to promote equal opportunities', to offers learning materials, and promote positive interdependence of learning among learners (Cavas, 2009).The impact of ICT on the learning process seems to be more important and requires more that looking only to the curricula. Improved students outcomes are observed with regard to variables such as motivation, enjoying learning, self-esteem, ICT skills, collaborative skills, subject knowledge, information handling skills, meta-cognitive skills (Azhar et al., 2011).

Existing ICT status in Ethiopian

The world has witnessed an unprecedented increase in access to ICT. Nowadays ICT is increasingly used as a key enabler and transformational tool to foster economic growth, accelerate knowledge transfer, develop local capacities, and raised productivity in a variety of sectors, in both developed and developing countries. The government of Ethiopia has embarked on an ICT-enabled transformation journey, aiming to enhance their efficiency across sectors (Marc & Mariana, 2014). Ethiopia is among the poorest countries regarding the quality of telecom infrastructure and service in Africa (Marc & Mariana, 2014), to change the situation the government of Ethiopia has taken decisive steps towards advancing the country from a low mobile, Internet, and broadband penetration rates to a highly connected society. By signing a two-year management contract (2010-2012) with France Telecom, the state-owned Ethiopian Telecom Company (ETC) took further steps towards changing course and transforming the telecom landscape in Ethiopia. Within this period the operators serve 20 million customers as of December 2012, with 50% growth. Moreover, Ethiopia Telecom has recently introduced a range of service to extended national and international service. The public operator is rehabilitated its optical fiber network (more than 10,000km) and other service. These have been achieved in partnership with the Chinese manufacturing ZTE who signed a US \$1.5 billion contract in 2010 to provide telecom equipment to Ethiopia (Marc & Mariana, 2014).

In Ethiopia, huge investment has been made to acquire the latest technology and expand the service in the telecommunications sector. As a result, accessibility and quality of telecommunication service have improved the number of customers of all kinds of telecom service increased from 7.7 million by 2009/10 to 39.8 million by 2014/15. During the same period, the number of mobile subscription increased from 6.7 million in 2009/10 to 38.8 million by 2014/15 (GTP-II-). The share of rural “*kebeles*” with access to telecommunication services (with 5km radius) increased to 97% by 2014/15 from 62.1% in 2009/10. The other significant achievement in the sector, during GTP-I- period, is the introduction of 3.75 G and 4G internet networks with the capacity to provide services to 60 million customers. The government recognized wider application of e-government, e-commerce, e-learning, e-library, mobile banking

and others have enabled to improve the quality and efficiency of public and private services.

The government of Ethiopia clearly recognized the indispensable role of ICT in enabling the education sector and has made great leaps forward to deliver the responsibilities of higher learning institutions, namely quality teaching -learning, problem-solving research and community service (MoE, 2012). The understanding and commitment of the university community to develop and use ICT as a solution to the various resources and manpower shortages that may prevent the education sector from delivering quality education, addressing the growing student population needs, introducing innovative teaching and conducting problem solving research is critical. However, ICT in the university context has not made the significant progress that was expected of it, nor has it delivered the several benefits that it should have. Looking at the key role that ICT can and should play has required that efforts be redoubled to move it forward so that it can pay back on the investment made on it, and play the role of turbo charging the education sector (MoE, 2012). The Ethiopian Federal Ministry of Education designed a proposal for university ICT organization in 2012 to reduce the challenges that ICT face and consider ICT as an engine for rapid advance in the primary function of Ethiopian university MoE (2012).

The ICT directorate is responsible and accountable to the university presidents and members of the university upper management council. The major roles and responsibilities of the directorate are providing leadership and management to the ICT department; ensuring that ICT provides, operates and maintains the ICT infrastructure, systems and solution to meet the needs of the administrative, educational, research program of the university; establishing proper ICT governance through an ICT policy for the university, planning of ICT projects, managing the portfolio of solutions, system and infrastructure; and instituting service management approach to the service and solution that the ICT delivery to the university community; being an ICT evangelist in the university and its department; keeping up with the ever changing ICT; and insure that the ICT department understand the needs of its customers (MoE, 2012). The structural organization is demonstrated as follows:

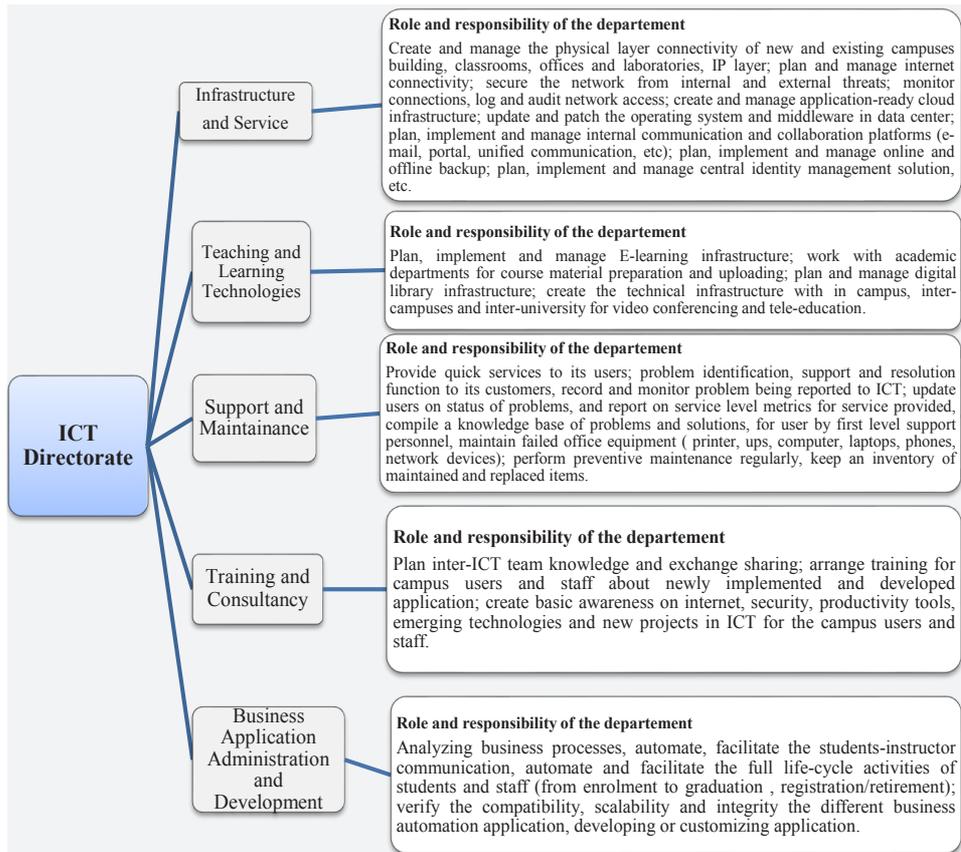


Figure 1. ICT Structure in Ethiopian higher education institutions

Research Design and Methodology

This study utilized a survey research design. A survey is an attempt to collect data from members of a population with respect to one or more variables (Gay & Airasian, 2003). The goal of a survey is to gain specific information about a representative sample of a particular group, a self-report measure is a strong method to provide great insight on an individual's perception. The researcher used gender and locality as independent variables, and perception of students as dependent variable. The sample for this study was derived from undergraduate students (graduating class of 2016/17) enrolled at some selected colleges of Haramaya University (one of the oldest university in the country). Both primary source of data (questionnaire and interview) and secondary source of data (document review) used to collect valuable information for the study.

The total population of graduating class students was 1357, of which the researcher selected 310 students using Slovin Formula ($n = \frac{N}{1 + N(e^2)}$) from four colleges. Systematic, purposive and heterogeneity-sampling techniques were an equal repre-

presentations were secured to select sample students across the colleges. The quantitative data substantiated by open-ended question items, interview data and document review related with ICT in Ethiopia. The number of items on the questionnaire were 52 and the reliability of the items were tested and the value of the reliability was $\alpha=.832$, which is strongly acceptable. The Likert-type scale from 1-5 (5= “strongly agree”, 4= “agree”, 3= “undecided”, 2= “disagree” and 1= “strongly disagree”) was used to check students’ perception towards technology utilization for learning. Their level of practice measured on a scale of 1-5 score (5= “frequently”, 4= “always”, 3= “some-time”, 2= “rarely” and 1= “not at all/never”). The data was coded and prepared using the Statistical Package for Social Sciences (SPSS 16) for analysis. Both descriptive and inferential statistics were used to calculate and report the result. Frequency, mean, standard deviation and independent sample t-test used to analyze the data.

Data presentation, analysis and interpretation

This section deals with the presentation, analysis and interpretation of the data gathered through the survey questionnaire, interview and document review followed by discussion of the findings. Furthermore, the main findings of the study are presented with the help of descriptive and inferential statistics. The researcher distributed 310 questionnaires to the participants, 298 (96.12%) of which were filled the questionnaire and returned successfully.

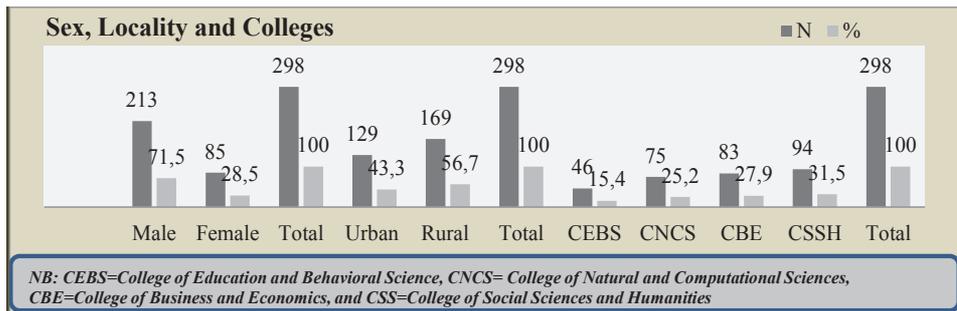


Figure 2. Demographic information

As it can be seen in Figure 2, 213 (71.5%) of respondents are male and the remaining 85 (28.5%) are female students. Out of these 129 (43.3%) came from urban areas and the remaining 169(56.7%) from rural areas. From this data, we can understand that gender disparity is high in higher learning institutions. Regarding the composition of respondents 46(15.4%), 75(25.2%), 83(27.9%) and 94 (31.5%) of respondents were selected from CEBS, CNCS, CBE and CSSH respectively.

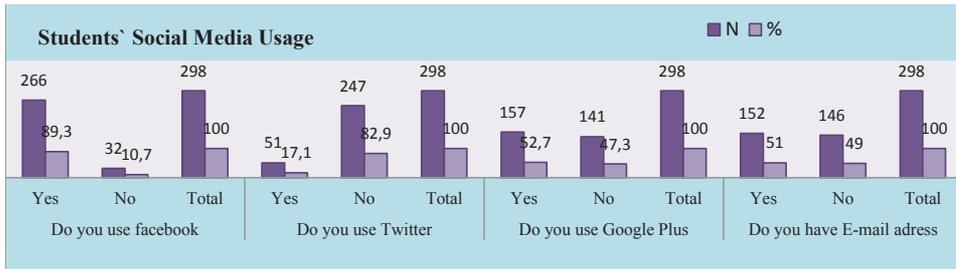


Figure 3. Students' social media usage

As shown in Figure 3, 266 (89.3%) of participants use Facebook dominantly for personal and informational purposes than educational purposes, the remaining 32(10.7%) of respondents do not use Facebook at all. 247(82.9%) of students do not use twitter. Nearly half of respondents were use Google Plus and have E-mail address. Furthermore, students use “Viber”, “Messenger”, “Whatsups” and “imo” to exchange message and personal information.

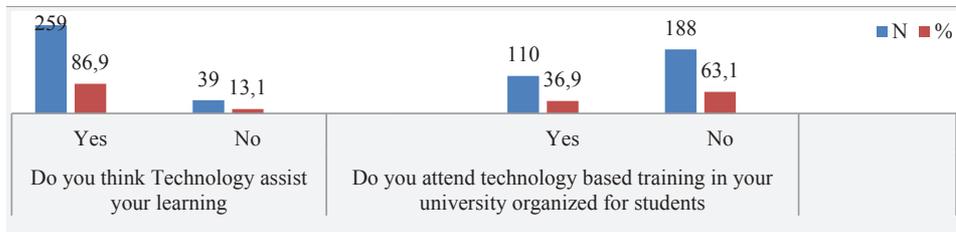


Figure 4. Issue related with students' opinions and training

As it can be seen in Figure 4, majority 259(86.9%) of participants believe that technology can assist their learning. This may help the university management and faculty members to facilitate the integration and utilization of information communication technology in teaching learning processes. It also helps the process of transformation of creating highly connected society. Nevertheless, no more than 110(36.9%) of students get support and training from the university, the remaining 188(63.1%) of respondents did not get technology based training organized by the university for students. Therefore, the university management need to take the initiatives, colleges in collaboration with ICT directorate should organize training for both students and lecturers to enhance the integration and utilization of technology for learning.

Findings and Discussion

1) To what extents do students`utilize technology for learning in higher learning institution?

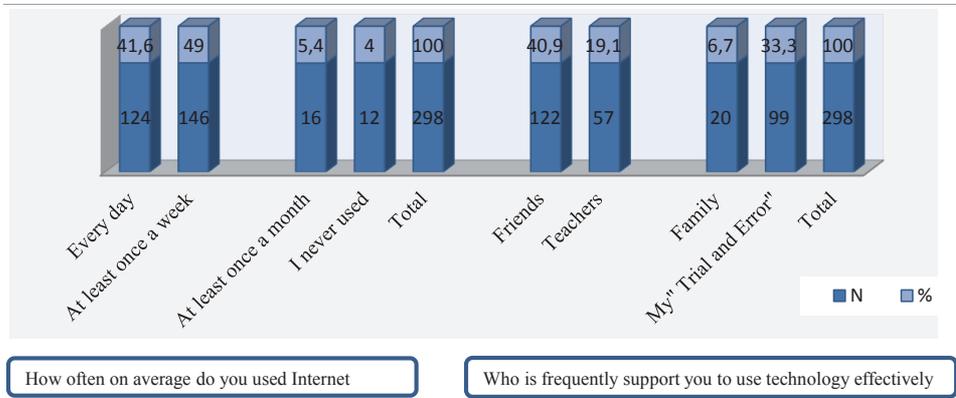


Figure 5. Issues related with students' usage of Internet

As the data obtained from respondents portray, a majority 146(49.0%) of students use internet at least once a week, 124(41.6%) use internet every day, the remaining 16(5.4%) use at least once a month and 12(4.0%) of respondents never used internet. Interestingly, 122 (40.9%) of respondents get support from their friends, 99 (33.3%) of respondents use technology by “trial and error”, the remaining 57 (19.1%) get support from teachers and 20 (6.7%) from their family. From these findings, we can understand that the students' cooperative and collaborative learning, personal experiences and practice enhance their understanding about technology.

Table 1. Issue related with utilization of technology for learning

No	Items	Sex	N	Mean	M. Diff.
1.	I use technologies that enhance my learning	M	213	3.39	-0.14
		F	85	3.53	
2.	I use Mobile for doing assignment and read learning content	M	213	3.66	-0.01
		F	85	3.67	
3.	I can learn lessons that appropriately combine technologies	M	213	3.06	-0.38
		F	85	3.44	
4.	I like LCD projector and PowerPoint for learning	M	213	3.07	-0.39
		F	85	3.46	
5.	I use internet to do assignment and other learning project	M	213	3.68	-0.17
		F	85	3.85	
6.	I use Face book for educational purpose	M	213	2.72	-0.28
		F	85	3.00	
7.	I use Face book for informational purpose	M	213	3.76	-0.15
		F	85	3.91	
8.	I use YouTube for educational purpose	M	213	2.61	-0.27
		F	85	2.88	
9.	I use internet for Accessing and share educational information	M	213	3.13	-0.19
		F	85	3.32	
10.	I use online journals and digital storage to access learning materials and books	M	213	2.62	-0.38
		F	85	3.00	

Note: the mean score ranged from 1-1.5= "I cannot use at all", 1.51-2.5= "I can use rarely", 2.51-3.5= "I can use sometimes", 3.51-4.5= "I can use always" and >4.51= "I can use frequently".

As Table 1 shows, university students sometimes, use technology that enhances their learning. Interestingly, the results suggest that most of the university students use their mobile phone (smart phone) to do assignments and reading learning contents always the mean score of both sex were >3.65. Most of the participants like LCD projector, PowerPoint and can learn from lessons that appropriately combine technologies. However, Mobile penetration remains significantly below the regional mean of sub-Saharan Africa of 53% (Marc & Mariana, 2014). They always use internet to do assignments and learning projects, (the mean score of male and female respondents on the issue was 3.68 and 3.84 respectively). Students of higher education institution always use Facebook for informational purposes. They use online journals and digital storage to access learning materials and books. They use mobile application for learning purposes. From the above mean difference, we can understand that female students report using more technology for learning than their male counterpart. The overall mean of all the above items is 3.388 meaning students sometimes utilized technology for learning purposes.

2) Do differences exist across localities and sex in students' perception towards utilization of technology for learning?

3) " H_{01} ": There is no statistically significance mean difference between Male and Female students' perception towards utilization of technology for learning.

4) " H_{02} ": There is no statistically significance mean difference between students' perception towards utilization of technology for learning based on their locality (Rural & Urban)

Table 2. Respondents Perception towards Technology Utilization for Learning

Items	Sex	N	Mean	SD	Locality	N	Mean	SD
1. I feel that technologies can help me to increase my knowledge in my subject	M	213	4.46	.803	Urban	129	4.58	.681
	F	85	4.53	.700	Rural	169	4.40	.833
2. I feel that technology can have a room for different learning styles	M	213	4.21	1.613	Urban	129	4.12	.924
	F	85	4.00	.859	Rural	169	4.18	1.737
3. I feel that I am successful in learning through technology	M	213	3.73	1.217	Urban	129	3.79	1.229
	F	85	4.04	1.063	Rural	169	3.84	1.146
4. I perceive that technology can help me to maximize my technical Skills	M	213	4.17	1.034	Urban	129	4.26	.871
	F	85	4.34	.765	Rural	169	4.19	1.035
5. I perceive that technology can help me to maximize my Academic Achievement	M	213	4.06	1.047	Urban	129	4.03	1.053
	F	85	4.11	.951	Rural	169	4.11	.994
6. I perceive that technology can help me to maximize my social interaction/relation	M	213	4.17	1.041	Urban	129	4.10	1.014
	F	85	3.95	1.101	Rural	169	4.11	1.099
7. I perceive that technology can help me to maximize my deeper understand in learning	M	213	4.07	.979	Urban	129	4.09	.936
	F	85	4.05	.950	Rural	169	4.04	.996
8. I feel that technology can helpfully support my experience of reading books	M	213	4.08	1.047	Urban	129	4.05	.951
	F	85	4.02	.926	Rural	169	4.08	1.060
9. I feel that technology make my learning easy and simple	M	213	4.11	1.110	Urban	129	4.02	1.228
	F	85	4.11	1.091	Rural	169	4.18	.996

Note: the mean score ranged from 1-1.5= strongly disagree, 1.51-2.5=Disagree, 2.51-3.5= undecided, 3.51-4.5=Agree and >4.51= strongly agree.

Table 3. Computed Independent Sample t-test of Students' Perception

	Sex	N	Mean	Std. D	df	t	Sig. (2-tailed)
a)	Male	213	37.0657	6.09248			.919
b)	Female	85	37.1412	4.92842	296	-.102	
a)	UrbanArea	129	37.0388	5.55428	296	-.126	.900
b)	Rural Area	169	37.1243	5.95638			

If $p < .05$ (i.e. the significance level calculated is less than or equal to .05) then we would conclude that there is sufficient evidence to reject the null-hypothesis and thus accept the alternative hypothesis. If $p > .05$ (i.e. is greater than .05) then we would conclude that there is not sufficient evidence to reject the null-hypothesis

The results in Table 3 show that there is no statistically significance mean difference between male and female students' perception towards technology utilization for learning $t(296) = -0.102$, $p > 0.05$, $p = 0.919$. Similarly, Seyal, Rahim and Rahman's (2002) study on computer attitudes of 268 students revealed that there was no significance difference in students' attitude in relation to gender. In addition, Mizrachi and Shoham (2004) studied students' computer attitudes in schools and found that there is no significant difference in attitudes concerning gender. However, more computer use leads to more positive computer attitudes. Similarly, as can be seen from table 2 above there is no statistically significance mean difference between students' perception towards technology utilization for learning based on their locality (Rural & Urban) $t(296) = -0.126$, $p > 0.05$, $p = 0.900$. This is may be the result of increased access to technology in Ethiopia. According to the government of Ethiopia the share of rural "Kebeles" with access to telecom service (with in 5km radius) increased from 62.1% in 2009/10 to 97% by 2014/15 in (GTP-I-). Furthermore, in Ethiopia students start ICT education at the same grade level (grade 9th) in government schools both in rural and urban areas.

3. What are the major challenges that may faced by students in utilization of technology for learning at Haramaya University?

On the open-ended survey questionnaires, most of respondents frequently reported that, the high cost of technological materials/devices; slow internet connection, lack of ICT training, high cost internet service and lack of students' technical skills were the major challenges in the utilization of technology in higher learning institutions. Furthermore, as the challenges of technology utilization, students listed lack of organized laboratories, lack of support from top management, low experiences and inconsistent electric power supply. Likewise, Marc and Mariana (2014) stated that high telecommunication cost continue to hinder the country's competitiveness for the sector. They also declared that poor qualities of infrastructure, weak institutional and regulatory

framework, and low coverage of ICT service observed in Ethiopia

Conclusion and Implications

Some scholars in the field of educational and instructional technology promote the application of information communication technology, online learning environment, social media, internet technologies, and digitalized learning. However, there is a shortage of empirical research concerning students' perceptions regarding the use or utilization of technologies and technologies ability to promote learning. Therefore, this paper will contribute to the literature in the field.

The main conclusion of this study is that majority of university students believe that technology can assist their learning, and demonstrated positive perception towards technology utilization for learning. Based on this finding we can conclude that there is no statistically significant mean deference between students' on their perception towards utilization of technology for learning against their gender and locality. Furthermore, they feel that technology can help them to increase their knowledge, address different students learning style, maximize students' technical skills and academic achievements, deeper understanding, makes learning easy and simple. Students use their mobile internet to access personal and educational information, doing assignments and learning new content.

However, specific factors have been identified as the challenges that affect utilization of technology for learning and teaching such as poor and slow internet connection, high price of internet service and technology materials, lack of awareness and support from faculty members and top management, lack of well equipped ICT laboratory and inconsistent power supply. Optimistically, the result of this study may be seen just as the beginning of a transition processes to technology assisted teaching and learning in higher education. From the aforementioned findings, the researcher suggested that the management of 21st century higher education institutions need to pay more attention to the use of ICT for teaching and learning. They should maintain the growing ICT usage among students through continuous short and long-term ICT skill training and promotion of the benefits of ICT in education. Higher learning institution management needs to make basic investments to advance access and utilization of technology with clear vision and strategies because ICT were the best and immediate source of information and innovative ideas. Furthermore, a lot needs to be done in order to create university networks locally and join the rest of developed and modern universities in the world in the area of ICT to improve teaching learning and accessing educational information. In addition, African governments in general, and the Ethiopian government in particular, need to allocate appropriate and independent budget for ICT infrastructural development and monitor the implementation of it. The government of Ethiopia should improve infrastructural facilities such as electricity, ICT materials, capacity of internet connection and services at accessible prices.

Limitation of the Study

The sample may not represent the whole population of university students. Therefore, further researchers may want to validate this finding with students of different universities in the country. The researcher investigated only students' perception and utilization of technology for learning, using self-report questionnaire as primary data collection instrument and did not examine the perception of teacher in comparative manner against students. Therefore, issues such as the effectiveness of ICT integration for learning, distance education and technology oriented curriculum development and evaluation may be the area of research in the future.

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