



ICTs in English language teaching: Positive teachers' beliefs of ICT and their insufficient uses

Mitiku Garedew Tessema[✉]

¹Addis Ababa Science and Technology University, Ethiopia

Article Info

Article History:
Received on 29
February 2024
Approved on 21
November 2024
Published on 30
November 2024

Keywords Beliefs;
practice; ICTs; ELT

Abstract

Information and Communication Technologies (ICTs) are playing an important role in the teaching learning processes in the Ethiopian higher learning institutions. The purpose of this study was to investigate University English as Foreign Language (EFL) teachers' beliefs and usage of ICTs in English language teaching. The study participants were English language teachers from a university in Ethiopia. Concurrent mixed methods research design and was employed in the study. Participants of the study were 29. They were selected using total population sampling. The data were collected using a questionnaire and semi-structured interviews tools. The interview was conducted with teachers who were selected using purposive sampling. Then an interview was conducted with the selected teachers. The quantitative data were analyzed using descriptive statistics, tables and verbal descriptions. Next up, the qualitative data obtained from the interview were analyzed. The analysis was made based on the themes obtained from the research questions. Finally the discussion of the data was made by mixing both the quantitative and qualitative data. The findings of the study indicated that teachers' beliefs about the use of ICTs in English language teaching were positive; however, their practice was not to as their stated beliefs. Finally, the study recommended that English teachers should improve their utilization of the ICTs for ELT according to their stated beliefs. The university should also fix the technical problems of the language labs and provide English teachers with consecutive and practical training on how to use the available ICTs to improve the current ELT practices.

[✉]Correspondence Address:
Department of Humanities in the College of Social Sciences
and Humanities
Addis Ababa Ethiopia
E-mail: mitiku.garedew@aastu.edu.et

INTRODUCTION

Due to the continuous technological advancements in this dynamic world, teachers and students in different countries are currently having better access to different technological tools as compared to some years before. Similarly, teachers and learners in Ethiopia's higher education institutions have better opportunities to access different technological devices than in earlier times.

In order to realize the integration of technology in the education system of our country, Ethiopia, there have been certain attempts made and activities undertaken by the government in order to expand ICT infrastructures in high schools and universities and encourage both teachers and students to use them in their academic endeavors, (Jang, 2020; Hare, 2007; FDRE, 2009 & Ministry of Science and Higher Education 2020).

In connection with the expansion of ICTs, Birhanu (2014) and Yigezu (2021) stated that, in Ethiopia, the use of ICTs in education is broadening, and ICTs have been organized to support teaching, learning, at different levels of the educational institutes including universities. Tadesse (2015) added that Ethiopian higher education is organizing the ICT manpower, investing on ICT infrastructure and attempting to use ICT for education mainly in the area of course management system such as Modular Object-Oriented Dynamic Learning Environment (Moodle) or Learning Management Systems (LMS), library automation (library management systems), digital library and student information management systems (SIMS). Similarly, Addis Ababa Science and Technology University is one of the Ethiopian universities with a better expansion of ICTs.

The utilization of technology has become more decisive for the successful accomplishment of the language teaching and learning process (Dureiti et al., 2013; Fisseha, 2011; Stanley, 2013). Gilakjani (2012, p.1) also describes the impact of technology on language teaching as follows:

“Traditional approaches to language teaching and learning have been challenged by new and innovative approaches based on the latest advances in computer and internet technology. The vast resources and opportunities that computers and the internet provide have brought about new tools, approaches, and strategies in language teaching and learning.”

The use of different technological tools in the teaching of English as a foreign or second language has benefited EFL classes in different parts of the world. Similarly, higher education teachers in general, and EFL teachers, in particular, can also use ICTs for their classroom practice, as the technologies allow them to enhance their traditional teaching approach.

This is a very good example for developing countries such as Ethiopia that are engaged in expanding ICT facilities in their educational institutions. In spite of the expansion of the ICT facilities in Addis Ababa Science and Technology University, the use of these technologies in English language teaching doesn't seem to be at the required level. This may be due to teachers' beliefs about technology usage in English language teaching. As Borg (2017) stated, teachers' beliefs determine their professional practices. Similarly, studying the teachers' beliefs about the use of ICT and their classroom practice is important to enhance EFL teachers' professional practices at Addis Ababa Science and Technology University. In addition, sufficient studies have not been carried out with regard to the focus of this research in the context of university EFL teachers in Ethiopia. As far as the researcher readings are concerned, Jang (2020) investigated how Ethiopian secondary school teachers' beliefs and practices in Addis Ababa about the use of ICT are constructed. Amanuel (2019) also conducted a research that aimed at exploring the role of ICT in the Ethiopian higher education system. However, these studies did not address the beliefs and uses of ICTs in English language teaching in the Ethiopian higher institutions.

Teachers' beliefs refer to teachers' pedagogical beliefs which are important for the teaching learning activities in the class room, (Borg, 2001). As to Pajares (1992), teachers' beliefs refer to as personal ideas that can provide comprehension, decisions, and assessments of teachers' classroom practices.

Incorporating ICT in teaching English depends on the beliefs of individual teacher about using technology. According to Ertmer (2005) and Neiderhauser and Stoddart (2001) cited in Shifflet and Weilbacher (2016) beliefs can influence the choice of a teacher whether to use technology in the classroom or not. But this may not be necessarily true sometimes; though teachers may have a positive belief about the technology use they may not use the technology in actual classroom.

Therefore, it is important to conduct a study to fill the research gaps in relation to English language teachers' beliefs and uses of ICTs in teaching the English language teaching in the context

of Addis Ababa Science and Technology University. The study is conducted based on the following research questions.

1. What are EFL teachers' beliefs towards the use of ICTs in English language teaching?
2. What do EFL teachers' use of ICTs in English language teaching look like?

METHODS

In this study, the mixed data collection method was employed for the purposes of gaining breadth and depth of understanding and corroboration of the data. This approach was selected to collect comprehensive data about EFL teachers' beliefs and practices regarding the use of ICTs for English language teaching. Among the mixed methods elements, the concurrent mixed methods approach is used in this study.

The data collection tools were prepared based on the related literatures in the study and by adapting from similar empirical studies previously conducted (see Alemu, 2015). The questionnaire consists of two sections. The first section contains seven items that require teachers to respond about their beliefs of ICT use in teaching English. The second section of the questionnaire consists of eight items to assess teachers' use of ICTs in teaching English.

Before administering the questionnaire and interview, the tools were peer reviewed to enhance their reliability and validity respectively. The comments were included and some items were improved.

According to the data obtained from the English divisions of Addis Abbaba Science and Technology University, there were 30 English teachers. Among them, 27 of them are TEFL graduates. Two of the rest are graduates of applied linguistics, and another is an English language literature graduate who was the language lab assistant. Among the 30 English teachers, only 29 teachers were able to fill out the questionnaire and send it back to the researcher. There were four PhD holders among them, and the remaining 25 MA holders. Their teaching experience ranges from 6 to greater than 15 years. The whole population was taken as a sample because the wider population is small. Therefore, total population sampling was used in this study to fill out the questionnaire. In addition, to triangulate the data collected by the questionnaire, four teachers were selected using purposive sampling. In general, in this study, the researcher tried to use questionnaire and interview to triangulate the data obtained from informants.

The data gathered through the questionnaires were, first, analyzed using percentage, frequency, and mean values. Teachers' beliefs and practices in using ICTs for ELT were determined based on the argument that a mean score of 3 on the Likert scale represents a neutral response. A mean score of less than 3 represents disagreements, and a score greater than 3 represents agreements. Next, the interviews were transcribed and verified for accuracy and consistency by listening to the recordings. Then the themes were identified and analyzed in relation to the research questions themes which are participants' beliefs and practices in using ICTs for ELT. Both the quantitative and qualitative data were discussed by mixing the data, and the findings of the study were presented.

FINDINGS AND DISCUSSION

What are EFL teachers' beliefs towards the use of ICTs in English language teaching?

The first item (see Table 1 below) deals with the performance expectancy of ICTs such as the digital language lab to teach listening skills. Accordingly, teachers responded as follows. 10 (34.5%) of them strongly agreed and 17 (58.6%) of them agreed but 2 (6.9%) of them disagreed on item 1. The mean score was 4.2. This might imply that many of the teachers believed that the digital language labs provide them with opportunities to teach listening skills.

As indicated in the data for item 2, 13 (44.8%) of them strongly agreed and 9 (31%) of them agreed. 7 (24.1%) of them undecided about this item. The mean read 4.2. According to the data, many of the study participant believed that tablets, smartphones, laptops and desktops were useful to teach reading skills, except few of them couldn't tell where their beliefs lie between the two opposite responses.

Table 1. Teachers' beliefs about ICTs use in ELT

I believe that use of ICTs such as	Strongly Disagree		Disagree		Undecided		Agree		Strongly Agree		Mean
	F	%	F	%	F	%	F	%	F	%	
1 the digital language labs provides me with opportunities to teach listening skills.	-	-	2	6.9	-	-	17	58.6	10	34.5	4.2
2 tablets, smartphones, laptops and desktops are useful to teach reading skills.	-	-	-	-	7	24.1	9	31	13	44.8	4.2
3 wiki and, email, Telegram group are helpful in teaching writing.	-	-	-	-	3	10.3	12	41.4	14	48.3	4.3
4 YouTube videos help me to teach students speaking skills.	1	3.4	3	10.3	3	10.3	12	41.4	10	34.5	3.9
5 Offline ELT apps, online sources help me to teach grammar.	-	-	-	-	2	6.9	15	51.7	12	41.4	4.3
6 electronic dictionary, synonym antonym apps are useful in teaching vocabulary.	-	-	-	-	4	13.8	12	41.4	13	44.8	4.3
7 the online learning system of the university enhances my teaching practice.	-	-	4	13.8	6	20.7	11	37.9	8	27.6	3.7
Average Mean											4.1

Concerning teachers' performance expectancy of ICTs such as wiki and, email, Telegram group in teaching writing, 14 (48.3%) of the teachers showed their strong agreement and 12 (41.4%) of them their agreement respectively, but 3(10.3%) of them preferred neutral opinion. The mean score for this item was 4.3. The result shows that many of the teachers believed that the above mentioned ICTs were helpful in teaching writing.

With reference to item 4, the performance expectancy of ICTs such as YouTube videos help to teach students speaking skills in teaching students speaking skills. 10 (34.5%) of the respondents strongly agreed and 12(41.4%) agreed on this theme; however, 1(3.4%) of them strongly disagreed and 3(10.3%) of them disagreed. The rest 3(10.3%) of them undecided. The mean score read 3.9. The data, therefore, demonstrated that majority of the teachers believed strongly that ICTs such as YouTube videos helped them to teach students speaking skills.

For item 5, 12 (41.4%) of the teachers strongly agreed and 15 (51.7%) of them agreed on their performance expectancy in the use of ICTs to teach their students grammar on the contrary 4(11.4%) of them disagreed on this idea. others 2(6.9%) of them took neutral position. As the mean score was 4.3, it indicated agreement. Therefore, the data confirmed that, except few teachers, majority of them believed that ICTs such as offline ELT apps, online sources help them to teach grammar.

Item 6 tried to identify EFL teachers' performance expectancy about the use of ICTs for the teaching of vocabulary. 13 (44.8%) of the teachers showed their strong agreement and 12(41.4%) agreed about this view. 4(13.8%) of them chose neutral opinion. The mean score indicated 4.3 which represents agreement of teachers with this item. This could imply that many teachers believed that ICTs such as electronic dictionary, synonym antonym apps were useful in teaching vocabulary.

Item 7 objective was to identify EFL teachers' performance expectancy in the use of the online learning system of the university. 8(27.6%) of the teachers strongly agreed and 11(37.9%) agreed, but 6(20.7%) of them strongly disagreed while 4(13.8%) of the teachers opted neutral stand. This suggests that significant number of the teachers believed that the online learning system of the university enhances their teaching practice. All in all the grand mean indicated 4.1 which indicated that majority of the EFL teachers have positive beliefs about the usage of ICTs in ELT.

Concerning the qualitative data, the interviewees stated their beliefs about ICTs importance for ELT. it is summarized and presented below.

As the first interviewee stated, different technologies or educational technologies could help teachers to improve their teaching practice. He believed that, this technology was very important in promoting students collaborative writing skills. In short, he believed that ICTs could promote reading, grammar, speaking, and writing skills. The other interviewee stated that ICTs have many advantages in

English language teaching. As she indicated, she believed that ICTs were important in teaching English in general. The third interviewee believed that technologies were very significant in bringing standard lessons to the class which contributes for the quality of English language teaching. The last interviewee also stated that he believed that ICTs were playing an important role in teaching English as we were in the technology era. From the above interviewees response one can conclude teachers have positive beliefs about the use of ICTs in ELT.

What do EFL teachers' use of ICTs in English language teaching look like?

Table 2 (see below) deals with English language teachers' use of information communication technology for ELT. In this section 8 items were analyzed. The items were supposed to be taken from teachers' common experience of ICT.

The first item deals with EFL teachers' experience of using a digital language laboratory to teach students a listening skill accompanied by tasks. 3 (10.3%) of them used the labs sometimes. On the contrary, 2(6.9%) and 24 (82.7%) of them never or rarely used them. The mean score indicated 2. This might imply that many of the teachers didn't frequently use the language labs to teach students a listening skill.

Concerning using ICTs such as smartphones, tablets, laptops or desktop computer, to teach students reading skills, teachers responded the following. 1 (3.4%) and 5 (17.2%) of the teachers always or often used them respectively. The others 16(55.2%) of the teachers sometimes do the same, but 6 (20.7%) and 1(3.4%) of the teachers rarely or never participated in such activities. The mean score also read 2.9. From the data, we can understand that majority of the teachers didn't usually use ICTs to the teaching of reading.

The third item was about using ICTs such as telegram group, wiki, e-mail etc. to engage students in writing tasks. 2 (6.9%) and 7 (24.1%) of the teachers always or often used these technologies. 6 (20.7%) of them sometimes participate in the mentioned activity, but the other 7 (24.1%) and 7 (24.1%) of them rarely or never use them. the mean value indicated 3.2. The result showed that half of them tried to use the above mentioned technologies but the remaining teachers didn't use them; however based on the mean score of this item, teachers do not frequently use the mentioned ICTs in teaching writing.

The next item asks whether teachers use of ICTs to help students improve their speaking skills. 1 (3.4%) and 2 (6.9%) of the respondents always or often used these technologies and 12 (41.4%) of them used sometimes; however, 11 (37.9%) and 3 (10.3%) of them rarely and never employed formerly mentioned technologies respectively. In addition, the mean score of this item indicated 2.5. Therefore, based on the data, it may be argued that many teachers didn't frequently used ICTs for the teaching of speaking skills.

The teachers were also asked to respond if they used ICTs to teach students grammar with variety of exercise. 1 (3.4%) and 5 (17.2%) of the teachers always or frequently use these technologies and, 13 (44.8%) teachers sometimes use. 6 (20.7%) and 4 (13.8 %) of the teachers rarely or never used the technologies for the above mentioned purpose. The mean score also indicated 2.7. From the above data, it can be noted that the majority of the teachers didn't frequently use ICTs to teach grammar and provide students with sufficient exercise.

Table 2. Teachers' usage of ICTs in ELT

		Never		Rarely		Sometimes		Often		Always		Mean
		F	%	F	%	F	%	F	%	F	%	
1	I use a digital language laboratory to teach students a listening skill accompanied by tasks.	24	82.7	2	6.9	3	10.3	-	-	-	-	2
2	I use ICTs (smartphones, tablets, laptops or desktop computer), to teach students reading skills.	1	3.4	6	20.7	16	55.2	5	17.2	1	3.4	2.9
3	I use ICTs such as telegram group, wiki, e-mail etc. to engage students in writing tasks.	7	24.1	7	24.1	6	20.7	7	24.1	2	6.9	3.2
4	I use ICTs to help students improve their speaking skills.	3	10.3	11	37.9	12	41.4	2	6.9	1	3.4	2.5
5	I use ICTs to teach students grammar with variety of exercise.	4	13.8	6	20.7	13	44.8	5	17.2	1	3.4	2.7

6	I use ICTs such as electronic dictionary and exercise apps on their smart phone. teach students vocabulary.	5	17.2	5	17.2	14	48.3	5	17.2	-	-	2.6
7	I teach students pronunciation with the help of ICTs (smartphones, tablets...)	15	51.7	6	20.7	5	17.2	3	10.3	-	-	1.8
8	I teach students English using online learning system of the university.	14	48.3	5	17.2	7	24.1	2	6.9	1	3.4	2
Average Mean												2.4

Concerning using ICTs such as electronic dictionary and exercise apps on smart phones to teach students vocabulary, 5 (17.2%) teachers stated that they often used ICTs. 14(48.3%) of them also used sometimes. However, 5(17.2%) of them never used the technologies. The remaining 5 (17.2 %) of them rarely used the above mentioned technologies. Moreover, the mean score indicated 2.6. From the above data, it is possible to conclude that many of the teachers didn't frequently use the stated ICTs for the teaching of vocabulary.

Using ICTs such as smartphones, tablets... were the component in exploring teachers ICTs use for the teaching of pronunciations. 3 (10.3%) of the teachers often used ICTs to teach pronunciations. The other 5 (17.2%) responded they sometimes used ICTs for similar purposes. The other 21 (74.5%) of them never or rarely use these technologies. This could imply that majority of the teachers didn't use ICTs for the teaching of pronunciations except few teachers. The mean value 1.8 also indicated EFL teachers' less frequent usage of the above mentioned technologies in teaching pronunciations.

Concerning teaching students English using online learning system of the university, 3 (10.3%) teachers responded that they always or often used the system to teach English, and 7(24.1%) of hem used it sometimes. However, 19 (65.5%) of them never or rarely used it. From the above data, it is possible to understand that many of the teachers didn't frequently use the online learning system of the university to teach English.

All in all, according to the data for each item and the grand mean score 2, it can be inferred that majority of EFL teachers did not frequently use ICTs for ELT.

The interviewees also informed their experience about the usage of ICTs in English language teaching. The first interviewee stated that there were educational technologies that could help teachers and improve their practice. He mentioned as an example Wiki. "If we take Wiki, which was the center of my project... which is very important in promoting... improving learners writing skills," he said. As he further explained, he tried to use technologies to promote reading, grammar, speaking skills of his students.

The other interviewee said that she didn't consider herself as a frequent user she would sometimes use smartphone to teach her students. She also said that she would use other ICTs such as desktop laptop, internet to down load and prepare English teaching materials.

The third teacher told to the interviewer that he didn't use ICTs frequently for the following reasons. First, he said that the university was not well facilitated with the required ICTs facilities in particular the classrooms were not well organized to use ICTs for ELT. He also said that all the students may not have standard cellphones which would be helpful for language teaching. In addition, he stated that Wi-Fi was not available around the classrooms to enable students use their cellphone during ELT.

Finally, the other interviewee stated that he used some technologies such as cellphone, desktop, and different apps in teaching English. He also explained that he would download different important materials related to what he was going to teach his students. He further elaborated that he would send students different learning materials through telegram and this had helped him to approach the teaching learning process in different forms as compared to what he used to teach in the previous years. Based on the above data teachers were not frequent users of the ICTs in English language teaching.

Discussion

EFL teachers' beliefs in using ICTs for ELT

Teachers' perceived belief about technology use plays important role in making effective the use of ICTS in their daily teaching practices, (Charles, 2012). According to the data obtained from the participants of the study, they believed that ICTs such as educational technologies can help them to improve their teaching practice. They also believed that ICTs are very important in promoting students language skills. Their beliefs indicated that the ICTs provide countless ELT materials for

them. Jang (2020) and Amanuel (2019), Haolader (2013) and Kharode (2019) also found out that teachers believed that using ICTs were important in helping their teaching learning process. In addition, they believed that these technologies are helpful in time of exam preparation, teaching listening skills using the modern language lab, and students' smartphone. They also believed that teaching writing using applications such as WIKI is another advantage of ICTs. WIKI is a platform that one interviewee believed to be effective for the teaching of collaborative writing. This is similar with the research findings of Kuddus (2013) conducted about the Changing Roles of Teachers with ICT in Teaching and Learning of English as Second and Foreign Language. He found out that the field of ELT has become more authentic, easier, and entertaining with the integration of Information and Communication Technologies (ICTs). Akhtar (2017) conducted a research on the role of ICT in the Enhancement of English Language Skills among the Learners. As he stated, ICT tools are being used widely in ELT due to their convenience, omnipresence, and effectiveness, time saving, and being economic.

In short, majority of English language teachers in this study had similar beliefs or have positive beliefs about the issue discussed above. They believed, ICTs were useful in the teaching of English. This finding is related with the findings of Jang (2020) who studied Teachers' Beliefs and Practices of ICT Use in Secondary Schools in Addis Ababa. According to his study, the teachers' general and pedagogical beliefs toward ICT were positive.

Use of ICTs for ELT

Some teachers usually use ICTs to promote the quality of their teaching and therefore they teach their students with the help of technology reading, grammar, and speaking skills. ICTs such as desktop laptops, smartphones, and the internet are some of the ICTs teachers mentioned that they use frequently to download and prepare English teaching materials. This is similar with the findings that indicated Saudi English language lecturers frequently used mobile technology regarding the technology in general and mobile technology in particular in their teaching processes to create new learning experiences for their students (Almofadi, 2020) other researcher such as Gilakjani, and Leong (2012), Guma and et al. (2013), and Lau and Sim (2008) have also found out that teachers have already begun to use ICTs to some extent in their teaching learning process. Few of the participants of the study used LCD projector and language labs as they indicated during the interview. However, others didn't use these technologies due to "lack of ICTs facilities" around the classrooms' ' in spite of their positive beliefs about ICTs advantage over the English language teaching. This finding is aligned with the findings of Jang (2020), Assafa (2017) and Dureiti, et al. (2013) stated that some teachers refused to use ICTs in their lessons although they believed that ICT was important in English language teaching.

CONCLUSION

Based on the findings obtained from this study's quantitative and qualitative data, teachers have positive beliefs about using ICTs in English language teaching. Concerning the usage of ICTs for English language teaching, the following can be concluded. According to the results of the analysis of the data, many of the English language teachers reported that they use ICTs such as internet, smartphones, laptop, tablets and desktops sometimes but a few teachers used these technologies rarely. On the other hand, many English language teachers did not seem to use the interactive whiteboards and the language laboratories facilitated by the university.

Based on the conclusions drawn from the findings of this study, English language teachers should acquaint themselves with the use of ICTs in their classroom practice to provide learners with the authentic learning environment and to bring real-life situations into the classroom through the application of multimedia. Moreover, the university should provide technical and pedagogical support readily available to enable English language teachers to translate their positive beliefs about ICTs use in to their classroom practice. What is more, the English department in collaboration with the university management should provide continuous hands on- training to English language teachers about ICTs usage in ELT. This can enhance their current ICTs usage skills to promote the available ICTs opportunities such as the LMS, digital language labs, in the university. In addition, the English department and the university management should fix the problems that hamper the effective usage of the English language labs. Finally, the university should continue expanding the ICTs facilities that promote the teaching learning process such as modern LCD projectors and smart boards, in each classroom, and it should also provide technical support to the teachers.

ACKNOWLEDGEMENT

This research did not receive any research grant from any agency.

REFERENCES

- Akhtar, S. (2017). Role of ICT in the enhancement of English language skills among the learners. *Journal of Technology for ELT*, 6(2).
- Alemu, B. M. (2015). Integrating ICT into teaching-learning practices: Promise, challenges and future directions of higher educational institutes. *Universal Journal of Educational Research*, 3(3), 170-189. <https://doi.org/10.13189/ujer.2015.030303>
- Almofadi, N. (2020). *Investigating the experiences of lecturers using mobile technology to teach english at Saudi universities* [Doctor of Philoshophy Thesis, Liverpool John Moores University].
- Amanuel Ayde. (2019). Exploring the role of information and communication technology for pedagogical practices in higher education: *The case of ethiopia*. *The International Journal of Education and Development using Information and Communication Technology (IJEDICT)*, 15(2), 171-181.
- Assefa, T. (2017). E-learning implementation in Ethiopian high schools: Opportunities and challenges of the satellite broadcast approach. in Marcus-Quinn A., H. T. (ed.). *Handbook on digital learning for K-12 schools*. Springer, Cham. https://doi.org/10.1007/978-3-319-33808-8_25
- Birhanu M. (2014). The role of Information and Communication Technology (ICT) in enhancing the quality education of Ethiopian universities: A review of literature. *Journal of Education Research and Behavioral Sciences*, 3(8), 246-258. Retrieved from <http://www.apexjournal.org>
- Borg, S. (2001). Key Concepts in ELT: Teachers' Beliefs. *ELT Journal*, 55(2). Oxford University Press.
- Borg, S. (2017). *The Routledge handbook of language awareness: Teachers' beliefs and classroom practices*. New York: Routledge.
- Charles, B. (2012). Factors influencing teachers' adoption and integration of information and communication technology into teaching: A review of the literature. *International Journal of Education and Development using Information and Communication Technology (IJEDICT)*, 8(1), 136-155.
- Dureiti, S., Wakgari, T., & Manas, R. (2013). Information communication technology for educational quality: Challenges, prospects in Ethiopian context. *Turkish Online Journal of Distance Education-TOJDE*, 14(4), 235-251. Retrieved from <http://files.eric.ed.gov>
- Ethiopian Ministry of Science and Higher Education. (2020). *National Digital Skills Country Action Plan (DSCAP) for Ethiopian Higher Education (HE) and Technical and vocational Education Training (TVET) Institutions for the period of ten years, 2021-2030*. Addis Ababa, Ethiopia.
- Federal Democratic Republic of Ethiopia. (2009). *The national information and communication technology policy and strategy*.
- Fisseha, M. (2011). The roles of information communication technologies in education: Review article with emphasis to the computer and internet. *Ethiopian Journal of Education and Sciences*, 6(2). Retrieved from <https://www.ajol.info/index.php/ejesc/article/view/73521>
- Gilakjani, P. A., & Leong, L-M. (2012). EFL teachers' attitudes toward using computer technology in English language teaching. *Theory and Practice in Language Studies*, 2(3), 630-636. <https://doi.org/10.4304/tpls.2.3.630-636>
- Guma Ali, Faruque A.Haolader, & Khushi Muhammad. (2013). The role of ICT to make teaching-learning effective in higher institutions of learning in Uganda. *International Journal of Innovative Research in Science, Engineering and Technology*, 2(8). Retrieved from https://www.researchgate.net/publication/318129417_
- Hare, H. (2007). *ICT in education in Ethiopia*. World Bank Report.
- Haolader, F. (2013). The role of ICT to make teaching-learning effective in higher institutions of learning in Uganda. Retrieved from <https://www.researchgate.net/publication/288003552>
- Jang, I. C. (2020). *Teachers' beliefs and practices of ICT use in secondary schools in Addis Ababa, Ethiopia* [Doctor of Philoshophy Thesis, University of East Anglia].
- Kharode, V. C. (2019). Impact of ICT in teaching, learning and evaluation. Retrieved from <https://journals.indexcopernicus.com/search/article?articleId=2468391>

- Kuddus, K. (2013). Changing roles of teachers with ICT in teaching and learning of English as second and foreign language. *ELTWeekly*. Retrieved from <http://eltweekly.com/2013/05/changing-roles-of-teachers-with-ict-in-teaching-and-learning-of-english-as-second-and-foreign-language-by-khushboo-kuddus/>
- Lau, & Sim. (2008). Exploring the extent of ICT adoption among secondary school teachers in Malaysia. *International Journal of Computing and ICT Research*, 2(2), 19-36. Retrieved from <http://www.ijcir.org/>
- Pajares, M. F. (1992). Teachers' beliefs and educational research: Cleaning up a messy construct. *Review of Educational Research*. 62(3), 307-332.
- Shifflet, R., & Weilbacher, G. (2016). Teacher beliefs and their influence on technology use: A case study. *Contemporary Issues in Technology and Teacher Education (CITE Journal)*, 15(3), 368-394.
- Stanley, G. (2013). Integrating technology into secondary English language teaching. *British Council Teaching English*. Retrieved from www.britishcouncil.org
- Tadesse, A. (2015). Survey of the use e-learning in Ethiopia. *Ababa Science & Technology University (AASTU)*.
- Yigezu, M. (2021) Digitalization in teaching and education in the context of COVID-19: Ethiopia; Digitalization, the future of work and the teaching profession project. Retrieved from https://www.ilo.org/sector/Resources/publications/WCMS_783722/lang-en/index.htm