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EXPLORING ENGLISH LANGUAGE TEACHERS' TECHNOLOGICAL COMPETENCE IN LISTENING SKILLS INSTRUCTION

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Abstract

The digitalized educational landscape of today requires ELT teachers to be conversant with technology. This study examined ELT teachers' technological and pedagogical knowledge and their use of technology in listening skills instruction. To this end, an exploratory qualitative research design was employed. Thematic analysis was used to analyze the data collected using classroom observation and interviews. N-Vivo version 10 software was used for the data analysis. The findings indicated that teachers have a fair command of technology. However, they had limited technological content knowledge and technological pedagogical knowledge (TPK). Teachers were not able to make use of their knowledge of technology in their teaching. During listening instructions, only a few teachers use a smart board or a laptop to play audio materials. Most are not familiar with how to use any digital gadgets for teaching. For successful integration of digital technologies into listening instruction, training in the TPK is recommended. Furthermore, teachers' capacity to use relevant digital apparatuses should be built.

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INTRODUCTION

The Ethiopian higher education system harmonizes the common courses given at the tertiary level. English language skills courses are one of the mandatory common courses given to university students. Both receptive and productive language skills are given to all first-year students. Addis Ababa Science and Technology University (AASTU), one of Ethiopia's higher education institutes, provides English language courses such as communicative English skills II and II and report writing skills. These courses emphasize the four macro language skills at various depths and breadth. In the communicative English skills I course, listening skills, argued to be a primary skill to be acquired in language learning and a prerequisite to other language skills (Yavuz & Celik, 2017), are dominantly covered.

Proficiency in English language listening skills supports higher education students successfully attending subject lectures. It will also support learners in effectively engaging in English language communications or interactions with other students, teachers, and people in the real world. Thus, EFL teachers need to provide enough aural input to students to acquire and learn a language (Krashen, 1985). Teachers must expose students to authentic language input in and outside the classroom to improve their aural proficiency.

More language inputs needed to be given to students as English is considered a foreign language in Ethiopia. English language exposure is limited for students in Ethiopia. Such input availability can be achieved through technology. Digital technology (DT) makes such exposure possible and has opened new ways to find and exchange information (Nehring et al., 2019). In line with this, Liu et al. (2014) stated that due to the lack of exposure to natural English-speaking environments and limited opportunities for real-time communication with native English speakers, EFL learners rely heavily on technology to learn authentic English, especially listening and speaking. Besides, in the 21st century, teachers must use several technological resources to support teaching receptive and productive language skills. Education institutions are responding to the societal changes that DTs bring and preparing to fulfill the new learning demands of 21st-century students (Nehring et al., 2019). Fulfilling the demands of the students in this era required teachers' technological knowledge and skills. Technological knowledge is crucial in contemporary ELT settings because it can help teachers create more effective lessons, students access and learn from various resources, and students communicate and collaborate more effectively.

To be specific, from the learning side, technology can help to increase student engagement and motivation. Technology can provide students access to various engaging and interactive learning activities, such as online games, simulations, and videos (Graham, 2013).

It can help to keep students motivated and interested in learning English. Besides, technology can help to personalize the learning experience (Warschauer, 2014). It can be used to tailor the learning experience to the individual needs of each student. Warschauer (2014) further explained that students can use adaptive learning software to practice at their own pace and receive feedback on their progress. Technology can help to improve student outcomes. Research has shown that using technology in ELT can improve student outcomes in reading comprehension, vocabulary acquisition, and speaking fluency (Levy et al., 2015).

From the instructional side, it is undeniable that teachers can use technology to create and deliver more effective lessons. Teachers can use presentation software to create interactive presentations that include images, videos, and audio clips. They can also use online tools to create quizzes and assessment activities. Similarly, students can use technology to communicate and collaborate. As to Kukulska-Hulme and Shield (2014), students can use online discussion forums, chat rooms, and video conferencing tools to work on group projects and practice their English-speaking skills.

Teachers need to use technology in various ways to support their language instruction and students listening skills learning in the classroom. Aytan (2016) points out, "Technology is needed as the media and source to teach listening skills." Teaching and learning listening skills and technology are inseparable. Besides, Aytan (2016) also said "Teaching listening needs audio materials of native speakers for learning activities inside the classroom or for students' practices outside the classroom." To achieve this, technology plays a paramount role in providing authentic aural inputs for students. Moreover, technology serves students and teachers in practicing and teaching listening skills, respectively, in and out of class. For such technology utilization in teaching listening skills, teachers must have technological pedagogical and content knowledge (TPACK). Among other teaching skills and knowledge, teachers need to have TPACK.

Technology is critical for achieving the language learning and teaching aim, especially for language listening skills instruction, because it allows learners to engage with one another, provide a range of learning experiences, and promote learning. As a result, teachers are expected to use technology to offer language skills in and out of the classroom. However, Teachers' use of technology, specifically information communication technology, continues to be criticized. It has been generally reported that teachers utilize ICT infrequently, and when they do, it is mainly for the conveyance of information rather than to facilitate students' knowledge construction (Gao et al., 2009).

The teacher's ability to select and use appropriate technology to plan and deliver language instruction is critical. Therefore, teachers' technological pedagogical and content knowledge (TPACK) is essential for successful technology integration and use in the classroom for teaching listening skills. TPACK shows a relationship between technology, content, and pedagogy, and their purposeful blending is key to successfully using technology for pedagogy. Technological-pedagogical knowledge is crucial in contemporary ELT settings because it can help make teaching and learning more effective, engaging, and accessible for all students. However, the research gap in the use of technology for EFL listening skills instruction in Ethiopia is the lack of studies that examine how EFL teachers' TPACK (technological-pedagogical and content knowledge) can be used to improve teaching and learning in ELT settings. The findings of such a study could help ELT teachers develop more effective lesson plans, use technology more effectively in the classroom, and support their students' learning in new and innovative ways.

The study is also believed to help further understand how technological pedagogical knowledge can be used to improve teaching and learning in ELT settings. The study findings could help ELT teachers develop effective lesson plans, use technology more effectively in the classroom, and support their students' learning in new and innovative ways. Thus, this study intends to examine how EFL teachers TPACK—the relationships among and between three core components—content, pedagogy, and technology—are at the center of effective teaching with technology (Mishra & Koehler, 2006).

REVIEW OF LITERATURE

Language Teaching

Teaching is a complex and multifaceted activity that requires various knowledge and skills (Mishra & Koehler, 2006). It involves not only transmitting information but also the creation of a learning environment conducive to student growth and development. As per Chai et al. (2013), the teaching-learning environment is a complex and dynamic system influenced by many factors, including the teacher's pedagogical content knowledge (PCK). PCK is a type of professional knowledge that teachers acquire to make topic information accessible to students through a variety of pedagogical strategies. In Shulman's (1986, p. 5) words, PCK is "the blending of content and pedagogy that enables teachers to transform their knowledge of subject matter into meaningful learning experiences for their students."

The concept of pedagogical content knowledge (PCK) was introduced by Shulman in 1986. It refers to teachers' knowledge to teach a subject matter engagingly and effectively.

With the growing use of technology in education, the concept of PCK has been expanded to include technological pedagogical content knowledge (TPACK). TPACK is the knowledge that teachers need to integrate technology into their teaching to enhance student learning (Chai et al., 2013). TPACK consists of three main components: content knowledge (CK), pedagogical knowledge (PK), and technological knowledge (TK) (Koehler & Mishra, 2009). CK is the knowledge of the subject matter that a teacher teaches. PK is the knowledge of how to teach effectively. TK is the knowledge of how to use technology effectively. The three components of TPACK are interrelated and overlapping. TPACK is essential for effective teaching in the 21st century. Teachers who can develop their TPACK can better create a learning environment conducive to student success (Schmidt et al., 2009).

Technological, Pedagogical and Content Knowledge (TPACK)

The Technological Pedagogical Content Knowledge (TPACK) framework (Koehler & Mishra, 2009; Mishra & Koehler, 2006) describes the teacher knowledge required to teach effectively with technology. TPACK is a framework that helps educators understand how technology can be used to enhance student learning. It is based on the idea that educators need to have three types of knowledge: content knowledge, pedagogical knowledge, and technological knowledge. TPACK helps educators to understand how these three types of knowledge can be combined to create effective learning experiences. As to Niess (2011), a teacher with strong TPACK could use technology to help students visualize a complex concept or provide students with opportunities to collaborate. TPACK is essential for educators who want to use technology effectively in their classrooms.

TPACK helps educators understand how these three types of knowledge can be combined to create effective learning experiences. TPACK is not just about using technology in the classroom but also about merging technological knowledge with pedagogical content knowledge to produce something new. It means that educators need to understand how technology can be used to support specific learning objectives and how it can be used to engage students and make learning more meaningful Koehler and Mishra (2009). Teachers must also understand that merely integrating technology into the classroom will not result in the integration of technology that is genuinely relevant. In order to create a learning experience relevant for students in particular contexts, teachers must instead be aware of how technology, pedagogy, and content knowledge interact with one another (Koehler and Mishra, 2009).

The TPACK framework is a teacher knowledge model developed by Punya Mishra and Matthew Koehler in 2009. It has seven components: CK (content knowledge), PK (pedagogical knowledge), TK (technological knowledge), TCK (technological content knowledge), TPK (technological pedagogical knowledge), PCK (pedagogical content knowledge), and TPACK (technological pedagogical content knowledge). TPACK results from teachers' contemporaneous and interdependent understanding of content, pedagogy, and technology (Zhang & Chen, 2022). It is particularly influenced by the three knowledge-type intersections represented in Figure 1 below.

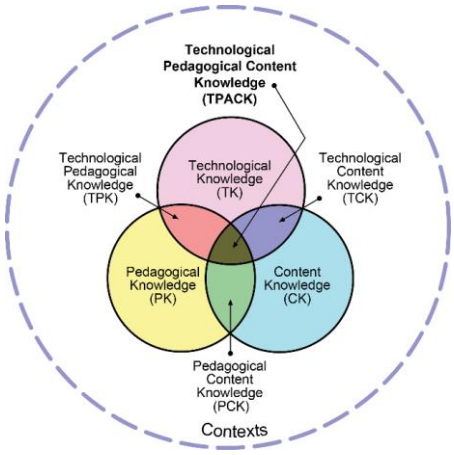

Figure 1: TPACK Framework ©2012 by tpack.org

Technological Knowledge (TK): Technological knowledge (TK) is a constantly evolving field, enabling individuals to accomplish various tasks using information technology. It is essential for teachers to incorporate technology effectively into their teaching, as it plays a crucial role in English for Communication (EFL) contexts (Liu et al. 2014). Teachers must understand how technology is used in teaching subject matter, forming Technological Content Knowledge (TCK).

Technological Content Knowledge (TCK): Understanding the effects and limitations of technology and content on subject matter learning is referred to as technological content knowledge (TCK). Teachers must understand the best technologies for their fields and how content affects or transforms technology. TCK assists educators in making technology choices that support content-based principles.

Technological Pedagogical Knowledge (TPK): Developing effective teaching and learning strategies requires understanding the pedagogical affordances and constraints of technologies (Liu et al. 2014). It entails being aware of the disciplinary contexts in which these tools are used and how their application can vary depending on the situation and the desired outcome. TPK is crucial as most software packages are not designed for educational

purposes. Teachers must break free from functional fixity and personalize technology to meet educational goals. A forward-thinking, creative, and open-minded approach is needed to advance student learning and comprehension.

Technological pedagogical content knowledge (TPCK/TPACK) is the understanding of how to teach a subject matter using the technologies that best embody and support it in ways that adequately match students' needs and preferences (Koehler & Mishra, 2009).

Finally, Technology is critical for achieving the language learning and teaching aim, especially for language listening skills instruction, because it allows learners to engage with one another, provide a range of learning experiences, and promote learning. As a result, teachers are expected to use technology to offer language skills in and out of the classroom. The teacher's ability to select and use appropriate technology to plan and deliver language instruction is critical. Teachers' Technological Pedagogical and Content Knowledge (TPACK) are essential for successful technology integration and use in the classroom.

METHOD

Research Design: Exploratory Research Method

An exploratory qualitative research design was chosen for this study because the goal was to explore a new and understudied phenomenon: the impact of technological knowledge on teaching and learning in ELT settings in the context of HEIs in Ethiopia, Addis Ababa Science and Technology University. Exploratory research is designed to generate new insights and understandings about the topic, teachers' technological, technological pedagogical, and technological content knowledge (TPACK), and it is used because there is limited existing research on that topic. Qualitative research was chosen because it is well-suited for exploring complex phenomena and understanding people's experiences and perspectives.

Sample Size

The institution, AASTU, has 21 EFL/ESL teachers. Nine teachers offering the Communicative English Skills I course were selected using purposive sampling for the interview and classroom observation. The teachers had various experience levels, ranging from 10 to 29 years of experience.

Data Gathering Instruments

Observation and interview tools were used to capture data. The structured and semi-structured interviews used in this study were adapted from Schmidt et al. (2009) survey items.

It was administered in a one-on-one interview setting. Though completing with one participant at a time is time-consuming, it is suitable for interview participants who are not hesitant to speak. Teachers' TPACK for listening instruction was assessed through an interview as a major tool, and an observation tool was employed to see teachers' technology use and listening instruction approaches. Specific TPACK components such As Technological Knowledge (TK), Technological Content Knowledge (TCK), and Technological Pedagogical Knowledge (TPK) in listening teaching were assessed using interviews. The feasible tool that worked for this research context was an interview rather than a questionnaire because of the limited number of teachers who participated in this study. A questionnaire could not be recommended for a limited number of participants. As a result, the researchers employed interviews as a primary tool to assess teachers' TPACK. The observation tool employed to support the interview data mainly focused on tools teachers used in listening instructions in the classroom.

Data Collection Procedure

The first instrument used in the data collection procedure was classroom observation. The classroom observation focused on the instructors' use of technological tools to teach listening skills and their teaching methods. Following the observation, the teachers were interviewed. Teachers' TPACK is assessed using this interview method. All the interviews with teachers, which were conducted one-on-one, were tape-recorded. The technique, which includes classroom observation followed by interviews, is thought to improve the data's reliability.

Method of Data Analysis

The researchers used thematic analysis, a qualitative data analysis method, to analyze the collected data. The researchers used the NVivo 10 software because it was easy to use and helped organize the data. Thematic analysis was chosen because it is a flexible and widely used method for finding patterns and themes in qualitative data. The researchers transcribed the audio-recorded interviews and then used NVivo 10 to organize the data. The researcher then read the data repeatedly to identify ideas and concepts and assigned codes to them. It helped to structure the data. The researcher then identified themes by looking for the most common responses to questions and patterns or relationships in the data.

RESULTS AND DISCUSSIONS

Result

Classroom Observation

In this study, as indicated below, nine purposely selected English language teachers (T1, T2, T3, T4, T5, T6, T7, T8, and T9) were involved in the classroom observations. All the teachers were observed twice while teaching listening skills sections of the course Communicative English Language Skills I. All nine teachers were observed while they were teaching listening skills lessons. Each teacher was observed two times. The observation data focused on the practice of teaching listening and DT Utilization.

The Practice of Teaching Listening and DT Utilization

The teachers' teaching practices only focused on the listening lessons; no other skills were observed. How do English-language teachers teach listening skills? The teaching method observed was either assisted by digital technology, hereafter called technology-assisted teaching (TAT), or teacher-reading aloud the listening scripts that, is a conventional teaching (CT) method, or both conventional and tech assisted hereafter called mixed teaching (MT) method. Whether they were incorporating technology into the classroom for teaching listening or not, how they teach listening skills in both cases is discussed further below.

Table 1. Summary of Teaching Method Used

Teachers	**T1**	**T2**	**T3**	**T4**	**T5**	**T6**	**T7**	**T8**	**T9**
Methods	TAT	MT	TAT	CT	MT	MT	MT	CT	CT

As inferred from the summary table above, teachers use three alternative methods to teaching listening skills. Most mix conventional and tech-enhanced teaching methods, while few teach listening conventionally. Each teacher's teaching ways in the classroom are described below.

Teacher One (T1)

Teacher one (T1) employed digital technology (DT) for listening instruction. The teacher used a language laboratory to teach listening skills. He began the sessions by summarizing what had been done in the previous session and introducing the day's lesson. The teacher used an e-smart board to play the audiotape and display the pre-listening questions. The students read the questions from the e-board, and some read from their smartphones to respond to the questions. The 3 phases of listening instruction were observed in this class.

The instructional site, the language lab, had desktop computers, headsets, an e-smart board, UPS (power saver), and built-in speakers. The teacher and students also brought their

smartphones. Some students even brought their laptops. Not all, but some of the available digital technologies (DTs) were used for listening instruction. The teacher connected his phone to the e-smart board via Bluetooth to play the audio material and made students listen to it. After listening to the audio text, students responded to the while-listening questions and post-listening tasks.

The teacher looked comfortable using the e-smart board. He also looked motivated to use the resources in the language lab. As the language laboratory began working recently, the teacher was testing multiple devices available to him to make use of them in his instruction.

Teacher Two (T2), Teacher Five (T5), Teacher Six (T6) and Teacher Seven (T7)

T2, T5, T6, and T7 used a technology-enhanced and conventional teacher-reading-aloud approach for teaching listening. In the conventional approach, they stood before the students and read the listening text script.

T5 used the language laboratory in the technology-assisted listening teaching, while T2, T6, and T7 employed laptops to play the audio text. They arranged an armchair in the front space of the classroom to put a laptop computer on. Then, they played the audio text for students to listen to and answer questions while listening. The listening material had some visual features, but the teachers used the laptop, which has a narrow screen to display, so it was difficult for students to see. It was not easy to make it visible to every student. Besides, the laptop produced a low sound volume, making the text inaudible to everyone in the classroom. Immediately, the students dragged their armchairs towards the laptop.

The teachers were comfortable using the laptop to play the listening text as it is a common device used for various purposes. Concerning the students, there was no engagement and participation in using digital technology. The tech was handled and used by the teachers. However, the students were engaged with their cell phones to access the soft copy of the module to work on the different listening skills tasks.

Teacher Three (T3)

T3 employed the technology and used the language laboratory for the instruction. The listening skills lesson was conducted in the language lab. The teacher started the lesson by briefly introducing how the lesson would proceed. Then, two students stood up to join the teacher and the laboratory technician. As they tried connecting the PowerPoint presentation and audio material, the students brought a pen drive to the smart board. It took more than expected to finally set it up, probably because the laboratory technician and the teacher did not seem fluent in the technicalities.

The students used all the possible resources in the language laboratory as they were the ones who conducted the listening teaching for the rest of the class. The teacher only facilitated the sessions. Students did all the teaching following prior instructions. Though the lessons were conducted by students employing various tech and tech products, the teacher seemed comfortable using the tech tools in the lab to some extent.

Teacher Four (T4), Teacher Eight (T8) and Teacher Nine (T9)

All three teachers (T4, T8, and T9) applied the conventional (teacher-read) approach to teaching listening. There was no technology in any form used by the teacher. However, students were observed accessing the listening activities and the course module from their cell phones. The teachers began the sessions by introducing the day's lessons. They stood before the students and read the listening text script to them. The instructional sites for these teachers were classrooms that did not have modern digital technological facilities such as computers, Wi-Fi, projectors, and others. Students were usually made to listen to the teachers' reading twice. Then, students were engaged in the listening activities and responded to questions.

Teacher Five (T5)

T5 had both technology-enhanced and conventional listening classes. In the technology-enhanced class, the teacher used the language laboratory for listening instruction. The teacher tried to write questions on the e-smart board but could not manage it as he had not tried it beforehand. The e-board pen was magnetic, and the teacher could not write as he wanted. He immediately began using the hardcopy module handout to read the pre-listening questions and discuss the tasks. Then, the teacher played the audio material via the e-smart board. The teacher operated the tape to play and replay for the students. The sound was clear and audible.

Desktop computers, headsets, an e-smart board, a power saver, and built-in speakers are the digital technologies available in the language laboratory where T5 taught a listening lesson. The teacher and the students also brought their smartphones to the session. Not all, but some of the digital technologies (DTs) were used for listening instruction. The teacher connects his phone with the e-smart board via Bluetooth, allowing students to listen to the audio materials. After listening to the audio text, students responded to the while-listening questions. Similarly, almost all the students were observed using their cellphones to access the softcopy of the listening activities.

Overall listening instruction using digital technology (DT), T1, T3, and T5 were observed taking the students to the language laboratory and consistently using the language laboratory resources. The other three teachers, T2, T6, and T7, used both teacher-read and tech-enhanced

approaches, which employed laptops in the conventional teaching-learning classrooms. They did not take students to the language lab but used laptops to support their listening instruction. The remaining three teachers, T4, T8, and T9, were observed using conventional classrooms and teacher-read approaches.

The study found that English language teachers in Ethiopia use three alternative methods to teach listening skills: technology-assisted teaching (TAT), conventional teacher-reading-aloud teaching (CT), and a mixed teaching (MT) method that incorporates both TAT and CT. The study also found that digital technology for listening instruction varied from teacher to teacher. Some teachers used technology effectively, while others struggled to do so. Additionally, some teachers had access to more sophisticated digital technologies than others. Overall, the study suggests a need for professional development programs to help English language teachers in Ethiopia develop their TPACK skills and use technology more effectively in their teaching.

Teachers' Interview

Technological Pedagogical and Content Knowledge (TPACK)

Technological Knowledge (TK), Technological Content Knowledge (TCK), and Technological Pedagogical Knowledge (TPK) were the three components assessed in teachers' TPACK. Among some of the mechanisms to assess teachers' TPACK, a self-reporting interview was convenient. Accordingly, using semi-structured and structured interviews, nine English-language teachers, who were selected using a simple random sampling method, were interviewed concerning their TK, TCK, and TPK. First, the semi-structured interview items were analyzed, followed by the structured ones. The analysis of the teachers' responses concerning their perceived knowledge of technology, techno pedagogy, and techno-content knowledge is presented below.

Technological Knowledge (TK)

Technological Knowledge (TK) is the knowledge required to use technology tools to achieve various tasks. In the interview questionnaire, two semi-structured and six structured questions were asked to measure teachers' knowledge of technology.

Teachers' technological knowledge (TK) is a key factor in their ability to use technology effectively in the classroom. The interview questions assess teachers' TK in terms of their ability to learn and solve technical problems, knowledge of new technologies, frequency of use of technology, and knowledge of different technologies. Teachers with high TK are more likely to be able to use technology effectively to support teaching and learning.

When asked about their technological knowledge, T1, T2, T4, T5, and T9 said they can use technology well and can solve some of the technological problems they may have had. In addition to using technology, T1 and T5 said they can learn and keep up with the latest technological advancements. It was also inferred from the classroom observation that T1 and T5 used some technological instruments, such as personal smartphones built with various applications. They were also running listening instruction lessons in the language laboratory.

On the other hand, T2, T3, T4, T6, T7, T8, and T9 did not play around technologies, and they did not keep up with the new technologies. T3, T7, and T9 also did not have the technical skills they needed to use technology, while T4, T6, and T8 were uncertain about their technical skills to use technology. Related to technological knowledge, all teachers quickly learn technologies. However, they were not confident in keeping up with advancements and sorting out the technical challenges they may face while using technology (T3, T6, T9). They thought they had technological competence but could not implement it in the classroom due to low technical skills (T2, T7) and poor internet connectivity and infrastructure (T4, T9) needed to use technology.

It could be why teachers dominantly used the teacher-read approach with intermittent laptop-supported listening instruction. Similarly, T7 said he had not "gained enough technological knowledge to use it for listening instruction." If his technological capacity had been built, he could have supported his instruction more via technology. Supporting this, Akram et al. (2021) said, "The technological competencies of teachers enable them to adapt to other teaching strategies and approaches easily; as a result, their performance gets enhanced."

Technological Content Knowledge (TCK)

TCK is a teacher's specialized knowledge to choose or integrate the right technology into their subject area. In this case, the teacher's ability to select appropriate technology for listening instruction was analyzed under TCK. Three semi-structured and four structured questions were asked to assess teachers' TCK. The questions and the analysis are discussed below.

Teachers' technological content knowledge (TCK) is their understanding of how to use technology to teach specific content areas. In English language teaching, TCK includes knowing about technologies that can be used to teach listening skills, managing and communicating information about listening skills lessons and developing digital content for

listening skills instruction. Teachers with high TCK are more likely to be able to use technology effectively to support teaching and learning of listening skills.

Almost all teachers knew about technologies they could use to understand the English language in general. However, they did not know what to use to learn and enhance listening skills (T2, T3, T6, T8). However, T1, T4, and T5 said they knew what technology best works for developing listening skills. T1 and T5 used the e-smart board in the language lab and knew they could have used the institution's Learning Management System (LMS). Nevertheless, they have never used the LMS so far, and they have no technical skills for designing e-content for their listening teaching and ELT in general.

T2, T5, T6, and T7 confirmed that laptops are their primary tools for listening instruction. These teachers used no other technological resources, both hardware and software. They said that they had never developed digital or e-content for teaching. All nine teachers admitted they had no such technical skills in developing e-content. As T4 justified the reason, though the institution has an e-learning platform, teachers are not practicing it because of "The limited available facilities like the Internet, and our students were not coached to use e-learning." Besides, T1 said, "Using the university e-learning platforms is not practical because the pedagogical aspect of that technology is ignored." The pedagogical value of how e-learning can be used to teach listening should be considered.

Concerning the development and use of e-content, the teachers admitted that they had never tried it before. They are unfamiliar with the idea of content authoring tools to use LMS. Most teachers considered the soft copy materials of their course module and similar resources as "e-content" or "digital content." This misconception could communicate a few things about the teacher's knowledge of technology concerning e-learning for teaching and learning.

An exciting experience captured from T1 was that he uses technological resources for his professional development. Taking courses such as "Technologies for Instruction" from the free online source "Coursera" helped him understand various technologies that could be used in English language teaching, which helped him improve his teaching practices. However, T1 claimed, "I'm not well equipped. There is room for more improvement".

As the classroom practice indicated, teachers incorporated a few tech tools for listening instruction. They dominantly do the instruction traditionally. It could be because of the availability or nonavailability of the facilities, as T4 said, and the technical skills teachers need to use the techs (T7).

Technological Pedagogical Knowledge (TPK)

Understanding technological instruments that can enhance listening skills, learning, and teaching can be referred to as technological pedagogical knowledge. This aspect of TPK was investigated in the current study using three semi-structured and six structured interview questions.

Teachers' technological pedagogical knowledge (TPK) is their understanding of how to use technology to enhance teaching and learning. In listening skills instruction, TPK includes choosing technologies that align with teaching approaches and methodologies, adapting technologies to specific teaching activities, and using technology comfortably in the classroom. Teachers with high TPK are more likely to be able to use technology effectively to support teaching and learning of listening skills.

T1, T2, T4, and T5 could choose technologies appropriate for instruction. All, except T2, T3, T7, and T9, could also adapt technologies they knew to the teaching and learning context. However, T2, T4, T7, T8, and T9 admitted that they had limited technology use in the listening teaching practice for different reasons, one of which was the unavailability of the Internet, as the teachers mentioned. T2, T6, and T7 made few attempts to use technology. As the observation data indicated, they had experience using laptops only for listening instruction a few times.

T1 shared his experiences adapting technological applications that were not created for educational purposes. Apart from cellphones, T1 was observed using telegrams and email in listening instruction as communication tools adapted by the teacher for teaching and learning purposes. He adapted the basic function of email for assessment and feedback purposes. A concern that T1, T3, and T7 discussed was the need and vitality of awareness raising and training on how technology can be integrated into classroom practices, especially for teaching listening skills.

T7 had limited knowledge of technology in general and technology for pedagogy in particular. He was not capable of adapting technologies for classroom instruction. Nearly all interviewed teachers confirmed that they could not select technologies to use in their classrooms that enhance what they teach (content), how they teach (methodology) and what students learn (learning). It was also inferred from the classroom observation that T4, T8 and T9 used traditional listening instruction methods; no technological instruments employed for running listening lessons instruction while some other teachers embed some tech tools for teaching. Training to know how to use the technologies and how they can be integrated into lessons is requested by teachers.

Discussion

The Practice of Teaching Listening and DT Utilization

English language teachers in Ethiopia use a variety of approaches to teaching listening, including technology-assisted teaching (TAT) and conventional teacher-reading-aloud teaching (CT). While most teachers used a mixed teaching method, some used TAT or CT exclusively.

Teachers who used TAT faced several challenges, including lack of access to modern digital technological facilities in classrooms, not being fluent with the technicalities of using digital technology, and difficulty making digital technology visible and audible to all students. However, some teachers could use technology effectively for listening instruction by using tools such as the language laboratory and laptops to play audiotapes and display text.

Teachers also used a variety of approaches to teach listening, including pre-listening activities to prepare students for the listening task, while-listening activities to help students focus on specific aspects of the task, and post-listening activities to check students' understanding of the task and provide practice opportunities. Some teachers used a more systematic approach to teaching listening, following a three-phase pre-listening, while-listening, and post-listening process. Other teachers used a more ad hoc approach, relying on their teaching experience and intuition.

Overall, the study suggests a need for professional development programs to help English language teachers in Ethiopia develop their TPACK skills and use technology more effectively to teach listening. Professional development programs should focus on helping teachers select and use appropriate digital technologies for listening instruction, design and implement lesson plans that integrate technology in a meaningful way and use a variety of approaches to teach listening. By providing teachers with the necessary knowledge and skills, professional development programs can help them to improve the quality of listening instruction in Ethiopia.

TPACK

To teach in the continuously changing educational landscape of the 21st century, teachers must have good Technological Pedagogical and Content Knowledge (TPACK) (Ertmer & Ottenbreit-Leftwich, 2010) or digital pedagogy (Milton & Vozzo, 2013). Thus, this study intended to examine English language teachers' technological pedagogical content knowledge (TPACK) at AASTU. To achieve this objective, teachers' interview was employed. Technological knowledge (TK), technological content knowledge (TCK), and technological pedagogical knowledge (TPK) were assessed out of the seven TPACK

constructs. This knowledge is believed to help teachers integrate technologies for listening instruction. Among some of the mechanisms to assess teachers' TK, TCK, and TPK, a self-reporting interview was convenient. Accordingly, the nine English-language teachers were interviewed concerning their TK, TCK, and TPK. Both semi-structured and structured interviews were employed. The structured interview was a Likert scale question where teachers responded by saying agree, disagree, and uncertain. The semi-structured questions allowed teachers to explain their answers. The teachers' responses concerning their perceived knowledge of technology, techno pedagogy, and techno content knowledge were discussed.

Technology Knowledge (TK)

According to Koehler and Mishra (2009), technology knowledge is needed to use technology tools for various tasks. The teachers' interview responses were analyzed qualitatively following thematic analysis. Accordingly, some teachers indicated that they had technological knowledge. They also thought they could learn technology easily; they knew technical skills to use technology and could solve some of the technical problems they faced in using technology. They claimed they knew some technologies and kept up with important ones. These teachers were the ones who were seen embedding technology in teaching listening skills. They were teaching listening in the language laboratory.

Many teachers admitted that they were unfamiliar with various technologies and they don't have the technical skills to use and solve technology-related challenges. Even a couple were not fans of technology in general and had never used technology for instruction. They confessed that they were not competent in technology. It could be why these teachers dominantly followed a "teacher reading" approach to listening instruction. They would have used technology to teach listening if they were competent enough. They could have supported their instruction via technology. Teachers with solid technological skills can quickly adapt to different teaching methods and approaches (Akram et al., 2021).

On the other hand, having technology skills and using technology effectively for teaching are different things (Hosseini & Kamal, 2012). Knowing technology cannot be a guarantee for using it for educational purposes. Being skillful in technology brings teachers one step ahead in integrating technology in the classroom. Comparing someone with tech skills and who has not, the one with the skill is quickly being onboard in learning and adapting it in different contexts, including teaching. Thus, few teachers reported they knew technology, and few of them were observed using technology consistently for listening instruction. Most of the

teachers requested basic training to use the language lab and to learn about all the functions of the resources in the digital language lab.

Technological Content Knowledge (TCK)

The ability to choose or integrate the proper technology into the subject matter, in this case, listening skills—is known as technological content knowledge (TCK). Seven semi-structured and structured questions were used to gauge teachers' TCK. The teacher's response was analyzed below *(*Koehler and Mishra, 2009).

Over half of the teachers did not know what technology to use for English language education or listening teaching. Their practice also revealed that teachers use little technology from available resources. Laptops and language labs were the commonly used resources by some teachers.

One typical response reported by all teachers was that they did not know about the e-content publishing authoring tools. They had never produced digital content for listening and other language skills or ELT. They have never used the institutional e-learning platform in any form or shape, though the institution provided the Learning Management System (LMS). Thus, most teachers do not have TCK. They were not familiar with technologies that could be employed to learn and understand English language listening skills.

Technological Pedagogical Knowledge (TPK)

Understanding technology instruments that can enhance the teaching and acquisition of subject matter, in this case, listening skills is known as technological pedagogical knowledge (Koehler and Mishra, 2009). Three semi-structured and six structured interview questions were administered to evaluate teachers' TPK. The teacher's response was qualitatively analyzed.

Though teachers self-reported that they could select an appropriate tool for listening instruction to enhance what they teach, how they teach, and what their students learn, they admitted that they had limited technology use in their practical teaching experiences. Some have stated that they have little practical experience using technology in the classroom for instructional purposes. Though they believe that they can select appropriate technologies and adapt technologies they know to various contexts, they have not yet applied them in teaching listening skills. It was also confirmed via observation, as many classes were conventional instruction using a teacher-read approach, not technology-supported.

Some teachers discussed their concerns about tech use. Teachers raised major concerns about how those technologies teachers claimed they knew could be integrated into the

classroom. The lack of awareness and knowledge of the pedagogical aspects of technology was an issue that needed attention. Teachers needed to integrate technology into their specific lessons and know how to use materials with their students. Thus, almost all of them underlined the vitality of training in the TPK aspect of the TPACK for the successful implementation of DTs in listening instruction and for maintaining uniform practice across classrooms. Thus, teachers believed they had some competence in TPK but still wanted support in the pedagogical use of technology to integrate technological tools for listening skills instruction. In line with this, Liu et al. (2014) declared the vitality of technology for teaching and learning aural-oral English language in a non-English speaking environment. They said, "Technology makes learning oral English possible in a non-English speaking environment. Thus, for EFL teachers, knowing how to use technological tools is always a part of their professional knowledge of teaching" (Liu et al., 2014, p. 682).

CONCLUSIONS

The classroom observation findings suggest that English language teachers in Ethiopia know the benefits of using technology for listening instruction. However, they may not be comfortable or confident using technology in the classroom. Additionally, some teachers face challenges in using technology due to a lack of access to modern facilities, technical difficulties, and difficulty in making technology visible and accessible to all students. Despite these challenges, some teachers can use technology effectively for listening instruction. Additionally, teachers use a variety of approaches to teach listening, including some teachers using a more systematic approach while others use a more ad hoc approach.

The study also found that English language teachers in Ethiopia had varying levels of Technological Knowledge (TK), Technological Content Knowledge (TCK), and Technological Pedagogical Knowledge (TPK). Some teachers could use technology effectively for listening instruction, while others struggled. The study also found that teachers had several concerns about using technology in the classroom, such as a lack of awareness and knowledge of the pedagogical aspects of technology, lack of training in how to integrate technology into their specific lessons, and difficulty making digital technology visible and audible to all students.

Teachers were found to have Technological Knowledge (TK), but only a few provided tech-supported listening instruction. Though teachers knew and used technologies for communications, they had a challenge adapting them for education. Even those found using the language lab admitted they needed refresher training on the function of the e-smart board

and similar resources in the language lab. Very few technologies, hardware, and software, such as cell phones, e-boards, and Bluetooth, were used for listening instruction in two classrooms. They were used only to play audio listening materials for a few minutes. Thus, teachers were found to be unfamiliar with technologies that could be employed while teaching listening skills. They requested training on technology use and integration in teaching listening skills.

Meanwhile, most teachers did not demonstrate having Technological Content Knowledge (TCK). Teachers could select digital technological tools for listening instruction to enhance what they teach, how they teach, and what their students learn. More than half of the teachers could adapt technology in various instructional contexts. Nonetheless, they have admitted that they had not adapted the technologies they knew for listening instruction, and the classroom observations also confirmed that teachers dominantly run non-technology-supported listening instruction.

How the digital technologies teachers claimed they knew could be adapted and integrated into the classroom was a major concern discussed by teachers. The lack of awareness and knowledge of the pedagogical aspects of technology was an issue that needed attention. Teachers needed to integrate technology into specific lessons and know how to use materials with students. Thus, almost all of them underlined the vitality of training in the TPK for the successful integration of DTs in listening instruction. Though teachers have TK, it would not be enough for them to use technology for listening instruction. They need to learn how to adapt various technologies that teachers and students use daily in educational settings. The study concludes that teachers need more training in TPACK to use technology effectively. This training should focus on helping teachers develop their technological skills, their knowledge of integrating technology into their teaching, and their understanding of the pedagogical implications of using technology.

REFERENCES

Akram, H., Yingxiu, Y., Al-Adwan, A. S., & Alkhalifah, A. (2021). Technology integration in higher education during COVID-19: An assessment of online teaching competencies through technological pedagogical content knowledge model. *Frontiers in Psychology, 12*(2021), 1–11. https://doi.org/10.3389/fpsyg.2021.736522

Aytan, T. (2016). The effect of a listening education course on the listening behaviors of prospective Turkish teachers. *International Journal of Higher Education*, *5*(2), 254–262. https://doi.org/10.5430/ijhe.v5n2p254

Chai, C. S., Koh, J. H. L., & Tsai, C.-C. (2013). A review of technological pedagogical content knowledge. *Educational Technology & Society*, *16*(2), 31–51.

https://www.jstor.org/stable/jeductechsoci.16.2.31

Ertmer, P. A., & Ottenbreit-Leftwich, A. T. (2010). *Teacher technology change: How knowledge, confidence, beliefs, and culture intersect*. *42*(3), 255–284. https://doi.org/10.1080/15391523.2010.10782551

Gao, P., Choy, D., Wong, A. F. L., & Wu, J. (2009). Developing a better understanding of technology based pedagogy. *Australasian Journal of Educational Technology*, *25*(5), 714–730. https://doi.org/10.14742/AJET.1117

Graham, C. R. (2013). The role of technology in teaching and learning. In C. M. Reigeluth (Ed.), *Instructional-design theories and models: An overview of their current status* (4th ed., pp. 277–303). Taylor & Francis.

Hosseini, Z., & Kamal, A. (2012). Developing an instrument to measure perceived technology integration knowledge of teachers. *International Conference on Advanced Information System, E-Education & Development (ICAISED 2012)*, 1–14. http://www.icaised.com

Koehler, M. J., & Mishra, P. (2009). What is technological pedagogical content knowledge? *Contemporary Issues in Technology and Teacher Education*, *9*(1), 60–70. http://www.tpck.org/.

Krashen, S. D. (1985). *The Input Hypothesis*. Longman.

Kukulska-Hulme, A., & Shield, L. (2014). *Digital literacy for language learners: Principles and practices*. Oxford University Press.

Levy, M., Hubbard, P., Stockwell, G., & Colpaert, J. (2015). Research challenges in CALL. *Computer Assisted Language Learning*, *28*(1), 1–6. https://doi.org/10.1080/09588221.2014.987035/ASSET//CMS/ASSET/8981A9CD-7C27-4CEB-910C-D9157E2BBD9C/09588221.2014.987035.FP.PNG

Liu, S., Liu, H., Yu, Y., Li, Y., & Wen, T. (2014). TPACK: A new dimension to EFL teachers' PCK. *Journal of Education and Human Development*, *3*(2), 681–693. http://jehdnet.com/journals/jehd/Vol_3_No_2_June_2014/41.pdf

Milton, M., & Vozzo, L. (2013). Using new technologies to support the learning of Aboriginal pre-service teachers. In S. Goff (Ed.), *From Theory To Practice, Context In Praxis: 8Th Action Learning, Action Research And 12Th Participatory Action Research, 2010 World Congress Proceedings* (pp. 208–216). http://www.alara.net.au/wc2010/proceedings

Mishra, P., & Koehler, M. J. (2006). Technological pedagogical content knowledge: A framework for teacher knowledge. *Teachers College Record: The Voice of Scholarship in Education*, *108*(6), 1017–1054.

Nehring, J. H., Charner-Laird, M., & Szczesiul, S. A. (2019). Redefining excellence: Teaching in transition, from test performance to 21st century skills. *NASSP Bulletin*, *103*(1), 5–31. https://doi.org/10.1177/0192636519830772

Niess, M. L. (2011). Investigating TPACK: Knowledge growth in teaching with technology. *Journal of Educational Computing Research*, *44*(3), 299–317. https://doi.org/10.2190/EC.44.3.C

Schmidt, D. A., Baran, E., Thompson, A. D., Mishra, P., Koehler, M. J., & Shin, T. S. (2009). Technological pedagogical content knowledge (TPACK): The development and validation of an assessment instrument for preservice teachers. *Journal of Research on Technology in Education*, *42*(2), 123–149. www.iste.org.

Shulman, L. S. (1986). Those who understand: Knowledge growth in teaching. *Educational*

Researcher, *15*(2), 4–14. https://doi.org/10.3102/0013189X015002004

Warschauer, M. (2014). Technology and second language learning. In M. Celce-Murcia, D. M. Brinton, M. A. Snow, & H. T. Williams (Eds.), *Teaching English as a second or foreign language* (pp. 437–451). Pearson Education.

Yavuz, F., & Celik, O. (2017). The importance of listening in communication. *Global Journal of Psychology Research: New Trends and Issues*, *07*(1), 8–11. https://doi.org/10.18844/gjpr.v7i1.2431

Zhang, M., & Chen, S. (2022). Modeling dichotomous technology use among university EFL teachers in China: The roles of TPACK, affective and evaluative attitudes towards technology. *Cogent Education*, *9*(1), 1–24. https://doi.org/10.1080/2331186X.2021.2013396