

## CHAPTER IV

### FINDINGS AND DISCUSSION

#### A. Findings

In this chapter aims to describe how English teachers integrate technology, pedagogy, and content knowledge in the teaching listening skills, as well to examine the issues and challenges they encounter during the instructional process. The research findings in this chapter are organized based on two research questions. The first is focuses on how teachers implement the TPACK Framework in teaching listening skills, the second is the issues and challenges faced by teaching in applying the TPACK framework in listening skills.

The data in this study were collected through two techniques, classroom observation and interview. Classroom observation were carried out on two occasions during listening lessons, in which the teachers integrated technology into the teaching and learning process. Interview were conducted with two English teacher to obtain in-depth information regarding the implementation of the TPACK framework in listening skills.

To maintain participants' confidentiality, several codes were used in presenting the data. TE1 refers to Teacher 1 and TE2 refers to Teacher 2. INT1

refers to Interview 1 and INT2 refers to Interview 2, while OBS1 refers to Observation 1 and OBS2 refers to Observation 2. These codes are used throughout the findings section to identify the sources of the data.

### **1. The teachers implement TPACK Framework to teach listening skills**

Based on the results of classroom observations and interview conducted with two English teachers at MAN 1 Banjarmasin, it was found that both teachers have considerable teaching experience. In their classroom practices, the teachers use technology as a supporting instructional tool, apply appropriate pedagogical, strategies, and adapt listening materials to align with curriculum and students' proficiency levels. These practices indicate that the TPACK framework has been actively implemented in listening instruction in the classroom.

#### **a. TK (Technology Knowledge)**

Based on interviews with two English teachers, it was found that both teachers utilized various forms of technology to support the teaching of listening skills. Technology was used not only as a medium for delivering audio materials but also as a tool to improve students' motivation and engagement during the listening process.

TE1 explained how technology was used to support listening activities in the classroom:

“I usually conduct listening activities in the language laboratory or computer laboratory because it is already complete, with computers,

LCD, speakers, headphone and school WiFi available. However, when teaching in the classroom, I usually bring a small speaker, so the students can practice listening. In the past, I used cassette tapes for exams, so each classroom had a speaker. Now, I usually open YouTube, songs, film, especially videos with animation, so students are more enthusiastic. I have also learned to use Plepty, Pendimen, and Showby for teaching English.” (TE1, INT1, 28 Nov 2025)

It also indicates that TE1 has adapted to technological developments and continues to develop technological competence in teaching listening. Similarly, TE2 described the use of digital resources to support listening instruction:

“I usually scan barcode from the student textbook to access listening materials, but I more often use YouTube videos about conversations, dialog, folklore, and songs because students enjoy the listening activity more. In addition, I use the language laboratory because the equipment is complete or sometime in the classroom.” (TE2, INT2, 27 Jan 2026)

TE2 is able to access and utilize various digital resources to facilities students’ listening learning. These findings indicate that both teachers demonstrated TK, as reflected in their ability to operate audio equipment, use digital platforms, access online listening materials, and utilize technological facilities such as the language laboratory to support the teaching and learning process.

**b. PK (Pedagogy Knowledge)**

The findings revealed that both teachers demonstrated appropriate pedagogical knowledge in meaning listening instruction.,

they applied several technique to help students understand the materials and stay engaged during the learning process.

TE1 described the instructional strategies used to prepare and support students during listening activities:

“For grade 10, I provide vocabulary before the listening activity so students are more prepared. I also give motivation, theory, and listening strategies before starting. If students do not understand the pronunciation, I replay the audio so they can listen again.” (TE1, INT1, 28 Nov 2025)

This indicates that TE1 applies structured pre-listening, while-listening, and post-listening strategies to support students’ comprehension and maintain classroom discipline. Similarly, TE2 explained the strategies used to encourage active participation during listening lessons:

“I used fill-in-the-blank exercises from songs, the students complete the missing words based on what they hear. I more often apply individual listening activities so every student is actively involved.” (TE2, INT2, 27 Jan 2026)

These statements show that TE2 selects instructional strategies that encourage concentration and individual accountability in listening activities.

These findings indicate that both teachers demonstrated PK through their ability to design listening activities, prepare students before listening, guide them during the activity, and provide follow-up tasks to strengthen comprehension.

**c. CK (Content Knowledge)**

The findings also revealed that both teachers demonstrated understanding of listening content and curriculum alignment. They selected materials based on students' level and curriculum requirements.

TE1 explained the approach used in selecting listening materials:

“Listening materials are selected based on textbook that follows the curriculum, and the materials are usually available through the textbook barcode, and additional materials are searched if needed.” Teacher 1 also explained, “all types of listening content are effective as long as they match the learning objectives.” (TE1, INT1, 28 Nov 2025)

This shows that TE1 understands how to select and adapt listening materials according to instructional goals. As well as, TE2 mention how listening content was aligned with the curriculum:

“Listening materials are selected based the textbook and learning objectives in the syllabus, and the materials are adjusted to the curriculum and students level of ability.” (TE2, INT2, 27 Jan 2026)

This statement reflect TE2 understanding of aligning listening content with curriculum standards and students' need. Overall, the findings show that both teachers demonstrated CK, as reflected in their understanding of curriculum-based listening materials, awareness of students listening levels, and ability to select appropriate content to support listening instruction.

**d. TCK (Technology Content Knowledge)**

TCK refers to the teachers' understanding of how technology can be used to present and represent listening content effectively. The findings showed that the teachers integrate the technologies used by the teachers included digital videos, films, and online video platforms that provide authentic listening materials. These technological resources helped present listening content in audio visual form, allowing students to understand both the spoken language and the context of the material.

As expressed by TE1 described how technology was used to deliver listening content in a more engaging way:

“I use animation videos from the YouTube or English Movie so students are more interested and focused during listening activities so this is help students understand the videos more easily.” (TE1, INT1, 28 Nov 2025)

This shows that TE1 used technological media to deliver listening content in a more meaningful and contextual way. TE2 explained how technology was used to ensure students could hear listening materials clearly:

“When I teach listening using songs, I usually play the audio using a speaker so all students can hear clearly. The speaker makes the sound louder and clearer, so students can understand the lyrics and pronunciation better. Sometimes, when I use the language computer, students use headphones so they can listen more clearly and focus on the audio without being disturbed by noise from other students.” (TE2, INT2, 27 Jan 2026)

These statement shows that TE2 used technology to support the delivery of listening content, particularly songs, so students could hear pronunciation and understand the material.

These results imply that both teachers demonstrated TCK, as reflected in their ability to use technological tools to present listening content in way that support students' understanding of English listening materials.

**e. TPK (Technology Pedagogy Knowledge)**

Based on the interview, both teachers demonstrated skills in using technology to support their instructional strategies and facilitate students' engagement during listening activities. Technology was not only used to deliver listening materials, but also guide students, support interaction, and help students participate actively I the learning process.

TE1 stated how technology was used to facilitate collaborative international communication during listening activities:

“I conduct collaborative classes with students from other countries using Zoom in the computer laboratory. Students use computers, LCD, speakers, and sometimes headphones to listen and communicate with student from other countries. This activity allows students to hear real English from different speakers and understand various accents directly. In this activity, I act more as a facilitator, guiding students and helping them if they experience difficulties, while students actively listen and interact during the session.” (TE1, INT1, 28 Nov 2025)

This show that TE1 used technology to support interactive learning and actively guide students during listening activities. In

addition, TE2 explained how to use technological tools to help students understand listening materials when they experienced difficulty:

“Students sometimes find it difficult when the listening material uses different accents, so I replay the audio or slow down the playback. If they still do not understand, I repeat it again and guide them to focus on the important parts of the audio.” (TE2, INT2, 27 Jan 2026)

This indicates that TE2 used technological features such as replaying and adjusting audio speed as part of his teaching strategy to support students' listening comprehension.

These findings indicate that both teachers demonstrated TPK, as reflected in their ability to use technology to guide students, adjust listening activities based on the students' needs, facilitate interactive learning, and support students' engagement.

**f. PCK (Pedagogy Content Knowledge)**

The findings showed that both teachers demonstrated PCK through their ability to apply appropriate teaching strategies to help students understand listening materials. They not only selected suitable content but also used instructional techniques that supported students' comprehension of listening topics.

TE1 explained the strategy used when unable to attend class in person:

“When I cannot attend the class, I ask students to go to the language laboratory and watch English Film together. After that, I ask them to review the film in the next meeting by explaining the story,

identifying the main ideas, and sharing their understanding.” (TE1, INT1, 28 Nov 2025)

This activity shows that TE1 used film as listening content and applied a review strategy to evaluate students understanding of the story and language used in the film. TE2 stated how listening materials were used to develop students’ comprehension skills:

“In teaching Narrative texts, I ask students to find folklore videos and listen attentively to the stories, after listening activity, students work in groups to discuss the content of the story, focusing on the plot, characters, main idea, and moral messages.” (TE2, INT2, 27 Jan 2026)

This shows that TE2 guided students to understanding listening materials through discussion and comprehension activities related to the listening content. These findings indicate that both teachers demonstrated PCK, as reflect in their ability to apply appropriate instructional strategies, such as reviewing films and discussing video content, to help students understand.

**g. TPACK (Technological Pedagogical Content Knowledge)**

Based on the observation results, the teacher demonstrated TPACK through the integration of technology, pedagogy, and content in teaching listening skills. The teacher used technological tools such as laptops, LCD, speakers, computers, headsets, Zoom, and YouTube to deliver listening materials and support the learning process. (TE1, OBS1 27 Jan 2026; TE2, OBS2, 30 Jan 2026).

The listening materials were taken from YouTube and authentic communication through Zoom, which provided students with meaningful exposure to real English use. The teacher ensured that the materials were appropriate to students' level and learning objectives, such as listening to dialogues and describing places. Pedagogically, the teacher applied structured listening activities by giving instructions before playing the audio, allowing students to listen carefully, replaying the audio when necessary, and guiding students throughout the listening process while facilitating classroom interaction.

This finding was supported by interview data. TE1 stated that, “the use of Zoom and YouTube helped students become more interested and active during listening activities” (TE1, INT, 27 Jan 2026). Similarly, TE2 explained, “integrating technology with teaching strategies made listening lessons more interactive and helped students understand the materials more easily” (TE2, INT, 27 Jan 2026).

These findings indicate that both teachers were able to integrate technology, pedagogy, and content effectively to support students' listening comprehension during the learning process. The results can be seen in the table below.

**Table 4.1 TPACK Components in Teaching Listening**

<b>Component</b>	<b>Teacher 1</b>	<b>Teacher 2</b>
TK	Utilizing digital tools such as YouTube, Zoom, and language laboratory equipment to support listening instruction	Utilizing digital resources such as YouTube, barcode scanning from textbooks, and language laboratory equipment
PK	Applying structured pre-listening activities by introducing vocabulary and listening strategies, and replaying audio during while-listening stage	Applying interactive tasks such as fill-in-the-blank exercises and individual listening activities to encourage active participation
CK	Using textbook and additional online materials	Selecting materials based on syllabus and students' level
TCK	Using videos and films to present listening content in a contextual and engaging way	Using speaker and headphones to ensure students hear pronunciation and song lyrics clearly
TPK	Facilitating interactive learning through Zoom collaboration	Using replay and speed adjustment to support understanding
PCK	Using film review and story retelling to support comprehension	Using group discussion to analyze narrative content
TPACK	Integrating technology, pedagogy, and content through interactive listening activities using videos and Zoom	Integrating technology, pedagogy, and content by combining tools, tasks, and materials to support comprehension

## **2. Challenges and Issues in Implementing the TPACK in Teaching Listening Skills**

Based on the observation and interviews results, it was found that both teachers faced several challenges in implementing the TPACK framework in teaching listening skills. These challenges included,

### **a. Technical Problems and Internet Connectivity**

Based on the observation conducted in the language laboratory, several technical problems occurred during the listening activities. Some computers experienced technical issues, and several students reported that the audio was interrupted technical issues, and several students reported that the audio was interrupted or unclear. (OBS2, 27 Jan 2026)

Similarly, during the listening activity using Zoom with students from Japan, the teacher needed to monitor the learning process, communicate with the host, and ensure that all technological equipment functional properly. The teacher was also assisted by the IT teacher to handle technical problems related to computers, internet connection, audio devices. These findings indicate that technical readiness and stable internet connection are important factors in supporting technology-integrated listening instruction. (OBS1, 27 Jan 2026)

These findings were supported by the interview result. TE1 stated the technical challenges encountered during listening lessons:

“Sometimes the internet connection is not stable, so I use my personal internet even though the school provides Wi-Fi. There are also situations when the electricity suddenly turns off.” (TE1, INT1, 28 Nov 2025)

Similarly, Teacher 2 explained, “The main challenges is usually related to unstable internet connection, which affects access to listening materials.” (TE2, INT2, 27 Jan 2026)

These findings indicate that technical problems and unstable internet connectivity remain a significant challenges in implementing technology integrated listening instruction.

#### **b. Students’ Difficulty in Understanding Listening Materials**

The observation results showed that several students experienced difficulty in understanding listening materials. Some students appeared confused after listening to the audio and requested the teacher to replay the audio and requested the teacher to replay the audio. Students also reported that the speed of the audio was too fast and that their limited vocabulary made it difficult to understand the listening content. (OBS1, 30 Jan 2026)

These findings were consistent with the interviews result. TE2 stated, “Students can still understand British or American accents, but they have difficulty when listening materials use other accents, such as Indian and Thai accents.” (TE2, INT2, 27 Jan 2026)

TE1 also explained, “Students have different levels of ability. Some students understand quickly, but others need to listen several times, so I replay the audio to help them understand.” (TE1, INT1, 28 Nov 2025)

These findings indicate that differences in students listening abilities and language proficiency remain a major challenge in listening instruction.

**c. Challenges in Managing Technology During the Learning Process**

Based on the observation also showed that teachers needed to actively monitor students, manage technological tools, and ensure that all devices functioned properly during listening activities.

The teacher walked around the classroom, checked students' progress, and helped students who experienced technical difficulties. This situation shows that the use of technology in the classroom requires not only teaching skills but also the ability to manage multiple tools at the same time. (OBS2, 27 Jan 2026)

This findings was supported by TE1, the additional effort required to manage technology during lessons:

“Sometimes I ask students or the IT teacher for help when there are technical problems, especially when using technology in the classroom requires additional effort and support to ensure that the learning process runs smoothly. Before the lesson starts, I sometimes ask students to help me prepare the media, like setting up the speaker or opening the video, so we can start the lesson more quickly.” (TE1, INT1, 28 Nov 2025)

Overall, these findings indicate that managing technology during the learning process can be challenging. Teachers are required to have good organizational and multitasking skills, as they need to handle both the teaching process and technical aspects at the same time. Therefore, support from students and other staff can help make the learning process more effective and efficient.

**d. Maintaining Students Focus Engagement During Listening Activities**

Based on the observation, not all students remained fully focused during listening activities. Some students were distracted, asked permission to leave the classroom, or arrived late during the listening session. In addition some students expressed frustration because they could not fully understand the listening materials.

Furthermore, during the listening activities, some students showed signs of difficulty in understanding the audio. They appeared confused, repeatedly asked their peers for answers and showed a lack of confidence when completing the given tasks. A number of students also expressed frustration, particularly when the audio was played only a limited number of times or when the speed of the speech was too fast as a result, their motivation and engagement gradually decreased during the lesson. (OBS2, 27 Jan 2026)

The observational findings were supported by the result of the interviews with the teacher. TE1 stated:

“Sometimes students lose their focus during listening activities, especially when the material is too difficult or the audio is too fast. They tend to get frustrated and stop paying attention. Even when I use videos or interesting media, it is still challenging to keep all students engaged. Some students are active, but others easily get distracted or do not fully concentrate on the task.” (TE1, INT1, 28 Nov 2025)

These findings indicate that maintaining students focus and engagement is a challenge in listening instruction, even when technology is used. Teachers need to apply appropriate strategies to ensure that students remain engaged and actively participate in listening activity.

#### **e. Students’ Access to Learning Resources**

Based on the interview results, it was found that not all students had equal access to learning resources. TE2 stated the challenge related to students’ access to learning materials:

“Some students do not have the student worksheet (LKS) due to economic factors, so not all students can access the listening material optimally.” (TE2, INT2, 27 Jan 2026)

This condition makes it more difficult for teachers to ensure that all students can fully participate in listening activities.

This finding indicates that differences in students’ access to learning resources can affect the effectiveness of technology supported listening instruction. Teachers need to adjust their

strategies to ensure that all students can still follow the learning process.

Overall, the findings from observation and interviews indicate that although technology provides many benefits in teaching listening, teachers still face several challenges, including technical problems, students listening comprehension difficulties, limited access to learning resources, challenges in managing technology, and maintaining students' focus during listening activities. These challenges require teachers to apply adaptive strategies and continuous support to ensure effective listening instruction. The results can be seen in the table below.

**Table 4.2 Challenges in the Implementation of TPACK in Listening**

<b>Aspect</b>	<b>TE1</b>	<b>TE2</b>
<b>Technical Issues</b>	Internet not stable, sometimes power off	Internet not stable, hard to access materials
Understanding Listening	Students need to repeat audio many times	Students are confused with fast speech and accents
Managing Technology	Needs extra effort and asks help from students or IT	Handles tools and helps students during problems
Student Engagement	Students lose focus when material is difficult	Students feel confused and less confident

Learning Resources	-	Some students do not have materials (LKS)
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## **B. Discussion**

This section discusses the research findings obtained from interviews and classroom observations involving two English teachers in teaching listening skills. The findings revealed that both teachers integrated the main components of the TPACK framework, including CK, PK, and TK, as well as their intersections such as TCK, TPK, and PCK.

However, the teachers also face several challenges, such as differences in students' listening abilities and the need to adjust teaching strategies to ensure students' understanding. Despite these challenges, the teachers demonstrated their ability to adapt and integrate technology, pedagogy, and content in the classroom.

### **1. The teachers implement TPACK Framework to teach listening skills**

#### **a. Technology Knowledge (TK)**

Both teachers showed competence in Technological Knowledge (TK) through their ability to operate audio-visual equipment, access online platforms such as YouTube, and use school facilities like the language laboratory. TK refers to knowledge about technology that

continues to develop and can be applied productively in various learning contexts, including the use of audio-visual applications, podcasts, and online learning platforms (Mishra & Koehler, 2006). This finding is in line with Rustanto et al. (2020), who state that teachers with strong TK are able to utilize various digital tools and internet-based resources to support listening instruction.

TE1 demonstrated more advanced TK by using collaborative online learning through Zoom, which allowed students to experience authentic English communication with speakers from different countries. Meanwhile, TE2 showed TK competence by using barcode scanning from textbooks and accessing listening materials through YouTube. These findings indicate that both teachers are able to adapt to technological developments and continue to develop their technological skills in teaching listening.

**b. Pedagogical Knowledge (PK)**

The findings showed that both teachers demonstrated strong Pedagogical Knowledge (PK) in organizing listening instruction. Mishra & Koehler (2006) define PK as the teacher's deep understanding of the processes and practices of teaching and learning. They applied structured by pre-listening, while-listening, and post-listening activities during the lesson. TE1 prepared students by introducing key vocabulary and giving listening strategies before the

activity began. Meanwhile, TE2 used activities such as fill-in-the-blank exercises and individual listening tasks to encourage students to participate actively.

These practices are consistent with the findings of Isti et al. (2024), who highlighted the importance of structured listening stages in supporting effective listening instruction in EFL classrooms. The use of clear stages helps students better understand the material and follow the learning process more systematically.

In addition, both teachers showed good classroom management by monitoring students' progress, providing explanations when needed, and adjusting the activities based on students' responses. This flexibility allowed the teachers to maintain students' engagement and ensure that the learning objectives were achieved.

**c. Content Knowledge (CK)**

Both teachers demonstrated Content Knowledge (CK) through their ability to choose listening materials that were appropriate to the curriculum and students' proficiency levels. As stated by Mishra & Koehler (2006), CK refers to the teacher's knowledge of the subject matter being taught, including concepts, theories, and practices that are well established in the field. TE1 used materials from the textbook and supported them with additional resources from online sources.

Meanwhile, TE2 selected listening materials based on the syllabus objectives and adjusted them to match students' ability levels.

This is consistent with the findings of Savitri et al. (2024), who explain that selecting materials that align with learning objectives is an important aspect of CK within the TPACK Framework. Choosing appropriate materials not only ensures that the content meets curriculum standards but also supports students in understanding the lesson more effectively.

These findings suggest that both teachers were able to consider curriculum demands while also addressing students learning needs when choosing listening materials, which contributed to more effective and meaningful listening instruction.

#### **d. Technology Content Knowledge (TCK)**

The findings showed that both teachers TCK through their use of digital videos, films, songs, and online platforms to present listening materials in audio-visual forms. Mishra & Koehler (2006) describe TCK as knowledge of the many ways in which technology and content are connected to one another. TE1 used animation videos and English films from YouTube to present listening content in a more contextual and engaging way. Meanwhile, TE2 used speakers and headphones so that students could clearly hear pronunciation and better understand the song lyrics used in the lesson.

This findings is in line with Savitri et al. (2024), who found that the use of multimedia tools can help improve students' understanding of listening materials. The integration of audio-visual media not only support comprehension but also provides more authentic language input, which is essential in listening instruction.

These result indicate that the use of technology in presenting content can support students' comprehension while also increasing their interest and engagement in listening activities. This suggests that strong TCK enables teachers to transform abstract listening content into more accessible and engaging learning experiences.

**e. Technology Pedagogical Knowledge (TPK)**

Both teachers showed TPK by using technology not only to deliver content but also to support the teaching process and help students better understand the listening activities. In line with Mishra & Koehler (2006), TPK involves understanding how the use of different technologies in teaching and learning can influence the outcomes of instruction. TE1 used Zoom to facilitate collaborative international communication, when the teacher acted as a facilitator while students actively listened and interacted. Meanwhile, TE2 used technological features such as replaying audio and showing down the playback speed to help student follow and understand the listening materials more easily.

This consistent with the idea proposed by Mishra & Koehler (2006), who explain that TPK involves understanding how technology can support and enhance teaching practices. In this context, technology was not used merely as a supplementary tool but as an integral part of the teaching strategy.

Furthermore, the ability of both teachers were able to use technology in ways that made listening instruction more interactive and responsive to students' learning needs.

**f. Pedagogical Content Knowledge (PCK)**

The findings revealed that the teachers demonstrated PCK through their ability to apply appropriate instructional strategies to help students understand listening materials. Mishra & Koehler (2006) explain that PCK involves knowing which pedagogical approaches are most relevant to specific content and how content can be organized for more effective teaching. TE1 used film review activities in which students identified the main ideas and retold the story, while TE2 guided students to discuss narrative video content in groups by focusing on the plot, characters, and moral messages.

These strategies show how teachers combined their understanding of content with suitable teaching approaches. Furthermore, the use of discussion and review activities as post-listening tasks supports the argument of Isti et al. (2024), who

emphasized the importance of post-listening activities in strengthening students' comprehension of listening materials.

**g. Technology Pedagogical Content Knowledge (TPACK)**

Overall, the findings indicate that the teachers have developed competency in the TPACK Framework through the integration of technological, pedagogical, and content knowledge. Mishra & Koehler (2006) define TPACK as the integration of content, pedagogy, and technology knowledge into effective teaching practice, representing teachers' ability to teach a specific subject using appropriate pedagogical strategies supported by relevant technology. Their ability to combine these three areas of knowledge allowed them to design listening lessons that were supported by technology, applied appropriate teaching strategies, and used relevant learning materials.

This finding supports Kurniawati et al. (2023), who state that teachers with strong TPACK are able to design listening lessons that encourage active listening, critical thinking, and meaningful learning experiences. Similarly, Kasan (2025) found that effective TELL integration depends on teachers' ability to integrate technological, pedagogical, and content knowledge effectively through the TPACK framework, which can improve students' engagement and learning experiences through meaningful instructional design.

## **2. Challenges and Issues in Implementing the TPACK in Teaching Listening Skills**

Despite their competent implementation of the TPACK Framework, several challenges emerged during the instructional process. These challenges are discussed based on the themes identified from the findings.

### **a. Technical Problems and Internet Connectivity**

One of the most noticeable challenges in this study was unstable internet connectivity and technical problems with classroom equipment. Teachers reported that unstable internet access often interrupted technology-based listening activities, especially when using platforms such as YouTube and Zoom.

This finding is consistent with the study of Taopan (2020), which identified unstable internet access as a major obstacle in implementing technology-integrated learning. Similarly, Savitri et al. (2024) found that electricity disruptions and limited technological facilities frequently hinder teachers in conducting technology-based English instruction. These findings suggest that limited infrastructure remains a significant barrier to the effective implementation of technology supported listening lessons.

### **b. Students' Difficulty in Understanding Listening Materials**

Another challenge involved students' difficulty in understanding listening materials. Several factors contributed in

students' listening proficiency levels. Students with limited vocabulary often struggled to recognize and interpret words from audio materials, which affected their overall comprehension. One teacher also noted that students found it difficult to understand accents that were less familiar to them, such as Indian and Thai accents.

This finding supports the study by Rizkiawan et al. (2024), who identified limited vocabulary and accent variation as common challenges in listening instruction. While technology allows teachers to introduce authentic listening materials, it can also expose students to language variations that may be difficult for them at their current level of proficiency.

**c. Challenges in Managing Technology During the Learning Process**

Managing several technological tools at the same time also became a challenge during listening lessons. Teachers needed to monitor students' activities, manage devices, and ensure that the technology used in the classroom functioned properly. In some situations, technical difficulties required additional assistance from students or the school's IT staff.

This finding is in line with Taopan (2020) who highlighted that managing technology during classroom instruction can be demanding for teachers. These results indicate that successful technology

integration requires not only technological knowledge but also strong classroom management and organizational skills.

**d. Maintaining Students Focus Engagement During Listening Activities**

Observation results showed that maintaining students' focus during listening activities was not always easy. Some students appeared distracted, arrived late, or showed frustration when they had difficulty understanding the listening materials.

This finding is similar to the results reported by Rizkiawan et al. (2024), who found that low student motivation and classroom distractions can affect the effectiveness of listening activities. These findings suggest that teachers need to use varied and engaging instructional strategies to maintain students' motivation and participation during listening lessons.

**e. Students' Access to Learning Resources**

The findings also revealed challenges related to students' access to learning resources. In some cases, not all students had access to student worksheets due to economic limitations, which affected their participation in classroom activities. This issue highlights an additional challenge that is not always discussed in previous studies, such as those by (Rizkiawan et al., 2024) and (Savitri et al., 2024). These results suggest that socioeconomic factors may also influence

the effectiveness of technology integrated learning and should be considered in future research on the implementation of the TPACK framework.

Despite these challenges, the teachers showed adaptive efforts to address the difficulties they encountered. They used personal internet connections as backup, replayed audio materials several times to support students' understanding, and adjusted their teaching strategies based on students' needs. This finding supports the study by Savitri et al. (2024), which suggests that even with various challenges, the TPACK framework can still help teachers listening instruction in a more structured way and support students' motivation and engagement in the learning process.

In addition, Kasan (2025) found that institutional support, technological facilities, and continuous training are important for successful TPACK and TELL implementation. The study also identified challenges such as unstable internet connection and limited facilities. Overall, these findings show that effective implementation of TPACK in listening instruction depends on technological, pedagogical, and institutional support.