

Exploring the Use of AI-Generated Contextual Materials in English Listening Instruction

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Abstract

This study explored teachers' and students' perceptions of AI-generated contextual materials and their implementation in English listening instruction at SMAN 1 Parindu. Using a qualitative research design, the study involved one English teacher and six tenth-grade students selected through purposive sampling. Data were collected through classroom observations, field notes, and semi-structured interviews and analyzed using thematic analysis. The findings revealed four main themes. First, conventional listening materials, including textbook audio and online resources, were sometimes unfamiliar to students, particularly when the content reflected contexts beyond their everyday experiences. Second, AI supported the teacher in developing listening texts and dialogues connected to students' local surroundings and familiar situations. Third, students perceived the contextual materials as more interesting and easier to follow, while classroom observations indicated active participation and more confident responses during listening activities. Fourth, implementation faced challenges related to internet connectivity and the clarity and speed of AI-generated audio, highlighting the need for teacher review and adaptation. Overall, the findings suggest that AI-generated contextual materials can support more relevant and engaging listening instruction. However, the study did not use standardized listening tests to measure learning gains, and the findings should be interpreted within the specific classroom context.

Keywords: AI in ELT, AI-Generated, Contextual Listening Materials, English Listening Instruction

INTRODUCTION

The continuous advancement of digital technology has reshaped many aspects of education, including English Language Teaching (ELT). One of the most influential developments is Artificial Intelligence (AI), which has introduced new possibilities for innovative teaching methods, individualized learning opportunities, and adaptive material development. Within ELT, AI technologies such as generative AI, speech synthesis, and natural language processing provide teachers with broader opportunities to create dynamic, interactive, and flexible learning resources. Recent scholarship indicates that AI can improve teachers' efficiency in designing instructional materials while also encouraging more creative language-learning practices.

Despite the growing integration of AI in ELT, its application across language skills remains uneven. Previous studies have largely focused on writing, speaking, and reading through AI-based writing assistants, automated feedback systems, and conversational chatbots (Godwin-Jones, 2023; Zhai *et al.*, 2023). In contrast, listening instruction has received relatively limited scholarly attention (Li & Lan, 2024). This gap is significant because listening is one of the most challenging skills for English as a Foreign Language (EFL) learners, requiring real-time processing, vocabulary recognition, pronunciation awareness, and contextual understanding (Vandergrift & Goh, 2012; Graham, 2017). Although listening plays a central role in language acquisition, empirical research on AI-supported listening instruction remains comparatively underexplored (Daud *et al.*, 2025; Kyaw & Jie, 2025).

Another important issue concerns the quality and relevance of listening materials used in many EFL classrooms. Listening instruction often depends on textbook-based audio materials that may lack contextual relevance to students' sociocultural backgrounds and daily experiences

(Field, 2008; Nation & Newton, 2009). Such decontextualized materials can reduce learner engagement and make comprehension more difficult (Tomlinson, 2013). Contextual learning theory emphasizes that instructional materials become more meaningful when connected to learners' real-life situations, local culture, and familiar social contexts (Richards, 2017). Therefore, contextualized listening materials are essential for improving students' engagement and comprehension.

However, developing contextual listening materials can be challenging for teachers due to limited time, technical expertise, and access to appropriate resources (Tomlinson, 2013). As a result, teachers may continue to rely on existing textbook materials rather than creating resources tailored to students' needs and backgrounds. In this context, artificial intelligence (AI) offers practical potential by enabling teachers to generate and adapt written texts, local stories, and real-life scenarios into listening scripts and audio materials through generative AI and text-to-speech technologies (Godwin-Jones, 2023; Zhai, 2022). Rather than replacing teachers, AI can function as a pedagogical tool that supports the development of relevant instructional materials. Nevertheless, AI-generated content requires teacher evaluation to ensure its linguistic accuracy, contextual suitability, and appropriateness for learners' proficiency levels (Luckin et al., 2022).

Previous studies have investigated the use of AI in education and language learning from several perspectives. Crompton and Burke (2023), in their systematic review of artificial intelligence in higher education, examined 138 studies published between 2016 and 2022. Their review mapped the development and applications of AI in educational settings and identified areas requiring further investigation. Although this study provides a broad understanding of AI integration in education, its focus on higher education does not specifically explain how secondary school English teachers can use AI to develop listening materials connected to students' local experiences. This distinction highlights the importance of examining AI use within specific language-learning contexts and everyday classroom practices.

Research has also begun to examine AI applications specifically in listening instruction. Yuswandari and Novitaningrum (2025) investigated AI-powered gamified listening activities involving three secondary school students. Using a qualitative case study approach, they collected data through classroom observations, reflective journals, and semi-structured interviews. Their findings indicated that students perceived the activities as engaging and interactive and reported greater confidence in listening. This study demonstrates the potential of AI-supported activities to encourage learner engagement. However, its primary focus was on gamification and students' experiences rather than on how teachers develop listening materials by incorporating familiar local contexts. Therefore, further investigation is needed to understand how AI-generated content can be adapted to students' sociocultural backgrounds and how such materials are implemented in regular classroom instruction.

In addition, Li and Lan (2024) examined the broader application of AI and speech technologies in language learning, providing a foundation for understanding the role of technological tools in language instruction. Their work is relevant to the present study because AI-supported language learning involves opportunities to develop and deliver language input through digital technologies. However, the specific process of transforming local knowledge and familiar real-life situations into AI-generated listening materials requires closer examination in classroom settings. Similarly, Crompton and Burke (2023) provide a broader educational perspective, while Yuswandari and Novitaningrum (2025) focus on AI-supported gamified listening. Taken together, these studies demonstrate the relevance of AI in education and listening instruction but leave room for further research into teacher-guided material development, local contextualization, and classroom implementation in secondary-school EFL settings.

Despite these developments, the use of AI to connect English listening instruction with learners' everyday experiences and local environments remains an important area for further investigation. In particular, there is a need to understand how teachers perceive AI as a material-development tool, how students respond to listening materials based on familiar contexts, and how these materials are implemented in actual classroom activities. The present study addresses these issues by investigating the use of AI-generated contextual listening materials at SMAN 1 Parindu, a secondary school in West Kalimantan, Indonesia. By focusing on one English teacher and six tenth-grade students, the study provides a context-specific account of how AI can support the development and classroom use of listening materials that reflect learners' familiar surroundings and experiences.

Accordingly, this study addresses three research questions: (1) How does the English teacher perceive the use of AI-generated contextual listening materials in listening instruction? (2) How do students perceive the use of AI-generated contextual listening materials in listening instruction? and (3) How are AI-generated contextual listening materials implemented in an EFL classroom? Using a qualitative descriptive approach, this study aims to explore the teacher's and students' perceptions and describe the classroom implementation of AI-generated contextual listening materials. The study contributes to research on AI-assisted language learning by providing classroom-based insights into the relationship between generative AI, teacher-guided material development, and contextualized listening instruction. Its findings are also expected to offer practical considerations for English teachers seeking to develop more relevant listening resources while maintaining their professional role in evaluating and adapting AI-generated content.

RESEARCH METHODS

This study employed a qualitative descriptive research design to explore the implementation of AI-generated contextual listening materials in English listening instruction at SMAN 1 Parindu, Indonesia. Sandelowski (2000) explained that qualitative descriptive research aims to provide a comprehensive account of events and experiences using language that remains close to the participants' descriptions and the observed phenomena. This approach was considered appropriate because the present study sought to describe the English teachers and students' perceptions and examine how AI-generated contextual listening materials were implemented in classroom activities, rather than to measure causal effects or statistically test learning outcomes.

The participants consisted of one English teacher and six tenth-grade students who had direct experience with listening lessons using AI-generated contextual materials. Participants were selected through purposive sampling, a technique that enables researchers to identify information-rich cases relevant to the research objectives (Palinkas et al., 2015). The teacher was selected because of their involvement in preparing and implementing the listening materials, while the students were selected because they participated in the learning activities and could provide information about their experiences and perceptions. The small, purposefully selected group was intended to support an in-depth understanding of the phenomenon within this specific classroom context rather than statistical generalization.

Data were collected through classroom observations, field notes, and semi-structured interviews. Classroom observations focused on the implementation of AI-generated contextual listening materials, including the teacher's instructional practices, classroom interactions, student participation, and responses to the listening activities. Field notes were used to document relevant classroom events and observations that could support the interpretation of the findings. Semi-structured interviews were conducted with the teacher and the six students

to explore their perceptions, experiences, perceived benefits, and challenges associated with the use of AI-generated contextual listening materials. The semi-structured format provided a consistent set of guiding questions while allowing follow-up questions to clarify participants' responses and obtain more detailed information.

The collected data were analyzed using thematic analysis following Braun and Clarke's (2006) approach. The analysis involved six phases: (1) familiarizing oneself with the data, (2) generating initial codes, (3) searching for themes, (4) reviewing themes, (5) defining and naming themes, and (6) producing the report. During familiarization, the researcher reviewed the interview responses and field notes to gain an overall understanding of the data. Initial codes were then developed to identify relevant information concerning contextual relevance, the development and use of AI-generated materials, student engagement and perceived comprehension, and implementation challenges. Related codes were subsequently organized into candidate themes, reviewed against the collected data, and refined to ensure that each theme represented a meaningful pattern relevant to the research questions. The resulting themes were used to structure the presentation and interpretation of the findings.

To strengthen the interpretation, information from classroom observations, field notes, and interviews was considered together to identify areas of convergence and differences between observed classroom practices and participants' accounts. The findings were interpreted descriptively and in relation to the three research questions. Because this study did not employ standardized pre-test and post-test listening assessments, participants' reports of comprehension and engagement were treated as perceived experiences rather than objectively measured learning gains. The methodological approach therefore supported a context-specific understanding of teachers' and students' experiences with AI-generated contextual listening materials in an EFL classroom.

RESULTS AND DISCUSSION

Results

The analysis of classroom observations, field notes, and semi-structured interviews with one English teacher and six tenth-grade students revealed four main themes concerning the use of AI-generated contextual listening materials in English listening instruction: (1) Traditional Listening Materials and Contextual Limitations, (2) AI as a Tool for Developing Contextual Listening Materials, (3) Student Engagement, Participation, and Perceived Comprehension, and (4) Implementation Challenges and the Continuing Role of the Teacher. These themes address the three research questions concerning the teacher's perceptions, students' perceptions, and the classroom implementation of AI-generated contextual listening materials.

Theme 1. Traditional Listening Materials and Contextual Limitations

The findings indicated that conventional listening materials were not always sufficiently connected to students' everyday experiences and local environments. Before the implementation of AI-generated contextual materials, listening instruction relied primarily on textbooks, audio resources provided with schoolbooks, and online sources such as YouTube. Although these resources were considered practical and accessible, the teacher and students reported difficulties when the materials presented unfamiliar situations or cultural contexts.

The teacher explained: "I usually used textbook materials and YouTube because they were practical and time-saving, but students often found them difficult because the contexts were not fully familiar." (Teacher Interview)

Students expressed similar experiences. Student 1 stated: "I found previous listening materials difficult because many of them used Western cultural contexts that were unfamiliar to me." (Student Interview)

Student 5 also explained: “If the topic is unfamiliar, it becomes harder to understand the conversation.” (Student Interview)

These accounts indicate that contextual unfamiliarity was one of the difficulties participants associated with conventional listening materials. Students reported that unfamiliar topics made it more difficult to follow conversations and understand their meanings. The teacher likewise identified the limited connection between existing resources and students’ experiences as a challenge in listening instruction.

Theme 2. AI as a Tool for Developing Contextual Listening Materials

The findings showed that AI was used as a supporting tool to develop listening texts and dialogues that reflected students’ daily lives and familiar surroundings. The teacher reported that AI made it easier to adapt topics, generate alternative learning materials, and incorporate contexts that were more relevant to students.

The teacher explained: “AI makes it easier for teachers and students because the materials can be adjusted to students’ daily lives.” (Teacher Interview)

The teacher further stated: “With AI, the materials are broader and more flexible than only using textbooks or limited media.” (Teacher Interview)

These responses indicate that the teacher perceived AI as a resource that expanded the possibilities for developing listening materials. Rather than depending exclusively on existing textbooks and online resources, the teacher could use AI-generated content as a starting point for preparing materials related to students’ experiences.

Students also described the relevance of the resulting materials. Student 1 stated: “The new listening material is easier because it talks about places and activities from our own area.” (Student Interview)

Student 6 added: “I feel more interested because the stories are related to places I know.” (Student Interview)

The students’ responses suggest that the connection between the listening content and their familiar surroundings was an important feature of their experience. However, the teacher emphasized that AI-generated content required further evaluation and modification before classroom use: “AI helps a lot, but the results still need editing because AI cannot fully provide specific materials suitable for students.” (Teacher Interview)

This finding demonstrates that AI-supported material development involved teacher judgment rather than the automatic adoption of generated content.

Theme 3. Student Engagement, Participation, and Perceived Comprehension

The interview data indicated that students generally perceived the AI-generated contextual listening materials as interesting and easier to follow when compared with materials they considered unfamiliar. Students associated the use of familiar topics with greater interest in listening activities and a more enjoyable classroom experience.

Student 2 explained: “I feel more enthusiastic because the material is about local things, so it is easier and more interesting.” (Student Interview)

Student 4 stated: “Because the context is familiar, I can remember vocabulary more easily.” (Student Interview)

Student 3 also described the classroom experience: “The class became more fun because the material was modern and not boring.” (Student Interview)

These responses show that students perceived the contextual materials as relevant to their interests and learning experiences. They also reported that familiar content helped them remember vocabulary and follow the listening activities.

Classroom observations and field notes provided additional evidence regarding student engagement. During the listening activities, students were observed paying attention to the materials, participating in discussions, answering questions, and responding more confidently.

These observations were consistent with the students' interview accounts of increased interest and willingness to participate.

Taken together, the interview and observation data indicate that the materials were associated with positive student responses in this classroom. However, the findings represent participants' perceptions and observed classroom behavior rather than objectively measured improvements in listening proficiency.

Theme 4. Implementation Challenges and the Continuing Role of the Teacher

Despite the positive responses, the findings revealed technical and pedagogical challenges during the use of AI-generated contextual listening materials. The teacher identified internet connectivity as one of the main practical concerns, explaining: "AI can be very helpful, but it depends on stable internet access, which may not always be available." (Teacher Interview)

Students also identified problems with the generated audio. Student 2 stated: "Sometimes the AI voice is unclear or too fast." (Student Interview)

Student 3 suggested: "The voice should be clearer and not too fast." (Student Interview)

These responses indicate that audio clarity and speaking speed were important considerations in the use of AI-generated listening resources. Although the content could be adapted to familiar contexts, technical characteristics of the audio could still make the listening activities challenging.

The teacher also emphasized the importance of professional judgment throughout the instructional process: "AI cannot replace the teacher because the teacher still needs to control the material and explain it to students." (Teacher Interview)

This statement highlights the teacher's continuing responsibility for selecting, reviewing, and adapting AI-generated materials. The findings therefore indicate that the implementation of these resources depended on both the availability of appropriate technological support and the teacher's ability to ensure that the content and audio were suitable for students.

Discussion

The findings provide insight into how AI-generated contextual listening materials were perceived and implemented in one secondary-school EFL classroom. Four issues emerged from the analysis: the contextual limitations of conventional listening resources, the potential of AI to support material development, students' engagement and perceived comprehension, and the continuing importance of teacher mediation.

Contextual Relevance and Listening Comprehension

The first theme revealed that the teacher and students associated unfamiliar listening contexts with difficulties in understanding spoken English. Students reported that materials involving unfamiliar cultural situations were harder to follow, while the teacher identified contextual relevance as a limitation of some existing resources. These findings suggest that listening difficulties in this classroom were not perceived as exclusively linguistic; unfamiliarity with the situations presented in the materials was also an important consideration.

This interpretation is consistent with Vandergrift and Goh (2012), who explain the importance of cognitive and metacognitive processes in second-language listening, and Field (2008), who discusses the complex processes involved in understanding spoken language. Background knowledge can help learners interpret spoken information by connecting it with what they already know. Richards (2017) also emphasizes the relevance of contextual considerations in language teaching.

The present study extends this discussion by showing how the teacher and students described contextual unfamiliarity in their particular learning environment. Rather than establishing that unfamiliar cultural contexts necessarily cause poor listening performance, the findings indicate that participants perceived familiar contexts as helpful for understanding

listening content. This distinction is important because the study relied on qualitative interviews and classroom observations rather than standardized measures of listening proficiency.

AI as Support for Contextual Material Development

The second theme showed that the teacher perceived AI as a flexible resource for preparing listening texts and dialogues that reflected students' everyday experiences. AI enabled the teacher to explore different topics and adapt content beyond what was readily available in existing textbooks and online resources. At the same time, the teacher emphasized the need to revise generated materials before using them in class.

This finding is consistent with broader discussions of AI in language education, particularly Godwin-Jones (2023), who examines the implications of generative AI for language learning and teaching. It also reflects the wider potential of AI-supported educational tools to assist teachers in preparing instructional resources. However, the present findings suggest that the value of AI-generated materials depended not only on the technology itself but also on the teacher's ability to connect the content with students' local experiences.

The contribution of this study lies in its focus on the relationship between AI-generated content and contextual adaptation in a secondary-school EFL setting. AI was used as a resource to support material development, while the teacher remained responsible for determining which content was appropriate for classroom use. Thus, the findings support a teacher-guided approach in which AI facilitates material preparation without replacing pedagogical decision-making.

Student Engagement and Perceived Comprehension

The third theme revealed that students generally responded positively to listening materials involving familiar places, activities, and situations. Their interview responses indicated that the materials were interesting, enjoyable, and easier to follow. Classroom observations also documented attention, participation in discussions, responses to questions, and greater confidence during listening activities.

These findings suggest a relationship between perceived contextual relevance and student engagement in the observed classroom. When students recognized the situations presented in the listening materials, they reported greater interest in the activities and an easier connection between the content and their own experiences. This interpretation is consistent with the view that background knowledge can support the interpretation of spoken language (Vandergrift & Goh, 2012; Field, 2008).

Nevertheless, the findings should not be interpreted as proof that AI-generated contextual materials directly improved students' listening proficiency. The study did not use standardized pre-test and post-test listening assessments. Therefore, the reported benefits concern students' perceptions of comprehension, vocabulary recall, interest, and classroom participation, supported by observations of their behavior. Further research involving direct assessments of listening performance would be needed to determine whether these positive experiences correspond to measurable learning gains.

Implementation Challenges and Teacher Mediation

The fourth theme demonstrated that the use of AI-generated contextual listening materials involved technical and pedagogical challenges. The teacher reported that unstable internet connectivity could hinder access to AI tools, while students identified unclear audio and excessive speaking speed as difficulties during listening activities. These findings indicate that the relevance of the written content alone does not guarantee that the resulting listening materials will be appropriate for classroom use.

The teacher's role was particularly important in addressing these challenges. The teacher needed to review the content, adjust its difficulty, and evaluate whether the generated audio was understandable for the students. This finding supports the view that educational technologies are most useful when integrated into purposeful teaching practices rather than treated as

substitutes for teacher expertise. It also reinforces the need to assess both the linguistic and technical quality of AI-generated listening resources before classroom implementation.

In practical terms, teachers using AI-generated listening materials should check the accuracy of the scripts, the suitability of the vocabulary, the relevance of the context, and the clarity and speed of the audio. Preparing an offline alternative may also help minimize disruptions when internet access is unreliable. These implications arise from the specific challenges reported by the participants in this study.

Overall Interpretation and Research Limitations

Overall, the findings indicate that AI-generated contextual listening materials were perceived positively by the teacher and students at SMAN 1 Parindu, particularly when the content reflected familiar local contexts. AI supported the teacher in preparing adaptable materials, while students described greater interest and perceived ease of understanding. At the same time, technical constraints and the need for teacher review remained important considerations.

The study contributes a context-specific account of how AI-assisted material development can be incorporated into English listening instruction in a secondary-school EFL classroom. Its findings also highlight that the usefulness of AI-generated materials depends on the interaction between technological resources, contextual relevance, and teacher mediation.

However, the study involved only one English teacher and six tenth-grade students at one school. Its qualitative descriptive design was intended to explore participants' experiences and classroom implementation rather than establish causal relationships or produce statistically generalizable findings. Future research could involve additional schools, examine a wider range of local contexts, and combine qualitative methods with listening assessments to investigate the relationship between students' perceptions and their actual listening performance.

CONCLUSION

This study explored teachers' and students' perceptions of AI-generated contextual materials and their implementation in English listening instruction at SMAN 1 Parindu. The findings indicated that conventional listening materials sometimes presented contexts that were unfamiliar to students, making the listening activities more challenging to follow. AI supported the teacher in developing more flexible and locally relevant listening materials connected to students' everyday experiences. Students responded positively to these materials, describing them as more interesting and easier to follow, while classroom observations indicated active participation and more confident responses during listening activities. Some students also reported that familiar contexts helped them remember vocabulary more easily.

Despite these positive responses, the implementation of AI-generated contextual listening materials presented challenges, particularly regarding internet connectivity and the clarity and speed of AI-generated audio. These findings highlight the importance of teacher involvement in reviewing, editing, and adapting AI-generated content to meet students' learning needs. AI should therefore be regarded as a supportive pedagogical tool rather than a replacement for teachers.

Overall, this study suggests that AI-generated contextual materials have the potential to support more relevant and engaging English listening instruction when combined with teacher expertise and appropriate classroom adaptation. However, because the study involved one teacher and six students in a single school and did not use standardized listening tests to measure learning outcomes, the findings should be interpreted within the specific context of the study. Future research could involve more participants, different school contexts, and additional

measures of listening performance to examine how AI-generated contextual materials may contribute to students' listening development.

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