



# Knowledgeable Research (KR)

ISSN: 2583-6633 | CODEN: KRABAU

International Open-Access Peer-Reviewed Refereed Multidisciplinary Journal

<https://knowledgeableresearch.com>

Spl. 01, Issue 04, July, 2026

Received: 13/06/2026 | Accepted: 23/06/2026 | Published: 31/07/2026

## The Role of AI-Based Listening Tools in Blended Language Learning Environments

<sup>1</sup>**Surbhi M Sharma\*** (PhD Scholar)

School of Humanities, MIT Art, Design and Technology University, Pune, India

<sup>2</sup>**Dr. Atul Patil** (Director)

School of Holistic Development, MIT Art, Design and Technology University, Pune, India

### Abstract:

*Listening comprehension is one of the most challenging yet essential skills for English as a Second Language (ESL) and English as a Foreign Language (EFL) learners. Natural speech complexity and high learner anxiety often hinder the development of effective listening skills. This study examines the effectiveness of AI-based listening support tools, including YouTube Auto-Caption, ELSA Speak, and AI chatbots, in blended learning environments to improve language learning and learner engagement. A descriptive qualitative research design was adopted, involving twelve university-level ESL students selected through purposive sampling based on their experience with AI-powered listening platforms. Semi-structured interviews were conducted to gain in-depth insights into the usefulness of these tools, and the collected data were systematically analyzed and interpreted. The findings indicate that familiarity and accessibility significantly influenced students' preference for platforms such as YouTube, which was valued for its real-time text visualization. A major advantage identified was the creation of a supportive, low-stress learning environment that reduced listening anxiety while promoting learner autonomy. Participants appreciated the immediate feedback provided by AI tools, which enhanced motivation and independent learning. However, they also highlighted notable limitations, including inaccurate pronunciation, recurring technical issues, and insufficient educational value in automated feedback. The study suggests that AI functions as an "autonomy accelerator" and cognitive scaffold, supporting learners in achieving their Zone of Proximal Development. Rather than replacing conventional teaching methods, AI-based tools should serve as complementary resources within language instruction. Therefore, effective pedagogical design should carefully consider the technical limitations of AI applications and ensure that tool selection aligns with learners' proficiency levels, instructional objectives, and course relevance to maximize language learning outcomes and sustained learner engagement.*

**Keywords:** Artificial Intelligence, Blended Learning, EFL Listening Comprehension, Learner Autonomy, Qualitative Research.

**\*Corresponding Author:**

Surbhi M Sharma

Email: [surbhimsharma4803@gmail.com](mailto:surbhimsharma4803@gmail.com)

## INTRODUCTION:

Listening comprehension is one of the most critical skills to achieve in second language acquisition, but it is also one of the most difficult skills to master for English as a Foreign Language (EFL) learners (Huda et al., 2025). The complexities of fast speech, regional accents, and the impact of the mother tongue often cause difficulties for learners in processing auditory information in real time (Raza et al., 2024). In traditional listening teaching, students feel that the input is monotonous, which may lead to poor listening comprehension and low motivation (Hameed & Haq, 2024).

To overcome such challenges, the field of language education has been shifting towards the use of blended learning environments. Blended learning is a conscious combination of face-to-face teaching experiences and online technological experiences, which is aimed at leveraging the strengths of both face-to-face experiences and technological experiences (Yenkimaleki et al., 2021). In such environments, AI has become a game-changer, providing innovative solutions to enduring pedagogical challenges (Raza et al., 2024).

AI-based listening tools, ranging from speech recognition software like ELSA Speak to generative platforms like ChatGPT and dedicated listening resources like Listenwise, have the potential to provide personalized feedback, adapt content, and deliver authentic listening experiences that are not always captured in traditional classrooms (Rajabboeva, 2025). These include automatic captioning, playback speed control, and pronunciation feedback that help students engage with content at their own speed, promoting greater autonomy and involvement (Huda et al., 2025). The scholarly studies in recent years indicate that the blending of AI-supported models could significantly improve student learning outcomes, engagement, and satisfaction (Ying, 2025).

But using AI in blended learning contexts always comes with its challenges. However, certain challenges remain significant, such as data privacy concerns, digital literacy, and the problematic nature of the internet (Huda et al., 2025; Rajabboeva, 2025), as well as technical limitations, including inaccurate captioning, unstable internet connectivity, and imprecise accent recognition. Moreover, empirical studies indicate that AI tools are

undeniably valuable tools but are best used in conjunction with proven pedagogical practices (Hazaymeh et al., 2025).

This study clarifies the context in which AI-based listening devices are used in a blended language learning context. It explores the synergy of the use of technological innovation and traditional instruction, aiming at outlining the best ways to use these two elements to improve listening skills while addressing ethical and technical issues related to their use.

## **Literature Review**

The use of Artificial Intelligence (AI) in blended language learning is a major paradigm shift in the English as a Foreign Language (EFL) learning field. This literature review explores the theoretical perspectives, technological implementations, and empirical insights on the use of AI tools for listening.

## **Theoretical Foundations**

Much of the work on the use of AI in the Blended Learning Environment (BLE) can be traced back to the principles of CLT, which suggest that students are active constructors of knowledge who are engaged in meaningful learning experiences in their

environment (Grubaugh et al., 2023). In this theoretical perspective, AI tools often serve as a 'scaffold' that helps students build toward their increasing competency (Saleem et al., 2025). The notion of a Zone of Proximal Development, as explained in Vygotsky's Social Constructivism, also speaks to this role: AI-assisted tools could be used as a means of collaboration and thus offer the necessary scaffolding for students to take on tasks that they are unable to perform independently at the moment. (Wei, 2023) Furthermore, Connectivism emphasizes the role of technology networks in contemporary learning, in which technology may be used as a teacher or facilitator to link learners to a variety of language resources (Duong & Suppasetsee, 2024; Toboula, 2023).

The AI Listening Tools have come a long way. The conventional approach to teaching listening often faces challenges, including a limited context and a lack of flexibility to meet the needs of different learners (Raza et al., 2024). On the other hand, AI technologies of today could help to alleviate these disadvantages by offering personalized and adaptive learning experiences. Some of the most commonly mentioned tools in recent studies are:

### **Speech Recognition & Pronunciation**

**Tools:** There are programs that give feedback and repeat sentences in an interactive way, such as ELSA Speak and Speech Ace.

**Generative AI & Chatbots:** ChatGPT and Duolingo Max provide personalized feedback and real-life listening exercises.

### **Listenwise's Curated Content Platforms:**

Structured, curated audio content with assessments that develop critical thinking and comprehension.

**Accessibility Features:** YouTube Auto-Caption is a popular tool because it is user-friendly and provides real-time captioning for spoken content, allowing learners to understand the spoken words.

### **Empirical Evidence in Blended Learning**

AI-enhanced blended educational approaches have the potential to greatly enhance listening skills as indicated by current research (Zhou et al., 2025; Alrasheedi, 2025). One of the studies conducted with Chinese college students revealed that the AI-supported blended approach resulted in significantly better post-test scores and increased student engagement than the conventional teaching method

(Wang, 2025; Ying, 2025). Likewise, participants in experimental groups, who learned from AI platforms such as Duolingo and chatbots, exhibited significant gains in contextual listening comprehension (Alrasheedi, 2025; Tajik, 2025).

In addition to scores, the literature notes the qualitative changes in learner behaviour. Besides, blended learning environments have been found to boost metacognitive and social strategy use, while the incorporation of AI is shown to boost student motivation and autonomy, with the ability to speed up learning and replay features allowing students to practice at their own pace (Huda et al., 2025).

### **Challenges and Pedagogical Limitations**

While these advantages exist, there are also some key challenges for the successful application of Artificial Intelligence (AI):

1. **Persistent Challenges:** Technical limitations such as inaccurate voice recognition for non-native accents, internet connection instability, and incorrect automatic captioning could be persistent challenges (Hazaymeh et al., 2025).
2. **Cognitive and Affective Barriers:** Lower-proficiency students might be

frustrated or "demotivated" by AI-generated speech that is too fast, or that uses lexically sophisticated vocabulary (Zhou et al., 2025).

3. **Instructional Gaps:** AI feedback can sometimes fall short in terms of "lack of depth" when compared with human feedback (Hazaymeh et al., 2025). Moreover, internal barriers such as a lack of technical expertise and the fear of technology replacing the pedagogical role of teachers exist in teachers (An et al., 2022).
4. **Ethical Considerations:** Data privacy, algorithmic bias, and potential over-dependence on technology might require careful monitoring (Rajabboeva, 2025; Raza et al., 2024).

To conclude, the literature indicates that AI tools for listening could serve as powerful supports for pedagogical methods, but that their effectiveness depends on "proficiency-sensitive" design and clear guiding instructional strategies for teachers to implement in blended instructional environments (Kim, 2026).

The main focus of this study is on exploring the role and effectiveness of AI-supported listening tools in a blended learning context from the learners' perspective. The detailed

analysis of student experience attempts to "understand how these technologies transform the listening process" (Wang et al., 2025).

### Research Objectives

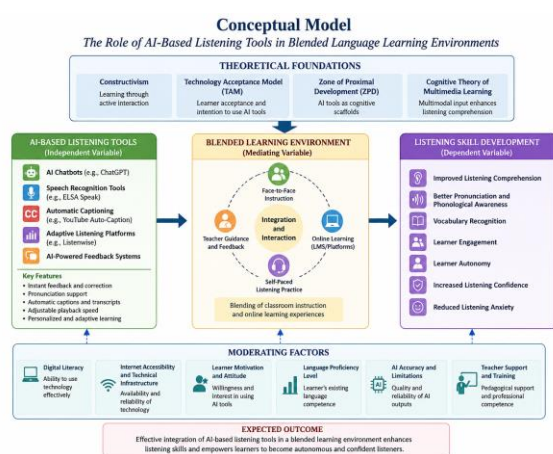
1. To determine the preferences and usage of ESL students for certain AI-based listening tools in the blended learning environment.
2. To study the effect of using AI to listen and automate listening practice on self-study and motivation
3. To identify the language support and feedback that students feel is most helpful with AI tools for listening comprehension
4. To explore technical and pedagogical issues students may face while using listening platforms based on artificial intelligence tools.

### Research Questions

1. How do ESL learners perceive and utilize AI-based listening tools within blended language learning environments?
2. In what ways does AI-assisted listening practice affect learner autonomy and motivation among EFL students?

3. What forms of AI-generated language support and feedback are perceived by learners as beneficial for listening comprehension development?
4. What technological and pedagogical barriers influence students' experiences with AI-based listening platforms?

## Conceptual Framework



**Figure 1.** Conceptual Framework of AI-Based Listening Tools in Blended Language Learning Environments

**Source:** Self-developed by the researcher using AI-assisted design tools.

## Methodology

A descriptive qualitative research design is used in this study to explore the lived experience and perceptions of learners who use AI-based listening tools.

## 3.1 Research Approach

The study follows an interpretive framework that focuses on the construction of meaning by learners through their interactions with AI tools. This is a qualitative method, which focuses on the "depth of understanding" of the complex learning-AI relationship, rather than on statistical significance.

## Participants and Sampling

The participants were English as a Second Language students at MIT Art, Design and Technology University. To ensure the data is relevant and substantive, purposive sampling has been used to select individuals who are actively using AI tools (such as ELSA Speak, ChatGPT, or the YouTube Auto-Caption) in their blended teaching and learning. This sampling approach is expected to provide a detailed account by the participants of both the positive and the technical/cognitive hurdles faced.

## Data Collection Instruments

The data was collected using a variety of qualitative data collection tools to capture the students' experience as fully as possible:

**Semi-Structured Interviews:** These interviews are deemed the primary source of data and are used to conduct an open-ended

exploration of student sentiments, preferences, and perceived efficacy of the AI tools used. Because of the semi-structured approach, there is the opportunity to develop an unexpected theme that may emerge during the discussion.

**Learner Reflective Journals/Observations:** Learners are expected to provide reflective notes of their listening practice sessions, noting specific instances where their listening was successful or not, and identifying reasons for successes and failures with the AI feedback.

### **Data Analysis Procedure**

The analysis of the collected data follows the principles:

**Data Reduction:** This involves selecting, focusing, and abstracting the data in a way that addresses specific questions of research, usually by means of transcription summaries, coding, etc. (Akbulut, 2003).

**Data Display:** The purpose of this phase is to display and organize reduced data into different representations such as matrix, graph, chart or network, which enable visualizing emergent patterns across different groups of participants (Akbulut, 2003).

**Conclusion Drawing:** The last step in the process is the conclusion drawing and verification step, in which the themes that emerged are identified and the findings are verified against the original transcripts, a step that is very important for ensuring that the findings are accurate and "trustworthy" (Akbulut, 2003).

In this qualitative approach, the emphasis is on revealing the voices of the learners and their subjectivities; thus, it appears that the results are based on the voices of the learners themselves (Isik, 2025).

### **Results**

Using the Miles and Huberman framework, the qualitative data were analyzed, and four main themes emerged concerning the role of AI-based listening tools in blended learning environments. The results seem to capture the true voices of respondents and their experience of technological usefulness.

#### **Tool Selection: Preferences and Familiarity**

The data suggest a discernible learner preference for tools that proffer a balance of accessibility and pedagogical value. The most commonly used was YouTube Auto-Caption, as this is extremely simple to use

and students are already familiar with the platform. Participants commented that the visualisation of spoken words through real-time captioning seemed to play a role in bridging the gap between listening and understanding. YouTube was not the only utility that was appreciated for its targeted use with pronunciation and repetitive interactive activities; tools such as ELSA Speak and Google Assistant were also useful in this regard.

### **Students' learning autonomy and motivation have improved**

There was a clear trend of increasing self-regulation in listening. Participants hypothesized that the use of AI tools provided opportunities to practice in a 'low-pressure environment,' which seemed to reduce considerably the foreign language listening anxiety that is often experienced in the face-to-face classroom environment. The constant availability of these tools seemed to promote a greater level of student engagement in shorter, more frequent practices, which led to the students in general having improved overall motivation. The flexibility to repeat challenging sections and to play music at a different speed were mentioned as important features that allowed students to control their own learning rate.

### **Perceived Language and Feedback Advantages**

The immediate feedback from AI-based platforms, like Chat Generative Pre-Trained Transformer (ChatGPT) for conversational feedback and English Language Speech Assistant (ELSA) for phonetic feedback, was reported to be more efficient than teacher-led corrections. This feedback seemed to have helped to identify listening errors, especially those relating to understanding a variety of accents and complex vocabulary. The use of these tools in a blended model seemed to provide a more comprehensive and varied language input than standard textbooks, leading to more exposure to a wider range of authentic linguistic patterns.

### **Challenges and Difficulties**

Although the levels of satisfaction were high, there were several blockers identified:

**Technical Glitches:** Internet connectivity issues and inaccuracies in speech-to-text conversion were among the common sources of frustrations reported by students (Alsanousi et al., 2023; Karataş et al., 2024).

**Accent Recognition:** AI tools were found to be less effective in recognizing non-native or regional accents, causing misunderstandings

and impacting psychology during interactive sessions (Ibeke, 2025; Sala et al., 2025).

**Instructional Depth:** One common criticism from the advanced learners was that feedback from AI lacked depth. These participants indicated that AI is effective in detecting some types of errors in texts, but is not entirely able to replace human explanation, particularly in providing context-specific explanations by a human teacher (Gill et al., 2025; Zellner, 2023).

To conclude, the results indicate that, although AI tools are considered very effective as 'educational helpers' to develop listening competence and confidence, there is often a need for pedagogical support and guidance, while the tools have technical constraints that limit their usefulness.

## Discussion

This study's findings offer a comprehensive view of the impact of AI listening tools on EFL university students in a blended learning setting. The results indicate that these tools can be seen as transformative for autonomy and immediate feedback, yet their effectiveness is greatly influenced by the reliability of the technological tools and the requirement for human pedagogical depth (Hazaymeh et al., 2025; Huda et al., 2025).

For the purpose of the present research, it was found that YouTube Auto-Caption is the preferred tool over other language learning platforms. This study found that many people prefer YouTube Auto-Caption to other language learning applications that provide similar functionality. This fits in with the principle of Constructivism, which states that learners use familiar technological scaffolds in building new linguistic knowledge (Sulindra et al., 2024). The preference for YouTube observed may indicate that accessibility and ease of use are more critical to the learners than the sophistication of the underlying AI (Zazenuri et al., 2025). These tools can also help reduce the cognitive load by offering students real-time text that matches what they are hearing, helping them cross the bridge between independent comprehension and assisted processing (Nguyen & Nguyen, 2025).

### 5.1 Psychological safety and self-regulated learning

The significant qualitative transformation towards a low-pressure learning environment seems to be one of the most obvious results of AI's impact. Students also indicated that the use of AI tools, including ChatGPT or ELSA Speak, reduced the stress they often experience when speaking. The finding thus

provides support for the literature on L2 motivation, which reveals that the private use of AI may ease the L2 learner to take risks and repeat tasks without the fear of social judgment (Wei, 2023). This autonomy is therefore a component of the blended model, as it enables the individualisation of the pace of learning; for example, students can adjust their learning speed by controlling the playback speed of the videos (Müller & Wulf, 2020).

If pedagogical depth were always the top priority, then what is the value of immediate feedback?

The potential for AI feedback in real-time seemed to be a major benefit for many participants, but the data also seems to shed light on some of the challenges in the quality of these corrections (Zhou et al., 2025). Often, AI tools have difficulties providing detailed and contextual explanations that a human teacher can provide (Mientus et al., 2026). This discovery seems to validate the claim that AI can best be used as an augmentation, not a replacement, for traditional pedagogy (Jabbour et al., 2025). The ubiquitousness of anytime, anywhere practice afforded by AI cannot be denied as a source of the required amount of practice;

however, qualitative interpretive guidance must be provided by the instructor.

### **Confronting Technical and Linguistic Barriers**

Instability of connectivity is among the problems highlighted, which represent a major obstacle for the 'seamless' embedding of AI in blended learning environments (Al-Jubeh et al., 2025). Learners' frustration at AI clearly not understanding foreign accents could highlight another key ethical and technical challenge: namely, the well-documented algorithmic bias of many speech recognition systems (Jeon et al., 2024),(Ibeke, 2025). Additionally, the students' demotivation reaction to the high speed of AI speech indicates that its effectiveness may be 'proficiency-sensitive' (Zhou et al., 2025). Without proper pedagogical support to navigate technical hiccups, the use of AI can, at times, become a source of student discontent instead of a learning opportunity, rather than a tool for progress (Karataş et al., 2024).

Finally, this qualitative study can validate the role of AI in blended listening contexts as an enabler of learner autonomy. If technical challenges are reduced and tools are chosen for their familiarity, AI could be a strong, nonthreatening environment where language

experimentation is easy. However, the effective application of such tools seems to depend on a 'balanced' use of AI to provide support in practice, with a simultaneous emphasis on context, strategy, and emotional support (Yi & Chen, 2025).

## Conclusion

The study suggests that Artificial Intelligence (AI) could have a great impact on improving the ESL students' listening comprehension ability in a blended learning environment. This qualitative research method allows for the exploration of learners' experiences at the crossroads of traditional pedagogy and emerging technologies, highlighting the nuances and complexities of the learning journey.

The results indicate that students might prefer using AI tools that are familiar and easy to use, and platforms such as YouTube and pronunciation apps could be valuable cognitive scaffolds. These tools may offer a uniquely non-stressful space where there is a chance for decreased anxiety that is often tied to auditory processing in real time. AI-enabled models can promote learners' autonomy and motivation, which may be more difficult to realize with traditional teaching methods, and provide them with a

platform for self-guided learning and repetitive practice.

It is important to note, however, that the research also indicates that the role of AI as a source of instant feedback and linguistic input could be seen as efficient, but it currently lacks the pedagogical skills and context-awareness of a human teacher. For learners, technical constraints like inconsistent accent recognition and connectivity could still be major problems that cause learner frustration. AI's role in blended learning, therefore, is not about replacing pedagogical oversight but rather as a valuable adjunct to support students in moving forward with their independent learning.

To conclude, a pedagogy that balances between content, context, and technology could be a key factor for the effectiveness of AI tools for listening. In order to get the best of the technologies, educators should ensure that they choose tools that are "proficiency sensitive" and that provide digital literacy support. Blended learning could be used to provide a more conducive environment for second language listening skills development by utilizing AI in regard to the amount of practice and human contact in relation to the quality of listening.

## REFERENCES

1. Akbulut, A. Y. (2003). *An investigation of the factors that influence electronic information sharing between state and local agencies*. [https://doi.org/10.31390/gradschool\\_dissertations.877](https://doi.org/10.31390/gradschool_dissertations.877)
2. Al-Jubeh, F. M., Istephan, S. V., Ali, S. A. K., & Khales, B. M. (2025). Blended Learning Enhanced by Artificial Intelligence in Palestinian Public Primary Schools During Crises and Exceptional Circumstances: Perspectives and Aspirations. *An-Najah University Journal for Research - B (Humanities)*, 40(6). <https://doi.org/10.35552/0247.40.6.2637>
3. Alrasheedi, S. (2025). THE EFFECT OF USING AI APPLICATIONS TO DEVELOP EFL LISTENING COMPREHENSION SKILLS AMONG UNIVERSITY STUDENTS. *Conhecimento & Diversidade*, 16(44), 601–637. <https://doi.org/10.18316/rcd.v16i44.12346>
4. Alsanousi, B., Albeshier, A. S., Do, H., & Ludi, S. (2023). Investigating the User Experience and Evaluating Usability Issues in AI-Enabled Learning Mobile Apps: An Analysis of User Reviews. *International Journal of Advanced Computer Science and Applications*, 14(6). <https://doi.org/10.14569/ijacsa.2023.0140602>
5. An, X., Chai, C. S., Li, Y., Zhou, Y., Shen, X., Zheng, C., & Chen, M. (2022). Modeling English teachers' behavioral intention to use artificial intelligence in middle schools. *Education and Information Technologies*, 28(5), 5187–5208. <https://doi.org/10.1007/s10639-022-11286-z>
6. Duong, T., & Suppasetseree, S. (2024). The Effects of an Artificial Intelligence Voice Chatbot on Improving Vietnamese Undergraduate Students' English Speaking Skills. *International Journal of Learning Teaching and Educational Research*, 23(3), 293–321. <https://doi.org/10.26803/ijlter.23.3.15>
7. Gill, R. D., Kuzminykh, I., Salem, M., & Ghita, B. (2025). Generative AI-Enabled Adaptive Learning Platform: How I Can Help You Pass Your Driving Test? *arXiv (Cornell University)*.

- <https://doi.org/10.48550/arxiv.2509.11438>
8. Grubaugh, S., Levitt, G., & Deever, D. (2023). Harnessing AI to Power Constructivist Learning: An Evolution in Educational Methodologies. *EIKI Journal of Effective Teaching Methods*, 1(3).  
<https://doi.org/10.59652/jetm.v1i3.43>
  9. Habibzadeh, F. (2026). From Findings to Meaning: A Strategic Framework for the Discussion Section. *Learned Publishing*, 39(2).  
<https://doi.org/10.1002/leap.2050>
  10. Hameed, P. F. M., & Haq, A. F. A. (2024). Teaching Listening Skills to EFL Students Using AI-Driven Technology-Based Media. *Evolutionary Studies in Imaginative Culture*, 1989–1999.  
<https://doi.org/10.70082/esiculture.vi.1610>
  11. Hazaymeh, W. A., Alshaikhi, T., Wahab, M. O. A., & Khasawneh, M. A. S. (2025). Evaluating AI Applications for Enhancing Listening Comprehension among EFL students in English language in Real-World Scenarios. *World Journal of English Language*, 15(6), 209–209.  
<https://doi.org/10.5430/wjel.v15n6.p209>
  12. He, C. (2025). Optimizing English Listening Pedagogy Through AIGC: Evidence From TTS-Enhanced Anxiety Mitigation, Metacognitive Awareness, and Performance Gains. *IEEE Access*, 13, 167449–167458.  
<https://doi.org/10.1109/access.2025.3613519>
  13. Huda, Moh. C., Roistika, N., & Triani, C. N. (2025). Exploring the Use of AI-Enhanced Listening Comprehension Tools by EFL Students in the English Department at Universitas Bhinneka PGRI. *Teaching English and Language Learning English Journal (TELLE)*, 5(3), 290–300.  
<https://doi.org/10.36085/telle.v5i3.9602>
  14. Ibeke, E. (2025). Unheard voices: addressing AI bias towards accented English in educational technologies. *Open Access Institutional Repository at Robert Gordon University (Robert Gordon University)*. <https://rgu-repository.worktribe.com/file/3175316/1/IBEKE%202025%20Unheard%20voices%20%28AAM%29>
  15. Isik, O. (2025). The Power of Stories: Understanding Human Experience

- Through Qualitative Research. *International Journal of English Literature and Social Sciences*, 10(3), 622–630.  
<https://doi.org/10.22161/ijels.103.90>
16. Jabbour, J., Kleinbard, K., Miller, O., Haussman, R., & Reddi, V. J. (2025). SocratiQ: A Generative AI-Powered Learning Companion for Personalized Education and Broader Accessibility. *arXiv (Cornell University)*.  
<https://doi.org/10.48550/arxiv.2502.00341>
17. Jeon, J., Lee, S., & Coronel--Molina, S. M. (2024). Rethinking AI: bias in speech-recognition chatbots for ELT. *ELT Journal*, 78(4), 435–445.  
<https://doi.org/10.1093/elt/ccae035>
18. Karataş, F., Abedi, F. Y., Gunyel, F. O., Karadeniz, D., & Kuzgun, Y. (2024). Incorporating AI in foreign language education: An investigation into ChatGPT's effect on foreign language learners. *Education and Information Technologies*, 29(15), 19343–19366.  
<https://doi.org/10.1007/s10639-024-12574-6>
19. Kim, H.-S. (2026). Oral Communication Skills and Literacy Gains Through AI Conversational Practice Across Proficiency Levels. *STEM Journal*, 27(1), 16–37.  
<https://doi.org/10.16875/stem.2026.27.1.16>
20. Konyrova, L. (2024). The Evolution of Language Learning: Exploring AI's Impact on Teaching English as a Second Language. *Eurasian Science Review.*, 2(2), 133–138.  
<https://doi.org/10.63034/esr-42>
21. Mananay, J. A. (2024). Integrating Artificial Intelligence (AI) in Language Teaching: Effectiveness, Challenges, and Strategies. *International Journal of Learning Teaching and Educational Research*, 23(9), 361–382.  
<https://doi.org/10.26803/ijlter.23.9.19>
22. Maola, P. S., Handak, I. S. K., & Herlambang, Y. T. (2024). PENERAPAN ARTIFICIAL INTELLIGENCE DALAM PENDIDIKAN DI ERA REVOLUSI INDUSTRI 4.0. *Educatio*, 19(1), 61–72.  
<https://doi.org/10.29408/edc.v19i1.24772>

23. Mientus, L., Wulff, P., Nowak, A., & Borowski, A. (2026). When AI Feedback Was Still in Its Infancy: An Exploratory Comparison of Early AI Feedback Attempts on Preservice Physics Teachers' Reflective Writing. *Education Sciences*, 16(2), 301–301. <https://doi.org/10.3390/educsci16020301>
24. Müller, F. A., & Wulf, T. (2020). Technology-supported management education: a systematic review of antecedents of learning effectiveness [Review of *Technology-supported management education: a systematic review of antecedents of learning effectiveness*]. *International Journal of Educational Technology in Higher Education*, 17(1). Springer Nature. <https://doi.org/10.1186/s41239-020-00226-x>
25. Nguyen, N. L., & Nguyen, T. (2025). The Impact of Implementing AI-Generated Audio Transcriptions on English Majors' Cognitive Load. *AsiaCALL Online Journal*, 16(1), 140–158. <https://doi.org/10.54855/acoj.251617>
26. Rajabboeva, S. (2025). USING ARTIFICIAL INTELLIGENCE TOOLS TO ENHANCE EFL LISTENING COMPREHENSION. *Zenodo (CERN European Organization for Nuclear Research)*. <https://doi.org/10.5281/zenodo.17532850>
27. Raza, D. M. A., Khan, D. A., & Bukhari, D. S. (2024). Transforming EFL Listening Skills: The Power of AI Integration in Classrooms. *Social Science Review Archives*, 2(2), 2284–2295. <https://doi.org/10.70670/sra.v2i2.485>
28. Sala, M., Kaur, S., Gillespie, S. E., Gleason, J. M., Wilson, C., & Ghosh, A. (2025). “It’s not a representation of me”: Examining Accent Bias and Digital Exclusion in Synthetic AI Voice Services. *arXiv (Cornell University)*. <https://doi.org/10.48550/arxiv.2504.09346>
29. Saleem, T., Saleem, A., & Aslam, D. M. (2025). Integrating AI in Pakistani ESL classrooms: Teachers' practices, perspectives, and impact on student performance. *PLoS ONE*, 20(9). <https://doi.org/10.1371/journal.pone.0333352>

30. Sulindra, E., Cendra, A. N., & Hartani, T. (2024). Utilization of Instructional Technology in English Language Teaching (ELT) based on Constructivism: A Literature Review. *English Education and Literature Journal (E-Jou)*, 4(2), 141–153. <https://doi.org/10.53863/ejou.v4i02.1150>
31. Supatmi, R., & Mar'an, D. A. (2021). AN ANALYSIS OF LEARNER LANGUAGE IN INDONESIAN-ENGLISH TRANSLATION OF ENGLISH EDUCATIONAL STUDY PROGRAM STUDENTS OF UNIVERSITAS NAHDLATUL ULAMA LAMPUNG. *LET Linguistics Literature and English Teaching Journal*, 11(1), 111–111. <https://doi.org/10.18592/let.v11i1.4652>
32. Tajik, A. (2025). *Gamified and Non-Gamified AI Tools in Enhancing EFL Listening Comprehension: An Analysis of Duolingo and Replika's Impact on Engagement, Motivation, and Learning Outcomes*. <https://doi.org/10.21203/rs.3.rs-6032009/v1>
33. TOBOULA, C. M. Z. (2023). Exploring the Impact of AI-powered Collaborative and Interactive NLP Apps on EFL Teaching in the Post-COVID-19 Era. *International Journal on Cybernetics & Informatics*, 12(2), 171–193. <https://doi.org/10.5121/ijci.2023.120213>
34. Wang, F., Li, N., Cheung, A., & Wong, G. K. W. (2025). In GenAI we trust: An investigation of university students' reliance on and resistance to generative AI in language learning. *International Journal of Educational Technology in Higher Education*, 22(1). <https://doi.org/10.1186/s41239-025-00547-9>
35. Wang, Z. (2025). *A Computer Technology-Enhanced Blended Learning Model for College English in Higher Vocational Education: Design, Implementation, and Efficacy*. 157–162. <https://doi.org/10.1145/3785987.3786013>
36. Wei, L. (2023). Artificial intelligence in language instruction: impact on English learning achievement, L2 motivation, and self-regulated learning. *Frontiers in Psychology*, 14. <https://doi.org/10.3389/fpsyg.2023.1261955>

37. Yenkimaleki, M., Heuven, V. J. van, & Moradimokhles, H. (2021). The effect of prosody instruction in developing listening comprehension skills by interpreter trainees: does methodology matter? *Computer Assisted Language Learning*, 36, 968–1004.  
<https://doi.org/10.1080/09588221.2021.1957942>
38. Yi, M., & Chen, M. (2025). The human touch in AI: optimizing language learning through self-determination theory and teacher scaffolding. *Frontiers in Psychology*, 16, 1568239–1568239.  
<https://doi.org/10.3389/fpsyg.2025.1568239>
39. Ying, Y. (2025). The Impact of an AI-Empowered Blended Teaching Model on Chinese EFL Students: A Case Study of Superstar Learning Platform. *Journal of Contemporary Educational Research*, 9(5), 228–240.  
<https://doi.org/10.26689/jcer.v9i5.10480>
40. Zaenuri, M., Yunus, M., Sya'bani, M. Z., & Ahmad, Z. (2025). Exploring Students' Preferences and Satisfaction in Using Digital Media for Arabic Language Learning in Islamic Higher Education. *ATHLA Journal of Arabic Teaching Linguistic and Literature*, 6(1), 103–127.  
<https://doi.org/10.22515/athla.v6i1.11998>
41. Zellner, A. (2023). Asking the Right Questions: The meaning of teaching and learning in the age of generative AI. *Irish Journal of Technology Enhanced Learning*, 7(2), 52–60.  
<https://doi.org/10.22554/ijtel.v7i2.132>
42. Zhang, M., & Li, S. (2025). The AI-Integrated English Learning of Chinese University Students: Preference, Effectiveness and Challenge. *English Language and Literature Studies*, 15(3), 91–91.  
<https://doi.org/10.5539/ells.v15n3p91>
43. Zhou, Q., Hashim, H., & Sulaiman, N. A. (2025). Integrating AI chatbots in informal digital English learning: impacts on listening competencies in Chinese higher education. *Education and Information Technologies*.  
<https://doi.org/10.1007/s10639-025-13811-2>.