THE EFFECTIVENESS OF APPLYING ARTIFICIAL INTELLIGENCE (AI) IN TEACHING LISTENING SKILLS TO STUDENTS

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ABSTRACT

Artificial intelligence (AI) is transforming the way listening skills are taught, addressing long-standing challenges such as limited contextual knowledge, accent diversity, rapid speaking speed, and native language influence from both students and teachers. This article presents the benefits of integrating AI tools such as SpeechAce and Listenwise in EFL classrooms, focusing on personalized learning experiences, real-time feedback, adaptive exercises, listening comprehension, and critical thinking. While SpeechAce enhances pronunciation through repetition and interactive tasks, Listenwise supports listening comprehension and critical thinking, based on curated audio content and assessments. However, the use of AI must also be monitored to ensure data security, accessibility, and algorithmic bias. Teachers play an important role as facilitators, ensuring responsible and effective use of AI tools. This article highlights the need to use AI ethically to create a balanced and innovative language education.

Keywords: *Artificial intelligence; education technology; listening skills; language education*

1. Introduction

In recent years, the integration of Artificial Intelligence (AI) into education has profoundly reshaped the landscape of English as a Foreign Language (EFL) teaching and learning. AI-based tools, including automatic speech recognition systems, adaptive listening platforms, and auto-feedback technologies, have provided new pedagogical opportunities that provide learners with authentic input, real-time feedback, and personalize learning to their individual levels. Listening comprehension, in particular, remains one of the most challenging yet essential skills in EFL acquisition, as it requires constant exposure to the target language, understanding context, and immediate feedback. For educators, the integration of AI offers a means to move beyond traditional teacher-centered approaches by introducing data-driven, adaptive, and interactive learning experiences that meet the diverse needs of students. Existing studies have highlighted the effectiveness of AI in improving listening performance and listening motivation. Abdellatif et al. (2024) reported that AI-driven listening assessment tools significantly improved learners' comprehension, engagement, and recall. Similarly, Raza et al. (2024) found that AI reduced persistent listening challenges such as accent inflection, speech rate, and limited contextual understanding, while Chaikovska et al. (2024) demonstrated that AI-assisted TED podcast activities promoted self-directed learning and improved comprehension of authentic spoken English. Despite these advances,

research in Vietnam on AI-assisted listening instruction remains limited and largely descriptive. Most studies relied on self-reported perceptions, lacked controlled experimental designs, did not report effect sizes, and provided insufficient methodological details for replication. This gap highlights the need for further empirical evidence to examine both the effectiveness and practical implications of AI-based listening instruction in the context of Vietnamese higher education.

To address these gaps, the current study pursues three objectives: to compare the effectiveness of AI-integrated instruction and traditional instruction in improving Vietnamese university students' English listening comprehension; to examine students' perceptions and experiences of using AI-based tools in listening practice; and to draw pedagogical implications for the effective implementation of AI in higher education. By integrating both cognitive and affective dimensions of learning, this study aims to provide empirical insights into how AI can enhance listening and engagement, thereby contributing to the broader discourse on technology-enabled language learning in the contemporary educational context of Vietnam.

How does the integration of Artificial Intelligence (AI) tools improve students' English listening comprehension compared to traditional teaching methods?

How do students perceive the use of AI-based applications to develop English listening skills in the context of learning English as a foreign language?

2. Literature review

2.1. Definition of AI – integrated listening

The integration of AI technology into listening instruction brings revolutionary changes to language learning through its ability to analyze speech and provide instant feedback to both teachers and students. The use of AI provides real-time interaction with personalized feedback and instant results, unlike traditional methods that use passive materials with delayed feedback. Research conducted by Xiao (2025) showed that AI-based speech recognition technology resulted in better listening scores, while also reducing student anxiety and improving their ability to concentrate. Saeedirad and Sabet (2025) demonstrated through his research that ChatGPT-based formative assessments help students develop metacognitive awareness and self-control, while building confidence and allowing them to significantly improve their listening skills. Furthermore, in the study by Luu & Doan (2025), it was shown that ChatGPT was most effective in promoting vocabulary development, followed by grammar knowledge and working memory. The least significant benefits were observed in improving pronunciation and listening motivation.

Nowadays, in the teaching and learning process, educational researchers have introduced AI-integrated interactive systems to overcome the major limitations of remote classrooms by providing customized instruction and error detection with the ability to automatically adjust the difficulty for each student. AI technology brings educational benefits to both learners and teachers, but experts advise against over-reliance on technological solutions. Successful integration of AI systems requires both teacher guidance and student participation to maintain

balanced learning methods that focus on students' needs in language education.

2.2. Benefits of applying AI in teaching listening Skills

The use of Artificial Intelligence (AI) in teaching and learning listening skills offers many educational benefits. By integrating AI tools like automatic speech recognition and adaptive learning systems, learners receive a personalized listening experience that matches their skill level and pace. They provide instant feedback so that students can identify and correct understanding mistakes in real time. This improves fluency and accuracy. AI systems also provide authentic listening conditions setting, exposing students to different accents, speech rates, and involving contexts reflecting communication realities. This variety improves flexibility and listening skill. AI facilitates learner autonomy through independent practice by students and tracking of their advancement via smart tracking systems. As Abdellatif et al (2024) confirm, instruction with AI enhances significantly the motivation, comprehension, and emotional hardness of learners. Overall, AI application in listening instruction supports more effective, interactive, and student-centered language learning environments.

2.3. Challenges of applying AI in teaching listening skills

Despite its possibility, the incorporation of Artificial Intelligence (AI) into listening skills is not a challenge-free task. One of the primary challenges is that there are infrastructural and technological inadequacies in most schools to support AI learning facilitation, particularly in developing contexts (Zawacki-Richter et al., 2019). In addition, some of the teachers are not well equipped to handle AI instruments, hence utilizing them inefficiently or failing to utilize them to their maximum capacity. Data protection and ethical use of information about students contribute to the complexity of AI application, especially in applications that collect performance data for the purpose of providing individualized feedback. Apart from this, AI feedback is not culturally tactful and sensitive enough for effective language teaching and can lead to learner frustration or confusion (Holmes et al., 2019). Finally, over-reliance on AI tools can reduce space for authentic human interaction, which is a central component of establishing communicative competence in listening. Furthermore, these issues highlight the importance of appropriate adoption, comprehensive teacher training, and pedagogical integration into AI-assisted systems for language learning.

2.4. Comparision between traditional listening skills teaching and AI-based listening skills teaching

Traditional teaching of listening is typically instruction-driven with pre-set audio materials, delayed feedback, and restricted learner interaction and flexibility. These methods are teacher-hubbed and may be non-personalized (Dhanapal et al., 2024). AI-powered listening, however, uses automatic speech recognition and dynamic algorithms to offer immediate feedback, customize content difficulty, and subject learners to differences in accents and speech rate (Dhanapal et al., 2024).This interactive approach enhances learner motivation and fluency as it enables instant correction and self-practice. A

comparative survey by Dhanapal et al. (2024) concluded that students reported greater satisfaction and perceived improvement in AI-supported learning over conventional teaching. Conventional teaching, however, enables social interaction, context-based comprehension, and mentorship, which cannot be sufficiently replicated by AI. A hybrid model tapping into AI for responsive, scalable practice but maintaining human-facilitated activities offers an even-keeled and efficient way to develop listening skills in EFL contexts.

3. Research methods

3.1. Research design

This study adopted a quasi-experimental mixed-methods design, combining a pre-test/post-test control group experiment with survey questionnaires and semi-structured interviews to investigate the effectiveness of AI-based tools in developing English listening skills among first-year students at the University of Phan Thiet. The intervention lasted for 24 weeks, with each instructional session conducted in a 50 minutes class period. Both the experimental and control groups followed the same syllabus, learning objectives, and textbook to ensure equivalence in instructional content. The experimental group received AI-integrated listening instruction through platforms such as SpeechAce and Listenwise, which were systematically embedded into lessons to provide instant feedback, adaptive listening tasks, and personalized practice aligned with learners' proficiency levels. The control group completed parallel listening activities using the same materials through conventional teacher-led instruction, thereby controlling for listening input and practice time. To minimize instructor-related bias, both groups were taught by the same teacher following a standardized lesson plan. Listening comprehension tests were administered before and after the intervention, and the data were analyzed using paired-sample and independent-sample t-tests, while qualitative responses were examined through thematic analysis.

3.2. Participants

The participants were 80 first-year students, including 25 males and 55 female from the Faculty of Foreign Languages, majoring in English Language Studies at University of Phan Thiet. They were recruited through convenience sampling from two existing classes, each consisting of 40 students. One class was assigned as the experimental group, receiving AI-assisted listening instruction, while the other class served as the control group, receiving traditional listening instruction. Four experienced listening instructors were in charge of the two classes, including two main instructors and two teaching assistants who provided additional support. The participants' informed consent was obtained, and their voluntary participation was assured. Anonymity and confidentiality were maintained throughout the data collection and analysis process.

3.3. Instruments

Three research instruments were used to collect both quantitative and qualitative data. First, a standardized listening comprehension test, developed by the Faculty of Foreign Languages at Phan Thiet of University based on the

Cambridge CEFR framework, was used as both a pre-test and post-test. The test covered levels B1 to Pre-B2, appropriate for first-year English major students, reflecting their expected listening proficiency. It included multiple-choice and short-answer items, and reliability was confirmed through a pilot study. Content validity was checked by three experienced listening instructors, and all items were scored independently by two main instructors and two teaching assistants with listening teaching experience, with inter-rater reliability verified for subjective items. The participants consisted of 80 students from two existing classes, with one class assigned as the experimental group (AI-assisted listening instruction) and the other as the control group (traditional instruction). Second, a questionnaire measured students' attitudes towards in-class and self-study listening, including 30 items across five constructs such as: motivation, perceived effectiveness, usability, anxiety, and learner autonomy, using a 5-point Likert scale (1 = strongly disagree to 5 = strongly agree). For qualitative data, semi-structured interviews were conducted online in Vietnamese with 10 purposively selected students from the experimental group, each lasting 5– minutes, focusing on experiences, preferences, and challenges with AI-assisted listening practice.

3.4. Data analysis

Data gathered were qualitatively and quantitatively interpreted. Quantitative data were compared between post-test and pre-test scores through paired sample t-tests in order to establish within-group variation and independent sample t-tests to establish experimental and control groups' performance. Descriptive statistics in the form of means and standard deviations were similarly applied in summarizing questionnaire responses. For ensuring internal consistency, Cronbach's alpha was calculated for all the constructs of the questionnaire. The data from the semi-structured interviews were analyzed thematically to derive consistent patterns and findings about students' experience, concerns, and beliefs about implementing AI in listening education during the qualitative phase.

4. Results and discussions

4.1. Results

4.1.1. Pre-test

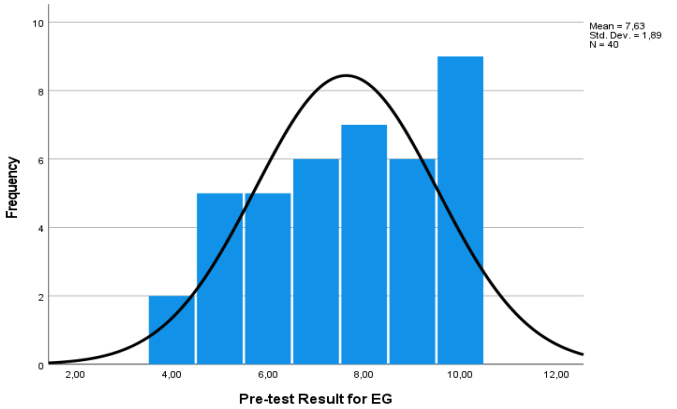

Figure 1: *Pre-test Result for EG*

The histogram in Figure 1 shows the distribution of pretest scores for the experimental group (EG). The histogram shows scores ranging from approximately 4.0 to 10.0, with the majority of students scoring between 6.0 and 10.0. The mean score was 7.63 (SD = 1.89, N = 40), indicating moderate to high listening proficiency prior to the intervention. The curve superimposed on the histogram resembles a normal distribution, indicating that the data are approximately normally distributed. However, there is a slight skew toward higher scores, with a relatively high skew in the range of 8.0 to 10.0. This baseline distribution suggests that in the experimental group, students had a wide range of listening abilities and proficiency prior to the AI-based instructional intervention. Most of the participating students demonstrated a relatively strong foundation, which may influence the potential impact of the instructional method.

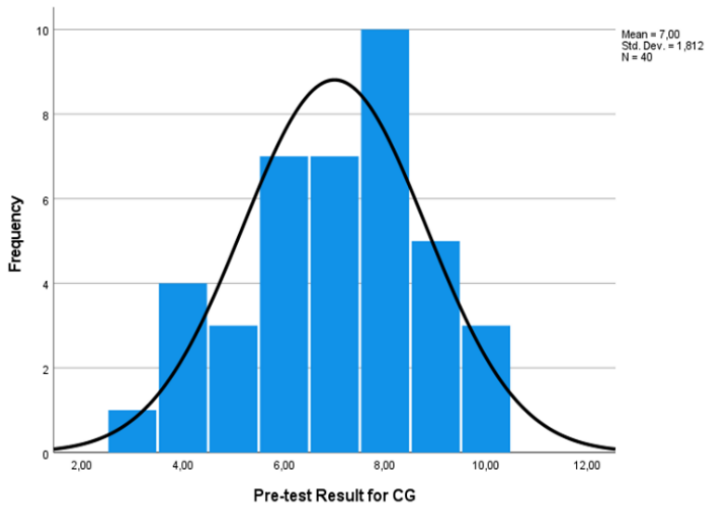

Figure 2: *Pre-test Result for CG*

Figure 2 shows the distribution of pre-test scores for the control group (CG). The results from the graph show a range of scores from approximately 3.0 to 10.0, with the highest concentration of scores between 6.0 and 8.0. The mean score was 7.00 (SD = 1.81, N = 40), indicating that the students' listening proficiency was at an average level before the intervention. The graph has a normal distribution curve superimposed on it, indicating that the data are relatively normally distributed, with the central density of the graph being approximately 8.0. Compared to the experimental group, the mean score of the control group was lower and the distribution appeared more symmetrical, with fewer participants scoring above 9.0. This baseline shows that both groups had similar initial proficiency, although the control group had slightly less change at higher scores, providing a balanced starting point to compare the effects of traditional listening instruction and non-AI-assisted listening instruction.

Table 1: *Pre-test scores of EG and CG*

	CLASS	N	Mean	Std. Deviation	Std. Error Mean
Pre-testresults	Control group	40	7.0000	1.81164	.28645
	Experimental group	40	8.2250	1.65618	.26187

Pretest results showed that the experimental group scored slightly higher on average, M = 8.2250, than the control group, M = 7.00, indicating slightly better initial listening performance. Both groups exhibited similar variability, with standard deviations of 1.65618 for the experimental group and 1.81164 for the control group, reflecting a similar distribution of scores and the absence of extreme outliers. The standard error values, 0.26187 for the experimental group and 0.28645 for the control group, indicated a high degree of accuracy in estimating the population mean and a balanced distribution of data. Taken together, these findings suggest that both groups exhibited similar levels of initial performance, with only small differences in their initial listening abilities prior to intervention.

Table 2: *ANOVA test results for the Pre-test group of the experimental and control group*

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Pre-test Result for EG	Between Groups	2.993	1	2.993	.834	.367
	Within Groups	136.382	38	3.589		
	Total	139.375	39			
Pre-test Result for EG	Between Groups	.000	1	.000	.000	1.000
	Within Groups	128.000	38	3.368		
	Total	128.000	39			

The ANOVA results presented in the table indicate that there was no statistically significant difference in the pre-test scores between the groups. For the experimental group, the F-value was 0.834 with a significance level of 0.367, which exceeds the conventional threshold of 0.05. Similarly, the control group recorded an F-value of 0.000 with a significance level of 1.000, also

indicating no significant variation. These results suggest that the pre-test performance of participants across groups was statistically equivalent prior to the intervention. Therefore, it can be inferred that both the experimental and control groups started from comparable baseline levels, ensuring the internal validity of subsequent analyses on post-test outcomes.

Table 3: *Pre-test results of Independent Sample T-Test*

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means					95% Confidence of the Differnce	
		F	Sig.	t	df	Sig.(2-tailed)	Mean Difference	Std.Error Difference	Lower	Upper
Pre_test_ results	Equal variances asumed	.051	.822	-3.156	78	.002	-1.22500	.38810	-1.99766	-.45234
	Equal variances not asumed			-3.156	77.380	.002	-1.22500	.38810	-1.99775	-.45235

Statistical testing of independent sample t-test data, Levene's definition test for equality of variance was found to have an F value of 0.051 and a significance value of 0.822. Since the significance value is greater than 0.AI05, the assumption of equal variances has been met. The analysis continues with the row "Assumption of equal variances". The t-test is -3.156 with 78 degrees of freedom (df) and has a p-value of 0.002, which is 0.05 below the mean. This indicates a statistically significant difference between the groups in pre-test scores. The mean difference is -1.225, which indicates that the experimental group scored on average 1.225 points lower than the control group. The 95% confidence interval for the mean difference ranges from -1.99766 to -0.45234 and does not include zero, once again confirming the statistical significance of this difference.

The mean difference standard error is 0.38810, which indicates a good level of precision for estimating group mean differences. Overall, although both groups started off with comparable ranges of scores, the experimental group had a much higher mean pre-test score than the control group, and this would need to be taken into account in interpreting post-intervention results.

4.1.2. Post-test

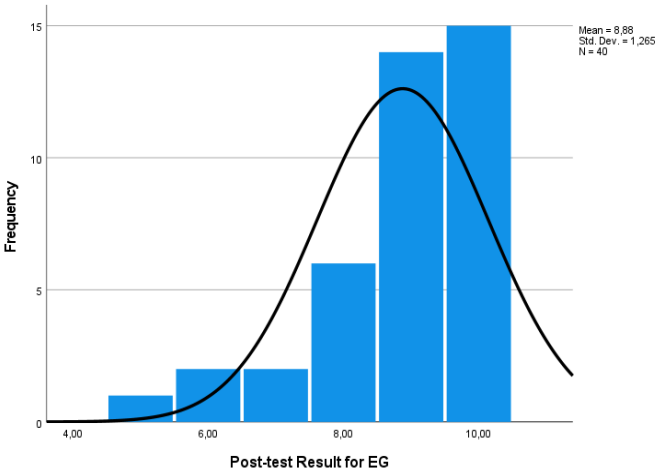

Figure 3: *Post-test Result for EG*

The graph illustrates the distribution of post-test scores for 40 students in the Experimental Group (EG). The mean score of the experimental group was 8.88 and the standard deviation was 1.265, indicating a relatively low level of variation and concentration of scores around the mean score. The majority of students scored between 8 and 10, as can be seen from the high frequency bars in this range. The reason why a normal distribution curve comes so nicely over the histogram is that results are almost normally distributed, yet slightly to the left side skewed, meaning that there existed some low scores that pulled the left side of the distribution outward. This trend could be accounted for by the fact that a significant majority of students in the experiment group posted high grades in the post-test, which reflected the success of the AI-integrated listening skills learning method.

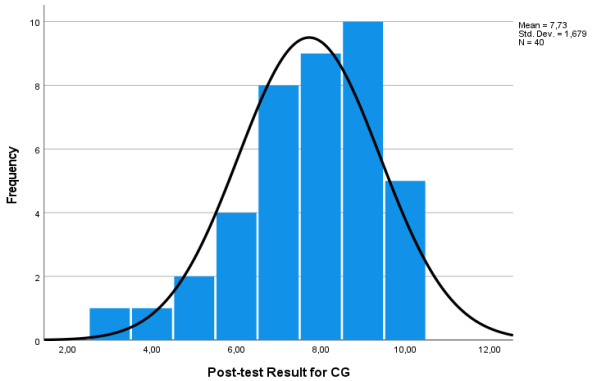

Figure 4: *Post-test Result for CG*

The graph in figure shows the post-test score of the Control Group (CG) consisting of 40 students. The average value of 7.73 and the standard deviation of 1.679 revealed marginally higher variability than in the experiment group. The dispersion has a normal curve shape with most of the scores falling between

7 and 9. A few students scored below 5, pulling the low tail of the scatter down. The control group had a lower mean score and a larger range of scores, indicating higher variability of performance, compared to the experimental group. These results indicate that although the control group performed exceedingly well, their mean achievement and score reliability were lower than that of the treatment group, explained by differences in instructional practices used.

Table 4: *Post-test scores of EG and CG*

	CLASS	N	Mean	Std. Deviation	Std. Error Mean
Post-test-results	Control group	40	7.7250	1.67925	.26551
	Experimental group	40	8.8750	1.26466	.19996

The post-test results show that the experimental group achieved a higher mean score of 8.8750 compared to the control group with 7.7250, demonstrating a notable improvement in listening performance after the AI-based instruction. The experimental group also had a lower standard deviation of 1.26466 compared to 1.67925 in the control group, indicating more consistent results among learners. The standard errors of 0.26551 and 0.19996 suggest that the mean estimates are reliable. Overall, these findings indicate that the application of AI tools enhanced both the effectiveness and consistency of learning outcomes compared to traditional teaching methods.

Table 5: *ANOVA test results for the Post-test group of the experimental and control groups*

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Post-test Result for EG	Between Groups	.030	1	.030	.018	.894
	Within Groups	62.345	38	1.641		
	Total	62.375	39			
Post-test Result for CG	Between Groups	2.201	1	2.201	.776	.384
	Within Groups	107.774	38	2.836		
	Total	109.975	39			

The ANOVA results for the post-test indicate no statistically significant difference between groups. For the experimental group, the obtained F value was 0.018 with a significance level of 0.894, suggesting that the variation between groups is negligible compared to the variation within groups. Similarly, the control group recorded an F value of 0.776 with a significance level of 0.384, also indicating no meaningful difference in post-test outcomes across participants.

These results demonstrate that, despite observable improvements in mean performance, the differences were not statistically significant at the 0.05 level, implying that both teaching approaches yielded relatively similar effects in the post-test phase.

Table 6: *Post-test results of Independent Sample T-Test*

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means					95% Confidence of the Differnce	
		F	Sig.	t	df	Sig.(2-tailed)	Mean Difference	Std.Error Difference	Lower	Upper
Post_test_results	Equal variances asumed	6.095	.016	-4.868	78	<.001	-1.57500	.32352	-2.21907	-.93093
	Equal variances not asumed			-4.868	66.622	<0.01	-1.575500	.32352	-2.22081	-.92919

When looking at the result of the independent samples t-test, the Levene's Test for Equality of Variances showed that the F-value was 6.095 with a significance value of 0.016. Since the significance value is less than 0.05, the variances assumption differs between the groups, and thus the analysis continues in the row "Equal variances not assumed.". The t-test was -4.868 with the degrees of freedom at 66.622 and the significance of less than 0.001. The p-value is far less than 0.05, which indicates that there is a statistically significant difference between the post-test scores of both the groups. The difference of means was -1.575, indicating the experimental group mean larger than the control group. 95% confidence interval of mean difference of -2.22081 to -0.92919 again confirms the result of difference as significant. Standard error of mean difference = 0.32352 that gives a satisfactory precision of estimation of mean difference among groups. In total, it indicates that the experimental group scored significantly more than the control group in the posttest.

3.1.3. Questionnaire

Table 7: *Reliability of the questionnaire and construct*

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.824	.823	6

The Cronbach's Alpha value of 0.824 indicates a high level of internal consistency between the items, indicating that the questionnaire is reliable in assessing the proposed solutions. This suggests that the items measure the same underlying concepts related to the effectiveness and engagement of AI applications in teaching listening skills to first-year English Language majors.

Furthermore, this reliability supports the validity of the questionnaire in capturing students' views on the proposed engagement level. It ensures that the findings can provide meaningful insights into strategies for improving listening skills for undergraduate English Language majors.

Table 8: *Exploratory factor analysis (EFA)*

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy		.834
Barlett's Test of Sphercity	Approx. Chi-Square	153.943
	df	15
	Sig.	<.001

Following the reliability analysis, the KMO and Bartlett's Test further confirmed the suitability of the dataset for factor analysis. The KMO value of .834 indicated a high level of sampling adequacy, while Bartlett's Test of Sphericity (χ^2 = 153.943, df = 15, p < .001) demonstrated significant correlations among the items. These results reinforce the consistency of the measurement instrument and validate the appropriateness of proceeding with furter statistical analyses.

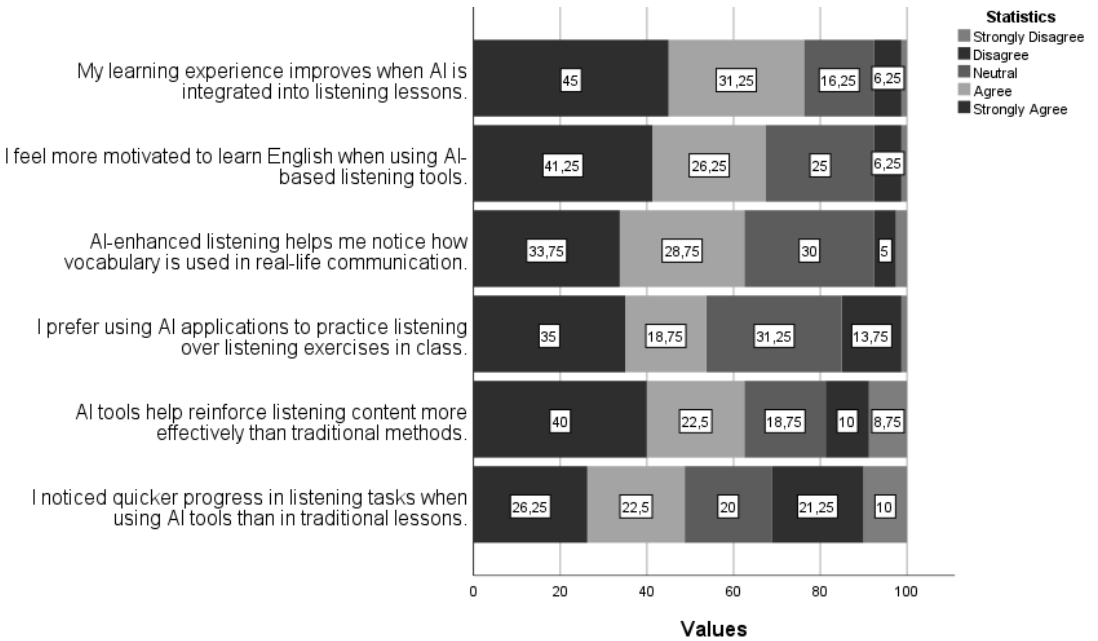

Figure 5: *The effectiveness of AI-integrated listening skills application compared to traditional listening skills*

The majority of survey respondents, 31.25% agreeing and 45% strongly agreeing, said they had a richer learning experience when AI was integrated into listening lessons. This shows a strong positive attitude towards AI helping to improve listening skills. A high proportion, 26.25% agreeing and 41.25% strongly agreeing, said they felt more motivated to learn English when using AI-based listening devices, which means that AI has the potential to boost learners' motivation. For the AI-enhanced listening feature, learners noticed how vocabulary is used in real-life communication with 30% agreeing and 33.75% strongly agreeing, thereby emphasizing the role of AI in supporting authentic language exposure. Regarding the desire to practice listening with AI applications in the classroom, 31.25% agreed and 35% strongly agreed, showing a strong tendency towards technology practice. When asked whether AI materials support listening materials better than traditional methods, 18.75% agreed and 40% strongly agreed, showing confidence in AI's ability to support enhanced learning. Finally, regarding the support of accelerated learning methods in listening exercises using AI technology, 20% agreed and 26.25% strongly agreed. On the other hand, 21.25% disagreed, showing that although most students believe that AI helps accelerate the learning process, most of them are still uncertain.

4.2. Discussions

The study results showed that integrating Artificial Intelligence (AI) into listening instruction improved student comprehension through key mechanisms such as real-time feedback, exposure to different accents and speech rates, and personalized task design. These adaptive features promoted engagement, autonomy, and confidence among learners at all proficiency levels. This finding is consistent with previous studies by Abdellatif et al. (2024) and Raza et al. (2024), although the observed effect sizes were slightly smaller, possibly due to the shorter intervention duration, limited authentic input, and different levels of digital literacy between teachers and students. However, the study was limited to a single institution, with adjusted baseline differences, no longitudinal follow-up, and incomplete reporting of test validity. In practice, effective implementation of AI-assisted instruction requires a stable technological infrastructure, AI-literacy training for teachers, and the adoption of a model that combines AI-assisted learning with classroom communication activities, supported by clear data governance policies. Future research should expand the research context, explore long-term sustainability impacts, compare different AI platforms, and analyze results at different levels of literacy.

5. Conclusion and suggestion

5.1. Conclusion

The study revealed that applying Artificial Intelligence in listening instruction led to measurable improvements in students' comprehension, vocabulary development, and engagement after baseline adjustment. The adaptive features of AI supported differentiated learning and promoted greater learner

autonomy, indicating meaningful educational value rather than merely statistical gains. While initial difficulties with technology use were observed, appropriate guidance helped students adapt effectively. These findings suggest that AI integration serves as a practical complement to traditional methods and should be implemented with structured lecturer support and gradual integration into broader language curricula.

5.2. Suggestion

The results indicate that the incorporation of Artificial Intelligence enhanced listening comprehension and learning motivation significantly. As a suggestion, based on the results, English lecturers are advised to keep applying AI tools as complementary materials to vary listening materials and provide instant corrections. Courses must be designed to incorporate AI-supported practice with class discussion for supporting comprehension and critical thinking. Students are also motivated to utilize AI-based programs outside class to extend learning and track personal improvement. There must be adequate technical assistance and training workshops on the university's side to unleash the potential of AI in the teaching of listening. Future studies could investigate the long-term impact of AI on listening skills instruction and its potential generalization to other areas of language proficiency.

REFERENCES

Abdellatif, M. S., Alshehri, M. A., Alshehri, H. A., Hafez, W. E., Gafar, M. G., & Lamouchi, A. (2024). I am all ears: listening exams with AI and its traces on foreign language learners' mindsets, self-competence, resilience, and listening improvement. *Language Testing in Asia*, *14*(1), 54. https://doi.org/10.1186/s40468-024-00329-6.

Chaikovska, O., Stoliarenko, O., Hlushkovetska, N., & Semenyshena, I. (2024, June). Enhancing students'listening comprehension skills through ai-based podcast activities: a study in self-study mode. In *Environment. Technologies. Resources. Proceedings of the International Scientific and Practical Conference* (Vol. 2, pp. 336-339). https://doi.org/10.17770/etr2024vol2.8085.

Dhanapal, C., Asharudeen, N., & Alfaruque, S. Y. (2024). Impact of artificial intelligence versus traditional instruction for language learning: A survey. *World Journal of English Language*, *14*(2), 182-182. https://doi.org/10.5430/wjel.v14n2p182.

Holmes, W., Bialik, M., & Fadel, C. (2019). *Artificial intelligence in education promises and implications for teaching and learning*. Center for Curriculum Redesign. https://discovery.ucl.ac.uk/id/eprint/10139722.

Luu, T. M. V., & Doan, Q. V. (2025). ChatGPT's Impact on Listening Comprehension: Perspectives from Vietnamese EFL University Learners. *Computer-Assisted Language Learning Electronic Journal*, *26*(3), 43-63. https://doi.org/10.54855/callej.252633.

Raza, M. A., Khan, H., & Bukhari, 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.

Saeedirad, M. A., & Sabet, M. K. (2024). Planting Seeds of Understanding: Nurturing Listening Comprehension through Formative Assessment and AI-Powered Feedback. *Journal of Applied Linguistics Studies*, *4*(2). https://doi.org/10.71664/jals.2024.202408161129315.

Xiao, Y. (2025). The impact of AI-driven speech recognition on EFL listening comprehension, flow experience, and anxiety: a randomized controlled trial. *Humanities and Social Sciences Communications*, *12*(1), 1-14. https://doi.org/10.1057/s41599-025-04672-8.

Zawacki-Richter, O., Marín, V. I., Bond, M., & Gouverneur, F. (2019). Systematic review of research on artificial intelligence applications in higher education–where are the educators?. *International journal of educational technology in higher education*, *16*(1), 1-27. https://doi.org/10.1186/s41239-019-0171-0.

HIỆU QUẢ CỦA VIỆC ỨNG DỤNG TRÍ TUỆ NHÂN TẠO (AI) TRONG GIẢNG DẠY KĨ NĂNG NGHE CHO SINH VIÊN

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Trường Đại học Phan Thiết

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TÓM TẮT

Trí tuệ nhân tạo (AI) đang thay đổi cách dạy kĩ năng nghe, giải quyết các thách thức lâu dài như kiến thức ngữ cảnh hạn chế, sự đa dạng trong giọng nói, tốc độ nói nhanh và ảnh hưởng của tiếng mẹ đẻ (của cả học viên và giáo viên). Bài viết này trình bày những lợi ích của việc tích hợp các công cụ AI như Speech Ace và Listenwise trong các lớp học EFL, tập trung vào trải nghiệm học tập cá nhân hóa, phản hồi theo thời gian thực, bài tập thích ứng, khả năng hiểu nghe và tư duy phản biện. Pronunciation được thúc đẩy thông qua việc lặp lại và các nhiệm vụ tương tác thông qua Speech Ace. Listenwise hỗ trợ khả năng nghe hiểu và tư duy phản biện, dựa trên nội dung âm thanh được chọn lọc và các bài kiểm tra. Tuy nhiên, việc sử dụng AI cũng phải được theo dõi để đảm bảo an toàn dữ liệu, khả năng tiếp cận và thiên lệch thuật toán. Giáo viên đóng vai trò quan trọng như những người hướng dẫn, đảm bảo việc sử dụng các công cụ AI một cách có trách nhiệm và hiệu quả. Bài nghiên cứu này nhấn mạnh sự cần thiết phải sử dụng AI một cách đạo đức để tạo ra một nền giáo dục ngôn ngữ cân bằng và đổi mới.

***Từ khóa**: Trí tuệ nhân tạo; công nghệ giáo dục; kĩ năng nghe; giáo dục ngôn ngữ*