

STUDENTS' PERCEPTIONS AND ATTITUDES TOWARD THE USE OF ARTIFICIAL INTELLIGENCE IN DESIGNING AND ASSESSING ENGLISH TESTS: A CASE STUDY OF ENGLISH-MAJORED STUDENTS AT THAI NGUYEN UNIVERSITY OF SCIENCES, THAI NGUYEN UNIVERSITY, VIETNAM

Nguyen Giang An, Nguyen Thi Tuyet and Nguyen Hai Quynh
Thai Nguyen University of Sciences, Vietnam

<https://doi.org/10.54922/IJEHSS.2025.1108>

Received: 10 September 2025/Published: 24 October 2025

ABSTRACT

In the context of Artificial Intelligence (AI) being increasingly applied in education, particularly in language teaching and assessment, the use of AI in designing and evaluating English tests for English majors has become more common. However, students remain concerned about issues of fairness, reliability, and potential overdependence on technology. Overall, students express conditional acceptance of AI integration but still prefer direct evaluation and feedback from lecturers. The study recommends that the university enhance digital literacy and AI-related knowledge for both students and teachers, and establish quality assurance procedures in applying AI to language test design and assessment.

Keywords: Artificial Intelligence, language assessment, test design, student attitudes, Thai Nguyen University of Sciences.

1. INTRODUCTION

In the era of the Fourth Industrial Revolution, Artificial Intelligence (AI) has emerged as one of the core technologies profoundly influencing various sectors of society, including education and foreign language training. The application of AI in teaching, testing, and assessing language proficiency offers numerous advantages for both instructors and learners. However, it also raises questions regarding awareness, attitudes, and academic ethics.

Therefore, investigating English majors' perceptions and attitudes toward the use of AI in designing and evaluating English tests is essential in determining their readiness for transformation in the digital learning environment. This article focuses on surveying students' perceptions and attitudes toward AI-based test design and assessment at the University of Sciences, Thai Nguyen University. Based on the findings, several pedagogical and administrative recommendations are proposed to guide students' understanding and attitudes toward AI applications, contributing to more effective language training and assisting institutions and educators in formulating appropriate teaching and assessment policies in the AI era.

2. CURRENT SITUATION OF STUDENTS' PERCEPTIONS AND ATTITUDES TOWARD AI AND ITS APPLICATION IN TEST DESIGN AND ASSESSMENT

To evaluate students' perceptions and attitudes toward Artificial Intelligence (AI) and its use in designing and assessing English tests, the research team conducted a survey of 150 English

major students enrolled in classes taught by the authors at the University of Sciences, Thai Nguyen University.

The objectives of the survey were to examine students' awareness of AI, their readiness to adopt AI technologies in their learning processes, particularly in developing and grading test materials, and their attitudes toward the opportunities and challenges AI introduces in ensuring objectivity, creativity, and fairness in assessment. The results form the basis for recommendations to enhance the capacity to apply AI effectively in higher education.

It is evident that AI now plays a crucial role in education, especially in students' learning activities. AI supports personalized learning, recommends suitable content, provides automated feedback, assists information searches, facilitates exercise design, and enhances learners' self-study and self-assessment efficiency. The results of students' awareness of AI are presented below:

Table 1. Students' Awareness of Artificial Intelligence

Level of Awareness	Number (n)	Percentage (%)
Never heard of AI	5	3.3
Heard but not clear	65	43.3
Basic understanding	55	36.7
Fairly clear understanding	20	13.3
Very clear understanding	5	3.3
Total	150	100.0

Table 1 shows that most students are somewhat aware of Artificial Intelligence (AI), with 43.3% reporting that they have heard of AI but do not understand it clearly, and 36.7% having a basic understanding. However, only 16.6% demonstrate in-depth knowledge, indicating that while AI has become a familiar concept in the academic environment, students' actual understanding remains limited.

According to the findings of the survey, English-major students at the university have made considerable use of various AI tools to support their learning, as detailed below:

Table 2. Students' Use of AI Tools in Learning

AI Tools Used	Number (n)	Percentage (%)
ChatGPT or similar AI assistants	120	80.0
AI-based image or video generation tools (e.g., Midjourney, Runway)	30	20.0
Writing and translation support tools (e.g., Grammarly, DeepL, QuillBot)	80	53.3
Language learning and skill practice tools (e.g., Duolingo, Elsa Speak)	70	46.7
Have not used any AI tools	15	10.0

The results presented in Table 2 indicate that most students have used AI tools for learning, especially ChatGPT and similar assistants (80%). Writing and translation tools (53.3%) and language practice tools (46.7%) are also popular. However, only 20% use advanced creative

AI tools such as image or video generators, showing that students' engagement remains focused on easily accessible tools rather than more specialized or innovative applications.

With the question "How do you evaluate AI applications in learning in terms of enhancing knowledge acquisition and self-learning skills?", we recorded the following results:

Table 3. Effectiveness of AI Applications in Learning

Level of Agreement	Frequency	Percent	Valid percent	Cumulative Percent
Strongly disagree	6	4.0	4.0	4.0
Disagree	9	6.0	6.0	10.0
Neutral	21	14.0	14.0	24.0
Agree	72	48.0	48.0	72.0
Strongly agree	42	28.0	28.0	100.0
Total	150	100.0	100.0	—

Descriptive Statistics: N = 150 Mean = 3.90 SD = 0.98

The data processed using SPSS 26.0 revealed that students' level of agreement with the statement "The application of AI in learning helps enhance students' knowledge acquisition and self-learning skills" had a mean (M) value of 3.90 and a standard deviation (SD) of 0.98, indicating that most responses clustered around the "agree" level. Regarding frequency distribution, 6 students (4.0%) strongly disagreed, 9 students (6.0%) disagreed, 21 students (14.0%) were neutral, while 72 students (48.0%) agreed and 42 students (28.0%) strongly agreed. Accordingly, 76% of the total respondents expressed positive attitudes (agree or strongly agree) toward the use of AI in learning. The mean value being higher than the theoretical median (M = 3.0) demonstrates a strong tendency toward agreement among students. The relatively low standard deviation (SD = 0.98) reflects a consistent pattern of responses. These findings suggest that the majority of students perceive AI as a practical and effective tool for improving their knowledge acquisition and self-learning skills, while only a small proportion remain uncertain or hold opposing views.

Regarding the use of AI in designing and assessing English tests, we recorded students' attitudes as follows:

Table 4. Students' Attitudes toward AI in Designing and Assessing English Tests

Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean	SD
I believe using AI makes testing fairer.	6 (4.0%)	15 (10.0%)	33 (22.0%)	66 (44.0%)	30 (20.0%)	3.66	1.02
I feel comfortable when my writing is graded by AI.	24 (16.0%)	42 (28.0%)	39 (26.0%)	33 (22.0%)	12 (8.0%)	2.78	1.13
I think AI can assist teachers in analyzing and providing feedback on students' English proficiency.	9 (6.0%)	18 (12.0%)	36 (24.0%)	60 (40.0%)	27 (18.0%)	3.52	1.06

The survey results on students' attitudes toward the use of Artificial Intelligence (AI) in designing and assessing English tests reveal a selectively positive trend, reflecting a generally favorable yet cautious attitude among students. For the statement "I believe that using AI makes the testing process fairer," the mean score was $M = 3.66$ with a standard deviation of $SD = 1.02$, indicating that most students agreed AI could contribute to enhancing fairness and objectivity in assessment. However, over 30% of respondents chose "neutral" or "disagree," suggesting that some learners remain skeptical about the actual fairness of AI tools, particularly regarding their ability to process natural language and diverse writing styles.

For the statement "I feel comfortable when my writing is graded by AI," the mean score was only $M = 2.78$ with $SD = 1.13$, the lowest among the three items. This finding indicates that students have not yet fully developed trust in AI's evaluative capacity and still prefer that their work be reviewed and commented on directly by instructors.

Regarding the statement "AI can assist teachers in analyzing and providing feedback on students' English proficiency," the mean score was $M = 3.52$ with $SD = 1.06$, reflecting a relatively high level of agreement. This suggests that most students perceive AI as a valuable supportive tool that helps teachers save time and provide more accurate feedback, although it cannot entirely replace the human role.

Overall, the findings illustrate a positive but cautious stance among students. They recognize the potential of AI to enhance fairness and support assessment, yet they continue to place primary trust in teachers' expertise and professional judgment.

Table 5. Students' Level of Agreement on AI Use in English Test Design and Assessment

Level of Agreement	Number (n)	Percentage (%)
Strongly disagree	12	8.0
Disagree	27	18.0
Neutral	63	42.0
Agree	33	22.0
Strongly agree	15	10.0
Total	150	100.0

Descriptive Statistics: Mean = 3.08 SD = 1.09

The survey data indicate that the majority of students (42.0%) expressed uncertainty or maintained a neutral attitude toward the use of Artificial Intelligence (AI) in English testing and assessment. Approximately 32.0% of students agreed or strongly agreed, while 26.0% disagreed or strongly disagreed. This suggests that most students have not yet developed a clear perception of the advantages or limitations of applying AI in academic evaluation. The mean score of 3.08 on a 5-point scale reflects a neutral tendency in students' overall perceptions of this issue. The standard deviation ($SD = 1.09$) indicates a moderate level of variation in responses. These findings imply that although students have begun to show interest in the role of AI in assessment, their understanding and confidence in the fairness and accuracy of such tools remain somewhat ambiguous and inconsistent.

3. RECOMMENDATIONS AND PROPOSED SOLUTIONS

Based on the survey results, the majority of English-major students at the University of Sciences – Thai Nguyen University are aware of Artificial Intelligence (AI) and have utilized it in their learning activities. Students also recognize the role of AI in designing and assessing English tests. They highly appreciate AI's potential to provide fair, objective, and personalized evaluation, yet they still prefer greater involvement from instructors in the grading and feedback process. This reality reflects the need for a balanced integration between technological and human elements in higher education. To maximize the advantages and address the limitations of applying AI in English test design and assessment, four key solutions are proposed:

3.1. Develop a Hybrid Assessment Model combining AI and human evaluation

Instead of allowing AI to grade entirely autonomously, institutions should adopt a two-stage hybrid model—AI performs preliminary scoring (grammar, structure, quantitative data), while lecturers are responsible for the overall assessment, result adjustment, and providing detailed feedback to students.

According to Atchley et al. (2024), the combination of human and AI assessment leverages the strengths of both: AI ensures consistency and processing speed, whereas instructors contribute professional depth and contextualized evaluation. Similarly, Darwin et al. (2023) found that AI can significantly reduce grading workload but cannot fully replace human judgment and pedagogical sensitivity. Therefore, we propose a two-stage assessment process—AI-assisted grading followed by instructor review—to maintain a balance between technological efficiency and pedagogical quality. At the same time, this approach aligns with students' preference for receiving direct feedback from instructors, thereby enhancing both reliability and learner motivation.

3.2. Increase Transparency in AI-Assisted Test Design and Assessment

One of the key reasons students tend to trust AI-based assessment systems is the perception that such systems are “fairer,” particularly when the grading process is clearly explained. However, due to limited understanding of how AI operates, many students find it difficult to comprehend the rationale behind their given scores, which may lead to skepticism or negative reactions. A study by Fangyuan Chai et al. (2024) published in *Frontiers in Psychology* found that students perceived AI grading as fairer when they were provided with information about assessment criteria and decision-making processes. Transparency thus serves as a crucial mediating factor in building trust in AI-based evaluation systems.

To strengthen students' confidence, instructors should design AI grading systems that explicitly display evaluation criteria—such as grammar, vocabulary, structure, and content—along with explanations for point deductions and suggestions for improvement. Both instructors and students should have access to statistical reports comparing AI-generated scores with those assigned by human graders. Ensuring transparency in AI usage not only enhances learners' trust but also facilitates long-term calibration, monitoring, and quality assurance of assessment systems.

3.3. Develop students' digital competence and AI literacy

The effective implementation of AI in education depends not only on technological advancement but also on the competence and attitudes of its users. The U.S. Department of Education (2023) emphasized that digital competence is a key factor in integrating AI into education safely, ethically, and effectively. Instructors need to understand how AI systems

function, recognize potential risks, and know when to rely on AI-generated outcomes and when human intervention is necessary to adjust results. Similarly, students should be guided to use AI as a learning aid rather than becoming dependent on it.

To enhance the effectiveness of AI use in learning and assessment, universities should organize training sessions, thematic workshops, and academic forums to equip both instructors and students with foundational knowledge about AI. In addition, institutions should establish guidelines for the use of AI in test design and assessment, clearly defining responsibilities, rights, and feedback procedures. The academic culture should promote critical thinking and collaboration among learners, teachers, and technology, thereby fostering a responsible, creative, and human-centered digital learning environment.

4. CONCLUSION

The application of AI in designing and assessing English tests is an inevitable trend in higher education. However, AI achieves optimal effectiveness only when integrated through a *human-machine collaborative approach*, rather than replacing human roles entirely. The proposed solutions—including the hybrid assessment model, enhanced transparency, and the development of digital competence and AI literacy—represents fundamental directions for improving fairness and effectiveness in assessment practices. Within this framework, instructors remain at the core of the process as facilitators, evaluators, and mediators of learners' emotional engagement, while AI serves as a powerful tool for data processing and technical support. When these elements are harmoniously combined, English teaching and assessment can become more effective, equitable, and learner-centered in the digital transformation era.

REFERENCES

- Atchley, P., et al. (2024). *Human-AI collaboration in higher education: Balancing technology and pedagogy*. Cognitive Research: Principles and Implications. <https://doi.org/10.1186/s41235-024-00547-9>
- Darwin, R., Mukminatien, N., Suryati, N., Laksmi, E. D., & Marzuki. (2023). *Critical thinking in the AI era: An exploration of EFL students' perceptions, benefits, and limitations*. Cogent Education, 11(1). <https://doi.org/10.1080/2331186X.2023.2290342>
- Chai, F., Ma, J., Wang, Y., Zhu, J., & Han, T. (2024). *Grading by AI makes me feel fairer? How different evaluators affect college students' perception of fairness*. Frontiers in Psychology. <https://doi.org/10.3389/fpsyg.2024.1221177>
- U.S. Department of Education. (2023). *Artificial Intelligence and the Future of Teaching and Learning: Insights and Recommendations*. Washington, D.C.