ETALEJ
English Teaching, Applied Linguistics and Education Journal

ISSN 2XXX-2XXX Vol. XX No. X, July 202X, Pg. XX-XX

Analyzing the Implementation of AI-Based Authentic Assessment Using EAP Talk for Assessing University Students' English Speaking Skills

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ABSTRACT

Artificial Intelligence (AI) has the potential to support authentic assessment in English speaking courses by providing automatic scoring and immediate feedback. This study aimed to analyze the implementation of AI-based authentic assessment using EAP Talk in an English speaking course. The study employed a descriptive qualitative approach involving 25 undergraduate students from the Information Systems Study Program at STTI NIIT, Indonesia. EAP Talk was integrated into performance-based speaking activities, and data were collected through classroom observations, AI-generated assessment results, and a student perception questionnaire. The findings revealed that EAP Talk successfully supported authentic assessment by generating automatic scores and feedback on pronunciation, fluency, vocabulary, grammar, and overall speaking performance. The application also received positive responses from students in terms of usefulness, ease of use, and feedback quality. The AI-generated results complemented lecturers' professional judgment, contributing to a more efficient and meaningful speaking assessment process. The study concludes that EAP Talk is a promising supporting tool for implementing AI-based authentic assessment in higher education English speaking courses.

Article Info

Article history:

Received, July 1 2026
Revised, July 15, 2026
Accepted, July 20, 2026

Keyword:
Artificial Intelligence
Authentic Assessment
EAP Talk
English Speaking
Higher Education

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INTRODUCTION

In the era of globalization and digital transformation, English speaking competence has become an essential skill for university graduates to succeed in academic and professional environments. Effective oral communication enables students to exchange ideas, collaborate with multidisciplinary teams, and participate confidently in global workplaces. This competency is particularly important for Information Systems students, who are expected to present software solutions, explain system workflows, discuss technical projects, and communicate with clients or stakeholders in English. Therefore, developing and assessing English speaking skills should be considered a fundamental component of higher education, particularly in programs preparing graduates for careers in the information technology industry.

Speaking instruction should extend beyond teaching grammatical knowledge to providing students with opportunities to communicate in meaningful and authentic contexts. In English courses for Information Systems students, learning activities can be designed through performance-based tasks such as technical presentations, business meeting simulations, project discussions, explaining system workflows, and presenting information technology products. These activities enable students to use English in situations that resemble professional communication in the workplace while integrating both language skills and disciplinary knowledge. Such an approach aligns with the principles of authentic learning, which emphasize engaging students in real-world tasks that promote meaningful learning and the application of knowledge in practical contexts (Herrington et al., 2014). Therefore, incorporating authentic speaking activities provides an appropriate pedagogical approach to preparing Information Systems students for future academic and professional communication.

As speaking instruction increasingly adopts authentic learning activities, the assessment process should also reflect authentic assessment principles. Authentic assessment evaluates students through meaningful performance tasks rather than relying solely on traditional written examinations (Mueller, 2018). In speaking courses, assessment can be conducted through oral presentations, discussions, role plays, project explanations, and problem-solving activities that mirror real-life communication. This approach is also consistent with the principles of Outcome-Based Education (OBE), which emphasize the demonstration of learning outcomes through observable knowledge, skills, and competencies in authentic contexts (Biggs & Tang, 2011). Therefore, authentic assessment provides an appropriate framework for evaluating students' communicative competence in higher education.

Despite its pedagogical benefits, implementing authentic assessment in speaking courses presents several challenges for instructors. Assessing students' oral performance requires considerable time because each student must be evaluated individually while multiple aspects, including pronunciation, fluency, vocabulary, grammar, and interaction, are observed simultaneously. In addition, providing immediate and constructive feedback and maintaining consistency in scoring across students can be difficult, particularly in classes with a large number of learners (Brown & Abeywickrama, 2019). These challenges highlight the need for innovative assessment approaches that can support instructors in conducting

authentic speaking assessment more efficiently without compromising the quality of evaluation.

Recent advances in Artificial Intelligence (AI) have created new opportunities to support language assessment through technologies such as speech recognition, pronunciation analysis, fluency analysis, automatic feedback, and automated scoring. These features enable instructors to obtain timely insights into students' speaking performance while reducing the time required for assessment. One application that offers these capabilities is EAP Talk, which is specifically designed to support English speaking practice and assessment. Rather than replacing teachers' professional judgment, AI-based applications can function as complementary tools that assist instructors in conducting more efficient and consistent authentic assessment (Holmes et al., 2022).

Previous studies have primarily examined the use of AI applications to improve learners' speaking performance, pronunciation, or fluency. However, limited research has explored the implementation of AI-based applications as tools for authentic assessment in English speaking courses, particularly in higher education where performance-based assessment is emphasized. Furthermore, studies focusing on Information Systems students remain scarce, despite the fact that they regularly engage in authentic communication tasks such as technical presentations, project discussions, and business meeting simulations. Therefore, this study investigates the implementation of AI-based authentic assessment using EAP Talk to support English speaking assessment in higher education.

Among the available AI-based speaking applications, EAP Talk was selected because it is freely accessible and provides features that support English speaking assessment, including AI-generated feedback, automatic scoring, oral presentation and discussion practice, and performance recording. These features indicate its potential to support authentic assessment by assisting instructors in evaluating students' speaking performance more efficiently. Therefore, this study aims to analyze the implementation of AI-based authentic assessment using EAP Talk for assessing university students' English speaking skills. Specifically, it investigates the integration of EAP Talk into speaking instruction, the implementation of authentic assessment through the application, and the opportunities and challenges encountered during its use.

RESEARCH METHOD

This study employed a descriptive qualitative approach to analyze the implementation of AI-based authentic assessment using EAP Talk in an English speaking course for undergraduate Information Systems students at a private university in Indonesia. The study involved students enrolled in the course who participated in a series of authentic speaking activities, including oral presentations, discussions, and technical explanations. EAP Talk was integrated into the assessment process to provide AI-generated feedback and automatic speaking scores as complementary evidence for authentic assessment. Data were collected through classroom observations, students' speaking performance records generated by EAP Talk, and a questionnaire exploring students' initial perceptions of the application. The data were analyzed descriptively by identifying the

implementation process, summarizing students' responses, and examining the opportunities and challenges of integrating AI into authentic speaking assessment.

FINDING AND DISCUSSION

Implementation of AI-Based Authentic Assessment Using EAP Talk

The implementation of AI-based authentic assessment using EAP Talk was integrated into the English speaking course through a series of performance-based learning activities. Prior to the implementation, the lecturer introduced the application, explained its features and assessment procedures, and provided students with guidance on how to complete speaking tasks using the platform. Throughout the course, students performed authentic speaking activities, including oral presentations, project discussions, and technical explanations related to Information Systems topics. After completing each task, EAP Talk automatically analyzed students' speaking performance and generated feedback and scores, which were then reviewed by both students and the lecturer. The lecturer used these results as supporting evidence in the authentic assessment process while considering students' overall speaking performance during classroom activities. This implementation demonstrates how AI can be integrated into authentic speaking assessment to support both learning and assessment without replacing the lecturer's professional judgment.

AI-Based Speaking Assessment Results

The results generated by EAP Talk demonstrated that the application was able to assess multiple aspects of students' speaking performance automatically describe in the table below.

Table 1 AI-Based Speaking Assessment Results Generated by EAP Talk

Assessment Aspect	Description
Pronunciation	AI-generated pronunciation score
Fluency	AI-generated fluency score
Vocabulary	AI-generated vocabulary score
Grammar	AI-generated grammar score
Overall Performance	Overall speaking score generated by AI
AI Feedback	Automated feedback for speaking improvement

As presented in Table 1, EAP Talk provided scores for pronunciation, fluency, vocabulary, grammar, and overall speaking performance, accompanied by AI-generated feedback for improvement. These assessment results enabled both students and the lecturer to identify strengths and areas requiring further development immediately after each speaking task. Rather than replacing the lecturer's role, the AI-generated scores and feedback served as complementary evidence to support authentic assessment. The lecturer reviewed the assessment results together with students' actual classroom performance, participation, and task completion before making the final evaluation, ensuring that the assessment reflected students' overall communicative competence.

Table 2. Students' Initial Perceptions toward EAP Talk (n = 25)

Indicator	Mean	Category

Ease of Use	4.36	Very Good
Usefulness	4.48	Very Good
Feedback Quality	4.24	Very Good
Motivation	4.12	Good
Overall Mean	4.30	Very Good

Likert Scale Category 1–5:
4.21–5.00 = **Very Good** 1.81–2.60 = **Poor**
3.41–4.20 = **Good** 1.00–1.80 = **Very Poor**
2.61–3.40 = **Fair**

Table 2 presents students' initial perceptions toward the use of EAP Talk in the English speaking course. Overall, students demonstrated positive perceptions of the application, with an overall mean score of 4.30, categorized as Very Good. The highest-rated indicator was Usefulness (M = 4.48), indicating that students perceived EAP Talk as a valuable tool for supporting speaking practice and assessment. Ease of Use also received a high mean score (M = 4.36), suggesting that most students found the application easy to operate after receiving initial guidance. The Feedback Quality indicator obtained a mean score of 4.24, reflecting that the AI-generated feedback was considered useful for identifying strengths and areas for improvement. Meanwhile, Motivation recorded the lowest mean score (M = 4.12), although it remained within the Good category, indicating that while EAP Talk encouraged students to participate in speaking activities, individual motivation was also influenced by other learning factors. Overall, these findings suggest that students responded positively to the integration of EAP Talk as a supporting tool for AI-based authentic assessment in speaking instruction.

The findings of this study indicate that EAP Talk has the potential to function as a supporting tool for authentic assessment in English speaking courses. The application enabled lecturers to obtain AI-generated scores and immediate feedback on multiple aspects of speaking performance, including pronunciation, fluency, vocabulary, and grammar. However, these outputs were not used as the sole basis for assessment. Instead, the lecturer combined the AI-generated results with direct classroom observations, students' participation, and overall task performance before determining the final assessment. This approach is consistent with the principles of authentic assessment, which emphasize evaluating learners' competencies through meaningful performance tasks using multiple sources of evidence rather than relying on a single measurement (Mueller, 2018). Furthermore, the integration of AI-generated assessment with lecturer judgment aligns with the Outcome-Based Education (OBE) framework, which focuses on evaluating students' achievement of intended learning outcomes through authentic demonstrations of knowledge and skills (Biggs & Tang, 2011). Therefore, EAP Talk should be viewed as a complementary assessment tool that enhances, rather than replaces, the lecturer's professional judgment.

The implementation of EAP Talk also provided several practical benefits for both lecturers and students. The AI-generated feedback was available immediately after students completed each speaking task, enabling learners to identify their strengths and areas for improvement without waiting for lecturer feedback. In addition, the automatic scoring process contributed to greater consistency in evaluating speaking performance and reduced the time required for assessment,

allowing lecturers to focus more on monitoring students' communicative abilities during classroom activities. Students' positive perceptions toward the application further suggest that AI-supported assessment can encourage self-reflection and independent learning by providing accessible and timely feedback. These findings are consistent with previous studies reporting that artificial intelligence can enhance language learning through immediate feedback, personalized learning support, and improved assessment efficiency while maintaining the important role of teachers in interpreting learning outcomes and facilitating student development.

CONCLUSION

This study analyzed the implementation of AI-based authentic assessment using EAP Talk in an English speaking course for undergraduate Information Systems students. The findings demonstrate that EAP Talk can be effectively integrated into performance-based speaking activities by providing automatic scoring and AI-generated feedback on multiple aspects of speaking performance. The application supported authentic assessment by offering additional evidence that complemented lecturers' observations and professional judgment rather than replacing them. Students also showed positive initial perceptions toward the application, particularly regarding its usefulness, ease of use, and feedback quality. Furthermore, the implementation of EAP Talk contributed to more efficient assessment and encouraged students' self-reflection on their speaking performance. Despite these benefits, AI-based assessment should be used as a supporting tool within authentic assessment because the lecturer remains responsible for making comprehensive and contextual evaluation decisions. Future research is recommended to investigate the effectiveness of AI-based authentic assessment in improving students' speaking proficiency and to compare AI-generated assessments with lecturer evaluations.

ACKNOWLEDGEMENT

The author would like to express sincere gratitude to the students who participated in this study for their cooperation and valuable contributions throughout the research process. Appreciation is also extended to STTI NIIT for providing the opportunity and support to conduct this research. Finally, the author acknowledges the developers of EAP Talk for providing an AI-based platform that facilitated the implementation of authentic speaking assessment in this study.

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