



Implementing the AI-Assisted SCENE Model in Teaching Speaking: A Descriptive Qualitative Study of Indonesian EFL Senior High School Students

Siti Hidayatur Rohmah¹, Risa Triassanti², Agus Wardhono³

^{1,2,3}Teacher Training and Education Faculty, Universitas PGRI Ronggolawe Tuban, Indonesia

Article Info

Article history:

Received 22-07-2026

Revised 28-07-2026

Accepted 10-08-2026

Keywords:

AI-Assisted SCENE Model
Descriptive Qualitative
EFL Speaking
Language Classrooms
Role-Play

ABSTRACT

This study aims to describe the implementation of the AI-Assisted SCENE Model in teaching speaking to EFL students and to explore their learning experiences during the learning process. A descriptive qualitative research design was conducted at MA Al Anwar Sarang, Rembang, involving 40 eleventh-grade students selected through purposive sampling. Data were collected through classroom observations, speaking performance rubrics, questionnaires, semi-structured interviews, and video recordings, and were analyzed using thematic analysis supported by descriptive statistics. During the implementation, ChatGPT was utilized to support dialogue development, idea generation, and speaking practice within the SCENE instructional procedures. The findings indicate that the AI-Assisted SCENE Model was implemented through five integrated procedures Starting with Essential Questions, Collaborative Planning and Scheduling, Enacting the Roles, Next-Level Assessment, and Evaluating the Experience which provided a structured and collaborative learning process. Descriptive results showed a higher mean speaking performance score in Role Play 2 (21.3, Very Good) than in Role Play 1 (20.6, Good), while qualitative findings revealed positive learning experiences, with 85% of students expressing favorable responses toward the implementation. These findings suggest that the AI-Assisted SCENE Model offers a structured and engaging approach to AI-assisted speaking instruction and provides practical insights for teachers seeking to integrate collaborative learning and AI-supported activities into EFL classrooms.

This is an open access article under the CC BY-SA license.



Corresponding Author:

Siti Hidayatur Rohmah

Teacher Training and Education Faculty, Universitas PGRI Ronggolawe Tuban, Lingkar Kampus Street, Tuban, East Java, Indonesia

Email: sitihidayaturrohmah22@gmail.com

INTRODUCTION

The discipline of English as a Foreign Language (EFL) education is currently witnessing a paradigm shift in how speaking skills are conceptualized and delivered. Speaking is widely recognized as a fundamental communicative skill, serving as the primary measure of language proficiency and student engagement (Mahvelati, 2026; Setianingsih & Sumarni, 2024). Despite its criticality, the field is often characterized by a persistent challenge: many learners struggle to achieve fluency due to high levels of anxiety, lack of motivation, and the scarcity of opportunities for authentic, low-stakes interaction (Mustamir, 2024). Traditional, teacher-centered methodologies frequently fail to provide the personalized and interactive

environments necessary for students to develop oral confidence, rendering the classroom a space where students are often reluctant to participate actively in speaking activities and where their linguistic potential remains largely untapped (Pham, 2022). These challenges highlight the need for instructional approaches that not only create meaningful opportunities for communication but also provide sufficient support to help students participate confidently in speaking activities.

In recent years, the integration of technology has moved from a peripheral support system to a transformative force in language pedagogy. Artificial Intelligence (AI) has emerged as a disruptive tool that offers unprecedented opportunities for personalized learning, providing students with immediate feedback, unlimited practice time, and interactive scenarios that effectively mimic real-world communication (Albedah, 2025; Daud et al., 2025; Lee et al., 2026). It is becoming more common knowledge that AI can significantly reduce speaking anxiety by providing a non-judgmental environment, which catalyzes students' willingness to communicate (Li, 2023). Collectively, these studies demonstrate that AI has considerable potential to support speaking instruction by creating more personalized, flexible, and learner-centered environments. However, most previous studies have primarily examined AI as an independent technological tool that provides feedback, practice opportunities, or anxiety reduction. Consequently, relatively little attention has been given to how AI can be systematically integrated into a structured instructional framework that guides students throughout the entire speaking process, from initial preparation to performance and reflection.

Furthermore, the synergy between AI and collaborative learning particularly through communicative strategies like role-play has been shown to enhance oral proficiency by promoting improvisational dialogue and contextualized vocabulary usage (Yana, 2026). Role-play transforms the classroom into a dynamic stage where learners can rehearse real-life scenarios, bridging the gap between theoretical knowledge and practical application (Fu & Li, 2025; Shravani, 2024). These findings suggest that role-play provides meaningful opportunities for authentic communication while encouraging learners to actively negotiate meaning and interact in realistic contexts. However, previous studies have generally examined role-play as an independent instructional strategy or have focused primarily on its contribution to speaking outcomes (Julianda et al., 2026). As a result, limited attention has been given to how role-play can be systematically integrated with AI-assisted learning within a coherent instructional framework that supports students throughout the entire learning process rather than during the speaking performance alone.

To maximize these technological and pedagogical advancements, this study implements the AI-Assisted SCENE Model an integrated instructional framework consisting of five systematic procedures: Starting with Essential Questions, Collaborative Planning and Scheduling, Enacting the Roles, Next-Level Assessment, and Evaluating the Experience. The model systematically integrates Project-Based Learning, role-play, and AI-assisted scaffolding into a coherent sequence of instructional activities that guides students from initial preparation to speaking performance and reflective learning. While previous research has explored the general impact of AI on EFL speaking, recent studies also show that AI can support personalized feedback and speaking practice in English learning (Yassin et al., 2026). Nevertheless, several important gaps remain. First, previous studies have predominantly examined AI, role-play, and Project-Based Learning as separate instructional approaches rather

than integrating them within a single pedagogical framework. Second, existing studies have mainly emphasized speaking outcomes, such as fluency, confidence, or achievement, while comparatively little attention has been paid to the implementation process and students' learning experiences in authentic classroom settings (Ainan et al., 2026; Darmawansah et al., 2025; Sawitri, 2024). Third, evidence regarding the implementation of AI-assisted instructional models in Indonesian senior high school EFL classrooms remains limited (Ainan et al., 2026; Darmawansah et al., 2025). The novelty of this study lies in implementing the AI-Assisted SCENE Model as a structured instructional framework that integrates AI-assisted learning, Project-Based Learning, and role-play within authentic classroom practice. This integrated framework combines AI-assisted scaffolding, collaborative project work, and role-play activities into five interconnected instructional procedures that systematically guide students from initial preparation to speaking performance and reflection. Accordingly, this study addresses these identified gaps by investigating how the AI-Assisted SCENE Model is implemented in teaching speaking and by exploring students' learning experiences in an Indonesian EFL senior high school classroom. Rather than examining instructional effectiveness, this study provides theoretical and practical insights into how an integrated AI-assisted instructional framework can support speaking instruction in authentic learning contexts. Specifically, the study examines how the AI-Assisted SCENE Model supports students' speaking performance and how students perceive their learning experiences throughout its implementation.

METHOD

Research Design

This study employed a descriptive qualitative research design to investigate the implementation of the AI-Assisted SCENE Model in teaching speaking and to explore students' learning experiences throughout the instructional process. The study emphasized describing classroom practices, students' interactions, and learning experiences within their natural learning context rather than measuring instructional effectiveness. Although numerical data from students' speaking performance scores and questionnaire responses were collected, these data were analyzed descriptively and used only to support the interpretation of the qualitative findings, rather than to examine causal relationships or instructional effectiveness (Afshar & Naser, 2023).

Participants and Research Setting

The study was conducted at MA Al Anwar Sarang, Rembang, Central Java, Indonesia, involving 40 eleventh-grade students selected through purposive sampling. During the implementation, students were organized into seven collaborative groups consisting of five to six members. Purposive sampling was employed because the selected class had experienced collaborative speaking activities and represented the characteristics required for investigating the implementation of the AI-Assisted SCENE Model in an authentic classroom context. Additionally, 10 students representing different participation levels (active, moderate, and less active) were selected for semi-structured interviews to obtain diverse perspectives on their learning experiences. All participants provided informed consent and were informed of their voluntary participation and their right to withdraw from the study at any stage.

AI-Assisted SCENE Model Implementation

The AI-Assisted SCENE Model was implemented through five interconnected instructional procedures: Starting with Essential Questions, Collaborative Planning and Scheduling, Enacting the Roles, Next-Level Assessment, and Evaluating the Experience. During the implementation, ChatGPT was used as the primary AI-assisted learning platform to support students in generating ideas, developing role-play dialogues, refining language expressions, and preparing speaking performances. In addition, AI-generated role-play videos were utilized as instructional scaffolding to provide pronunciation models, dialogue examples, and contextual speaking situations before students performed their role-play activities. This integration enabled students to receive AI-assisted support while maintaining collaborative learning through Project-Based Learning and role-play activities.

Instruments

Data were collected using five instruments. Classroom observation was conducted using an observation checklist and reflective field notes to document the implementation of each stage of the AI-Assisted SCENE Model, classroom interaction, students' participation, and AI-assisted learning activities. Students' speaking performance was assessed using an analytic speaking rubric during two role-play performances. The rubric consisted of five assessment criteria: fluency, accuracy, pronunciation, interaction, and confidence. The rubric was used to provide descriptive information regarding students' speaking performance throughout the implementation rather than to measure learning gains. A questionnaire was administered to all participants to examine students' perceptions of the implementation of the AI-Assisted SCENE Model. Semi-structured interviews were conducted with ten purposively selected students representing different participation levels to obtain richer information regarding their learning experiences. Finally, video recordings were used to document classroom interaction and students' speaking performances, enabling repeated observation during the analysis process.

Data Analysis

Observation data and interview transcripts were analyzed using thematic analysis to identify patterns related to the implementation of the AI-Assisted SCENE Model and students' learning experiences. Questionnaire responses and speaking performance scores were analyzed using descriptive statistics, including frequencies, percentages, and mean scores. The quantitative results were used as supporting evidence to complement the qualitative findings rather than as indicators of instructional effectiveness. Finally, qualitative and quantitative findings were interpreted collectively to provide a comprehensive description of the implementation process (Polat, 2025).

Trustworthiness

To enhance the credibility and trustworthiness of the findings, methodological triangulation was employed by comparing evidence obtained from classroom observations, speaking performance assessments, questionnaires, semi-structured interviews, and video recordings. The use of multiple data sources enabled cross-validation of the findings and

strengthened the consistency of the interpretations regarding the implementation of the AI-Assisted SCENE Model and students' learning experiences.

FINDINGS

The AI-Assisted SCENE Model and Speaking Performance

The AI-Assisted SCENE Model was implemented through five integrated instructional procedures: Starting with Essential Questions, Collaborative Planning and Scheduling, Enacting the Roles, Next-Level Assessment, and Evaluating the Experience. Throughout the implementation, students actively participated in collaborative speaking activities, including planning, dialogue development, role-play performance, peer feedback, and reflective evaluation. To complement these qualitative findings, students' speaking performance was described using mean scores obtained from two role-play activities.

Classroom observations indicated that each stage of the AI-Assisted SCENE Model supported different aspects of students' speaking development. During *Starting with Essential Questions*, students activated their prior knowledge and identified the communicative purpose of the speaking task. *Collaborative Planning and Scheduling* encouraged students to discuss ideas, organize dialogue content, and prepare their role-play collaboratively. In the *Enacting the Roles* stage, students practiced and performed their dialogues using AI-assisted learning materials as speaking models. The *Next-Level Assessment* stage provided opportunities for teacher and peer feedback on students' speaking performance, while *Evaluating the Experience* encouraged students to reflect on their performance and identify areas for further improvement. These interconnected stages created a structured learning process that supported students' active participation throughout the implementation.

Table 1. Students' Speaking Performance Across Two Role-Play Activities

Phase	Mean Score	Category
Role Play 1	20.6	Good
Role Play 2	21.3	Very Good

The descriptive results indicate that students obtained a mean score of 20.6 during the first role-play activity, which falls within the Good category based on the speaking performance rubric, whereas the mean score of 21.3 in the second role-play activity is categorized as Very Good. According to the rubric, scores ranging from 21–25 are classified as Very Good, 16–20 as Good, 11–15 as Fair, 6–10 as Poor, and 5 as Very Poor. These descriptive findings indicate that students demonstrated stronger speaking performance during the second role-play activity. Classroom observations further revealed that students participated more actively in group discussions, delivered their dialogues with greater confidence, and engaged more naturally in collaborative speaking activities during the later stage of the implementation.

Students' Learning Experiences

The questionnaire and semi-structured interview data provided complementary information regarding students' perceptions and learning experiences during the

implementation of the AI-Assisted SCENE Model. Overall, students reported positive perceptions across all measured dimensions, although the level of positive responses varied among the five aspects presented in Table 2.

Table 2. Summary of Students' Learning Experiences (n = 40)

Dimension	Positive Response
Learning Process Clarity	85.0%
AI-Assisted Media Utility	75.6%
Engagement and Participation	68.8%
Interaction Through Role Play	60.0%
Confidence Development	61.3%

The questionnaire and semi-structured interview data provided complementary information regarding students' perceptions and learning experiences during the implementation of the AI-Assisted SCENE Model. The percentages presented in Table 2 represent the proportion of students who selected positive responses (*Agree* and *Strongly Agree*) for each questionnaire dimension (n = 40). Overall, students reported positive perceptions across all measured dimensions, although the level of positive responses varied among the five aspects. Qualitative findings further revealed that students consistently described the learning activities as engaging, collaborative, and supportive. The highest positive response was found in the Learning Process Clarity dimension (85.0%), indicating that students generally understood the sequence of learning activities implemented through the AI-Assisted SCENE Model. Positive responses were also reported for AI-Assisted Media Utility (75.6%), suggesting that students perceived the AI-assisted learning materials as helpful in supporting dialogue preparation and speaking practice. These findings were further supported by interview data. One student stated, *"The AI model really helped me, especially in improving my pronunciation. Some vocabulary was unfamiliar to me, but the AI provided examples of how to use and pronounce the expressions, making them easier to imitate"* (Student 4). Another student explained, *"The AI viSETELAH REVISI INIdeo was very helpful because it showed me how to pronounce the dialogue correctly, so I could imitate the pronunciation more easily"* (Student 5). These interview excerpts illustrate that students perceived the AI-assisted materials as useful for pronunciation practice, speaking preparation, and increasing their confidence before performing role-play activities.

DISCUSSION

This finding presents a different perspective from previous research, which suggested that many EFL students remained highly dependent on teacher guidance and experienced difficulties in developing speaking skills independently. The classroom observations and interview findings in the present study indicate that the AI-Assisted SCENE Model provided a structured instructional sequence that encouraged students to participate actively throughout the learning process. Beginning with essential questions and collaborative planning, students were guided to discuss ideas, organize role-play dialogues, and prepare their speaking tasks before performing. Furthermore, the use of AI-assisted learning materials enabled students to observe pronunciation models and dialogue examples, which supported their preparation prior

to classroom performance. This interpretation is consistent with (Englmeier, 2025), who emphasized that AI-assisted scaffolding can support learners in preparing language output while promoting greater learner autonomy. For example, Student 4 explained, *“The AI model really helped me, especially in improving my pronunciation... the AI provided examples, making them easier to imitate,”* indicating that AI-assisted scaffolding functioned as practical support during speaking preparation rather than replacing the teacher's instructional role.

Previous studies have frequently reported challenges related to students' engagement and classroom interaction during speaking activities (Maisarah et al., 2026). In the present study, classroom observations, questionnaire responses, and interview findings consistently indicated that students actively participated in collaborative speaking activities throughout the implementation of the AI-Assisted SCENE Model. During the *Enacting the Roles* stage, students worked collaboratively to rehearse and perform their dialogues, while the *Next-Level Assessment* stage provided opportunities for teacher and peer feedback before students reflected on their performance during the *Evaluating the Experience* stage. This structured sequence appeared to encourage greater participation and interaction during classroom speaking activities. These findings are consistent with (Darmawansah et al., 2025), who reported that AI-supported role-play activities promote communicative interaction and participation by providing meaningful opportunities for speaking practice.

The findings also suggest that students' confidence developed gradually throughout the implementation process. Although several students initially reported feeling nervous and afraid of making mistakes, interview data indicated that collaborative peer support and AI-assisted learning materials helped them prepare more confidently before performing. For instance, Student 8 stated, *“The role-play performance made me feel more confident than before,”* while Student 6 explained that *“At first I was hesitant and afraid before the role-play, but afterward I became more confident.”* These responses illustrate that students perceived greater confidence as they progressed through the learning activities. This finding is consistent with (Aldamen & Almashour, 2023), who reported that AI-assisted speaking practice can reduce speaking anxiety and encourage students' willingness to communicate in supportive learning environments (Natasya et al., 2026). However, these findings should be interpreted within the context of this study, which was conducted in a single Indonesian EFL senior high school classroom. Rather than demonstrating the effectiveness of the AI-Assisted SCENE Model, the findings provide contextual evidence that a structured instructional framework integrating AI-assisted learning, Project-Based Learning, and role-play can support students' participation, speaking performance, and learning experiences during classroom implementation.

CONCLUSION

This study concludes that the implementation of the AI-Assisted SCENE Model provided a structured instructional framework for teaching speaking in an Indonesian EFL senior high school classroom. Through five interconnected procedures Starting with Essential Questions, Collaborative Planning and Scheduling, Enacting the Roles, Next-Level Assessment, and Evaluating the Experience the model facilitated collaborative learning, AI-assisted speaking practice, peer feedback, and reflective activities throughout the instructional process. The descriptive findings showed that students obtained a mean speaking score of 20.6 (*Good*) during the first role-play activity and 21.3 (*Very Good*) during the second role-play

activity. In addition, questionnaire and interview findings indicated that students generally perceived the learning process as engaging, collaborative, and supportive, particularly in terms of learning process clarity and the usefulness of AI-assisted learning materials. These findings should be interpreted within the specific context of this study, which involved a single class of forty eleventh-grade students at one Indonesian Islamic senior high school. Therefore, the findings are intended to provide a contextual description of the implementation of the AI-Assisted SCENE Model rather than to establish its effectiveness or to generalize the results to other educational settings. This study has several limitations. First, it was conducted in a single classroom using purposive sampling, which limits the transferability of the findings to different contexts. Second, the descriptive qualitative design focused on describing classroom implementation and students' learning experiences rather than examining causal relationships or long-term speaking development. Future research is recommended to investigate the implementation of the AI-Assisted SCENE Model across different educational levels, schools, and learning contexts involving more diverse participants. Further studies may also compare different AI-assisted learning platforms or employ longitudinal and mixed-methods designs to explore students' speaking development and learning experiences over extended instructional periods.

REFERENCES

- Afshar, H. S., & Naser, R. (2023). Mixed Methods Research in Applied Linguistics: The Status quo of the Current Issues and Practices. *Iranian Journal of Language Teaching Research*, 11(1), 49–74.
- Ainan, N., Waty, K. F. R., & Muhammad, D. (2026). The role of ChatGPT's voice conversation feature in enhancing EFL students' speaking confidence. *ELTIN JOURNAL Journal of English Language Teaching in Indonesia*, 14(1), 167–180.
- Albedah, F. (2025). Research Quarterly Artificial Intelligence in Language Education: A Systematic Review of Multilingual Applications , Large Language Models , and Emerging Challenges. *Language Teaching Research Quarterly*, 49, 247–268.
- Aldamen, H., & Almashour, M. (2023). AI as a reflective partner in EFL speaking: A qualitative study informed by cyborg psychology. *Frontiers in Psychology*, 17(1786617). <https://doi.org/10.3389/fpsyg.2026.1786617>
- Darmawansah, D., Jen, G., & Lin, C. J. (2025). An artificial intelligence - supported GFCA learning model to enhance L2 students ' role - play performance , English speaking and interaction mindset. *Educational Technology Research and Development*, 73(3), 1451–1479. <https://doi.org/10.1007/s11423-025-10453-6>
- Daud, A., Aulia, A. F., Muryanti, Harfal, H. Z., Nabilla, O., & Ali, H. S. (2025). Integrating Artificial Intelligence Into English Language Teaching: A Systematic Review. *European Journal of Educational Research*, 14(2), 677–691. <https://doi.org/https://doi.org/10.12973/eu-jer.14.2.677>
- Englmeier, K. (2025). Scaffolding Autonomy: AI-Augmented Self-Paced Learning Environments for Sustainable Learning Outcomes. *Human Systems Engineering and Design (IHSED2025)*, 198, 181–188. <https://doi.org/https://doi.org/10.54941/ahfe1006774>
- Fu, X., & Li, Q. (2025). Effectiveness of Role-play Method: A Meta-analysis. *International Journal of Instruction*, 18(1), 309–324.
- Julianda, Fauzi, A., Yani, I., & Rahman, M. A. B. H. A. (2026). Transforming Social Studies Learning in MI/SD through the Integration of Problem-Based Learning and Augmented

- Reality to Strengthen HOTS: A Literature Review: English. *International Journal of Education, Language, and Social Science*, 4(1), 104–117. <https://doi.org/10.62612/ijelass.v4i1.91>
- Lee, S., Choe, H., Zou, D., Jeon, J., Group, F., Lee, S., & Zou, D. (2026). Generative AI (GenAI) in the language classroom: A systematic review. *Interactive Learning Environments*, 34(1), 335–359. <https://doi.org/10.1080/10494820.2025.2498537>
- Li, H. (2023). Unveiling the Mechanisms: How AI-Powered Tools Alleviate Speaking Anxiety in Chinese EFL Learners. *Journal of Education and Educational Research*, 18(1), 823–837.
- Mahvelati, E. H. (2026). Mixed-Methods Analysis of Pre-Class Input-Driven Exposure and Linguistically Focused Instruction in Flipped EFL Speaking Instruction. *International Journal of Intruction*, 19(2), 661–680.
- Maisarah, Rohman, N., Abidah, & Salleh, S. B. (2026). INTERNALIZING RELIGIOUS VALUES THROUGH HABITUATION AND MODELING METHODS IN SEKOLAH RENDAH INTEGRITAS TERAS ISLAM (SRITI) AL-QAWWAM. *JURNAL ILMIAH DIDAKTIKA: Media Ilmiah Pendidikan dan Pengajaran*, 26(2), 171–186. <https://doi.org/10.22373/jid.v26i2.33128>
- Mustamir. (2024). Indonesian EFL Learners' Speaking Anxiety: Insights from a Meta-Synthetic Analysis. *Journal of English Education*, 12(2), 509–518.
- Natasya, A. S., Rohman, N., & Andhika, M. R. (2026). THE INFLUENCE OF THE PICTURE AND PICTURE MODEL ON THE LEARNING OUTCOMES OF SBDP MADRASAH IBTIDAIYAH STUDENTS. *JURNAL TARBIYAH*, 33(1), 60–75. <https://doi.org/10.30829/tar.v33i1.5506>
- Pham, A. N. (2022). The Relationship between Teachers' Interaction Strategies and Student Oral Involvement. *Essays in Education*, 28(1).
- Polat, A. (2025). Thematic Analysis in Qualitative Research: Common Pitfalls and Practical Insights for Academic Writing. *International Journal of Qualitative Methods*, 24, 1–10. <https://doi.org/10.1177/16094069251372835>
- Sawitri, Y. (2024). Implementasi PjBL dengan strategi role play untuk meningkatkan kemampuan berbicara siswa kelas TL SMK negeri 1 Luragung dalam pembelajaran asking and giving opinion. *JGURUKU: Jurnal Penelitian Guru*, 2, 1–8.
- Setianingsih, T., & Sumarni, B. (2024). Investigating EFL Students' Speaking Skills Viewed from Self-Efficacy: Instructional Experiences Learned from Seniors High Schools. *JOLLS: Journal of Language and Literature Studies*, 4(4), 883–894.
- Shravani, K. (2024). Empowering language learning through dynamic role- play in ELT. *International Journal of Applied Research*, 10(1), 187–189.
- Yana, N. F. (2026). Classroom Dynamics And Speaking Mastery In Ai-Integrated Mobile-Assisted Language Learning: A Study In Indonesian Efl Context. *SECONDARY: Jurnal Inovasi Pendidikan Menengah (JIPM)*, 6(2), 275–284. <https://doi.org/https://doi.org/10.51878/secondary.v6i2.9484>
- Yassin, B., Almousa, N., & Almousa, A. A. (2026). Artificial intelligence in EFL higher education: Effects on academic performance and social competence. *Frontiers in Education*, 11(March). <https://doi.org/10.3389/feduc.2026.1736757>