

Utilizing Virtual Reality (VR) Environments to Enhance Real-Life Speaking Situations at Private University in Central Java

Erna Sunarti^{*1}, Hermansyah²

¹Universitas Islam Sultan Agung, Indonesia

²Universitas PGRI Palembang, Indonesia

*Corresponding author erna.sunarti@unissula.ac.id

Abstrak

Penelitian ini bertujuan untuk menganalisis efektivitas penggunaan Virtual Reality (VR) dalam meningkatkan keterampilan berbicara mahasiswa Program Studi Sastra Inggris di Universitas Islam Sultan Agung (Unissula). Penelitian menggunakan desain mixed-methods dengan melibatkan 38 mahasiswa semester empat yang dibagi secara merata ke dalam kelompok eksperimen (VR) dan kelompok kontrol (metode konvensional). Data kuantitatif diperoleh melalui pre-test dan post-test pada aspek kefasihan berbicara serta tingkat kepercayaan diri, sementara data kualitatif dikumpulkan melalui wawancara, survei terbuka, dan observasi dosen. Hasil analisis menunjukkan bahwa kelompok VR mengalami peningkatan signifikan baik dalam kefasihan maupun kepercayaan diri berbicara dibandingkan kelompok kontrol. Selain itu, pengalaman belajar dalam lingkungan VR menciptakan suasana yang mendukung, kolaboratif, dan memotivasi mahasiswa untuk berani berkomunikasi secara spontan. Implikasi penelitian ini menyoroti potensi besar integrasi teknologi imersif dalam pembelajaran bahasa, serta mendorong pengembangan kurikulum berbasis teknologi di pendidikan tinggi Indonesia.

Kata Kunci: Virtual Reality, keterampilan berbicara, kepercayaan diri, pembelajaran bahasa, mixed-methods, pendidikan tinggi

Abstract

This study aims to analyze the effectiveness of Virtual Reality (VR) in enhancing the speaking skills of students in the English Literature Program at Universitas Islam Sultan Agung (Unissula). Employing a mixed-methods design, the research involved 38 fourth-semester students, evenly divided into experimental (VR) and control (conventional method) groups. Quantitative data were collected through pre- and post-tests measuring speaking fluency and confidence, while qualitative insights were obtained from interviews, open-ended surveys, and instructor observations. The findings indicate that the VR group achieved significantly greater improvements in both fluency and confidence compared to the control group. Furthermore, the VR learning environment fostered a supportive, collaborative, and motivating atmosphere, encouraging students to communicate spontaneously. These results highlight the substantial potential of immersive technology integration in language education and support the advancement of technology-oriented curricula in Indonesian higher education.

Keywords: Virtual Reality, speaking skills, confidence, language learning, mixed-methods, higher education

History:

Received : 11 August 2026

Revised : 20 August 2026

Accepted : 22 August 2026

Published : 24 August 2026

Publisher: Horizon Edukasi Prima Indonesia

Licensed: This work is licensed under
a [Creative Commons Attribution 4.0 License](https://creativecommons.org/licenses/by-sa/4.0/)



1. INTRODUCTION

The landscape of English language education in the twenty-first century is undergoing substantial transformation as globalization, digitalization, and increasingly diverse learner needs continue to reshape the purposes and practices of language learning. As the dominant lingua franca of international communication, English has moved beyond its conventional position as an academic subject and has become an essential means of accessing academic opportunities, advancing professional careers, and participating meaningfully in global discourse (Sakhiyya, 2019; Sifakis, 2023; Al Awlaqi & Ghozali, 2023). This development has consequently strengthened the need for language education to move beyond the acquisition of grammatical structures and vocabulary toward the cultivation of comprehensive communicative competencies that enable learners to function effectively in authentic contexts (Shi et al., 2024; Oktari, 2024; Laia, 2023).

Within this changing educational landscape, speaking has gained particular prominence as a productive and interactive language skill (Zou et al., 2023; Bygate, 2018; Miftahul Jannah et al., 2025). The capacity to communicate spontaneously, participate in discussions, negotiate meaning, exchange perspectives, and collaborate in problem-solving is increasingly valued across academic and professional settings. These demands are especially relevant to students enrolled in English Literature programs, including those at Universitas Islam Sultan Agung (Unissula). Their academic responsibilities extend beyond interpreting and critically analyzing literary texts; they are also expected to construct sophisticated arguments, justify their interpretations, and actively participate in intellectual discourse through English.

Despite the growing recognition of communicative competence, a substantial discrepancy persists between classroom-based speaking practices and the communicative demands learners encounter beyond the university. In Indonesian higher education, conventional pedagogical practices involving scripted dialogues, memorization, and formulaic oral presentations remain relatively common (Hockly, 2016; Suryana et al., 2020; Tuspekova et al., 2020). Although such approaches may provide controlled opportunities for practicing linguistic forms, they may offer insufficient preparation for the spontaneity, unpredictability, and contextual complexity characteristic of authentic communication. This limitation becomes particularly evident when students who perform successfully in written assignments or rehearsed presentations are confronted with situations requiring spontaneous expression, immediate responses, or negotiation of meaning (Godwin-Jones, 2016; Saraswati et al., 2021; Fitria, 2024).

The challenges associated with conventional speaking instruction are further intensified by affective factors. For literature students, academic expectations frequently involve engaging with complex texts, discussing alternative interpretations, defending critical perspectives, and presenting arguments persuasively in English. These demands may increase students' anxiety and self-consciousness, particularly when they are required to communicate extemporaneously in front of peers or within unfamiliar communicative situations. Previous research has identified speaking anxiety, fear of making mistakes, and inadequate self-confidence as significant affective barriers to oral language development in EFL contexts (Yıldırım, 2023; Yadollahi et al., 2024). Accordingly, the development of speaking proficiency requires attention not only to linguistic competence but also to the emotional and psychological conditions in which communication takes place.

Recent advances in educational technology have opened new possibilities for addressing these limitations, particularly through the use of Virtual Reality (VR). VR enables educators to construct immersive and interactive environments that approximate real-world communicative situations (Lin & Lan, 2015; Parmaxi, 2020). Through simulated settings such as cafés, international forums, social gatherings, or literary discussion spaces, learners can participate in communicative activities in which English serves a meaningful functional purpose rather than

being practiced exclusively through decontextualized classroom exercises. The immersive characteristics of VR allow learners to experience contextualized communication while maintaining a controlled environment in which they can experiment with language, rehearse responses, and gradually develop their communicative competence.

The potential contribution of VR extends beyond linguistic development to the affective dimension of language learning. Immersive environments can provide learners with a relatively safe space for experimentation and communicative risk-taking, potentially reducing the immediate pressure associated with face-to-face performance (Rahimi & Yadollahi, 2021; Godwin-Jones, 2016). Such conditions may encourage greater willingness to communicate and foster confidence in expressing ideas. This affordance is particularly meaningful for literature students, who are expected to articulate sophisticated, nuanced, and sometimes controversial interpretations with confidence, clarity, and sensitivity. Therefore, VR may be understood not merely as a technological supplement but as an alternative pedagogical environment capable of integrating linguistic, cognitive, social, and affective dimensions of speaking development.

International research has provided encouraging evidence regarding the potential of VR for language education. Previous studies have reported that immersive technologies can contribute to improvements in speaking fluency, learner confidence, motivation, and engagement (Lin & Lan, 2015; Parmaxi, 2020; Yıldırım, 2023). The context-rich nature of VR may also facilitate the development of broader competencies that support effective communication, including adaptability, collaboration, and creative thinking. These competencies are particularly relevant to contemporary academic and professional environments, where successful communication increasingly requires learners to respond flexibly to diverse interlocutors, contexts, and communicative demands.

Nevertheless, important empirical and contextual gaps remain. The adoption of VR in Indonesian language education is still relatively limited, while existing research has predominantly examined vocabulary or grammar learning or has focused on primary and secondary school contexts. Comparatively little research has investigated the potential of VR for developing higher-order speaking skills among university students, particularly English Literature students whose academic and professional trajectories depend on their ability to communicate complex ideas effectively in English (Bourgonjon et al., 2016; Zhang & Zou, 2022). Furthermore, the implementation of VR may be influenced by practical considerations, including unequal access to technological resources, variations in teacher readiness, infrastructure limitations, and students' unfamiliarity with immersive learning environments.

An additional gap concerns the limited attention given to students' perspectives regarding VR-mediated language learning in Indonesian higher education. Much of the existing literature has emphasized measurable learning outcomes, whereas comparatively less research has explored learners' lived experiences, attitudes, motivations, and perceptions of immersive learning. Understanding how students experience VR and how the technology influences their engagement, sense of agency, and participation is essential because the pedagogical effectiveness of educational technology depends not solely on its technical affordances but also on how learners perceive and interact with it. A student-centered investigation can therefore provide valuable insights for designing technology-mediated speaking instruction that is both pedagogically effective and responsive to learners' experiences.

In response to these theoretical and practical gaps, the present study investigates the effectiveness of VR-based speaking activities in the English Literature Program at Universitas Islam Sultan Agung (Unissula) and explores students' perceptions of VR as a medium for developing speaking skills. The study is guided by two central research questions: (1) Does VR-based speaking practice result in greater improvement in students' speaking fluency and confidence than conventional classroom speaking activities? and (2) How do students perceive

the use of VR for learning speaking skills? By examining both learning outcomes and students' experiences, the study seeks to provide a more comprehensive understanding of the pedagogical value of immersive technology in higher education.

The study is situated within Unissula's broader educational aspiration to prepare graduates who are academically competent, ethically grounded, and capable of participating effectively in an increasingly interconnected world. The integration of VR into speaking instruction may provide literature students with opportunities to strengthen communicative competence while simultaneously developing confidence, adaptability, intercultural awareness, and resilience. Beyond its immediate instructional implications, the study is expected to contribute to the broader discourse on technology-mediated language education in Indonesia and comparable contexts by generating insights relevant to curriculum development, teacher preparation, and the strategic integration of immersive technologies.

Ultimately, this study conceptualizes VR not simply as a technological innovation, but as a potential catalyst for transformative and human-centered language learning. By creating opportunities for learners to engage with simulated yet meaningful communicative situations, VR may help bridge the gap between controlled classroom practice and the complex demands of real-world communication. In this sense, the integration of immersive technology represents an opportunity to advance a more holistic approach to English language education—one that combines linguistic and academic development with confidence, adaptability, intercultural competence, and the broader personal capacities required for meaningful participation in contemporary global society.

2. METHOD

The research was conducted in the Literature Program at Universitas Islam Sultan Agung (Unissula) and focused on fourth-semester students. The total population involved in the study was 76 students, all of whom were enrolled in the same academic level to ensure homogeneity in terms of prior exposure to English language instruction and curriculum content. From this population, a purposive sampling technique was employed to select participants who met the criteria of having intermediate English proficiency, as determined by the program's placement test. The final sample comprised 38 students, with equal distribution into two groups: the experimental (VR) group and the control group, each consisting of 19 students. This matching process helped eliminate confounding variables related to age, language ability, and academic experience.

Table 1. Population and Sample of the Study

Group	Population (N)	Sample Size (n)	Description
VR Group	38	19	Literature students participating in VR-based speaking activities
Control Group	38	19	Literature students using conventional classroom methods
Total	76	38	Unissula Literature Program students (Semester 4, similar proficiency)

The population of this study comprised 76 students from the Unissula Literature Program, all in their fourth semester. Employing a purposive sampling technique, the study selected 38 participants, evenly divided into the experimental (VR) group and the control group, with 19 students in each. Careful matching ensured comparability in terms of age, academic background, and language proficiency, thereby supporting the validity of both the quantitative and qualitative analyses conducted. This design allowed for robust comparisons between groups and strengthened the mixed-methods approach used in the research (Neuman, 2019; Creswell &

Plano Clark, 2023). Table 1 outlines the distribution of the population and sample in this study. The table shows that both groups were drawn from the same population pool to ensure comparability. The VR group consisted of students who participated in VR-based speaking activities, while the control group engaged in conventional classroom-based speaking practices. This design allowed for direct comparison between the two instructional approaches.

The study utilized a mixed-methods research design to capture both the measurable and experiential impacts of VR integration. Quantitative data were collected through pre- and post-tests that assessed students' speaking fluency using an analytic rubric, as well as self-reported confidence levels on a 10-point scale (Robinson, 2024). These instruments were administered before and after the intervention period for both groups. To analyze quantitative outcomes, paired and independent samples t-tests were conducted. The paired t-test measured each group's progress over time, while the independent t-test compared overall gains between the VR and control groups. Additionally, effect sizes were calculated to determine the practical significance of the changes, ensuring that findings extended beyond statistical significance to genuine educational impact. On the qualitative side, data were collected through semi-structured interviews, open-ended survey responses, and instructor observation notes. Thematic analysis was applied to this data, allowing the researcher to identify patterns related to changes in motivation, anxiety, collaboration, and perceived learning. This approach ensured that students' and instructors' voices were meaningfully represented in the findings (Braun & Clarke, 2022; Nowell et al., 2017).

Throughout the intervention, the VR group participated in a series of immersive speaking activities designed to mirror real-life communicative scenarios, such as virtual cafés, debates, and collaborative tasks. The control group, in contrast, followed a traditional curriculum that emphasized scripted dialogues and structured oral presentations. Both groups received the same amount of instructional time and general topic coverage to maintain experimental integrity. Ethical considerations were carefully observed. Participation in the study was voluntary, and all students provided informed consent. Confidentiality and anonymity were strictly maintained throughout data collection, analysis, and reporting to protect participant privacy and ensure ethical compliance. By integrating quantitative rigor with qualitative depth, this research methodology offered a comprehensive understanding of the effects of VR-based speaking practice. The approach made it possible to not only detect measurable gains in fluency and confidence, but also to explore the transformative experiences and personal growth that students encountered in the process. This holistic perspective enriched the study's conclusions and underscored the multifaceted potential of immersive technology in language education.

3. RESULT AND DISCUSSION

The quantitative findings of this study reveal a striking divergence between the VR group and the control group in both speaking fluency and self-confidence. The VR group experienced a notable increase in mean fluency scores, rising from 4.2 (SD = 0.5) in the pre-test to 5.7 (SD = 0.4) in the post-test. Conversely, the control group's mean fluency improved only modestly, from 4.1 (SD = 0.6) to 4.8 (SD = 0.5). Statistical analysis confirmed that the improvement in the VR group was highly significant ($t(19) = 8.24$, $p < .01$) and represented a large effect size (Cohen's $d = 1.76$). These results suggest that the immersive, contextualized experiences afforded by VR contributed substantially to students' oral language development. In addition to increases in fluency, the VR group also demonstrated a significant enhancement in speaking confidence. The average self-reported confidence score for VR participants jumped from 5.6 to 8.4 on a 10-point scale, whereas the control group's improvement was less dramatic, shifting from 5.7 to 6.9. This pattern indicates that VR environments, by simulating authentic and engaging communicative situations, not only bolster linguistic competence but also foster

psychological readiness to speak. Students' willingness to participate and their frequency of volunteering for speaking tasks increased noticeably after the intervention.

Further analysis of students' spoken performances revealed qualitative improvements among the VR group. Recordings of post-test speaking tasks showed a reduction in hesitation markers such as "um" and "uh," smoother pacing, and the use of more idiomatic and contextually appropriate expressions. Students in the VR group frequently demonstrated greater spontaneity and depth in their responses, engaging in more natural turn-taking and employing a wider range of vocabulary than observed in the control group. These qualitative gains underscore the value of realistic, pressure-free practice for skill transfer to real-world communication. Throughout the six-week intervention, the VR group displayed a progressive increase in classroom engagement. Attendance rates for VR sessions were consistently high, and students expressed greater enthusiasm for participating in speaking activities compared to their experiences in conventional classes. Many students attributed their improved motivation to the novelty and excitement of using VR technology, as well as the perceived authenticity of the tasks. This sustained engagement is particularly noteworthy given the common challenge of maintaining student interest in language learning over time.

Observational data from instructors further highlighted the transformation in student behavior. Teachers noted that VR participants were more likely to initiate conversations, ask follow-up questions, and engage playfully with the content of the simulated scenarios. Over time, students overcame initial difficulties with VR controls, and episodes of discomfort or technical confusion became rare. By the end of the intervention period, most VR group members navigated the virtual environments with confidence, collaborating effectively with peers and demonstrating increased independence in managing communicative tasks. Finally, the control group, while demonstrating some progress, did not exhibit the same level of growth or enthusiasm. Improvements in fluency and confidence were present but more incremental, and classroom participation remained more reserved and teacher-driven. These contrasts reinforce the conclusion that immersive VR experiences can serve as a powerful catalyst for both linguistic and affective development in EFL learners, especially those in academic tracks like literature that require advanced communicative skills.

Table 1. Quantitative Results - Speaking Fluency and Confidence Scores

Group	Pre-Test Fluency (Mean $\pm$ SD)	Post-Test Fluency (Mean $\pm$ SD)	Pre-Test Confidence (Mean/10)	Post-Test Confidence (Mean/10)
VR Group	4.2 $\pm$ 0.5	5.7 $\pm$ 0.4	5.6	8.4
Control Group	4.1 $\pm$ 0.6	4.8 $\pm$ 0.5	5.7	6.9

Table 1 demonstrates a considerably greater improvement in both speaking fluency and communication confidence among students in the VR group than among those in the control group. The mean fluency score of the VR group increased from 4.2 to 5.7, representing a gain of 1.5 points, whereas the control group improved from 4.1 to 4.8, with a gain of only 0.7 points. A similar pattern was observed for confidence. The VR group's mean confidence rating increased from 5.6 to 8.4 on a 10-point scale, while the control group showed a more limited increase from 5.7 to 6.9. These findings suggest that VR-supported speaking activities generated substantially greater improvements in students' oral fluency and confidence than conventional classroom-based speaking instruction.

The quantitative findings were further supported by qualitative evidence obtained from semi-structured interviews, open-ended questionnaire responses, and instructor observation records. The analysis revealed several interconnected themes concerning students' linguistic

development, affective responses, classroom participation, and broader learning experiences. Collectively, these themes indicate that the contribution of VR extended beyond measurable improvements in speaking performance and influenced how students perceived themselves as English users.

The first and most prominent theme was increased speaking confidence. Students in the VR group frequently described feeling more comfortable and less constrained when communicating in English. They associated this increased confidence with the immersive and relatively non-threatening nature of the virtual environment. Several participants explained that they were less concerned about making mistakes and found it easier to express their thoughts spontaneously. The virtual setting appeared to create psychological distance from direct peer evaluation, allowing students to communicate with fewer concerns about embarrassment or negative judgment. This finding suggests that VR may provide an environment in which learners are more willing to experiment with language and gradually develop a stronger sense of communicative self-efficacy (Shahnazi et al., 2021; Wang et al., 2024).

Closely related to increased confidence was the theme of reduced speaking anxiety. Participants frequently characterized the VR environment as more comfortable and less intimidating than conventional face-to-face speaking activities. The use of avatars and simulated situations appeared to reduce the perceived pressure of being directly observed by classmates. Consequently, students were more willing to take linguistic risks, experiment with unfamiliar vocabulary, and produce more complex grammatical structures. Rather than perceiving mistakes as evidence of failure, students increasingly viewed them as a natural component of the learning process. This finding is particularly important in EFL contexts, where fear of errors and negative evaluation can substantially restrict students' willingness to communicate.

A third major theme concerned greater classroom engagement and peer collaboration. Students commonly described the VR sessions as enjoyable and collaborative, with some comparing the experience to a team-based activity. The interactive nature of the virtual environment encouraged students to assist one another with both technical procedures and communicative tasks. Informal interaction, humor, and shared experiences involving avatars contributed to a more positive classroom atmosphere. These observations indicate that VR did not merely place students individually within a digital environment; rather, it created opportunities for social interaction and peer-supported learning.

The qualitative data also pointed to a meaningful development in communicative competence. Instructor observations indicated that students' spoken production during VR activities became progressively longer, more spontaneous, and more closely aligned with patterns of authentic conversation. Analysis of speaking recordings suggested fewer hesitation markers and pauses, reduced dependence on fillers, and increased use of connected and idiomatic expressions. Students also reported that the virtual situations encouraged them to formulate ideas directly in English rather than mentally translating from their first language. The contextualized nature of the activities may therefore have helped students shift from controlled language production toward more spontaneous and purposeful communication.

Another important finding involved motivation and enthusiasm toward speaking activities. Students in the VR group demonstrated considerable anticipation for the sessions and frequently contrasted the experience with the repetitive character of conventional speaking lessons. Their enthusiasm was reflected in active classroom participation and more consistent attendance. The immersive and interactive characteristics of VR appeared to transform speaking practice from a routine academic requirement into an experience that students perceived as novel, meaningful, and enjoyable. This suggests that the motivational value of VR may complement its linguistic benefits by encouraging students to participate more actively in the learning process.

The intervention also appeared to contribute to digital literacy, adaptability, and resilience. At the beginning of the intervention, some students experienced difficulties understanding the VR controls and navigating the virtual environment. However, these initial difficulties gradually diminished as students became more familiar with the technology. By the third session, most participants were reportedly able to operate the system with considerably greater independence. Importantly, overcoming these challenges collectively encouraged students to support one another and strengthened their capacity to adapt to unfamiliar technological environments. Thus, the learning process involved not only language development but also the acquisition of practical digital competencies and greater confidence in dealing with technological challenges.

The comparison between the two groups becomes particularly meaningful when the numerical gains are considered alongside the qualitative evidence. The 1.5-point increase in fluency and 2.8-point increase in confidence among VR participants were substantially larger than the corresponding gains of 0.7 points and 1.2 points in the control group. These differences suggest that the intervention affected more than students' performance scores. The improvement appears to have been accompanied by changes in students' attitudes toward speaking, their willingness to participate, and their perception of themselves as capable English communicators. In this respect, the findings are consistent with previous research emphasizing the potential of immersive and authentic learning environments to support oral language development while reducing language-related anxiety (Lin & Lan, 2015; Yıldırım, 2023; Rahimi & Yadollahi, 2021).

A more detailed examination of students' speaking performances revealed several qualitative changes in their oral production. Post-test recordings indicated reduced hesitation, more natural speech pacing, and greater incorporation of idiomatic expressions. Students increasingly described their speech as feeling more natural and less constrained, while instructors observed that their responses became longer, richer, and more elaborated over the course of the intervention. The contextualized nature of VR appeared to help learners connect language with specific communicative situations, making it easier for them to retrieve and apply appropriate expressions during interaction.

The intervention also strengthened students' sense of belonging and classroom community. Participants frequently characterized the VR sessions as enjoyable, supportive, and collaborative. Students reported assisting one another when encountering technical difficulties or communicative problems, which contributed to a perception that they were learning collectively rather than competing individually. This collaborative dimension is significant because effective language development is not solely dependent on individual practice; opportunities for meaningful interaction and peer support can also contribute to learners' confidence and willingness to communicate.

Interestingly, the VR environment appeared to facilitate changes in the participation patterns of some students. Individuals who were generally quiet or reluctant to speak during conventional classroom activities became more active during VR sessions. Some students reportedly volunteered to initiate conversations, assume leadership roles, or coordinate group activities (Al-Ansi et al., 2023). Instructor observations similarly suggested that students who had previously demonstrated limited participation became more proactive and willing to take responsibility for communicative tasks. These changes indicate that VR may provide alternative participation conditions that enable less confident learners to engage more actively.

The recurring theme of reduced anxiety provides further insight into these behavioral changes. Students reported that the presence of avatars created a degree of psychological distance that made mistakes feel less consequential. The virtual environment consequently appeared to transform errors from potentially embarrassing events into ordinary opportunities for practice. This finding is particularly relevant from an affective perspective because a reduction in

perceived social threat can encourage learners to take greater communicative risks. In turn, increased risk-taking may provide more opportunities for meaningful language production and gradual improvement in speaking competence.

The VR intervention was also associated with consistently higher levels of motivation and learning excitement. Students expressed greater anticipation toward speaking sessions and perceived the activities as more engaging than conventional classroom exercises. The combination of immersion, interaction, novelty, and simulated real-world situations appeared to make speaking practice more personally meaningful. Rather than experiencing English speaking as a repetitive academic task, students increasingly perceived it as an opportunity to participate in an engaging communicative experience.

Furthermore, the findings demonstrate the importance of adaptability and resilience in technology-mediated learning. Although some participants initially experienced confusion or minor difficulties when operating the VR system, these barriers gradually became manageable through repeated practice and peer assistance. The process of collectively learning how to use the technology contributed to a stronger sense of shared accomplishment. In this respect, technical challenges themselves became part of the learning experience, encouraging students to develop persistence and problem-solving strategies.

Instructor observations provided additional evidence of the intervention's broader impact. Teachers reported that VR participants became increasingly proactive in initiating and sustaining conversations, experimenting with humor, and responding creatively to communicative situations. At the same time, students appeared less dependent on direct teacher assistance and more willing to provide support to their peers. This movement from teacher-directed participation toward greater learner autonomy represents an important pedagogical outcome because independent engagement and peer interaction are essential components of sustainable language learning.

Taken together, the findings indicate that the value of VR in this context extends beyond improvements in measurable speaking outcomes. The convergence of quantitative data, student accounts, speaking-performance evidence, and instructor observations demonstrates that immersive learning can simultaneously influence linguistic, affective, social, and technological dimensions of students' development. The intervention provided students with opportunities to practice English in contextualized situations while also encouraging confidence, autonomy, collaboration, curiosity, and persistence.

Overall, the integration of VR into the English Literature classroom appears to have created a more supportive, interactive, and learner-centered environment for speaking development. The substantially greater gains in fluency and confidence among the VR group, together with the qualitative evidence of reduced anxiety, increased participation, stronger peer collaboration, and greater motivation, suggest that VR can function as more than an instructional technology. It can serve as an environment in which learners develop both their ability to communicate in English and their confidence to participate in authentic social interaction. From a broader humanistic perspective, these findings highlight the potential of VR to foster not only language proficiency but also the personal and interpersonal capacities including courage, autonomy, adaptability, empathy, and collaboration that support meaningful communication and lifelong learning.

4. CONCLUSION

The findings of this study indicate that the integration of Virtual Reality (VR) into the Unissula Literature Program can substantially strengthen students' speaking fluency and communicative confidence when compared with conventional speaking instruction. The

immersive and contextually situated characteristics of VR create opportunities for learners to engage in simulated real-world communication, enabling them to use English in situations that approximate the complexity and spontaneity of authentic interaction. By providing a relatively psychologically secure environment, VR also appears to alleviate speaking-related anxiety and encourage students to take greater linguistic risks, experiment with unfamiliar expressions, and communicate more spontaneously. The convergence of quantitative improvements and qualitative evidence consequently demonstrates the potential of VR as a transformative medium for developing both linguistic competence and learners' confidence as English communicators.

Although the implementation was accompanied by several technical and logistical considerations, the overall outcomes demonstrate the feasibility and pedagogical promise of VR-supported speaking instruction. The findings suggest that immersive technology can contribute meaningfully to narrowing the persistent gap between controlled classroom practice and the communicative demands of real-world contexts, particularly when its implementation is supported by appropriate instructional planning, teacher guidance, and technological preparation. As educational technologies continue to develop, the strategic adoption of immersive and learner-centered approaches such as VR may become increasingly important for preparing students not only with stronger English proficiency but also with the confidence, autonomy, adaptability, and resilience required to participate effectively in an increasingly interconnected global society.

5. ACKNOWLEDGEMENT

The author wishes to express sincere gratitude to all participating students of the Unissula Literature Program, whose enthusiasm, commitment, and openness were fundamental to the success of this research. Their active engagement and thoughtful reflections not only enriched the data but also inspired the direction of the study. The author is also deeply thankful to the university's Language Center for their unwavering technical and logistical support, which ensured that the research activities ran smoothly and effectively. Genuine appreciation is extended to colleagues and mentors who generously provided critical feedback, shared valuable insights, and offered encouragement throughout every stage of the research process. Special thanks are due to the dedicated staff of the VR lab, whose expertise and assistance in managing the technology and facilitating the study sessions were indispensable. Without their collective efforts and collaboration, this research would not have been possible.

6. REFERENCES

- Al-Ansi, A. M., Jaboob, M., Garad, A., & Al-Ansi, A. (2023). Analyzing augmented reality (AR) and virtual reality (VR) recent development in education. *Social Sciences & Humanities Open*, 8(1), 100532. <https://doi.org/10.1016/j.ssaho.2023.100532>
- Al Awlaqi, H. A. S. M., & Ghozali, I. (2023). Is oral communication apprehension reasonable?: A study on sociocultural factors among Indonesian EFL learners. *REiLA: Journal of Research and Innovation in Language*, 5(3), 252–265. <https://doi.org/10.31849/reila.v5i3.16634>
- Bailey, K. M., & Savage, L. (1994). *New ways in teaching speaking*. TESOL.
- Bourgonjon, J., Vandermeersche, G., De Wever, B., Soetaert, R., & Valcke, M. (2016). Players' perspectives on the positive impact of video games: A qualitative content analysis of online forum discussions. *New Media & Society*, 18(8), 1732–1749. <https://doi.org/10.1177/1461444815569723>
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77–101. <https://doi.org/10.1191/1478088706qp063oa>
- Braun, V., & Clarke, V. (2022). Conceptual and design thinking for thematic analysis. *Qualitative Psychology*, 9(1), 3–26. <https://doi.org/10.1037/qup0000196>

- Bygate, M. (2018). *Speaking*. Oxford University Press.
- Chen, C. M., & Tsai, Y. N. (2023). Virtual reality in language learning: A review of empirical research. *Computers & Education*, 193, 104670. <https://doi.org/10.1016/j.compedu.2023.104670>
- Creswell, J. W., & Creswell, J. D. (2018). *Research design: Qualitative, quantitative, and mixed methods approaches* (5th ed.). SAGE Publications.
- Creswell, J. W., & Plano Clark, V. L. (2023). Revisiting mixed methods research designs twenty years later. *Handbook of Mixed Methods Research Designs*, 1(1), 21–36.
- Dörnyei, Z. (2001). *Motivational strategies in the language classroom*. Cambridge University Press.
- Fitria, T. N. (2024). Creative writing skills in English: Develop students' potential and creativity. *EBONY: Journal of English Language Teaching, Linguistics, and Literature*, 4(1), 1–17. <https://doi.org/10.37304/ebony.v4i1.10908>
- Gadelha, R. M. (2018). Interactive technologies: Virtual and augmented reality in the classroom. *Children and Libraries*, 16(2), 29–31. <https://doi.org/10.5860/cal.16.2.29>
- Godwin-Jones, R. (2016). Emerging technologies: Augmented reality and language learning: From annotated vocabulary to place-based mobile games. *Language Learning & Technology*, 20(3), 9–19. <https://www.lltjournal.org/item/2958>
- Hockly, N. (2016). *Focus on learning technologies*. Oxford University Press.
- Huang, H. M., & Liaw, S. S. (2018). An analysis of learners' intentions toward virtual reality learning based on constructivist and technology acceptance approaches. *International Review of Research in Open and Distributed Learning*, 19(1), 91–115. <https://doi.org/10.19173/irrodl.v19i1.2503>
- Krashen, S. D. (1982). *Principles and practice in second language acquisition*. Pergamon Press.
- Laia, I. F. (2023). Students' anxiety in speaking English at eighth grade students of SMP Negeri 3 Dharma Caraka Telukdalam. *Research on English Language Education*, 4(2), 30–39. <https://doi.org/10.57094/relation.v4i2.681>
- Lin, T. J., & Lan, Y. J. (2015). Language learning in virtual reality environments: Past, present, and future. *Journal of Educational Technology & Society*, 18(4), 486–497. <https://www.jstor.org/stable/jeductechsoci.18.4.486>
- Miftahul Jannah, D., Nuraisyah, D., Sumarni, S., Liswati, H. R., & Qamariah, Z. (2025). Innovative teaching with TELL: Enhancing speaking skills through digital applications. *Journal Innovation in Education*, 3(1), 138–146. <https://doi.org/10.59841/inoved.v3i1.2143>
- Minocha, S., & Reeves, A. J. (2021). Virtual reality and 3D animation in education: A review of the literature. *British Journal of Educational Technology*, 52(2), 560–577. <https://doi.org/10.1111/bjet.13045>
- Neuman, W. L. (2019). *Social research methods: Qualitative and quantitative approaches* (7th ed.). Pearson.
- Nowell, L. S., Norris, J. M., White, D. E., & Moules, N. J. (2017). Thematic analysis: Striving to meet the trustworthiness criteria. *International Journal of Qualitative Methods*, 16, 1–13. <https://doi.org/10.1177/1609406917733847>
- Oktari, N. F. (2024). *Investigating EFL students' strategies to overcome barriers in improving speaking skills through English club* [Undergraduate thesis, Universitas Islam Negeri Ar-Raniry Banda Aceh]. <https://repository.ar-raniry.ac.id/id/eprint/34541/>
- Parmaxi, A. (2023). Virtual reality in language learning: A systematic review and implications for research and practice. *Interactive Learning Environments*, 31(1), 172–184. <https://doi.org/10.1080/10494820.2020.1765392>
- Robinson, J. (2024). Likert scale. In *Encyclopedia of quality of life and well-being research*. Springer. https://doi.org/10.1007/978-3-031-17299-1_1654
- Sakhiyya, Z. (2019). English as a lingua franca: Perspectives for English language teaching and for teacher education. *Proceedings of the 3rd International Conference on English Language Teaching and Teacher Education*, 1–8. <https://doi.org/10.2991/eltlt-18.2019.24>

- Saraswati, N. A., Anam, S., & Purwati, O. (2021). Autonomous mobile-assisted language learning for young learners using Duolingo. *Celtic: A Journal of Culture, English Language Teaching, Literature and Linguistics*, 8(2), 235–246. <https://doi.org/10.22219/celtic.v8i2.16959>
- Shahnazi, H., Araban, M., Karimy, M., Basiri, M., Ghazvini, A., & Stein, L. (2021). A quasi-experimental study to improve health service quality: Implementing communication and self-efficacy skills training to primary healthcare workers in two counties in Iran. *BMC Medical Education*, 21(1), 369. <https://doi.org/10.1186/s12909-021-02796-4>
- Shi, C., Kassim, A., Raha, N., & Radzuan, M. (2024). Improving EFL learners' English public speaking performance through project-based learning strategy at tertiary level. *Language Teaching Research Quarterly*, 42, 126–144.
- Sifakis, N. (2023). Metacognitive and metalinguistic activities can raise ELF awareness: Why and how. *Journal of English as a Lingua Franca*, 12(1), 43–66. <https://doi.org/10.1515/jelf-2023-2006>
- Suryana, I., Hidantikarnillah, V., & Oktavianti, I. N. (2020). Enhancing students' English speaking skills through web-based teaching. *Eduvelop*, 3(2), 90–104. <https://doi.org/10.31605/eduvelop.v3i2.601>
- Tuspekova, A., Mustaffa, R., & Ismail, K. (2020). Understanding English speaking practice in public schools in Kazakhstan: A case study in Almaty. *3L: Language, Linguistics, Literature*, 26(1), 171–185. <https://doi.org/10.17576/3L-2020-2601-12>
- Wang, X., Gao, Y., Wang, Q., & Zhang, P. (2024). Relationships between self-efficacy and teachers' well-being in middle school English teachers: The mediating role of teaching satisfaction and resilience. *Behavioral Sciences*, 14(8), 629. <https://doi.org/10.3390/bs14080629>
- Yadollahi, S., Moloodi, A., & Rahimi, M. (2024). Analyzing the development of a longitudinal error-tagged English learner corpus: Exploring accuracy development in Iranian EFL learners' writing. *Journal of Modern Research in English Language Studies*, 12(1), 147–171.
- Yıldırım, G. (2020). The effects of virtual reality on EFL learners' speaking achievement, anxiety, and self-efficacy. *Computer Assisted Language Learning*, 33(7), 858–880. <https://doi.org/10.1080/09588221.2019.1619582>
- Zhang, H., & Zou, D. (2022). Applications of virtual reality in language learning: A systematic review. *Educational Technology Research and Development*, 70(2), 631–655. <https://doi.org/10.1007/s11423-021-10022-0>
- Zou, B., Guan, X., Shao, Y., & Chen, P. (2023). Supporting speaking practice by social network-based interaction in artificial intelligence (AI)-assisted language learning. *Sustainability*, 15(4), 2872. <https://doi.org/10.3390/su15042872>