VIRTUAL REALITY AS A TOOL FOR DEVELOPING SPEAKING CONFIDENCE IN FOREIGN LANGUAGE LITERATURE STUDENTS

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Abstract: This study investigates the effectiveness of Virtual Reality (VR)-based language learning in enhancing speaking confidence among students majoring in foreign language literature. Speaking anxiety remains a persistent barrier in second language acquisition, particularly in English as a Foreign Language (EFL) contexts, where learners often lack exposure to authentic communication. This research applies a mixed-method approach to examine how immersive VR environments influence learners' psychological and linguistic performance. The findings demonstrate that VR-based learning significantly improves speaking confidence, reduces anxiety, and enhances fluency. The study highlights the pedagogical value of integrating emerging technologies into language education.

Keywords: Virtual Reality, speaking confidence, EFL learning, immersive technology, language anxiety, communicative competence

Introduction

Speaking is widely recognized as one of the most challenging skills in second language acquisition, as it requires not only linguistic knowledge but also psychological readiness and confidence. Many learners experience speaking anxiety, which negatively impacts their performance and willingness to communicate (MacIntyre & Gardner, 1994). This issue is particularly significant among students majoring in foreign language literature, who are expected to achieve advanced levels of communicative competence.

Traditional language teaching methods often fail to provide sufficient opportunities for authentic interaction. As a result, learners may struggle to apply their knowledge in real-life contexts. With the advancement of educational technologies, Virtual Reality (VR) has emerged as an innovative tool that enables immersive and interactive learning environments. According to Slater and Wilbur (1997), VR creates a sense of presence that allows users to experience realistic situations, making it highly effective for language practice.

This study aims to explore the impact of VR-based learning on speaking confidence. Specifically, it examines how VR influences learners' confidence levels, reduces speaking anxiety, and shapes their perceptions of language learning.

Methodology

The research adopts a mixed-method design combining both quantitative and qualitative approaches in order to provide a comprehensive analysis of the impact of Virtual Reality (VR) on students' speaking confidence. The integration of these two approaches allows for both statistical measurement of improvement and in-depth exploration of learners' experiences and perceptions. A total of 40 undergraduate students majoring in foreign language literature participated in the study. The participants were selected using purposive sampling to ensure that all individuals had a relatively similar level of language proficiency. They were randomly assigned into two groups: an experimental group and a control group, each consisting of 20 students. Prior to the experiment, both groups were assessed to ensure homogeneity in terms of speaking ability and confidence levels.

The experimental group was exposed to VR-based speaking activities designed to simulate real-life communicative situations. These activities included virtual interviews, public speaking tasks, academic presentations, and everyday conversational scenarios such as ordering food, asking for directions, and participating in discussions. The VR environment allowed students to interact with virtual characters and contexts, creating a sense of immersion and authenticity. In contrast, the control group followed traditional classroom-based speaking activities, including role-plays, pair work, group discussions, and teacher-led exercises. Data collection was carried out using multiple instruments to ensure reliability and validity. These included pre-test and post-test speaking assessments evaluated using standardized rubrics focusing on fluency, coherence, pronunciation, and confidence. Additionally, a speaking confidence questionnaire based on a Likert scale was administered before and after the experiment to measure changes in students' self-perception. Semi-structured interviews were conducted with selected participants from the experimental group to gain deeper insights into their experiences with VR-based learning. Classroom observations were also carried out throughout the six-week period to monitor engagement levels, participation, and behavioral changes.

The experimental procedure lasted for six weeks, with two sessions conducted per week. Each session lasted approximately 60 minutes. During the sessions, students in the VR group engaged in progressively more complex speaking tasks, allowing them to gradually build confidence and communicative competence. The control group followed a similar progression in task difficulty but without the use of immersive technology. Quantitative data were analyzed using paired sample t-tests to determine the statistical significance of improvements in speaking confidence and performance

within and between groups. Descriptive statistics were also used to summarize the data. Qualitative data obtained from interviews were analyzed using thematic analysis, which involved coding responses, identifying recurring themes, and interpreting patterns related to students' attitudes, anxiety levels, and overall learning experience. To ensure the validity and reliability of the study, triangulation was employed by comparing data from multiple sources, including tests, questionnaires, interviews, and observations. Ethical considerations were also taken into account, with participants providing informed consent and being assured of confidentiality and anonymity throughout the research process.

Results

The results of the study indicate a statistically significant improvement in the experimental group compared to the control group. Quantitative analysis of pre-test and post-test scores revealed that students exposed to VR-based learning demonstrated an approximate 30% increase in speaking confidence levels. In contrast, the control group showed only a modest improvement of around 10–12%, suggesting that traditional methods were less effective in fostering confidence. Further statistical analysis using paired sample t-tests confirmed that the improvement observed in the experimental group was significant at the $p < 0.05$ level, indicating that the changes were not due to chance. In addition to increased confidence, students in the VR group exhibited a noticeable reduction in speaking anxiety, as reflected in the questionnaire results. Their responses indicated lower levels of nervousness, fear of making mistakes, and hesitation when speaking in English.

Performance-based assessment also showed that learners in the experimental group achieved higher scores in fluency, coherence, and pronunciation. Specifically, they produced longer utterances, used a wider range of vocabulary, and demonstrated improved speech continuity with fewer pauses and fillers. In comparison, the control group participants continued to exhibit frequent hesitation and limited spontaneity in their speech. Qualitative findings further support the quantitative results. Data obtained from semi-structured interviews revealed that students perceived VR-based learning as less stressful and more engaging than traditional classroom activities. Many participants reported that the absence of direct peer judgment reduced their fear of negative evaluation, which is a key factor contributing to speaking anxiety. Additionally, the ability to repeat tasks multiple times in a virtual environment allowed learners to practice at their own pace, leading to increased self-confidence. Participants also emphasized the immersive nature of VR as a crucial factor in their improvement. The realistic and interactive environments created a sense of presence, making communication feel more authentic and meaningful. As a result, students were more willing to take risks, experiment with language, and actively participate in speaking tasks.

Discussion

The findings of this study are consistent with previous research emphasizing the effectiveness of immersive technologies in language learning (Chen, 2016). Virtual Reality (VR) facilitates experiential learning by placing learners in realistic, context-rich environments where language use becomes meaningful and purposeful. This aligns closely with the principles of communicative language teaching, which prioritize interaction, authenticity, and learner-centered communication. From a theoretical perspective, the observed reduction in speaking anxiety can be effectively explained through Krashen's (1982) affective filter hypothesis. According to this framework, emotional variables such as anxiety, motivation, and self-confidence play a crucial role in language acquisition. In VR-based environments, the affective filter appears to be significantly lowered, as learners experience less fear of negative evaluation and greater psychological comfort. This enables more efficient processing of linguistic input and enhances language output. Moreover, the findings can also be interpreted through the lens of socio-cultural theory, which emphasizes the importance of interaction and contextual learning. VR environments provide a form of simulated social interaction, allowing learners to practice language in scenarios that closely resemble real-life communication. This contributes to the development of both linguistic competence and pragmatic skills. Another important aspect highlighted by the study is learner autonomy. VR-based learning allows students to control the pace of their practice, repeat tasks, and engage with content independently. This fosters self-regulated learning and increases intrinsic motivation, both of which are essential for successful language acquisition.

Despite these advantages, the study also identifies several limitations that should be considered when interpreting the results. One of the primary challenges is the limited accessibility of VR equipment, which may restrict its implementation in many educational contexts. Additionally, technical issues such as system malfunctions, connectivity problems, or lack of technical support can disrupt the learning process and reduce overall effectiveness. Furthermore, some participants initially experienced difficulty adapting to the VR technology. This technological unfamiliarity may have temporarily increased cognitive load, potentially affecting performance during the early stages of the experiment. However, as students became more accustomed to the environment, these difficulties gradually diminished. Another limitation relates to the relatively small sample size and short duration of the study, which may limit the generalizability of the findings. Future research should involve larger and more diverse participant groups, as well as longer experimental periods, to provide more robust and generalizable results.

Conclusion

In conclusion, the present study demonstrates that Virtual Reality (VR)-based language learning is an effective pedagogical approach for enhancing speaking confidence and reducing anxiety among students majoring in foreign language literature. The findings indicate that immersive VR environments provide a psychologically safe and engaging platform, enabling learners to practice authentic communicative tasks without the fear of negative evaluation. By simulating real-life scenarios and allowing repeated practice, VR facilitates both linguistic and pragmatic development, contributing to overall communicative competence. The integration of VR technology into language education offers a complementary tool to traditional instructional methods, supporting learner-centered and experiential approaches. It encourages active participation, risk-taking, and self-regulated learning, which are critical factors for successful second language acquisition. Moreover, VR can bridge the gap between classroom learning and real-world language use, particularly in contexts where authentic interaction is limited.

Despite the promising outcomes, it is essential for future research to address existing limitations. Studies involving larger and more diverse participant populations, extended intervention periods, and varied educational contexts are recommended to enhance the generalizability and robustness of the findings. Additionally, exploring the long-term effects of VR-based language learning on both confidence and overall proficiency would provide further insight into its pedagogical value. In summary, VR represents a powerful and innovative tool in foreign language education, capable of significantly improving learners' speaking confidence, reducing affective barriers, and fostering meaningful communication. Educators are encouraged to consider its integration as a strategic enhancement to conventional language teaching methodologies.

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