

Virtual English Language Learning With AI, AR, and Gamification: Enhancing English Skills and Speaking Confidence for Beginner Learners

1 Research Objective

To develop and evaluate a virtual English learning system integrating AI, AR, and gamification to enhance English skills and speaking confidence for beginner learners (CEFR A2).



AI Speech Recognition

Instant feedback on pronunciation and speaking



Augmented Reality (AR)

Immersive learning with interactive 3D content



Gamification

Points, badges, leaderboards and rewards increase motivation

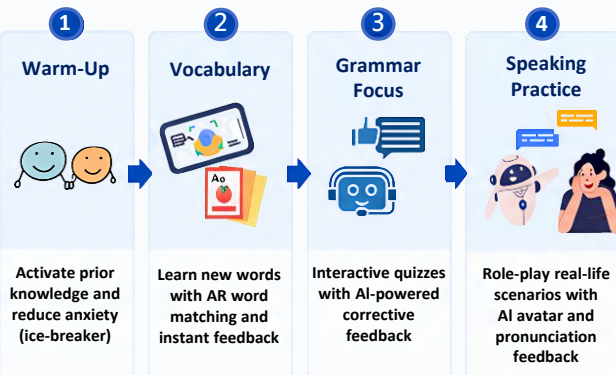


Target Group: Beginner learners (CEFR A2)
30 undergraduate students

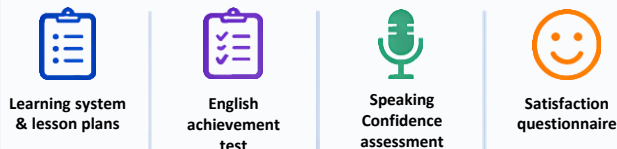
2 Methodology

One-group pretest-posttest design

4-Step Learning Process



Research Instruments



Data Analysis:

Descriptive statistics (Mean, SD, %)
Paired-samples t test

3 Key Results



English Achievement Significantly Improved

Post-test scores were significantly higher than pre-test scores

$(t = 12.35, p < .001)$



Greatest Improvement in Conversation Skills

Improvement order:

Conversation > Grammar > Vocabulary



Speaking Confidence Increased to a High Level

$M = 4.18$



Overall Satisfaction Was High

$M = 4.32$



The integration of AI, AR, and gamification in a virtual learning environment effectively enhances English skills—especially speaking—and builds confidence for beginner learners.



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