

Generative AI for active language environments: An Action Research at a military school

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INTRODUCTION

Vietnam is currently undergoing a national strategic transition from English as a Foreign Language (EFL) to English as a Second Language (ESL). This shift demands active, continuous, and highly immersive language practice environments for learners to acquire practical communication skills.

Military educational institutions face a severe challenge in providing an immersive communication environment. Cadets operate under rigid daily routines, strict institutional security regulations, and limited flexible hours for traditional language lab practice or unstructured conversation drills.

Leveraging Generative AI (GenAI) tools—specifically voice-interactive chatbots—provides a novel solution to construct a 24/7 active, scalable, and low-stakes language- learning environment tailored specifically for novice military cadets.

AIMS

- **Primary Aim:**
To investigate the efficacy of leveraging Generative AI voice-interactive chatbots to create an active, immersive language-learning environment for novice cadets at a military college in Vietnam.
- **Specific Objectives:**
 - +) Evaluate the impact of daily GenAI-assisted speaking tasks on cadets' oral fluency and speaking anxiety.
 - +) Assess how effectively AI voice chatbots simulate continuous, low-stakes input and output opportunities under rigid military schedules.
 - +) Formulate practical pedagogical recommendations for language instructors on integrating intelligent technologies while maintaining institutional security compliance.

METHODOLOGY

Participants

A cohort of 40 non-English major cadets (novice learners) across two classes at a military college in Vietnam.

8-Week Intervention

Cadets engaged in daily artificial intelligence-assisted speaking tasks mimicking real-world and routine military scenarios.

Data Collection & Triangulation

- Pre- and Post-intervention speaking assessments focusing on oral fluency.
- Structured classroom observations during communicative activities.
- Post-survey questionnaires evaluating speaking anxiety and learning engagement.

Empirical Findings

Evaluation Focus	Pre-Intervention Baseline	Post-Intervention Outcomes	Key Impact & Value
Speaking Anxiety	High fear of making errors in public	Significant Reduction	Lowered affective filter; boosted speaking confidence
Oral Fluency	Hesitant, limited oral output	Marked Improvement	Faster response rate, smoother delivery
Practice Frequency	Confined strictly to class time	Continuous / Daily	Accessible, low-stakes input & output practice

CONCLUSION

Generative AI voice chatbots effectively bridge the gap between traditional classroom instruction and an active ESL practice environment within military educational institutions. The 8-week action research intervention successfully reduced cadets' speaking anxiety while substantially improving their oral fluency, offering a scalable and compliant framework for military foreign language education.

PEDAGOGICAL RECOMMENDATIONS

Virtual Partner Integration	Contextual Task Design	Regulatory Compliance & Security
Seamlessly integrate voice-interactive chatbots into daily cadet self-study schedules as supplementary conversational partners to maximize Student Talking Time (STT).	Align GenAI speaking prompts directly with authentic military scenarios, routine duty terminology, and international defense protocols.	Establish clear operational guidelines for utilizing intelligent technologies in language training without compromising institutional security regulations.

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