

STUDENTS' PERCEPTIONS OF USING CHATGPT FOR ENGLISH PRONUNCIATION LEARNING: A MIXED-METHODS STUDY AT A UNIVERSITY IN VIETNAM

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Abstract: This study investigates the perceptions of second-year English-major students at Ho Chi Minh City Open University when using ChatGPT for pronunciation learning through the Technology Acceptance Model (TAM). Data were collected from only 93 valid participants through a structured questionnaire and 7 students through semi-interviews. Quantitative results revealed high levels of perceived usefulness ($M = 4.12$), perceived ease of use ($M = 4.28$), positive attitude ($M = 4.05$), and behavioral intention ($M = 4.19$) towards using ChatGPT. Qualitative findings enriched these results, highlighting ChatGPT's role in providing detailed feedback, reducing learner anxiety, and fostering self-regulated learning. However, concerns regarding feedback accuracy, unnatural intonation, and an over-reliance were also noted. The study concludes that while ChatGPT is a promising tool for autonomous practice, it is just a supplementary aid rather than a replacement for human teachers.

Keywords: ChatGPT, pronunciation learning, Technology Acceptance Model (TAM), mixed-methods, EFL, Vietnam, autonomous learning

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I. INTRODUCTION

The AI integration into education is becoming popular because of its ability to provide consistent, on-demand feedback, supporting learners to improve language (Ardini, 2023; Vančová, 2023). Among the various AI tools, ChatGPT has impressed by generating human-like text, providing instant feedback, and simulating conversational practice (Božić & Poola, 2023) to improve speaking skills (Nhu, 2024; Nuñez et al., 2025) and pronunciation (Mirza, 2025; Pham, 2025). Besides, pronunciation practice has been challenging due to limited class time, large student-teacher ratios, learner anxiety (Nguyen, 2023), and phonological differences between Vietnamese and English sounds (Le, 2024; Slowik & Dung, 2022).

However, most existing studies have focused on either quantitative or qualitative approaches, causing a gap in using a mixed-methods approach in understanding students' perceptions of ChatGPT for pronunciation improvement through a lens of the Technology Acceptance Model (TAM) (Davis, 1989).

This study aims to fill this gap with two main research questions:

1. What are students' perceptions of the usefulness, ease of use, attitude towards, and behavioral intention to use ChatGPT for pronunciation learning?
2. How do students experience using ChatGPT to improve their English pronunciation?

II. LITERATURE REVIEW

2.1. Pronunciation Challenges for Vietnamese EFL Learners

Vietnamese learners often struggle with common errors, including final consonants, the /θ/, /ð/ sounds (Le, 2024; NYARKS & INYANG, 2024), and past tense /-ed/ and plural /-s/ (Marchena et al., 2020). Suprasegmental features also often lead to misunderstandings (Slowik & Dung, 2022). Traditional classrooms, while valuable, may not provide sufficient individualized practice to overcome these persistent errors.

2.2. AI in Pronunciation Instruction

AI-driven tools, specifically ChatGPT, serve as a private tutor (Mirza, 2025) with immediate, non-judgmental feedback (Gutiérrez-Colina, 2023; Mohammadkarimi, 2024). Although impressive through providing detailed, text-based explanations and corrections with voice features (Fatima, 2024; Xodabande et al., 2025; Zakiyah, 2025), ChatGPT's voice accuracy is still developing.

2.3. Technology Acceptance Model (TAM)

TAM can help in understanding user acceptance of new technologies (Davis, 1989) and is applied in educational technology research, including ChatGPT (Anh & Ghi, 2025; Duong et al., 2025). This study adopts TAM to examine whether Perceived Usefulness (PU) and Perceived Ease of Use (PEOU) determine a user's Attitude (ATT), which finally influences their Behavioral Intention (BI) to use ChatGPT for pronunciation practice.

III. METHODOLOGY

3.1. Research Design

A mixed-methods design was employed to provide a comprehensive understanding of students' perceptions, with quantitative data to measure TAM constructs and qualitative data to provide depth.

3.2. Participants

120 second-year English-major students from HCMCOU participated in the quantitative phase through convenience sampling, but only 93 students are valid. For the qualitative phase, 7 students (5 females, 2 males) were selected to participate in in-depth interviews.

3.3. Data Collection Instruments

Structured questionnaire: The questionnaire has two sections. Section A gathered demographic information. Section B comprised 18 items (PU-4 items, PEOU-4 items, ATT-5 items, and BI-5 items), adapted from Karolina et al. (2025) and Azwar and Jayanti (2025), and rated on a 5-point Likert scale (1 = Strongly Disagree to 5 = Strongly Agree).

Semi-Structured Interview: An interview focuses on students' specific experiences of ChatGPT's accuracy and role in self-regulated learning.

3.4. Data analysis

Using descriptive statistics and inferential statistics in SPSS version 26. Then, using thematic analysis of Braun and Clarke (2006), coding was conducted to align with the TAM constructs.

3.5. Validity and reliability

Questionnaire items were adapted from established studies (Karolina et al., 2025; Azwar & Jayanti, 2025), reviewed by two TESOL experts, and finally piloted with 15 students to identify ambiguity. Reliability was confirmed with Cronbach's alpha values (from .812 to .879), exceeding the acceptable threshold (.70). Credibility was enhanced with data triangulation and member checking.

3.6. Ethical considerations

Participants provided consent, were informed of their rights, and were assigned codes for anonymity. Data were securely stored for research only.

IV. RESULTS

4.1. Quantitative findings

88.3% of participants had used ChatGPT for pronunciation practice (40% daily and 32% weekly).

Table 1. Descriptive statistics for TAM constructs

Construct	Mean (M)	Standard Deviation (SD)
Perceived Usefulness (PU)	4.12	0.68
Perceived Ease of Use (PEOU)	4.28	0.55
Attitude (ATT)	4.05	0.71
Behavioral Intention (BI)	4.19	0.66

Table 1 indicates that all four constructs were significantly higher ($p < .001$), suggesting that students generally perceive ChatGPT positively.

Table 2. Descriptive statistics and reliability for TAM Constructs (N = 93)

Construct	Number of Items	Cronbach's Alpha	Mean (M)	Standard Deviation (SD)
PU	4	.846	4.12	0.68
PEOU	4	.812	4.28	0.55
ATT	5	.879	4.05	0.71
BI	5	.865	4.19	0.66

Note: All Cronbach's alpha values exceeded the acceptable threshold of .70, indicating high internal consistency.

As presented in Table 2, all constructs exceeded .70, with ATT demonstrating the highest reliability ($\alpha = .879$), followed by BI ($\alpha = .865$), PU ($\alpha = .846$), and PEOU ($\alpha = .812$).

Table 3. One-Sample T-Test results for TAM constructs (Test value = 3)

Construct	Mean Difference	t	df	Sig. (2-tailed)	95% Confidence Interval of the Difference	
					Lower	Upper
PU	1.12	15.82	89	.001	0.98	1.26

PEOU	1.28	22.14	89	.001	1.18	1.38
ATT	1.05	14.07	89	.001	0.90	1.20
BI	1.19	17.00	89	.001	1.05	1.33

Note: All constructs demonstrated statistically significant differences from the neutral value of 3 at $p < .001$.

The results in Table 3 revealed that all four constructs were statistically significantly higher than the neutral point. PEOU recorded the highest mean ($M = 4.28$, $SD = 0.55$), followed by BI ($M = 4.19$, $SD = 0.66$), PU ($M = 4.12$, $SD = 0.68$), and ATT ($M = 4.05$, $SD = 0.71$).

The highest-rated item was PU1 ($M = 4.38$, $SD = 0.72$), indicating strong agreement on its primary benefit. PU4 ($M = 3.76$, $SD = 1.01$) had the lowest mean and the largest standard deviation.

Students strongly agreed with PEOU1 ($M = 4.45$, $SD = 0.68$) and PEOU2 ($M = 4.41$, $SD = 0.70$), reflecting ease of learning and using. All four PEOU items show consistent mean scores (ranging from 4.11 to 4.45).

The highest-rated item was ATT3 ($M = 4.50$, $SD = 0.65$) and the lowest was ATT4 ($M = 3.95$, $SD = 0.85$), showing that attitude slightly shifts on pronunciation confidence with ChatGPT.

BI2 had the highest mean score ($M = 4.38$, $SD = 0.70$), whereas BI4 had the lowest ($M = 3.98$, $SD = 0.88$).

4.2. Qualitative findings

The thematic analysis revealed four main themes:

Theme 1: ChatGPT as an assistant (Perceived Usefulness)

Students highlighted a patient and knowledgeable assistant for specific pronunciation issues.

Error Correction: Respondents mentioned ChatGPT's correction. R5 shared, "I got support for pronouncing the endings -ed, -s, -es." R6 noted: "I needed help pronouncing the specialized word 'infrastructure', similar to R7, who used to fix pronunciation mistakes for difficult words.

Phonetic Guidance: Respondents indicated ChatGPT's phonetic instructions. R3 stated, "I command ChatGPT to instruct pronunciation such as how to place the tongue, mouth shape, and differentiate long/short vowels, so I can imitate". R4 noted, "I often have been guided with complex C1, C2 vocabulary."

Theme 2: The Affordances and Constraints of Ease of Use (PEOU & Attitude)

Participants noted anxiety reduction and feedback quality.

Anxiety-Free Environment: ChatGPT can reduce pressure and raise confidence. R1 felt "comfortable and natural because practice is more

interesting and less stressful." R3 echoed this: "It reduces shyness, the fear of being wrong in front of a crowd."

Limitations of Feedback: ChatGPT limits accuracy and naturalness. R4 stated, "ChatGPT's outcomes are still more about theory." R3 and R7 noted that its audio was "not as diverse and natural as native speakers."

The role of teacher: Students overwhelmingly favored their teacher. R4 stated, "I trust teachers more because of expertise." R6 explained, "I choose the teacher because language is highly contextual, while AI just provides general information."

Theme 3: Behavioral Intention and the Prompt Students demonstrated an intention to continue using ChatGPT and learn quality prompts.

The Importance of Prompt: The efficacy was tied to prompt quality. R3 emphasized it was "very necessary to specify the accent and mouth shape to get a targeted response." R7 echoed results that to receive the right information and save time."

Complementary Tool, not a Replacement: R4 saw it as a "great 24/7 support tool but cannot replace teachers." R3 wants a specialized app for IELTS Speaking practice. R5 noted: "I find both methods useful and complementary."

Theme 4: Self-Regulated Learning and Future Potential

A significant outcome was the positive change in students' self-learning habits.

Enhanced Autonomy: Students reported becoming more proactive. R3 noted a "habit of proactively looking up information." R6 found that ChatGPT "makes learners more interested in self-study."

Emerging Concerns: There were cautions against over-reliance. R3 warned about "becoming dependent, lazy or less patient." R4 echoed "data security (information leakage)."

Perceived Accuracy Challenges: A problem was inaccuracy sometimes. R3 noted, "Sometimes the pronunciation isn't accurate; it still reports it as correct." R5 reported having to "rephrase the command's syntax to AI to correct again."

4.3. Discussions

The findings of this mixed-methods study aim to comprehend students' perception of using ChatGPT for pronunciation learning. The quantitative results show a strong positive

perception, supporting previous studies (Anh & Ghi, 2025; Duong et al., 2025). However, the qualitative data reveal a more complex picture.

First, the study confirms Ardini (2023) and Vančová's (2023) findings regarding autonomous learning. Almost all students perceived ChatGPT as an effective and friendly AI tutor (PU, $M=4.12$ and PEOU, $M=4.28$), aligning well with Mirza's (2025) findings. The detailed explanations about tongue placement and mouth shape (as noted by R3) provided by ChatGPT are not often available in textbooks. However, students still value traditional methods. The smaller shift in ATT4 may reflect learners' increased confidence in practicing with other tools.

Second, the study highlights the anxiety-free environment in shaping positive attitudes and behavioral intention. As mentioned by R1, R3, and R4, they prefer ChatGPT for its judgement-free nature, a major barrier in language learning (Gutiérrez-Colina, 2023). This psychological safety is arguably one of ChatGPT's most valuable contributions to pronunciation pedagogy. This finding supports the TAM theory, suggesting that positive perceptions of usefulness and ease of use translate into behavioral commitment.

Third, a trust in teachers and other apps. Participants expressed irreplaceable trust in the teacher during the interview. Moreover, students actively cross-referenced with other dictionaries. However, this healthy skepticism indicates that students are not blindly accepting ChatGPT outputs but are developing critical evaluation skills and reinforces that AI is just a supportive technology (Božić & Poola, 2023). Participants' varied responses to question PU4 revealed that high trust relies on dedicated teachers, highlighting quality teachers' roles.

Fourth, the study sheds light on students'

prompt-engineering skills. The more students' strategic prompts, the more effective learning experiences (Respondents 3, 4, 5, 7). Therefore, educators should teach students the right prompts to get the best answers.

Finally, the study uncovered specific limitations. The feedback was unnatural, and the audio was inaccurate (Respondents 3, 4, 5, 6). These results highlight that large language models lack specialized pronunciation like Elsa Speak (Fatima, 2024; Xodabande et al., 2025). As a result, ChatGPT needs further development, as suggested by R3 and R4, such as acoustic analysis and source verification.

V. CONCLUSION

The findings reveal that a highly positive perception can lead to favorable attitudes and strong intentions to continue use, empowering students to practice autonomously in an anxiety-free environment, seek detailed phonetic explanations, and develop prompting skills. Nevertheless, students still trust in teachers and distrust ChatGPT's auditory accuracy, making it a powerful supplementary tool rather than a replacement, especially a dedicated teacher.

Language educators should integrate ChatGPT into the curriculum alongside traditional methods. Include training on prompt engineering and developing cross-reference evaluation skills.

This study was limited to a single institution with a relatively small sample size. Future research should expand to multiple institutions and include longitudinal designs to track changes in pronunciation proficiency over time. Moreover, experimental studies would compare ChatGPT with other apps to provide valuable empirical data.

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