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Technology Acceptance Factors in Shaping Students' Behavioral Intention to Use an AI-Powered English Practice System

Dinh Dam Hai Anh and Nguyen Thi Hong Minh*
Faculty of Foreign Languages Education, Thai Nguyen University of Education, Vietnam
Corresponding Author Email: minhnth@tnue.edu.vn

Abstract

This study employs the Technology Acceptance Model (TAM) to investigate students' acceptance of an AI-powered English practice system developed through a "vibe coding" (natural language-based) approach. The research examines the influence of technology acceptance factors, specifically Perceived Ease of Use (PEOU) and Perceived Usefulness (PU) on students' Behavioral Intention (BI) to adopt the system in a formal educational context. Adopting a quantitative, survey-based design, the study involved 77 Grade 9 students from two lower secondary schools in Vietnam who used the system over a 10-week period. Data were collected through a 30-item questionnaire and analyzed using descriptive statistics, Pearson correlation, and multiple regression analysis. The findings indicate that students held generally positive perceptions across all constructs, with mean scores in the "Agree" range (PEOU = 3.67; PU = 3.65; BI = 3.78). Correlation analysis revealed strong and statistically significant positive relationships among PEOU, PU, and BI ($p < .001$), particularly between PEOU and PU ($r = 0.783$). Regression results further show that PEOU and PU jointly explain 54.5% of the variance in BI, with PU ($\beta = 0.407$) exerting a stronger influence than PEOU ($\beta = 0.374$). These findings suggest that while ease of use facilitates engagement, perceived learning value plays a more decisive role in shaping students' intention to use the system. Overall, the study provides empirical evidence supporting the effectiveness and acceptability of accessible AI-powered learning systems in lower secondary English education, particularly those developed through low-barrier approaches such as vibe coding.

Keywords:

Technology Acceptance Factors AI-Powered English Practice System; Google AI Studio; Technology Acceptance Model (TAM); Vibe coding; Behavioral intention.

1. Introduction

Artificial intelligence (AI) has increasingly been integrated into education, particularly in English language teaching and learning. Artificial intelligence can be viewed as both a field of study and a practical domain in which machines are developed to imitate human cognitive abilities, such as learning and problem-solving (Akbarani, 2023; Zhu, 2017). AI systems are designed to support cognitive processes such as learning, reasoning, and problem-solving, thereby assisting both teachers and learners throughout the instructional process (Chen et al., 2020). In addition, AI technologies enable the analysis of large-scale educational data, supporting more informed pedagogical decisions and facilitating personalized learning

experiences (Akbarani, 2023). As a result, AI is widely recognized as a valuable tool for enhancing the accessibility, interactivity, and effectiveness of English language learning (Wang, 2019). More recently, AI-driven features such as automated feedback, adaptive instruction, and personalized learning pathways have further contributed to improving both teaching practices and learning outcomes (Hassan, 2025; Köse & Arslan, 2015).

Within this context, numerous studies have explored the application of AI in supporting specific aspects of language learning. For example, AI-driven tools have been shown to improve speaking and writing through interactive practice and immediate feedback (Yang, 2007; Hynes, 2016), while applications such as grammar checkers and writing assistants contribute to greater accuracy and error reduction in written production (Marr, 2018). More broadly, AI-powered tools, including real-time translation systems and intelligent tutoring applications, support individualized learning pathways and enhance learner engagement (De la Vall & Araya, 2023).

Beyond individual tools, recent research has emphasized the importance of integrated AI-powered learning systems. Such systems are expected to provide personalized learning environments through the combination of tailored content, adaptive strategies, and structured learning pathways (Lee et al., 2023). For instance, Jia et al. (2022) developed an AI-enabled English learning system that supports vocabulary and grammar acquisition in authentic contexts. Similarly, Intelligent Tutoring Systems (ITS) have been widely applied in English language education. Abu Ghali et al. (2018) demonstrated that ITS can provide adaptive feedback based on learner behavior, while Ni and Cheung (2023) highlighted their effectiveness in supporting homework, assessment, and self-directed learning. However, these systems often involve complex architectures and require substantial programming expertise, technical resources, and system integration, which may limit their accessibility for teachers and individual practitioners.

In response to these limitations, recent developments in AI have introduced more accessible approaches to system development, particularly through prompt-based and low-code paradigms. Research on prompt engineering has highlighted its role in optimizing interactions with AI systems and enhancing learning outcomes through well-structured input design (Choi & Chang, 2025). Building on this, Chen et al. (2026) proposed the concept of "vibe coding," a natural language-based programming approach that enables users to create functional applications through AI without conventional coding. These approaches significantly reduce technical barriers and allow non-experts to design and deploy AI-powered systems for educational purposes. Accordingly, AI-based learning systems can now be developed more rapidly and flexibly, expanding their potential application in classroom contexts, including English language learning.

Despite these advancements, an important issue remains underexplored. While prompt-based approaches such as vibe coding make AI system development more accessible, it is still unclear how learners perceive and accept such systems in actual learning contexts. In particular, systems developed through this approach may differ from traditional applications in terms of usability, transparency, and user experience, which can influence students' willingness to adopt them.

To address this issue, the present study developed an AI-powered English practice system using a prompt-based "vibe coding" approach on Google AI Studio. The system integrates multiple language skills, including listening, speaking, reading, and writing, alongside key language

aspects such as vocabulary, grammar, and integrated practice. In addition, it provides a resource section containing unit-based grammar and vocabulary aligned with the Grade 9 textbook, as well as mock tests designed to support students' exam preparation. The system is accessible online at: https://ai.studio/apps/e8645318-fda9-44fb-8611-d85cc35ce6ae.

To address this gap, the present study applies the Technology Acceptance Model (TAM) to examine students' acceptance of an AI-powered English practice system developed using a vibe coding approach. Specifically, the study investigates how perceived usefulness and perceived ease of use influence students' behavioral intention to use the system. By focusing on lower secondary students in a curriculum-based context, the study aims to provide empirical evidence on the acceptance of accessible AI-powered learning systems in formal education.

The Technology Acceptance Model (TAM) is a widely recognized framework for explaining users' acceptance of new technologies. It has been extensively applied in educational technology research, including studies on AI-powered learning systems. For example, Ni and Cheung (2023) employed an extended TAM to examine students' continued use of intelligent tutoring systems for English learning, highlighting the model's relevance in evaluating AI-based educational tools. Building on this foundation, the present study adopts TAM to assess learners' acceptance of the system through three core constructs. Perceived Usefulness (PU) refers to the extent to which learners believe that using the system enhances their learning performance, while Perceived Ease of Use (PEOU) reflects the degree to which the system is considered easy to use and requires minimal effort (Davis, 1989). These two factors influence Behavioral Intention to Use (BI), which represents learners' willingness to adopt and continue using the system.

2. Methods

This study adopts a quantitative research approach to examine students' acceptance of an AI-powered English practice system. A survey-based design was employed, grounded in the Technology Acceptance Model (TAM), to investigate the relationships among Perceived Usefulness (PU), Perceived Ease of Use (PEOU), and Behavioral Intention to Use (BI).

The participants consisted of Grade 9 students from two lower secondary schools in Thai Nguyen province, representing both urban and suburban contexts. A total of 77 students completed all stages. All participants were learning English using the Global Success textbook and were therefore familiar with the curriculum aligned with the 2018 General Education Framework. Prior to the survey, students engaged with the AI-powered system over a 10-week period, after which they were invited to provide feedback through a structured questionnaire.

The survey instrument was designed based on the Technology Acceptance Model and included three main constructs: PEOU, PU, and BI. All items were measured using a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree) (Sözen, 2019). The interpretation of mean scores followed established ranges, as presented in Table 2.1.

Table 2.1. Scoring range of the Likert scale of the survey (Sözen, 2019)

Value	Level of Agreement	Mean Range
1	Strongly Disagree	1.00 – 1.80
2	Disagree	1.81 – 2.60
3	Neither/Nor agree	2.61 – 3.40
4	Agree	3.41 – 4.20
5	Strongly Agree	4.21 – 5.00

For data analysis, descriptive statistics were first used to summarize students' responses. Correlation analysis was then conducted to examine the relationships among PU, PEOU, and BI. In addition, regression analysis was applied to determine the extent to which perceived usefulness and perceived ease of use predict students' behavioral intention to use the system. All statistical analyses were performed using SPSS software.

Descriptive analysis was first conducted to examine students' overall perceptions of the system across the three TAM constructs (PEOU, PU, and BI). To ensure the reliability of these measurements, Cronbach's alpha was employed to assess the internal consistency of the questionnaire, a widely accepted method in educational research (Goforth, 2015). A threshold of $\alpha \geq 0.70$ was adopted as the criterion for acceptable reliability (Tavakol & Dennick, 2011), and the analysis confirmed that all constructs met this requirement.

Second, Pearson correlation analysis was employed to examine the relationships among PEOU, PU, and BI. Correlation coefficients (r) were interpreted in terms of strength and direction, with values closer to ±1 indicating stronger relationships (Fraenkel et al., 1993). Statistical significance was determined at the 0.05 level.

Finally, regression analysis was conducted to examine the predictive effects among variables. Standardized regression coefficients (β) were used to indicate the strength and direction of relationships, with higher absolute values reflecting stronger effects (Fraenkel, Wallen, & Hyun, 1993). As a general guideline, β values around 0.10 indicate a small effect, around 0.30 a moderate effect, and ≥ 0.50 a strong effect. Statistical significance was determined using p-values ($p < 0.05$). In addition, the coefficient of determination (R^2) was used to assess the explanatory power of the model, representing the proportion of variance in the dependent variable explained by the predictors. R^2 values of approximately 0.25, 0.50, and 0.75 can be interpreted as weak, moderate, and strong explanatory power, respectively.

3. Findings and Discussion

Findings

Descriptive statistics of PEOU, PU, and BI

Table 3.1 demonstrates the descriptive statistics for the Perceived Ease of Use (PEOU) construct. The overall mean score is 3.67 (SD ≈ 0.80), indicating that students generally agree

that the system is easy to use. This suggests a positive perception of usability, implying that the system requires relatively low effort to operate.

Table 3.1. Descriptive statistics of perceived ease of use (PEOU)

Descriptive Statistics					
	N	**Minimum**	**Maximum**	**Mean**	**Std. Deviation**
PEOU1	77	2	5	3.82	.739
PEOU2	77	2	5	3.87	.923
PEOU3	77	2	5	3.58	.923
PEOU4	77	2	5	3.82	.899
PEOU5	77	2	5	3.49	.772
PEOU6	77	2	5	3.62	.744
PEOU7	77	2	5	3.71	.625
PEOU8	77	2	5	3.82	.773
PEOU9	77	2	5	3.35	.739
PEOU10	77	2	5	3.57	.834
PEOU_MEAN	77	2	5	3.67	0.8
Valid N	77				

At the item level, mean scores range from 3.35 to 3.87, showing a relatively consistent pattern. The highest score is observed for PEOU2 (M = 3.87), followed by PEOU1 and PEOU4 (both M = 3.82), indicating that students found the system well-organized, easy to learn, and simple to navigate. In contrast, lower scores are found in PEOU9 (M = 3.35) and PEOU5 (M = 3.49), suggesting that some aspects related to task efficiency and clarity of task execution may require further improvement. The standard deviation values (SD = 0.625–0.923) indicate moderate variability, suggesting generally consistent perceptions among students, with some individual differences.

Table 3.2 shows the descriptive statistics of the Perceived Usefulness (PU) construct based on responses from 77 students. The overall mean score is M = 3.65 (SD = 0.79), which falls within the "Agree" range (3.41–4.20) according to Sözen (2019). This indicates that students generally perceive the AI-powered English practice system as useful in supporting their English learning and improving performance.

Table 3.2. Descriptive statistics of Perceived Usefulness (PU)

Descriptive Statistics					
	N	**Minimum**	**Maximum**	**Mean**	**Std. Deviation**
PU1	77	2	5	3.71	.809
PU2	77	2	5	3.69	.748
PU3	77	2	5	3.65	.757
PU4	77	2	5	3.69	.847
PU5	77	2	5	3.51	.821
PU6	77	2	5	3.87	.833
PU7	77	2	5	3.56	.752
PU8	77	2	5	3.38	.795
PU9	77	2	5	3.52	.754
PU10	77	2	5	3.90	.804
PU _ MEAN	77	2	5	3.65	0.79
Valid N	77				

At the item level, mean scores range from 3.38 to 3.90, showing a relatively consistent pattern across items. The highest scores are observed in PU10 (M = 3.90) and PU6 (M = 3.87), suggesting that students particularly value the Testing component in boosting exam confidence and the system's ability to support understanding of lesson content. In addition, all four language skills, listening (PU1, M = 3.71), speaking (PU2, M = 3.69), reading (PU3, M = 3.65), and writing (PU4, M = 3.69), receive positive evaluations, indicating that the system effectively supports comprehensive skill development.

However, some aspects receive comparatively lower ratings, particularly PU8 (M = 3.38), related to learning resources, and PU5 (M = 3.51), reflecting overall learning efficiency. While still within the "Agree" range, these results suggest that certain components could be further improved.

Table 3.3 presents the descriptive statistics of the Behavioral Intention to Use (BI) construct based on responses from 77 students. The overall mean score is M = 3.78 (SD = 0.84), which falls within the "Agree" range (3.41–4.20) according to Sözen (2019). This indicates that students generally show a positive and relatively strong intention to continue using the AI-

powered English practice system. Notably, the BI mean is slightly higher than those of PEOU and PU, suggesting that positive perceptions of usability and usefulness are associated with stronger usage intention.

Table 3.3 Descriptive statistics of the Behavioral Intention to Use (BI)

Descriptive Statistics					
	N	**Minimum**	**Maximum**	**Mean**	**Std. Deviation**
BI1	77	2	5	3.84	.844
BI2	77	1	5	3.70	.904
BI3	77	1	5	3.99	.881
BI4	77	2	5	3.77	.742
BI5	77	1	5	3.82	.884
BI6	77	1	5	3.44	.835
BI7	77	2	5	3.64	.759
BI8	77	1	5	3.91	.798
BI9	77	1	5	3.78	.853
BI10	77	1	5	3.90	.940
BI _ MEAN	77	1	5	3.78	0.84
Valid N	77				

At the item level, mean scores range from 3.44 to 3.99, showing a consistent pattern across items. The highest score is observed in BI3 (M = 3.99), indicating a strong willingness to use the system for self-study. Similarly, high values in BI8 (M = 3.91) and BI10 (M = 3.90) suggest that students are willing to recommend the system and continue using it in the long term. Other items (e.g., BI1, BI5, BI9) also indicate that students intend to integrate the system into exam preparation and regular learning routines.

However, some items receive relatively lower ratings, particularly BI6 (M = 3.44), suggesting that students are less certain about prioritizing the system over other learning methods. Despite this, the overall results confirm a positive behavioral intention to use the system. Within the TAM framework, this finding supports the assumption that perceived usefulness and ease of use contribute to students' intention to adopt the system, which will be further examined through correlation and regression analyses.

The overall descriptive statistics of the questionnaire, comprising 30 items across the three constructs (PEOU, PU, and BI), are presented in Table 3.4. The results show an overall mean score of M = 3.70 (SD = 0.81), with responses ranging from 1 to 5. According to Sözen (2019), this mean value falls within the "Agree" range (3.41 - 4.20), indicating that students generally hold positive perceptions of the system in terms of ease of use, usefulness, and intention to use. The moderate standard deviation suggests a relatively consistent pattern of responses, although some individual variation remains.

Table 3.4. Overall descriptive statistics of the questionnaire

Descriptive Statistics					
Variable	**N**	**Minimum**	**Maximum**	**Mean**	**Std. Deviation**
Overall (30 items)	77	1.00	5.00	3.70	0.81

In addition to descriptive statistics, the reliability of the questionnaire was assessed using Cronbach's alpha (Table 3.5). The overall scale achieved a high reliability ($\alpha = 0.885$), indicating strong internal consistency. For individual constructs, Cronbach's alpha values were 0.742 for PEOU, 0.704 for PU, and 0.706 for BI, all exceeding the acceptable threshold of $\alpha \geq 0.70$ (Tavakol & Dennick, 2011).

Table 3.5. Reliability analysis of the questionnaire using Cronbach's alpha

Construct	**Number of Items**	**Cronbach's Alpha**
Perceived Ease of Use (PEOU)	10	0.742
Perceived Usefulness (PU)	10	0.704
Behavioral Intention (BI)	10	0.706
Overall Scale	30	0.885

These results confirm that the measurement instrument is reliable and suitable for further analyses, including correlation and regression.

Correlation analysis among PEOU, PU, and BI

To examine the relationships among the key constructs of the Technology Acceptance Model (TAM), Pearson correlation analysis was conducted for Perceived Ease of Use (PEOU), Perceived Usefulness (PU), and Behavioral Intention to Use (BI). As presented in Table 3.6, all correlations are positive and statistically significant at the 0.001 level ($p < .001$), with coefficients ranging from 0.693 to 0.783, indicating strong relationships according to Fraenkel et al. (1993).

Table 3.6. Pearson correlation matrix among PEOU, PU, and BI

Correlations				
		PEOU_MEAN	**PU_MEAN**	**BI_MEAN**
PEOU_MEAN	**Pearson Correlation**	1	.783***	.693***
	Sig. (2-tailed)		<.001	<.001
	N	77	77	77
PU_MEAN	**Pearson Correlation**	.783***	1	.700***
	Sig. (2-tailed)	<.001		<.001
	N	77	77	77
BI_MEAN	**Pearson Correlation**	.693***	.700***	1
	Sig. (2-tailed)	<.001	<.001	
	N	77	77	77
***. Correlation is significant at the 0.001 level (2-tailed).				

Specifically, PEOU shows a strong positive correlation with PU (r = 0.783), suggesting that systems perceived as easier to use are also considered more useful. In addition, PEOU is strongly correlated with BI (r = 0.693), indicating that ease of use directly contributes to students' intention to use the system. Similarly, PU demonstrates a strong positive relationship with BI (r = 0.700), confirming that perceived usefulness is a key factor influencing usage intention.

Overall, the results are consistent with the TAM framework, showing that PEOU and PU are closely interrelated and both strongly associated with BI. These findings provide empirical support for the proposed relationships and suggest that improving system usability and perceived usefulness can enhance students' behavioral intention to use the system. Further analysis through regression is required to examine the predictive effects of these variables.

Multiple regression analysis

To provide a more comprehensive understanding of the relationships within the TAM framework, regression analysis was conducted to examine four key relationships among PEOU, PU, and BI. This includes both the individual and combined effects of the independent variables on the dependent variables, offering deeper insight into their predictive roles. The results are presented in the following subsections.

A simple linear regression analysis was conducted to examine the effect of PEOU on PU. As presented in Table 3.7, the model shows a strong relationship with $R = 0.783$ and $R^2 = 0.613$, indicating that 61.3% of the variance in PU is explained by PEOU. This suggests that PEOU plays a substantial role in shaping students' perceptions of usefulness.

Table 3.7. Model summary of regression analysis (PEOU → PU)

Model Summary				
Model	**R**	**R Square**	**Adjusted R-Square**	**Std. Error of the Estimate**
1	.783[a]	.613	.608	.25919
a. Predictors: (Constant), PEOU_MEAN				

The regression coefficients in Table 3.8 further confirm this relationship, with a standardized coefficient of $\beta = 0.783$ ($p < .001$), indicating a strong and statistically significant positive effect of PEOU on PU. This result demonstrates that higher levels of perceived ease of use are associated with higher levels of perceived usefulness.

Table 3.8. Regression coefficients for the effect of PEOU on PU

Coefficients								
Model		**Unstandardized Coefficients**		**Standardized Coefficients**	**t**	**Sig.**	**Collinearity Statistics**	
		B	**Std. Error**	**Beta**			**Tolerance**	**VIF**
1	**(Constant)**	.946	.249		3.795	<.001		
	PEOU_MEAN	.737	.068	.783	10.908	<.001	1.000	1.000
a. Dependent Variable: PU_MEAN								

Overall, the findings provide strong empirical support for the TAM assumption that PEOU significantly influences PU, highlighting the importance of usability in enhancing the perceived effectiveness of the system.

The impact of PEOU on BI was examined using linear regression analysis. As shown in Table 3.9, the model indicates a strong relationship with R = 0.693 and R^2 = 0.481, meaning that 48.1% of the variance in BI is explained by PEOU. This suggests that ease of use is an important factor influencing students' intention to use the system.

Table 3.9. Model summary of regression analysis (PEOU → BI)

Model Summary				
Model	**R**	**R Square**	**Adjusted R-Square**	**Std. Error of the Estimate**
1	.693[a]	.481	.474	.32157
a. Predictors: (Constant), PEOU_MEAN				

The regression coefficients in Table 3.10 further confirm this effect, with β = 0.693 ($p < .001$), indicating a strong and statistically significant positive impact of PEOU on BI. This implies that students who perceive the system as easy to use are more likely to develop a stronger intention to continue using it.

Table 3.10. Regression coefficients for the effect of PEOU on BI

Coefficients								
Model		**Unstandardized Coefficients**		**Standardized Coefficients**	**t**	**Sig.**	**Collinearity Statistics**	
		B	**Std. Error**	**Beta**			**Tolerance**	**VIF**
1	**(Constant)**	1.219	.309		3.941	<.001		
	PEOU_MEAN	.698	.084	.693	8.331	<.001	1.000	1.000
a. Dependent Variable: BI_MEAN								

Although the effect is slightly weaker than that of PEOU on PU, the findings remain consistent with TAM, highlighting that PEOU directly contributes to BI. Overall, the results emphasize the importance of usability in promoting students' adoption of the system.

The effect of PU on BI was examined using linear regression analysis. As shown in Table 3.11, the model indicates a strong relationship with $R = 0.700$ and $R^2 = 0.490$, meaning that 49.0% of the variance in BI is explained by PU. This suggests that PU is a substantial predictor of students' intention to use the system and shows slightly stronger explanatory power than PEOU.

Table 3.11. Model summary of regression analysis (PU → BI)

Model Summary				
Model	**R**	**R Square**	**Adjusted R-Square**	**Std. Error of the Estimate**
1	.700[a]	.490	.484	.31851
a. Predictors: (Constant), PU_MEAN				

The regression coefficients in Table 3.12 further confirm this relationship, with $\beta = 0.700$ ($p < .001$), indicating a strong and statistically significant positive effect of PU on BI. This implies that students who perceive greater learning benefits from the system are more likely to develop a stronger intention to use it.

Table 3.12. Regression coefficients for the effect of PU on BI

Coefficients								
Model		**Unstandardized Coefficients**		**Standardized Coefficients**	**t**	**Sig.**	**Collinearity Statistics**	
		B	**Std. Error**	**Beta**			**Tolerance**	**VIF**
1	**(Constant)**	1.044	.324		3.224	.002		
	PU_MEAN	.750	.088	.700	8.497	<.001	1.000	1.000
a. Dependent Variable: BI_MEAN								

Overall, the findings are consistent with TAM, highlighting PU as a key determinant of BI. This underscores the importance of ensuring that the system delivers clear and meaningful learning benefits to promote sustained user engagement.

To provide a more comprehensive understanding of BI, multiple regression analysis was conducted to examine the combined effect of PEOU and PU. As shown in Table 3.13, the model demonstrates a strong relationship ($R = 0.738$) with $R^2 = 0.545$, indicating that 54.5% of the variance in BI is jointly explained by PEOU and PU. This represents higher explanatory power than each predictor individually, confirming that both factors together better explain students' intention to use the system.

Table 3.13. Model summary of multiple regression analysis (PEOU, PU → BI)

Model Summary				
Model	**R**	**R Square**	**Adjusted R Square**	**Std. Error of the Estimate**
1	.738[a]	.545	.532	.30311
a. Predictors: (Constant), PU_MEAN, PEOU_MEAN				

The regression coefficients in Table 3.14 show that both PEOU ($\beta = 0.374$, $p = .004$) and PU ($\beta = 0.407$, $p = .002$) have significant positive effects on BI. While both predictors are important, PU exerts a slightly stronger influence than PEOU, suggesting that perceived learning benefits play a more dominant role in shaping students' intention. At the same time, the significance of PEOU confirms that usability remains an essential factor in supporting system adoption.

Table 3.14. Regression coefficients for the combined effect of PEOU and PU on BI

Coefficients								
Model		**Unstandardized Coefficients**		**Standardized Coefficients**	**t**	**Sig.**	**Collinearity Statistics**	
		B	**Std. Error**	**Beta**			**Tolerance**	**VIF**
1	**(Constant)**	.807	.318		2.534	.013		

	PEOU_MEAN	.377	.127	.374	2.969	.004	.387	2.586
	PU_MEAN	.436	.135	.407	3.227	.002	.387	2.586
a. Dependent Variable: BI_MEAN								

In addition, the collinearity statistics (VIF = 2.586) indicate no multicollinearity issues, ensuring the reliability of the model. Overall, the results strongly support the TAM framework, demonstrating that both PEOU and PU significantly contribute to BI, with PU as the primary driver and PEOU as a supporting factor.

Discussion

The findings explain students' acceptance of the AI-powered English practice system in line with the Technology Acceptance Model (TAM). Overall, students show positive perceptions, indicating that the system meets both usability and learning expectations.

PEOU acts as a facilitating factor that enhances PU, suggesting that when the system is easy to use, students are more likely to recognize its benefits (Davis, 1989). However, PU emerges as the stronger determinant of BI, indicating that students' intention is mainly driven by perceived learning effectiveness rather than usability alone. This finding is consistent with Ni and Cheung (2023).

The strong relationships among PEOU, PU, and BI further confirm the interconnected structure of TAM. However, the system is more likely to function as a complementary tool rather than a full replacement for traditional learning, suggesting that acceptance does not necessarily imply complete adoption (Lee et al., 2003).

4. Conclusion and recommendations

Conclusion

This study demonstrates how PEOU and PU influence BI within the context of an AI-powered English practice system. Descriptive results indicate generally positive perceptions across all three constructs, with BI recording the highest mean. Correlation analysis reveals strong and statistically significant relationships among the variables, particularly between PEOU and PU, and between PU and BI. Regression analysis further confirms that both PEOU and PU significantly predict BI, with PU exerting a stronger effect. Overall, while PEOU facilitates engagement and enhances PU, PU emerges as the more decisive factor in shaping students' intention to use the system.

Recommendations

Based on the TAM analysis, PU emerges as the more decisive factor influencing BI. Therefore, future system development should prioritize enhancing pedagogical value, particularly by strengthening curriculum alignment, improving exam-oriented practice, and ensuring that

learning activities lead to observable progress. Although PEOU plays a supportive role, it remains essential in facilitating engagement and reinforcing PU. Accordingly, usability should be improved by simplifying interactions, providing clearer instructions, and optimizing task flow to ensure a smoother user experience.

Finally, TAM proves to be a useful framework for examining students' acceptance of AI-powered learning systems. Future studies may apply or extend this model to further explore the relationships among usability, perceived value, and behavioral intention in diverse educational contexts.

Generative AI Statement

During the preparation of this manuscript, the author used the AI-based writing tool QuillBot (https://quillbot.com/) to support paraphrasing, sentence restructuring, and language enhancement. The tool was used solely for linguistic and stylistic purposes, without generating original research content or interpretations. All outputs were critically reviewed, revised, and validated by the author to ensure their accuracy and alignment with the study's objectives. The author assumes full responsibility for the integrity and content of the final manuscript.

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Appendix

Questionnaire

A. Perceived Ease of Use (PEOU)

Code	Item
PEOU1	I can quickly become familiar with how to use the system.
PEOU2	The system's functions are well-organized and easy to locate.
PEOU3	I can operate the system's features without significant difficulty.
PEOU4	Navigation between different sections is intuitive.
PEOU5	I can easily understand how to complete the activities.
PEOU6	I can use the system without frequent assistance.
PEOU7	Any instructions provided are clear and understandable.
PEOU8	Accessing skill practice, resources, and tests is convenient.
PEOU9	I can complete learning tasks efficiently using the system.
PEOU10	Overall, using the system requires little effort.

B. Perceived Usefulness (PU)

Code	Item
PU1	The system improves my English listening skills.
PU2	The system supports the development of my speaking skills.
PU3	The system enhances my reading comprehension.
PU4	The system improves my writing ability.

PU5	The system makes my English learning more effective than traditional methods.
PU6	The system helps me better understand lesson content.
PU7	Using the system leads to noticeable learning progress.
PU8	The unit-based vocabulary and grammar resources effectively support my learning.
PU9	The Testing section (exam-oriented practice) familiarizes me with real exam formats.
PU10	Practicing with Testing increases my confidence in taking tests.

C. Behavioral Intention (BI)

Code	**Item**
BI1	I intend to continue using the system in the future.
BI2	I plan to use the system regularly for learning English.
BI3	I will use the system as a primary tool for self-study.
BI4	I am willing to spend time using the system outside class.
BI5	I will use the system to prepare for important exams.
BI6	I tend to prefer the system over other learning methods.
BI7	I will continue using the system even if it is not required.
BI8	I am willing to recommend the system to others.
BI9	I believe the system will be part of my English learning routine.
BI10	I plan to use the system in the long term.