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PAPER

University Students' Perceptions of Google Translate in Learning English: A Case Study in Vietnam

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ABSTRACT

This study investigates Vietnamese university students' perceptions of Google translate (GT) in English language learning using the technology acceptance model (TAM). The research examines three key constructs: Perceived ease of use (PEOU), perceived usefulness (PU), and behavioral intention (BI). It explores the relationships among them. Data collected from 535 students from a university in Vietnam revealed high levels of acceptance, with strong correlations among the TAM constructs. Female students reported significantly higher levels of PEOU, PU, and BI compared to males, highlighting gender-based differences in perceptions, while no significant differences were observed between first- and second-year students. These findings underscore the potential of GT as a supplementary tool in English-as-a-foreign-language (EFL) learning, enhancing user engagement and academic outcomes. However, overreliance on the tool may hinder critical language skill development, emphasizing the need for guided integration. Practical recommendations include training sessions on effective usage and gender-sensitive pedagogical interventions. Limitations of the study include its focus on a single institution and reliance on self-reported data, suggesting the need for broader, multi-institutional studies and qualitative approaches in future research. The findings contribute to the literature on technology acceptance in language education, providing valuable insights for optimizing GT's role in EFL learning.

KEYWORDS

technology acceptance model (TAM), google translate (GT), learning English, students' perceptions

1 INTRODUCTION

The landscape of education has undergone a dramatic transformation in recent years, with technology playing an increasingly central role in facilitating learning processes [1], [2]. This shift has been particularly pronounced in language learning, where digital tools such as Google translate (GT) have emerged as readily available resources for students seeking to enhance their English proficiency [3]. GT's free,

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user-friendly interface and ability to translate between numerous languages have propelled it to become a popular learning tool, particularly among English-as-a-foreign-language (EFL) learners worldwide [4], [5]. The growing reliance on GT in EFL contexts raises important questions about its effectiveness and impact on language acquisition.

Despite its widespread use, the integration of GT into EFL learning environments remains a subject of debate. While some educators recognize its potential benefits in aiding comprehension, vocabulary acquisition, and translation tasks, others express concerns regarding overreliance on the tool, the accuracy of its translations, and its potential to hinder critical thinking and language skill development [6], [7]. The effectiveness of GT as a learning aid depends largely on students' perceptions and their ability to use the tool strategically rather than as a substitute for active learning. Understanding how students perceive GT in terms of its ease of use, usefulness, and overall impact on their language learning is therefore crucial for optimizing its integration into educational settings.

While prior studies have explored the use of GT by EFL learners across various contexts [8–10], a gap exists in research focusing specifically on Vietnamese university students' perceptions of this tool. Existing studies on Vietnamese learners have primarily examined GT's role in translation classes and its application for translation tasks [11]. Furthermore, limited research has applied the technology acceptance model (TAM) [12] to investigate EFL university students' acceptance of GT in Vietnam. The TAM framework offers a valuable lens through which to examine students' perceptions, particularly in terms of perceived ease of use (PEOU) and perceived usefulness (PU), which ultimately influence their behavioral intention (BI) to integrate GT into their English learning [13], [14].

Beyond filling a gap in the literature, this study is significant for several reasons. First, with the increasing integration of artificial intelligence-driven translation tools in language learning, it is important to assess how students interact with and perceive such tools. Understanding their acceptance of GT can inform future technological advancements and pedagogical strategies that maximize its benefits while mitigating potential drawbacks. Second, examining demographic differences, particularly in terms of gender and year level, can provide insights into how diverse learner groups engage with GT, allowing educators to tailor their instructional approaches accordingly. Finally, the findings of this study contribute to the broader discourse on digital tools in language education by offering empirical evidence on how GT fits within the evolving landscape of EFL learning.

This study aims to address the identified research gap by investigating Vietnamese university students' perceptions of GT for English language learning. Hence, the research questions of the study are:

1. What are students' perceptions of GT in terms of usefulness, ease of use, and intention to use?
2. Are there significant differences in perceptions based on gender and year level?
3. What are the relationships between PEOU, PU, and BI?

By answering these research questions, this study holds significant implications for both researchers and educators. Understanding students' perceptions of GT's usefulness, ease of use, and potential limitations can inform strategies for more effective integration of technology in EFL classrooms. For educators, the findings can guide pedagogical practices that encourage students to use GT as a supplementary tool rather than a primary learning method, fostering a balance between technological

assistance and language skill development. Furthermore, by applying the TAM framework in the Vietnamese EFL context, this study contributes valuable insights into technology acceptance in language learning, supporting future research and policy decisions aimed at enhancing digital literacy among students [15]–[17]. This study endeavors to bridge the gap in existing literature by investigating Vietnamese university students' perceptions of GT for English language learning through the lens of the TAM framework. By examining students' perceptions, potential gender and year-level differences, and the interplay between TAM constructs, the study aims to inform the effective integration of this technology in Vietnamese EFL classrooms and contribute to a broader understanding of technology acceptance in language education.

2 RELATED WORK

2.1 Acceptance of technological tools in language learning

The TAM, introduced by Davis [12], remains a widely used framework for understanding how learners adopt and integrate technology into educational contexts. The model (see Figure 1) emphasizes PU, PEOU, and BI as central constructs influencing acceptance. Over time, numerous studies have validated TAM's applicability to a range of technological tools in language learning.

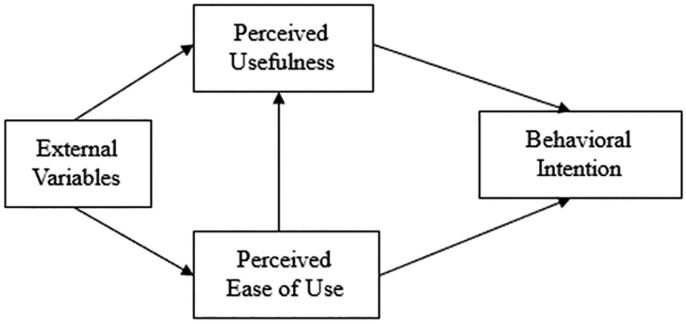

Fig. 1. Technology acceptance model

In mobile-assisted language learning (MALL), applications such as Busuu and ChatGPT have demonstrated high levels of acceptance due to their user-friendly designs and perceived learning benefits. AlDakhil and AlFadda [18] found that EFL learners valued the Busuu app for its interactive features and utility in improving language skills. Similarly, Liu and Ma [19] explored the use of ChatGPT for informal English learning, reporting strong correlations between PEOU and BI, as well as PU and BI, indicating learners' readiness to adopt AI-driven tools. Online platforms such as zoom have also been studied within TAM's framework. Alfadda and Mahdi [20] reported that students perceived Zoom as an effective platform for language courses during the COVID-19 pandemic, with PU and PEOU emerging as significant predictors of its continued use. Studies focusing on virtual reality environments, such as those by Barrett et al. [21], also highlighted TAM's utility in assessing engagement and learning outcomes in immersive settings. In addition to specific tools, general trends in integrating ICT into language education have been documented. Sulistiyo et al. [22] identified critical determinants of ICT acceptance among EFL learners, including accessibility and alignment with pedagogical goals. These findings align

with Peng, Xu, and Xu's [23] research on mobile learning, which emphasized the interplay between technological features and learner motivation. Despite this breadth of research, gaps remain in understanding how demographic factors such as gender and academic year influence acceptance, particularly in the context of tools such as GT. Addressing these factors is crucial for tailoring technology integration to diverse learner groups.

2.2 Differences in students' acceptance of technology by gender and year level

Demographic factors, including gender and academic year, play a critical role in shaping learners' acceptance of technology. However, studies on these aspects yield mixed findings, highlighting the need for context-specific investigations. Research on gender differences in technology acceptance reveals varying patterns. Hanif, Siddiqi, and Jalil [24] found that male students generally exhibit higher levels of confidence and lower levels of anxiety when using e-learning systems, leading to greater acceptance. Conversely, Hsu and Lin [25] argued that psychological constructs, such as motivation and self-efficacy, mediate gender-based differences, suggesting that both male and female learners can achieve comparable levels of acceptance under supportive conditions. Year level is another significant factor influencing technology acceptance. Chen and Yang [16] explored the adoption of online learning tools in collaborative programs, noting that senior students displayed higher PU due to greater familiarity with the tools. Similarly, Craig [13] reported that first-year students often experience higher levels of anxiety and lower PEOU, which can hinder acceptance. These findings suggest a need for targeted interventions to address the unique challenges faced by learners at different stages of their academic journey. Despite these insights, studies on demographic variations in the acceptance of specific tools such GT are scarce. Most research focuses on general ICT adoption or e-learning platforms, leaving a gap in understanding how gender and year level influence attitudes toward translation tools in language learning.

2.3 Acceptance of GT in learning English

Google translate has emerged as a widely used tool in language learning due to its accessibility and real-time translation capabilities. Existing research highlights its benefits and limitations, providing a nuanced understanding of its role in EFL contexts. Alhaisoni and Alhaysony [26] investigated Saudi EFL students' perceptions of GT, reporting positive attitudes toward its usefulness in vocabulary acquisition and comprehension tasks. Similarly, Bin Dahmash [4] found that students valued GT for its convenience, especially in translating unfamiliar texts. However, both studies noted that overreliance on GT could hinder learners' language development and critical thinking skills.

Google translate's impact on specific language skills has also been explored. Cancino and Panes [27] analyzed its effect on writing quality among Chilean high school students, observing improvements in grammatical accuracy and coherence. Chompurach [28] echoed these findings in Thai EFL learners, emphasizing GT's ability to reduce writing anxiety. However, concerns about dependency and the lack of contextual accuracy remain prevalent across studies. In translation-focused studies, GT has shown mixed results. Maulidina, Budiastuti, and Wijayatiningsih [29] examined

Indonesian students' use of GT for writing assignments, reporting that while GT enhanced efficiency, its grammatical inaccuracies posed challenges. Lam [30] explored Malaysian students' perceptions, finding that GT was most effective when combined with instructor guidance.

In the Vietnamese context, research on GT is limited. Le and Le [11] studied students' perceptions of GT in translation classes, identifying positive attitudes toward its utility but highlighting challenges with idiomatic expressions and contextual nuances. Pham et al. [31] investigated university students' use of GT, noting common issues such as dependency and inaccurate translations. These findings underscore the need for strategies to integrate GT effectively into the curriculum while mitigating its limitations. Despite these contributions, there is limited research on how demographic factors influence Vietnamese students' acceptance of GT. Understanding how gender and year level shape perceptions of PU, PEOU, and BI could provide valuable insights for educators and policymakers.

3 MATERIALS AND METHODS

3.1 Context and participants

This study was conducted during the first semester of the 2024–2025 academic year at a university in a northern Vietnamese region. The provincial authority is in charge of the university's administrative administration, and its goal is to provide high-level education and workforce training for the province and its neighboring regions. There are two faculties (political theory and physical education and psychology) and six departments (economics, tourism, foreign languages and information technology, continuing education, primary and preschool education, and secondary teacher education). English is a required course at the institution that all majors are required to take starting in their first year. Within the first two years, students must complete the three required general English courses: General English 1, General English 2, and General English 3. A teaching-learning timetable of 15 weeks is set for each subject.

This study involved 535 students. The demographic profile of the participants, as presented in Table 1, illustrates the distribution across gender, year level, and department among the 535 respondents. In terms of gender, the majority of participants were female, accounting for 86.4% (462 individuals), while male participants made up only 13.6% (73 individuals), reflecting a significant gender imbalance in the sample. Regarding year level, the distribution was relatively even, with 49.2% (263 individuals) being first-year students and 50.8% (272 individuals) being second-year students. This balanced representation provides insights into perceptions across different stages of academic experience. Furthermore, the participants were drawn from six distinct departments, with the largest group, 60.0% (321 individuals), coming from the Primary and Preschool Education department. This was followed by students from Continuing Education, comprising 15.1% (81 individuals), and Foreign Languages and IT, making up 9.7% (52 individuals). Smaller proportions were observed in the Secondary School Education department (6.9%, 37 individuals), the Economics department (4.7%, 25 individuals), and the Tourism department (3.6%, 19 individuals). Overall, the demographic data highlight a predominantly female cohort, an even distribution across year levels, and a concentration of participants in the Primary and Preschool Education department.

Table 1. Demographic information of participants (N = 535)

Categories		Number	Percent
Gender	Male	73	13.6
	Female	462	86.4
Year Level	First	263	49.2
	Second	272	50.8
Department	Economics	25	4.7
	Continuing Education	81	15.1
	Primary and Preschool Education	321	60.0
	Secondary School Education	37	6.9
	Foreign Languages and IT	52	9.7
	Tourism	19	3.6

3.2 Data collection

The study utilized a 10-item questionnaire presented in Table 2 that assessed PEOU with four items (from 1 to 4), PU with four items (from 5 to 8), and BI with two items (9 and 10). The questionnaire was created on the web-based platform Google forms. All items were modified from Dizon [14], deploying a 5-point Likert scale that spans from 1 (strongly disagree) to 5 (strongly agree).

Table 2. Questionnaire concepts and elements

Constructs	Items
PEOU	**1.** GT is easy to use. **2.** It would be easy for me to become skillful at using Google translate. **3.** My interaction with GT would be clear and understandable. **4.** I would find it easy to get what I want to do when I use Google translate.
PU	**5.** Using GT would improve my learning performance. **6.** I would find GT useful in learning English. **7.** Using GT would make my English learning easier. **8.** Using GT would enhance the effectiveness of my English learning.
BI	**9.** I intend to use GT in the future.
	10. I intend to use GT's functions to assist the English learning.

The link to the questionnaire was sent to the students via groups of the classes in Zalo–a popular social media in the country. It took the students about five minutes to answer the question items just by clicking on the given link address. The delivery was conducted in the middle of the semester (week 7th). The students' participation was voluntary, which was stated along with the research purpose and plan informed at the introduction part of the questionnaire. And after one week the questionnaire ceased response acceptance automatically.

Table 3 presents the reliability analysis of the constructs PEOU, PU, and BI using Cronbach's alpha values. Cronbach's alpha is a measure of internal consistency, indicating the reliability of the items within each construct. The PEOU construct, consisting of 4 items, demonstrated a Cronbach's alpha of 0.880. This value indicates a high level of reliability, as it exceeds the commonly accepted threshold of 0.7 for adequate internal consistency. Similarly, the PU construct, also with four items, showed an even

higher Cronbach's alpha of 0.929, signifying excellent reliability and strong consistency among the items within this construct. Lastly, the BI construct, which comprises two items, reported a Cronbach's alpha of 0.869, reflecting high reliability as well. The Cronbach's alpha values for all three constructs indicate that the items within each are internally consistent and reliable for measuring the respective constructs. The high reliability supports the validity of these constructs in the context of the study.

Table 3. Cronbach's alpha of PU, PEOU, and BI constructs

Constructs	Number of Items	Cronbach's Alpha
PEOU	4	0.880
PU	4	0.929
BI	2	0.869

3.3 Data analysis

The data analysis techniques applied in this study consist of three primary methods to evaluate the participants' perceptions and examine differences and relationships among the constructs based on the TAM using SPSS version 20 software. Descriptive statistics were used to summarize and describe the overall perceptions of participants regarding the constructs of PEOU, PU, and BI. This includes measures such as means and standard deviations to provide an overview of the central tendencies and variability within the dataset. Independent sample t-tests were employed to explore differences in perceptions based on gender (male and female) and year levels (first-year and second-year participants). These techniques help identify whether demographic factors significantly influence participants' perceptions of the TAM constructs. Correlation analysis was conducted to assess the strength and direction of relationships between TAM constructs (PEOU, PU, and BI). Regression analysis was used to evaluate predictive relationships between these constructs, such as how PEOU and PU predict BI. These methods provide insights into the interdependencies and causal relationships within the TAM framework. Descriptive correlational research is especially effective for examining the degree and characteristics of relationships among variables within a specified population [32].

The combination of these analytical techniques ensures a comprehensive examination of the data. Descriptive statistics offer a baseline understanding of participants' perceptions, t-tests evaluate demographic group differences, and correlation and regression analyses validate the relationships and predictive power among TAM constructs. This multi-method approach provides robust evidence for interpreting participants' acceptance and use of GT in English learning.

4 MAIN RESULTS

4.1 Students' perceptions of GT in terms of usefulness, ease of use, and intention to use

To address the first research question, this study employed a combination of quantitative and qualitative approaches. A structured questionnaire was distributed to collect data on students' perceptions of GT, measuring three key constructs: PU, PEOU, and BI. Table 4 provides descriptive statistical analysis of the mean, standard

deviation, and level of acceptance for the constructs PEOU, PU, and BI. These metrics offer insight into participants' perceptions and acceptance levels of these constructs.

Table 4. Level of acceptance

Constructs	Mean (M)	Std. Dev. (SD)	Level
PEOU	4.197	0.77902	High
PU	4.126	0.82871	High
BI	4.170	0.92157	High

The PEOU construct achieved the highest mean score (M = 4.197, SD = 0.77902), indicating that participants strongly perceive the technology as easy to use. The level of acceptance for this construct is categorized as "High," reflecting a positive user experience in terms of ease of use. Similarly, the PU construct reported a high mean score (M = 4.126, SD = 0.82871), demonstrating that participants perceive the technology as significantly useful in supporting their learning process. The "High" level of acceptance for PU underscores the participants' positive assessment of the usefulness of the technology in their educational context. The BI construct also scored highly (M = 4.170, SD = 0.92157), signifying a strong BI among participants to continue using the technology. The "High" level of acceptance for BI suggests that participants are likely to adopt and integrate the technology into their academic practices.

Overall, the results show consistently high mean scores and low standard deviations for all three constructs, indicating a favorable perception and a strong level of acceptance among participants. This uniformity across constructs highlights the technology's potential for widespread adoption and its alignment with the participants' needs and expectations. The findings suggest that ease of use and PU significantly influence BI, supporting the TAM framework applied in this study.

4.2 Differences in perceptions based on gender and year level

To explore potential differences in students' perceptions based on gender and academic year, independent sample t-tests were conducted. This statistical method was chosen to determine whether significant variations exist between male and female students, as well as between first- and second-year students, regarding their perceptions of GT. Table 5 presents the results of independent sample t-tests analyzing gender differences in the perceptions of PEOU, PU, and BI among the participants. The table shows the mean scores, standard deviations, and p-values for male and female participants across the three constructs.

The mean score for male participants is 3.9795 (SD = 0.89341), while female participants have a higher mean score of 4.2316 (SD = 0.75473). The p-value for the t-test is 0.010, which is less than the standard significance level of 0.05, indicating a statistically significant difference between male and female participants in their perceptions of PEOU. Females perceive the technology as easier to use compared to males. For PU, male participants report a mean score of 3.8356 (SD = 0.96755), while female participants score significantly higher with a mean of 4.1715 (SD = 0.79617). The p-value for the t-test is 0.001, which is highly significant. This result suggests that female participants find the technology more useful compared to their male counterparts. Regarding BI, male participants have a mean score of 3.7740 (SD = 1.13358), whereas female participants again report a higher mean score of

4.2327 (SD = 0.86851). The p-value is 0.000, indicating a highly significant difference between genders. This suggests that females exhibit a stronger BI to use the technology compared to males.

Table 5. Independent sample t-test results on genders

Constructs	Gender	N	Mean (M)	Std. Dev. (SD)	P-Value
PEOU	Male	73	3.9795	.89341	.010
	Female	462	4.2316	.75473	.025
PU	Male	73	3.8356	.96755	.001
	Female	462	4.1715	.79617	.006
BI	Male	73	3.7740	1.13358	.000
	Female	462	4.2327	.86851	.001

The results indicate statistically significant gender differences across all three constructs (PEOU, PU, and BI). Female participants consistently reported higher mean scores, demonstrating that they perceive the technology as easier to use, and more useful and exhibit a stronger intention to use it compared to male participants. These findings imply that gender may influence the acceptance and adoption of technology, with females showing more favorable attitudes. This trend may be due to differing levels of familiarity, engagement, or specific needs that align more closely with the features of the technology. Further investigation could explore underlying factors contributing to these gender differences.

Table 6 presents the results of an independent sample t-test analyzing differences in PEOU, PU, and BI to use (BI) between first-year and second-year participants. The table includes the mean scores, standard deviations, and p-values for the two year levels. First-year participants have a mean score of 4.1992 (SD = 0.77633), while second-year participants have a mean score of 4.2003 (SD = 0.77230). The p-value for the t-test is 0.987, indicating no statistically significant difference between the two groups. This suggests that participants' perceptions of the ease of use of the technology are similar across both year levels. The mean score for first-year participants is 4.1184 (SD = 0.85236), compared to 4.1548 (SD = 0.75534) for second-year participants. The p-value for this comparison is 0.630, which is not significant. This implies that both first-year and second-year participants perceive the usefulness of the technology similarly. For BI, first-year participants report a mean score of 4.1574 (SD = 0.94301), while second-year participants have a slightly higher mean score of 4.2188 (SD = 0.83948). However, the p-value is 0.446, indicating no statistically significant difference between the two groups. This suggests that the BI to use the technology does not differ meaningfully between year levels.

Table 6. Independent sample t-test results on year level

Constructs	Year Level	N	Mean (M)	Std. Dev. (SD)	P-Value
PEOU	First	359	4.1992	.77633	.987
	Second	176	4.2003	.77230	.987
PU	First	359	4.1184	.85236	.630
	Second	176	4.1548	.75534	.616
BI	First	359	4.1574	.94301	.464
	Second	176	4.2188	.83948	.446

The results reveal no statistically significant differences in PEOU, PU, or BI between first-year and second-year participants, as all p-values exceed the significance threshold of 0.05. This indicates that perceptions of ease of use, usefulness, and intention to use the technology are consistent across both year levels. These findings suggest that academic year level does not significantly influence students' acceptance of the technology, which may imply that other factors, such as prior experience or individual preferences, have a greater impact on their perceptions. Further research could explore these potential influences to better understand the uniformity in responses across year levels.

4.3 Relationships between PEOU, PU, and behavioral intention

To assess the relationships between PEOU, PU, and BI, correlation analyses were conducted. Pearson's correlation coefficients were calculated to measure the strength and direction of associations between the constructs. Table 7 presents the Pearson's correlation matrix for PEOU, PU, and BI. The table shows the correlation coefficients between these constructs, with all correlations being significant at the 0.01 level (2-tailed). The correlation coefficient between PEOU and PU is 0.753, indicating a strong positive relationship. This suggests that as participants perceive the technology as easier to use, their perception of its usefulness increases. This finding aligns with the TAM, which posits that PEOU significantly influences PU. The correlation coefficient between PEOU and BI is 0.679, showing a moderately strong positive relationship. This indicates that the ease of use of the technology positively impacts participants' BI to use it. While the relationship is slightly weaker compared to the PEOU-PU link, it highlights the importance of ease of use in driving intention to adopt the technology. The strongest correlation is observed between PU and BI, with a coefficient of 0.783, representing a strong positive relationship. This finding suggests that participants who perceive the technology as useful are highly likely to exhibit a strong intention to use it. This aligns with the TAM framework, which posits PU as a primary predictor of behavioral intention.

Table 7. Pearson's correlation matrix for PEOU, PU, and behavioral intention

	PEOU	PU	BI
PEOU	1	–	–
PU	.753**	1	–
BI	.679**	.783**	1

The results highlight significant positive correlations among all three constructs, with the strongest relationship observed between PU and BI, followed by PEOU and PU, and finally PEOU and BI. These findings provide robust support for the TAM framework, indicating that PEOU influences PU, which in turn strongly impacts BI. Additionally, PEOU also has a direct effect on BI, though to a slightly lesser extent. These results underscore the importance of designing technology that is both easy to use and perceived as useful to encourage greater adoption and usage intention among users.

5 DISCUSSION

This study examined university students' perceptions of GT in English language learning using the TAM framework. The findings provide insights into how students

perceive the tool's usefulness, ease of use, and their intention to use it, as well as the influence of gender and year level. The relationships among TAM constructs were also analyzed to better understand factors driving students' acceptance of GT. The findings of this study reveal that university students hold positive perceptions of GT, viewing it as a valuable supplementary tool in EFL learning. High mean scores for PEOU, PU, and BI suggest that students find the tool user-friendly, and beneficial for their English learning process and express a strong intention to use it in the future. These results align with TAM theory, which posits that PEOU enhances PU, which in turn influences behavioral intention.

The significant gender differences observed in the study indicate contextual or experiential influences. Female participants consistently reported higher mean scores for PEOU, PU, and BI compared to male participants, suggesting that they perceive the tool as easier to use and more useful, which translates into a stronger intention to use it. Several potential explanations exist for this disparity. Research suggests that female students may engage more actively in metacognitive learning strategies, such as verifying translation accuracy and cross-referencing multiple sources, which enhances their PU of GT [16]. Additionally, social and cultural factors may play a role; female learners may experience greater external pressures to achieve linguistic accuracy, leading them to adopt digital translation tools more frequently [18]. Another possible explanation is that female students may exhibit higher levels of digital literacy in language learning contexts, making them more adept at integrating GT into their academic routines [5]. Future studies could explore whether these gender differences persist across different age groups or educational settings and whether instructional interventions could help balance GT adoption rates between male and female students. On the other hand, year level did not show significant differences in perceptions, highlighting consistency in attitudes toward GT across academic stages. This uniformity suggests that the tool is perceived similarly regardless of students' year level. This finding may indicate that GT is widely accessible and intuitive, allowing students at all academic stages to use it effectively without the need for additional training. However, this raises questions about whether students develop more nuanced perspectives on GT's limitations over time. Unlike more advanced translation tools that require structured learning curves, GT offers immediate accessibility, which might explain why its adoption remains stable across year levels. Nevertheless, longitudinal studies are needed to track whether prolonged exposure leads to greater discernment regarding GT's limitations and advantages [19].

The study also confirmed strong relationships among TAM constructs. The significant positive correlations between PEOU, PU, and BI underscore the interconnectedness of these variables. Notably, the strongest relationship was observed between PU and BI, suggesting that students' intention to use GT is primarily driven by their perception of its usefulness. This finding reinforces TAM's assertion that PU is a critical determinant of BI. The moderately strong relationship between PEOU and BI indicates that ease of use also directly impacts students' willingness to adopt the tool, albeit to a lesser extent than PU. The findings of this study are consistent with existing research on the application of TAM in educational contexts. Similar to studies by AlDakhil and AlFadda [18] on mobile-assisted language learning tools and Liu and Ma [19] on AI-driven platforms, this study confirms the relevance of TAM constructs in explaining students' acceptance of GT. The strong correlations between PEOU, PU, and BI mirror the trends reported in previous studies, validating TAM as a robust framework for understanding technology adoption in language learning.

However, this study offers unique insights into EFL students' experiences in the Vietnamese context, an area previously underexplored. Unlike studies that focus on general ICT tools or translation technologies in other regions, this study highlights the specific attitudes and behaviors of Vietnamese university students. While prior studies by Alhaisoni and Alhaysony [26] and Cancino and Panes [27] emphasized GT's role in vocabulary acquisition and writing improvement, this study expands the discussion by examining the demographic influences of gender and year level. The lack of significant differences between year levels contradicts findings by Chen and Yang [16], who reported variations in acceptance based on academic familiarity. This discrepancy underscores the importance of context-specific investigations, as cultural and institutional factors may shape students' perceptions differently. Additionally, the study builds on concerns raised in earlier research about overreliance on GT. While the high levels of acceptance in this study suggest its potential as a supplementary tool, it also underscore the need for educators to address the risk of dependency. Similar to findings by Lam [30], which highlighted challenges with idiomatic expressions and contextual nuances, this study implies that students require guidance to use GT effectively and critically.

The results of this study have significant practical, theoretical, and pedagogical implications for integrating GT into EFL curricula and advancing TAM research in educational contexts. From a practical perspective, the findings suggest that GT can be effectively incorporated into EFL curricula as a supplementary learning tool. However, its integration should be accompanied by training sessions and workshops to enhance students' ability to use the tool critically. Educators should emphasize strategies for verifying translation accuracy, understanding contextual nuances, and using the tool for specific tasks such as vocabulary building and writing enhancement. Furthermore, tailored support for male students, who reported lower levels of PEOU, PU, and BI, could help bridge the gender gap in technology acceptance. The study contributes to the growing body of literature on TAM by providing empirical evidence of its applicability in the context of language learning tools. The strong relationships among PEOU, PU, and BI reaffirm TAM's relevance in explaining technology acceptance in educational settings. Moreover, the study highlights the need to consider demographic variables, such as gender, in TAM-based research. The findings offer a nuanced understanding of how contextual factors, such as cultural and institutional settings, interact with TAM constructs, paving the way for future research on technology acceptance in diverse educational contexts. The gender differences observed in this study highlight the importance of addressing individual learner characteristics to optimize the effectiveness of GT. Educators should design gender-sensitive interventions to ensure equal access and benefits for all students. Providing additional support to male students who may perceive the tool as less useful could enhance their engagement and acceptance. While no significant differences were found between year levels, educators should still consider students' varying levels of familiarity with technology and offer differentiated guidance as needed.

6 CONCLUSIONS

This study explored university students' perceptions of GT for English language learning using the TAM. The findings revealed positive perceptions of the tool's ease of use, usefulness, and BI, with female students reporting higher levels across these constructs compared to males. However, no significant differences were found between first-year and second-year students, suggesting consistent

perceptions across academic levels. Strong correlations among PEOU, PU, and BI validated the TAM framework, with PU emerging as the strongest predictor of BI. Based on these findings, several recommendations can be made. Institutions should organize training sessions to teach students how to use GT effectively, focusing on its strategic application for tasks such as vocabulary building and writing improvement. Addressing gender differences through targeted support for male students could enhance their engagement. Additionally, educators should integrate GT as a supplementary resource, encouraging balanced use alongside traditional learning methods to avoid overreliance. Further research is also needed to investigate the long-term effects of using translation tools on language development, particularly on writing and critical thinking skills.

Despite its contributions, this study has several limitations that should be acknowledged. First, the research was conducted at a single institution, which may limit the generalizability of the findings. Future research should include multi-institutional studies across different regions to gain a more comprehensive understanding of students' perceptions of GT in English learning. Second, the study relied on self-reported data, which may be subject to response bias. To address this limitation, future research should incorporate qualitative methods, such as interviews and classroom observations, to triangulate findings and gain deeper insights into students' experiences with GT. Moreover, future studies should employ longitudinal designs to track changes in students' perceptions and usage patterns of GT over time. Such an approach would provide valuable insights into how familiarity and evolving technological advancements influence students' acceptance and reliance on GT. Experimental research comparing groups with and without GT interventions could also help determine its actual impact on language proficiency and critical thinking skills. Additionally, researchers could explore the integration of GT with other artificial intelligence-powered tools, such as ChatGPT, or virtual reality applications to assess how combining these technologies might support a more holistic and immersive language learning experience. By addressing these gaps, future research can contribute to a more nuanced and evidence-based understanding of technology-assisted language learning.

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