Article

Journal of International Students
Volume 16, Issue 18 (2026), pp. 85-104
ISSN: 2162-3104 (Print), 2166-3750 (Online)
jistudents.org
https://doi.org/10.32674/jn21p669

Teachers' Adoption of ChatGPT as a Supportive Tool for Lesson Planning

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ABSTRACT: *AI tools such as ChatGPT have attracted increased interest from educators in diverse teaching settings. Based on the theoretical frameworks of TAM and UTAUT, this study explores the factors influencing the adoption of ChatGPT as a supportive tool for lesson planning and examines how they interact across various teaching contexts. A quantitative study using PLS-SEM was conducted to examine the effects of perceived usefulness, perceived ease of use, and social influence on teachers' intention to use ChatGPT in lesson planning. Data collected from 284 Vietnamese teachers, including both English-speaking and non-English-speaking teachers, revealed that all the factors directly and positively affected the behavioral intention to use ChatGPT and indirectly predicted actual long-term use. This study provides practical implications from the context of the Global South, such as Vietnam, emphasizing the need for international support and international collaboration to enhance not only the usefulness of ChatGPT for lesson planning but also teacher education and technology integration.*

Keywords: ChatGPT, diverse teaching contexts, international support, lesson planning, teachers' adoption, TAM, UTAUT

INTRODUCTION

In recent years, with the widespread development and integration of education, artificial intelligence (AI) has provided teachers with a new vision of teaching to minimize their workload. One of the highly attractive AI applications is ChatGPT because it generates humanlike responses and supports lesson planning (Octavio et al., 2024). ChatGPT is a text-based AI chatbot that can provide instant ideas and suggest classroom activities through which teachers can adapt to different learning goals (Al-Marzouqi et al., 2024). It was developed and launched by OpenAI in November 2022; it is a powerful AI chatbot that offers teachers suggestions for exercises, explanations, or even discussion prompts, which makes lesson preparation more efficient and flexible (Anders, 2023). Understanding teachers' perceptions and willingness to use ChatGPT is critical for determining how successful its adoption is when integrated into different long-term teaching contexts.

A growing number of studies have investigated technology acceptance in education based on either the technology acceptance model (TAM) (Davis, 1989) or the unified theory of acceptance and use of technology (UTAUT) (Venkatesh et al., 2003). First, this study fills this gap by combining both the TAM and UTAUT models, which emphasize key factors such as perceived usefulness, perceived ease of use, social influence, behavioral intention, and actual use. Consequently, this combination proposes a unique model. Second, AI technologies in language learning and teacher training have been widely addressed (Lai et al., 2024); however, few studies on ChatGPT as a supportive tool in lesson planning, from teachers' perspectives, can be found. Another aspect of the research gap is that many of these previous studies focused on a narrow scope, such as a specific school, subject, or EFL context only (Bannister et al., 2024; Nguyen et al., 2024; Diep & Dang, 2024), which limits the generalizability of the findings across broader teaching communities. In contrast, this study seeks to address these gaps by examining teachers' adoption of ChatGPT across diverse educational contexts in Vietnam, a country in the global south where technology literacy and teachers' professional development continue to develop. The paper includes participants from different contexts in Vietnam, ranging from primary schools to universities, vocational schools, and international schools. With a focus on a wider subject area of teachers' perspectives, this study aims to show how ChatGPT is perceived and used as a supportive tool for lesson planning. Using the TAM and UTAUT as theoretical frameworks, this study investigates how perceived usefulness, perceived ease of use, and social impact affect instructors' behavioral intentions to use ChatGPT and predict long-term actual use. In response to these research gaps, the present study aims to address the following two research questions:

- RQ1: What are the perceived factors influencing teachers' adoption of ChatGPT as a supportive tool for lesson planning?
- RQ2: What are the structural relationships among these factors in predicting teachers' behavioral intention and actual use of ChatGPT?

The purpose of this study is to determine the perceived elements that influence teachers' adoption of ChatGPT in lesson planning and to investigate the relationships among these factors using a structural model tested by PLS-SEM. Although both teachers' and learners' perspectives in studies of technology adoption are quite important, as Pham and Le (2024) stated, ChatGPT is considered an effective supportive tool for both teachers and learners in their teaching and learning processes. However, the scope of our research is limited to teachers' perspectives on lesson preparation and does not consider direct classroom implementation or learners' perceptions.

This study serves as a starting point not only for a specific school but also for various regional institutions in Vietnam to raise awareness about the benefits and convenience of AI tools for teaching support, which are intended for teacher education rather than individual use, particularly in technology education. Therefore, this study calls for support to internationalize teacher education and technology education, enhancing the usefulness of ChatGPT for lesson planning. Ren and Wang (2022) reported that with internationalization, individuals can learn from others, develop their ability to analyze global issues, and benefit from opportunities to share advanced scientific and technological ideas.

LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

ChatGPT in Teaching from Diverse Contexts

Technology plays an increasingly important role in education, and ChatGPT has emerged as a popular AI tool for teachers because of its increasing benefits. ChatGPT has been adopted across diverse teaching contexts, from primary to university, vocational, and international institutions, as well as in both language and non-language subjects. The ability to adapt to a wide range of contexts and educational needs highlights the recognition of AI as a versatile collaborator in lesson planning and learning enhancement (Al-Marzouqi et al., 2024). From the teachers' perspective, ChatGPT assists teachers in designing lessons and creating content such as interactive activities, tasks, grammar exercises, vocabulary practices, sample dialogs, and reading passages adapted to their students' individual needs (Graefen & Fazal, 2024). In STEM contexts, for example, it can produce problem sets and simulations, whereas in humanities or social sciences, it helps with prompts for discussion and critical reflection tasks for students to experience (Budhathoki, 2024). Dornburg and Davin (2024) also supported the idea that ChatGPT reduces teacher effort by suggesting lesson-planning ideas. For example, with specific prompts, it can quickly create diverse classroom resources for different teaching needs that fit the learners' needs, interests, and objectives, saving teachers time and effort and reducing teachers' stress in class preparation. These applications highlight its cross-disciplinary value, as perceived usefulness extends beyond a single topic domain to every setting in which teachers must deliver compelling lectures effectively. Owing to ChatGPT, teachers' workload is reduced, which saves teachers time in paying attention to learner-centered interactions. Thus, Huang et al. (2022) reported that ChatGPT is considered a

supportive, professional development tool that provides teachers with suggestions for relevant plans and teaching strategies based on best practices in language education. In addition, in multicultural classrooms such as international schools and vocational institutions, as Zeng and Mahmud (2024) stated, ChatGPT helps teachers adapt materials to varied learners' linguistic backgrounds. With translation support or alternative explanations, ChatGPT enables teachers in nonlanguage subjects to access various teaching resources from all over the world in any field. Such features make ChatGPT a supportive tool across heterogeneous educational environments.

Factors Influencing Teachers' Adoption of ChatGPT

Theoretical Frameworks

In research on technology adoption, the TAM (Davis, 1989) and the UTAUT (Venkatesh et al., 2003) are usually studied as a theoretical background to examine how teachers perceive and integrate technology tools such as ChatGPT into their teaching practices. Perceived usefulness (PU) and perceived ease of use (PEOU) are two main components of the TAM for assessing technology acceptance, and social influence (SI) is a factor from UTAUT. TAM has been widely validated and applied in many fields because of its key PU and PEOU factors, which lead users to decide to adopt technology in the long term (Ittefaq et al., 2025). Its strength is its simplicity and predictive power, which make it a popular framework for examining the use of digital resources in education (Marikyan & Papagiannidis, 2023). Venkatesh et al. (2003) created the UTAUT based on the TAM and other theories of technology acceptance, which combines different models into one, and one of the most important parts of UTAUT is the SI. In educational research, UTAUT has become prominent because of its ability to capture contextual and social dynamics, such as the influence of colleagues, institutional culture, or training opportunities (Zogheib et al., 2024).

A considerable number of recent studies have used TAM and UTAUT to examine the adoption of AI tools in education. Lai (2024) augmented the TAM to examine intrinsic motivation in the utilization of ChatGPT. In addition, a study by Mutammimah et al. (2024) assisted teachers in Indonesia and comparable regions in understanding and adopting ChatGPT in English language teaching. This research adapted the TAM framework to investigate English teachers' perspectives on the intention to adopt ChatGPT. A PLS–SEM study by Shahzad et al. (2024) across China also integrated key determinants from the TAM, from which constructions such as PU, PEOU, and perceived intelligence mediated the relationship between awareness and adoption intention.

In the meantime, Apata et al. (2024) successfully applied the UTAUT as a theoretical foundation to offer deep insights into preservice teachers' perceptions of ChatGPT in Nigerian higher education when new technologies such as ChatGPT are adopted. The study of Xue et al. (2024) evaluated the application of the UTAUT model in higher education, showing that performance expectancy has the strongest effect on behavioral intention and highlighting nuanced variances in

the impact of UTAUT factors between higher education and general contexts. These studies demonstrate that both models provide complementary insights; the TAM elucidates the utility and usability of digital tools such as ChatGPT, whereas UTAUT addresses the social and organizational factors that affect adoption. This study uses both TAM and UTAUT to establish a comprehensive framework for examining teachers' perspectives on the adoption of ChatGPT for lesson planning across various contexts. By synthesizing components from both models, such as PU, PEOU, SI, behavioral intention (BI), and actual use (AU), the study examines educators' awareness of the ChatGPT application while also considering the broader social contexts that promote its application. This integrated methodology ensures a theoretical foundation and enables a comprehensive analysis of technology adoption across various educational levels and disciplines.

Key constructs in the study

Perceived Usefulness (PU)

PU, a key concept of the TAM, was developed by Davis (1989) to evaluate the acceptance of technology use. It refers to the extent to which an individual will enhance his or her job performance by using a particular technological tool. According to the TAM, PU is considered the strongest factor of BI, reflecting that users will adopt technology when they perceive it as beneficial for their job (Marikyan & Papagiannidis, 2023). In the educational teaching context, PU has been widely used to explain why teachers and students integrate digital technologies, ranging from e-learning platforms to AI-based systems (Zogheib et al., 2024). Teachers are under more pressure to develop new ways to teach and meet the needs of diverse students. ChatGPT will be a useful tool for teachers who first want to improve the quality and creativity of their lessons. With ChatGPT, teachers can update more flexible and participatory teaching methods (Fu, 2024) to design creative tasks rather than routine tasks, thus increasing student involvement. It can generate interesting ideas and design a variety of exercises and activities suitable for different skill levels and create more profound conversation and discovery for non-language situations (Chou et al., 2024). Koraishi (2023) confirmed that ChatGPT can save teachers' time and energy in lesson preparation without lowering the quality of lesson plans. Second, most users from different contexts are likely to use ChatGPT because of its time efficiency and productivity. As in the previous study by Diep and Dang (2024), EFL teachers often spend hours making a list of words, coming up with reading comprehension problems, or creating grammar exercises that fit the students' textbook or a specific topic from the course framework. Teachers can obtain all the vocabulary they need, reading comprehension questions based on the students' textbook, and many grammar assignments with ChatGPT. In fact, Kiryakova and Angelova (2023) reported that professors agreed that ChatGPT supports activities that take more time, such as creating scenarios, materials, and presentations for lectures; exam questions; quizzes; and assignments for student assessment, allowing them to focus on more important pedagogical tasks. In the context of

teaching young learners, ChatGPT can be a valuable tool for generating a variety of lively sources, such as games, quizzes, and writing story scripts, that are appropriate for the needs and interests of learners in different contexts (Anders, 2023); thus, Allehyani and Algamdi (2023) reported that ChatGPT can support important requirements in a mixed-ability classroom context in a short time that can reduce the teaching overload for teachers but still increase their teaching productivity. Moreover, Zheng and Mahmud (2023) explained that if teachers provide it with clear instructions, including topics, levels, and objectives, it can create personalized teaching materials such as a detailed lesson plan, including goals, materials, exercises, and specific activities for the lesson on the basis of the learner's levels and interests. Apata et al. (2024) reported that preservice teachers perceived AI as valuable for adapting content to learners' diverse backgrounds, whereas in multicultural or multilingual classrooms, ChatGPT helps bridge language gaps, offering alternative explanations or translations (Zeng & Mahmud, 2023). Another advantage of ChatGPT for educators is that with ChatGPT, users can access updated and useful resources because Al-Marzouqi et al. (2024) argued that it serves as 'a resource bank' to find valuable materials. It is particularly useful for non-English subjects, where teachers can create case studies or practice questions aligned with current knowledge.

In general, factors of usefulness through teachers' perceptions show that ChatGPT can enhance lesson quality and creativity, save teachers' time, support personalization, offer access to varied resources, and benefit teachers in any field. In any diverse context, PU is a key component of BI (Lai et al., 2024) and (Mutammimah et al, 2024). Consequently, in the present study, PU is hypothesized to have a direct and positive effect on teachers' intention to adopt ChatGPT for lesson planning.

Perceived Ease of Use (PEOU)

The second factor of the TAM, PEOU, has a considerable effect on digital tools such as the ChatGPT. According to Davis (1989), PEOU relates to the extent to which users thought that utilizing a particular digital tool would be "free of effort". In educational contexts, the more user-friendly the technology was, the more willing people were to adopt it in lesson planning. In fact, ChatGPT has user-friendly interfaces that can provide immediate assistance, is easy to use, and can be accessible all the time (Lai et al. 2023). Surprisingly, Darmu'in et al. (2025) reported that ChatGPT also works well with those who live in remote areas, making it accessible easily to high-quality education through digital platforms. It can automatically generate ideas for lesson plans, modify or refine outputs according to teachers' feedback, recognize the structure of a lesson plan, and then reply accordingly in a very short period (Mutammimah et al., 2024). Apart from the interface design, PEOU shows that ChatGPT reduces teachers' workload and time rather than adding complexity by simplifying teachers' work because Dornburg and Davin (2024) confirmed that with ChatGPT, teachers can create multiple materials for both in-class activities and homework assignments quickly and easily. Anders (2023) argued that ChatGPT allows teachers to quickly

brainstorm lesson ideas and edit and refine lesson plans without navigating overly complicated procedures, which encourages broader adoption.

Social Influence (SI)

SI is among the essential factors in the UTAUT model of Venkatesh et al. (2003). It describes how external factors such as institutions, dean boards, colleagues, and students affect users' adoption of AI tools. Unlike the internal factors PU and PEOU, SI is related to the social and organizational contexts of acceptance. In diverse teaching contexts, SI varies across different kinds of schools, from primary to high schools, vocational schools, and universities. AI technologies such as ChatGPT are promoted and encouraged in large, professional institutions; thus, teachers use these tools quickly and use them as teaching assistants (Chou et al., 2022). Apata et al. (2024) reported that preservice teachers express interest in using AI tools for lesson planning when they are recommended by their peers. Zogheib et al. (2024) reported that teachers tend to utilize ChatGPT for lesson preparation when they experience their colleagues using it effectively. However, in contexts such as rural areas where resources, budgets, and technology literacy are limited, the application of digital tools depends heavily on the policies of institutions and leaders. Their encouragement is essential in educational innovation, especially in AI tool adoption. As Chou et al. (2024) demonstrated, when institutional leaders and policymakers encouraged AI application and offered useful workshop training, teachers were more confident and willing to adopt ChatGPT for their teaching planning.

Structural relationships among these factors

Understanding the structural relationships among PU, PEOU, SI, BI, and AU is crucial for analyzing technology adoption, which is based on the theoretical framework of the TAM (Davis, 1989) and UTAUT (Venkatesh et al., 2003). First, research in the TAM technology adoption literature clearly shows that PU directly influences BI. PU is the strongest element of BI in both the TAM and UTAUT models (Marikyan & Papagiannidis, 2023). Teachers are more likely to use ChatGPT as their assistant if they believe that it will help them make better lesson plans (Venkatesh and Davis, 2000). Budhathoki et al. (2024) emphasized that PU was a more critical factor in teachers' acceptance than other elements were, suggesting that demonstrating the practical advantages of ChatGPT is crucial for enhancing its use across diverse contexts. Al-Marzouqi et al. (2024) reported that educators' perceptions of digital technologies, irrespective of context, profoundly influenced their readiness to integrate these tools into their pedagogy. The TAM hypothesis (Davis, 1989) posits that PU directly influences BI and indirectly impacts AU. According to Al-Gahtani's (2016) study, the perceived value of ChatGPT and other AI technologies significantly affects their actual usage, particularly in educational settings. In fact, educators are more inclined to use ChatGPT if they see a clear connection between its capabilities and their pedagogical goals.

Second, we examine the correlation between PEOU and both BI and AU. According to the TAM (Davis 1989), PEOU directly affects BI. Teachers will be willing to use digital technologies that are user friendly and easily accessible and provide rapid help in their lesson development. Graefen and Fazal (2024) reported that if educators see it as intuitive and user friendly, they are likely to embrace it quickly. Educators' belief that AI information technology will enhance their future teaching capacity is closely linked to their desire to use this technology, and this belief is particularly effective in elementary or vocational school settings when digital literacy is constrained (Al-kfairy, 2024). PEOU influences BI directly and AU indirectly. Davis (1989) established that when instructors see technology as user friendly without requiring complex modifications, they are not only inclined to use it but also do so more often, hence enhancing actual usage. Tools that are user friendly are not only installed more rapidly but also used for longer durations, which is necessary to meet the advantages of AI tools such as ChatGPT in diverse educational settings (Venkatesh et al. 2003).

With UTAUT, teachers' behavioral intentions to adopt technology are shaped by social influence and professional norms (Venkatesh et al. 2003). When schools encourage the use of digital tools such as ChatGPT, when they see colleagues perform it successfully, teachers become aware of its importance and, in turn, use it for their personal development. Similarly, Al-Marzouqi et al. (2024) reported that educators will be inspired to adopt ChatGPT for their work if they recognize that their peers, as role models, experience it effectively. Apata et al. (2024) reported that preservice teachers were affected by their peers' recommendations for AI tools, whereas Mutammimah et al. (2024) reported that in higher education, instructors were more likely to use ChatGPT because of the rules and expectations of their schools. SI plays an essential role in shaping teachers' behavioral intentions across varied educational settings, and SI also indirectly influences AU through BI. Kiryakova and Angelova (2023) confirmed that if institutions actively engaged these powerful tools, such as ChatGPT, in their school framework to motivate teachers to make use of the benefits of ChatGPT, as a result, teachers would implement them in their daily preparation.

The study of Diep and Dang (2024) revealed that factors (PU, PEOU, and SI) collectively and directly impact BI and the intention to use ChatGPT in an educational context, and in turn, all these factors indirectly impact AU. Considering the final fundamental relationship between BI and AU, both Davis (1989) with the TAM and Venkatesh et al. (2003) with UTAUT argued that BI directly influences AU; the more users intend to adopt technology, the greater the users' actual use is over a longer period of time, which is aligned with the study of Lai et al. (2024), who reported that BI significantly translated into actual classroom use of ChatGPT for designing active learning tasks.

Based on the structural relationships established in the TAM and UTAUT and supported by the empirical literature review above, it is clear that PU is the strongest component of BI, which ultimately affects AU. PEOU is an important aspect of BI that subsequently has an indirect effect on AU. SI is also a significant element of BI and indirectly affects AU.

Hypotheses

The following hypotheses were proposed:

H1: PU positively affects the behavioral intention to use (BI) ChatGPT in lesson planning.

H2: PEOU positively affects the behavioral intention to use (BI) ChatGPT in lesson planning.

H3: SI positively affects the behavioral intention to use (BI) ChatGPT in lesson planning.

H4: BI positively affects the actual use of ChatGPT (AU) in lesson planning.

Based on previous studies and the TAM developed by Davis (1989) and the UTAUT (Venkatesh et al., 2003), a research model is proposed that encompasses components from both the TAM and UTAUT. This research model includes four factors, PU, PEOU, and SI, as determinants of BI, which directly influence BI, leading to the actual use (AU) of ChatGPT. The objective of this model is to offer an in-depth understanding of the factors that impact EFL teachers' adoption of ChatGPT for lesson planning.

METHOD

Pedagogical Setting and Participants

This study extends the previous research from Diep and Dang (2024) to a larger and more diverse teaching context of a total of 314 educators who participated in the survey to explore the key factors influencing the adoption of ChatGPT as a supportive tool for teachers' lesson planning. Among the 314 returned questionnaires, 284 respondents indicated their experience using ChatGPT for lesson planning and were included as the target sample for analysis. Thirty participants, who were identified as nonusers of ChatGPT for English teaching purposes, were excluded from the analysis. These participants were both EFL teachers and non-English subjects' teachers from different schools in Ho Chi Minh City and other provinces around Vietnam. Additionally, some of them are preservice English teachers in HCMC. Novice teachers and preservice teachers were also selected because they are young and dynamic generations who can access digital literacy and adapt to it easily and quickly. They have teaching experience with the roles of teaching assistants, tutors, and part-time English teachers, and all are currently undergoing teaching practice training in university programs. The participants varied widely in demographic characteristics, including age, gender, teaching conditions, academic qualifications, and teaching experience. Their ages varied from the early 20s to the late 60s, which ranged

from newbie teachers to highly experienced educators, who offered valuable perspectives on how useful and efficient new technologies are when lesson plans are created. Such heterogeneity was selected reasonably to enhance the accuracy and generalizability of the sample and strengthen the validity of the findings of the adoption of ChatGPT across diverse settings because Hui and Wold (1982) cited in Binh and Tri (2023) stated that the higher the sample size is, the more accurate the estimate is. Details of the sample's demographic information are shown in Table 1.

Table 1: Teachers' Demographic Profile (N= 284)

Profile		Frequency	Percentage %
Usage of AI/ChatGPT	**Total**	**314**	
	Yes	284	90.4%
	No	30	9.6%
Teaching contexts	**Total**	**284**	**100%**
	Primary schools	7	2.46%
	Secondary schools	9	3.17%
	High schools	11	3.88%
	International schools	10	3.52%
	Universities	85	29.93%
	Language centers	109	38.38%
	Vocational schools	15	5.28%
	Others (preservice teachers)	38	13.38%
Teaching Experience	**Total**	**284**	
	Less than 1 year	64	22.54%
	1 – 5 years	134	47.18%
	6 – 15 years	52	18.31%
	More than 15 years	34	11.97%
Teaching Qualifications	**Total**	**284**	
	Bachelor's degree	156	54.93%
	Master's degree	81	28.52%
	Doctorate	14	4.93%
	Others (preservice teachers)	33	11.62%

Research Design and Instruments

The present study applied a quantitative strategy to investigate the factors impacting the adoption of ChatGPT in lesson preparation in diverse contexts. A 5-Likert survey questionnaire including 17 items was designed to collect data for measuring five key constructs to validate the proposed hypothesis and measure the variables and examine the relationships among those variables on the basis of

the theoretical framework of the TAM (Davis, 1989) and the UTAUT (Venkatesh et al., 2003). PU was first measured through four items related to the degree to which users use ChatGPT to enhance their lesson quality and creativity while maintaining time efficiency and productivity. Second, four items for PEOU focus on user-friendly interfaces and the easy accessibility of ChatGPT. The next factor was SI, which consisted of four items related to social influence, such as peers, and institutional support for ChatGPT adoption. Three items for another factor, BI, which is a mediating variable, are aimed at teachers' intention to accept ChatGPT in their future teaching. The last factor, AU, which has two items, assesses how frequently teachers integrate ChatGPT into their daily teaching practices. The Vietnamese translation of these items ensured their readability and logical coherence.

Data Collection and Analysis

After three weeks, data was collected from 284 respondents via Google. The analysis was performed using PLS-SEM with SmartPLS software 3.0 to estimate SEM using path models with latent variables. SEM was utilized because of the many measurement items versus constructs, and it detects the association between dependent and independent variables concurrently instead of individual testing of correlations (Hair et al., 2017). In accordance with Hair et al. (2016), steps for testing the reliability of the measurement scale—the questionnaire items—include reviewing CA, CR, and the outer loading coefficient. The convergent and discriminant validity of the constructs were also examined using AVE values, AVE (Fornell–Larcker), and HTMT. Second, the structural fit of the SEM was assessed using the VIF, R^2, (β), (f^2), Q^2, and SRMR. Finally, the P value was used to validate the proposed hypotheses.

RESULTS

Assessment of the Reliability and Validity of the Measurement Scale

First, the reliability of the five key factors, PU, PEOU, SI, BI, and AU, needs to be evaluated through CA. As shown in Table 2, all the factors were dependable, with a CA coefficient greater than 0.7 (Nunnally & Bernstein, 1994), specifically ranging from 0.789 to 0.865. This finding indicates that the scale reliability of all the constructs is consistent and acceptable. Second, the outer loading values of all the items were tested to determine the relationship between each indicator and its respective variable. All the values of outer loading exceeded 0.7, with the lowest value being 0.756, indicating the reliability of each measurement item (Ringle et al., 2013). In addition, the CR is used to examine the internal consistency of the factors. All the CR values were greater than 0.8 (ranging from 0.863 to 0.931) (Table 2). Thus, the scale has strong internal consistency across all the factors. Afterward, the convergent validity of the scale was evaluated using the AVE to determine whether the questionnaire items truly belonged to the respective factors. The results in Table 2 show that the AVEs of the factors were above 0.5,

ranging from 0.614 to 0.831, indicating good convergent validity of the measurement scale (Hair et al., 2017). Finally, discriminant validity was assessed using the Fornell–Larcker criterion and the HTMT ratio. The discriminant validity for any latent variable achieved by the square root of the AVE (diagonal values in bold) is higher than the corresponding interconstruct correlations, thereby satisfying the condition for discriminant validity. Moreover, the HTMT values were less than 0.9, with the highest being 0.819, satisfying the standard conditions (Hair et al., 2016).

Table 2: Summary Results of the Coefficients in Model PLS-SEM

Factors	Items	Outer loading	Cronbach's Alpha (CA)	Composite Reliability (CR)	Average Variance Extracted (AVE)	VIF	R^2 Adjusted	Q^2 (=1-SSE/SSO)
PU	PU1 PU2 PU3 PU4	0.840 0.843 0.840 0.779	0.845	0.896	0.683	1.949 2.107 1.955 1.643		
PEOU	PEOU1 PEOU2 PEOU3 PEOU4	0.823 0.812 0.840 0.756	0.789	0.863	0.614	1.683 1.681 1.857 1.303		
SI	SI1 SI2 SI3 SI4	0.844 0.809 0.844 0.863	0.861	0.906	0.706	2.014 1.809 2.483 2.653		
BI	BI1 BI2 BI3	0.848 0.913 0.902	0.865	0.918	0.788	1.882 2.709 2.564	0.629	0.495
AU	AU1 AU2	0.940 0.926	0.852	0.931	0.871	2.230 2.230	0.511	0.442

The analysis results above indicated that the scale or questionnaire items used in the research model achieved outstanding reliability and validity. Consequently, this scale will be used in structural model analysis.

Assessment of Structural Model Fit

First, the data in Table 2 reveal that the variance inflation factor (VIF) is less than 5, accounting for a maximum of 2.709, while the minimum is 1.303, exceeding 0.2. As a result, the latent variables do not exhibit multicollinearity, which shows that all the factors do not overlap. Second, Q^2 values were tested using the blindfolded technique to demonstrate the predictive accuracy of the structural model. The estimation results in Table 2 show that the Q_{AU}^2 value was 0.442 and that the Q_{BI}^2 was 0.495, which exceeded 0, indicating that the model was adequately predictive. Moreover, as shown in Table 2, the adjusted R^2 for AU

was 0.511, which met the statistical standard for model suitability, from 0.33 to 0.67. Therefore, the R^2 adjusted of the model is assumed to be moderate (Hair et al., 2017).

According to Nguyen et al. (2024), the structural path coefficient **(β)** illustrated in the path diagram after calculation is the path weight connecting the factors together. To assess the size of influence among the independent variables, PU, PEOU, and SI, f^2 was evaluated. Table 3 presents the values of f^2 for the relationships between the variables, which ranged from 0.118 to 1.051. These results demonstrated that PU and SI had a medium effect on BI, whereas PEOU had a smaller but still meaningful effect; importantly, the transition from BI to AU reflected a very large effect, demonstrating the strong influence size of teachers' behavioral intention in predicting their actual use of ChatGPT in lesson planning (Henseler et al. 2015). Finally, the quality of the model was also tested through an evaluation of overall compatibility. The SRMR value is 0.068, which is lower than 0.08, suggesting that this research structural model fits well (Hu & Bentler, 1998).

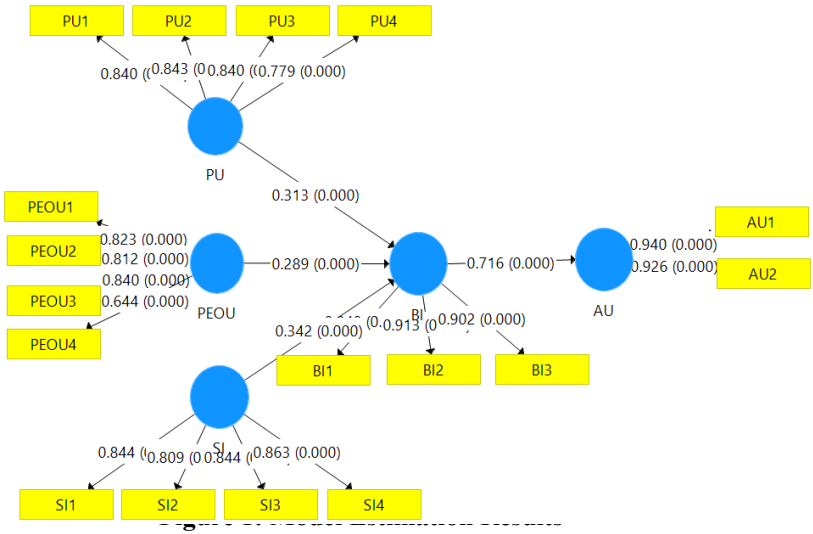
The results of the above analyses confirm that the research model is of good quality, fits well with the empirical data and can be used for further structural analysis.

Assessment of the Research Hypothesis

Table 3: Results of Evaluating the Research Hypothesis

Hypothesis	Relationship	Path (β)	P Value	f^2	Results
H1	PU → BI	0.313	0.000	0.145	Accepted
H2	PEOU → BI	0.289	0.000	0.118	Accepted
H3	SI → BI	0.342	0.000	0.211	Accepted
H4	BI → AU	0.716	0.000	1.051	Accepted

As shown in Table 3, all the hypotheses from H1 to H4 were statistically significant, with path coefficient (β) indices of 0.313, 0.289, 0.342, and 0.716, respectively, and P values equal to 0.000 for all the hypotheses, which are lower than 0.05. Therefore, all the hypotheses from H1 to H4 were statistically supported. In addition, the path coefficients (β) of the three factors PU, PEOU, and SI on the behavioral intention to use and actual use ChatGPT in lesson planning were arranged in order of impact, from highest to lowest: SI, PU, and PEOU. The coefficient (β), P values, and all the variables and scale items are presented in Figure 1.



DISCUSSION

As proven by the findings, all key factors, including PU, PEOU, and SI, directly influence BI and indirectly affect the AU of ChatGPT adoption in lesson planning. These results are consistent with the framework of the TAM (Davis, 1989) with an extension of the last factor of the SI, which is based on UTAUT (Venkatesh et al., 2003). The results highlighted that PU had the second strongest impact on BI, accounting for β, 0.313 and a P value less than 0.001. These results confirm H1 with respect to the relationship between PU and BI, which is also in alignment with recent studies. In the context of teaching, teachers perceived ChatGPT as a valuable tool for improving lesson quality and efficiency, particularly in brainstorming lesson ideas tailored to the lesson's objectives and promoting learner autonomy Zeng and Mahmud (2023). These results are also aligned with those of Chou et al. (2022), who noted that time-saving tools such as ChatGPT are attractive to teachers because they allow more space for learner-centered interactions. Additionally, Apata et al. (2024) reported that ChatGPT helps teachers adapt content for diverse learners and bridge language gaps. Therefore, teachers in different contexts are willing to use ChatGPT to support their lesson preparation if they find it useful for their work.

While Lai et al. (2023) reported that PU is considered a strong predictor of intention to use in an active-learning context, PEOU is also a significant factor in digital adoption among Vietnamese teachers. PEOU had a positive influence on BI, with a β of 0.289 and a P value of less than 0.001. These results confirm H2,

with the relationship between PEOU and BI being consistent with that of Venkatesh and Davis (2000), who emphasized the importance of simplicity of use in technology adoption. This is also appropriate for the study of Zheng and Mahmud (2023), in which the simpler and more user-friendly the ChatGPT interface was, the more teachers wanted to test its capabilities, lowering teachers' pressure. In general, these theories led us to infer that teachers who find ChatGPT easy to use are more likely to integrate it into lesson planning and that both PU and PEOU notably influence users' intentions to utilize AI (Ittefaq, 2025).

SI had the strongest and most positive effect on BI, with β accounting for 0.342 and a P value of 0.000, which was lower than 0.001. The results confirm H3, with the relationship between SI and BI indicating that participants' perceptions of greater levels of social expectations, including peers and online communities, strongly and significantly affect adoption intentions (Ittefaq et al., 2025). It is also correlated with the UTAUT theory that social influence predicts intention (Venkatesh et al., 2003) and associated with the work of Edmett et al. (2023) that teachers feel more confident in trying out new technology for lesson planning if they are engaged and supported by their colleagues or leaders. However, while the findings from this study showed that SI had the strongest effect on BI, the results from Xue et al. (2024) revealed that SI plays a less significant role in the academic context. One possible explanation is that this study was conducted in more diverse contexts for both English language teachers and non-English language teachers, and social influence plays a more important role in teachers' digital adoption. The results led us to infer that peer pressure, peer encouragement, and support from institutions were the key factors in teachers' decisions to adopt ChatGPT for their teaching practices in various contexts.

Finally, the results also confirm the close connection between BI and AU, indicating that teachers who are motivated to use ChatGPT are more inclined to incorporate it consistently into their teaching, which leads to H4.

Overall, these findings lend support to the assumption that the four proposed hypotheses (H1–H4) were statistically supported and that the four factors PU, PEOU, and SI were highly important in the adoption of technology, especially within the diverse context of the teaching environment (Venkatesh & Davis, 2000).

This study has several limitations. First, the sample was selected only from teachers in a Vietnamese context, which limits its generalizability to other countries. Second, the study focuses on quantitative methods without providing in-depth insights into how teachers use ChatGPT and the emerging challenges they might face. Future research should address these gaps with a more diverse mixed-method approach and larger data. Additionally, future research should address comparisons between different cultures, such as EFL and non-EFL teachers' perspectives, to test the similarities and differences between the two groups. Finally, this study emphasizes teachers' perceptions of ChatGPT acceptance. Future research could incorporate students' perspectives to provide a broader view of how ChatGPT affects both teaching and learning.

CONCLUSION AND IMPLICATIONS

The purpose of this study is to explore key factors and their importance in teachers' intention to use ChatGPT in diverse educational contexts in the Global South country. The results of the PLS-SEM study confirmed that Vietnamese teachers' intentions to use ChatGPT as a supportive tool for lesson planning are affected by three key independent factors and two dependent factors. Among the three factors, social influence has the strongest effect, indicating that teachers from various contexts' intentions to use ChatGPT depend most strongly on encouragement, pioneering from colleagues, and support from the institutional environment, emphasizing the social dimension of AI integration in education. These results, under the theoretical framework of the TAM and UTAUT, can be applied to different educational contexts, which is consistent with the findings of most recent studies, which imply that in both EFL and non-EFL settings, ChatGPT is considered a valuable pedagogical tool and resource for lesson planning (Diep & Dang, 2024; Lai et al., 2024; Apata et al., 2024).

This paper contributes to research on AI adoption in education. While previous studies usually focus on AI integration in EFL teaching or in higher education settings or on students' perceptions of AI, few studies have explored teachers' perspectives on the adoption of ChatGPT for lesson planning from multiple educational levels and subject areas, even among preservice English teachers. Furthermore, this study focuses on the PLS–SEM quantitative approach, which is better suited for predictive modeling and mediation analyses than simpler regression models are (Huang, 2021).

Together with these gaps, the study offers several practical implications for educators, administrators, and policymakers. Because social influence has the strongest effect on teachers' behavioral intention, first, schools and administrators should encourage peer collaboration that motivates teachers to share successful strategies and challenges related to ChatGPT use (Lai et al., 2024). More importantly, the adoption of ChatGPT should focus on social impact rather than individual teacher practice by involving faculty leaders as ethical role models for AI applications and leveraging school support, particularly through a broader internationalization strategy to promote advanced technological ideas, because Ren and Wang (2022) suggested that internationalization can share advanced scientific and technological ideas to accelerate economic cooperation among countries. Therefore, digital literacy training and support should be carried out across different contexts to ensure that teachers from any teaching setting or any teaching level can gain confidence in using ChatGPT for lesson planning. Second, teachers should have more opportunities to attend hands-on workshops and online training, highlighting the usefulness and ease of use of AI tools such as ChatGPT for teaching support and ways to optimize risks in AI usage. Finally, we should develop effective, clear, and consistent guidelines for the ethical use of AI technology to ensure its reliability in educational settings.

Acknowledgment

In this manuscript, we utilized artificial intelligence (AI) tools to refine language use and check grammar errors and typos. The use of AI tools complied with ethical standards and guidelines for academic integrity. The final content has been thoroughly reviewed and edited to ensure accuracy, relevance, and adherence to academic standards.

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