

APPLYING UTAUT2 TO AI-DRIVEN IELTS PREPARATION: A STUDY OF CHATGPT ADOPTION

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ABSTRACT

This study explores the application of UTAUT2 in adopting ChatGPT for IELTS preparation, identifying key influencing factors. A scenario-based online survey with 168 Indonesian social media users was analyzed using partial least square-structural equation modeling (PLS-SEM). Findings reveal that performance expectancy, effort expectancy, social influence, and habit significantly drive behavioral intention. Users perceive ChatGPT as an effective tool for improving IELTS scores through personalized learning and appreciate its ease of use. Social influence from educators and peers also plays a crucial role, while habitual use reinforces trust in ChatGPT's reliability. Interestingly, facilitating conditions, hedonic motivation and price value were non-significant. Specifically, cost concerns may be less relevant given ChatGPT's free-tier accessibility, and hedonic motivation may be secondary in a goal-oriented setting like IELTS preparation. These non-significant results might also be shaped by Indonesia's collectivist culture, where social influence outweighs individualistic motivations such as enjoyment. These findings suggest that the UTAUT2 model may require contextual adaptation for educational technologies, particularly in settings where functionality and effectiveness outweigh cost considerations. This study highlights the need to prioritize performance, ease of use and social influence to drive AI adoption in education.

Key Words: chatGPT; generative AI; IELTS test; language learning; UTAUT2 model

ABSTRAK

Penelitian ini mengeksplorasi penerapan UTAUT2 dalam adopsi ChatGPT untuk persiapan IELTS, dengan mengidentifikasi faktor-faktor utama yang memengaruhi. Survei online berbasis skenario dengan 168 pengguna media sosial di Indonesia dianalisis menggunakan metode partial least square-structural equation modelling (PLS-SEM). Hasil menunjukkan bahwa ekspektasi kinerja, ekspektasi usaha, pengaruh sosial, dan kebiasaan secara signifikan mendorong niat perilaku. Pengguna memandang ChatGPT sebagai alat yang efektif untuk meningkatkan skor IELTS melalui pembelajaran yang dipersonalisasi dan menghargai kemudahan penggunaannya. Pengaruh sosial dari pendidik dan teman sebaya juga memainkan peran penting, sementara penggunaan yang bersifat kebiasaan memperkuat kepercayaan pada keandalan ChatGPT. Menariknya, kondisi pendukung, motivasi hedonis, dan nilai harga tidak signifikan. Secara khusus, kekhawatiran tentang biaya mungkin kurang relevan mengingat aksesibilitas tingkat gratis ChatGPT, dan motivasi hedonis mungkin menjadi faktor sekunder dalam konteks yang berorientasi pada tujuan seperti persiapan IELTS. Hasil yang tidak signifikan ini mungkin juga dipengaruhi oleh budaya kolektif di Indonesia, di mana pengaruh sosial lebih dominan daripada motivasi individualistik seperti hiburan. Temuan ini menunjukkan bahwa model UTAUT2 mungkin memerlukan adaptasi kontekstual untuk teknologi pendidikan, terutama di lingkungan di mana fungsi dan efektivitas lebih penting dibandingkan

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pertimbangan biaya. Penelitian ini menekankan perlunya memprioritaskan kinerja, kemudahan penggunaan, dan pengaruh sosial untuk mendorong adopsi AI dalam pendidikan.

Kata Kunci: ChatGPT; AI Generatif; tes IELTS; pembelajaran bahasa; model UTAUT2

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INTRODUCTION

Artificial intelligence (AI) technologies' rapid advancement has transformed the language learning landscape and standardized test preparation (Edmett et al., 2023; Kasneci et al., 2023). Among the most notable AI-driven tools is ChatGPT, a language model designed to facilitate interactive learning experiences (Baskara & Mukarto, 2023; Kasneci et al., 2023). A few studies have examined the potential of using ChatGPT to enhance the preparation process for standardized tests like the International English Language Testing System (IELTS; Sutrisno, 2023; Xu et al., 2024). Traditionally, test takers prepare for an IELTS test by taking courses or learning from online sources available on websites or YouTube (Liu & Pei, 2023; Muluk et al., 2022; Warsidi et al., 2024). However, the emergence of Generative AI like ChatGPT offers a dynamic, interactive platform for learners to practice and improve their English language skills, providing personalized feedback and practice sessions (Kohnke et al., 2023; Teng, 2024; Xiao & Zhi, 2023). Despite its increasing adoption, there remains a gap in understanding the factors influencing its effectiveness and acceptance among learners, particularly through the lens of established theoretical models.

To systematically assess the factors influencing the adoption and usage of ChatGPT for IELTS preparation, the Unified Theory of Acceptance and Use of Technology (UTAUT2) provides a comprehensive framework since the model is designed for consumer contexts (Venkatesh et al., 2012). This model expands from the original UTAUT model, incorporating additional constructs such as hedonic motivation, price value and habit. These additional constructs provide a more nuanced understanding of technology use. To the best of our knowledge, there have been no studies applying UTAUT2 to investigate the phenomenon of ChatGPT usage for IELTS preparation to date. Existing research has mainly focused on using ChatGPT to help students prepare for specific IELTS skills, such as speaking (Xu et al., 2024) and writing (Sutrisno, 2023), using mixed-methods techniques such as survey and thematic analysis and self-experimental study, respectively. Without applying a theoretical model to understand this phenomenon, advancing the discourse around the optimal use of Generative AI for standardized test preparation such as IELTS would be difficult.

Thus, this paper explores the application of the UTAUT2 model in understanding the behavioral intentions among individuals preparing for an IELTS test to evaluate the key determinants that drive learners to engage with this AI tool. This paper seeks to provide insights into how AI-driven tools like ChatGPT can be optimized for language learning and test preparation, ultimately contributing to the broader discourse on integrating advanced technologies in educational practices.

Technology acceptance models have evolved significantly to address the complexities of user adoption and technology use. The Technology Acceptance Model (TAM; Davis, 1989) posits that perceived ease of use and perceived usefulness are the primary determinants of technology adoption. While TAM provides a foundational understanding, the model was later expanded by Venkatesh et al. (2003) in the form of the UTAUT model to provide a more comprehensive view of technologies being adopted in organizational contexts. Venkatesh et al. (2012) further expanded the UTAUT model into UTAUT2 to study technologies being deployed within consumer settings, such as social media. To study more recent innovations, such as AI technologies, Gursoy et al. (2019) adopted key constructs from the UTAUT model, such as performance and effort expectancy. They created a model called Artificially Intelligent Device Use and Acceptance (AIDUA), which was deployed to understand the determinants of AI technology adoption in service contexts. These evolutions show the constant need for a technology acceptance model to evolve following the more recent technological advancements.

More specifically, previous studies have applied, modified or extended the UTAUT or

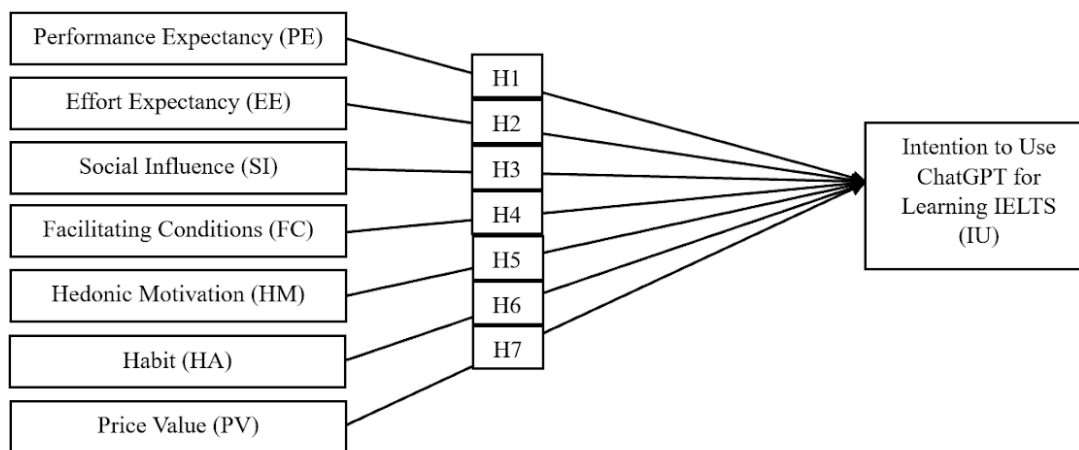
UTAUT2 models to understand the phenomena of Generative AI adoption for educational purposes (Bhat et al., 2024; Habibi et al., 2023; Polyportis & Pahos, 2024; Sabeh, 2024; Strzelecki, 2023, 2024), including language learning (Dong, 2024; Wang et al., n.d.). In language learning, previous studies have identified factors such as performance expectancy, effort expectancy, and facilitating conditions as significant drivers of adoption for writing purposes (Dong, 2024). Wang et al. (n.d.) interestingly found that social influence is more strongly correlated with behavioral intention among less experienced users compared to more experienced users.

While there is growing research on adopting AI technologies in education, there is a notable gap in studies specifically addressing the effectiveness and acceptance of ChatGPT as a tool for IELTS preparation. Existing literature broadly applies theoretical models like UTAUT2 to educational technologies but fails to focus on generative AI tools like ChatGPT (Bessadok & Hersi, 2023; Du & Gao, 2021; Xu et al., 2024). Furthermore, while some studies explore general constructs such as performance expectancy and effort expectancy, the role of habit and social influence in high-stakes, goal-oriented tasks like IELTS preparation remain underexplored (Bhat et al., 2024; Sabeh, 2024). This study addresses these gaps by examining how constructs like habit and social influence influence ChatGPT adoption and how these factors interact in a developing country context, offering a novel perspective on applying theoretical models in generative AI-driven education.

Because this study is the first to apply the UTAUT2 model to investigate the phenomenon of ChatGPT usage in the context of IELTS exam preparation, hypotheses are developed by fully adopting the constructs. Venkatesh et al. (2012) introduced eight constructs in UTAUT2, which will be used in this study: performance expectancy, effort expectancy, social influence, facilitating conditions, hedonic motivation, habit, price value and behavioral intentions. Figure 1 illustrates the application of the UTAUT2 model in this research, outlining the relationships between various independent variables (Performance Expectancy, Effort Expectancy, Social Influence, Facilitating Conditions, Hedonic Motivation, Habit, and Price Value) and the dependent variable—Intention to Use ChatGPT for Learning IELTS. Each of these factors is predicted to directly influence individuals' intention to adopt ChatGPT as a tool for IELTS preparation.

- H1: Higher performance expectancy (i.e., the belief that ChatGPT will enhance IELTS preparation) is positively related to a stronger behavioral intention to use ChatGPT for IELTS preparation.
- H2: Greater effort expectancy (i.e., the ease of using ChatGPT) is positively associated with a higher behavioral intention to use ChatGPT for IELTS preparation.
- H3: Increased social influence (i.e., the extent to which essential others encourage the use of ChatGPT) positively impacts the behavioral intention to use ChatGPT for IELTS preparation.
- H4: Better facilitating conditions (i.e., availability of resources and support for using ChatGPT) is positively related to a stronger behavioral intention to use ChatGPT for IELTS preparation.
- H5: Higher hedonic motivation (i.e., enjoyment and satisfaction from using ChatGPT) is positively correlated with a greater behavioral intention to use ChatGPT for IELTS preparation.
- H6: A favorable price value (i.e., perceived benefits of using ChatGPT outweighing the costs) is positively associated with a higher behavioral intention to use ChatGPT for IELTS preparation.
- H7: A stronger habit (i.e., frequent and automatic use of ChatGPT) is positively related to a greater behavioral intention to continue using ChatGPT for IELTS preparation.

Figure 1 UTAUT2 Application in this study



METHODS

The measurement items for all constructs were adapted from the original UTAUT2 model (Venkatesh et al., 2012), consisting of Performance Expectancy (3 items), Effort Expectancy (4 items), Social Influence (3 items), Facilitating Conditions (4 items), Hedonic Motivation (3 items), Habit (3 items), Price Value (3 items) and Behavioral Intention (3 items). This study assumes that most respondents are not using ChatGPT to learn IELTS to ensure the data collection process is easier. As such, the survey was carried out using the scenario-based experimental approach, where respondents were shown pictures and explanations before filling out the survey (Kim & Jang, 2014). The following information was presented to the respondents:

"You are about to take the IELTS test, and now you are looking for a way to help you prepare for the test. ChatGPT, a generative artificial intelligence, can act as an IELTS tutor. ChatGPT is free for anyone to access as long as they can provide effective guidance to ChatGPT. ChatGPT was invented by a company based in the United States – an English-speaking country – therefore, it is safe to say that using ChatGPT as an IELTS tutor can be an attractive solution for many English learners, especially in developing countries like Indonesia, where cost is often an issue for many people. Below is an example of how ChatGPT can be used as a virtual assistant to accompany you in studying IELTS."

The phrase "effective guidance" refers to the ability of users to provide clear and well-structured instructions, also known as skilled prompt engineering (Giray, 2023; Oppenlaender et al., 2024; Woo et al., 2024). In the context of using ChatGPT as an IELTS tutor, this involves crafting specific and targeted prompts to elicit accurate and relevant responses from the AI. For instance, users might guide ChatGPT by asking it to generate IELTS-style writing tasks, simulate speaking tests, or provide feedback on their answers based on specific scoring criteria. By effectively communicating their learning needs, users can maximize the utility of ChatGPT as a personalized study tool, even without prior expertise in language instruction. This concept emphasizes the importance of user input in optimizing ChatGPT's functionality for educational purposes.

Figure 2 demonstrates how ChatGPT can be an effective study tool for improving IELTS Writing skills. By inputting an essay text alongside a prompt instructing the AI to evaluate the essay based on IELTS band descriptor writing criteria, users can receive detailed feedback tailored to IELTS standards. This method provides learners with a readily available study assistant, enabling continuous improvement in writing exercises.

Figure 3 provides an example of the assessment and feedback generated by ChatGPT for an IELTS Writing essay previously inputted in Figure 2. It highlights ChatGPT's ability to analyze essays according to IELTS band descriptors, offering specific feedback across key categories such as task achievement, coherence and cohesion, lexical resource, and grammatical range and accuracy. This figure emphasizes how ChatGPT identifies errors, suggests language enhancements, and guides users

toward refining their writing skills, ultimately supporting their preparation for the IELTS Writing test.

Figure 2 Prompt to instruct ChatGPT to analyze an IELTS Writing Task 1 essay

Dibawah ini adalah contoh essay writing task 1 IELTS milik saya. Berikan feedback singkat dan penilaian score atas essay tersebut berdasarkan IELTS band descriptor official.

From the line graph, we can see the average monthly rise or fall in how much copper, nickel and zinc cost throughout 2014.

Overall, nickel started with the highest percentage change of the three but ended with the lowest. Zinc started with the smallest change and ended with the highest, and copper prices fluctuated. Prices for all three metals dipped in June.

In January the price of nickel was up six per cent, but this dropped to negative three percent in June, ending the year with a one percent increase in both November and December. Copper began the year with an increase of two percent and by May, the price was dropping (by slightly less than one per cent). It rose again, increasing by a percentage point in July, August and September. Zinc saw its most dramatic increase in February, with three per cent and the price fell in June (a one percent decrease). The change was negative until October/November when it began to rise.

Figure 3 Results of the analysis of the IELTS Writing Task 1 essay by ChatGPT



ChatGPT

Your essay provides a decent overview of the information presented in the line graph, and you've covered the key trends in copper, nickel, and zinc prices throughout 2014. However, there are areas for improvement:

1. Accuracy and Clarity:

- Review the phrase "up six per cent" in the sentence discussing the price of nickel in January. It appears to be a typographical error or incomplete information. Ensure accuracy in presenting numerical data.

2. Grammar and Cohesion:

- In the sentence "The change, was negative until October/November when it began to rise," consider rephrasing for clarity. Specify the exact nature of the change and how it shifted during October/November.

3. Variety in Sentence Structure:

- Introduce more variety in sentence structures to make your essay more engaging. Combine short sentences or use different sentence structures for a more polished expression.

4. Detail and Specificity:

- Be more specific in your analysis, providing exact percentages and details about the fluctuations in prices. This will contribute to a more detailed and precise description of the trends.

Based on the provided information, your essay seems to be in the range of 6 to 7 on the IELTS band scale. To improve, focus on accuracy in numerical representation, clarity in presenting information, and providing more specific details in your analysis. Aim for a well-structured essay with a clear introduction, body, and conclusion.

The survey was conducted online using Google Forms, and the data collected was hosted on Google Spreadsheet. The online survey was shared among the authors' professional network through social media and messaging platforms such as WhatsApp, Instagram and Telegram. The reliance on social media and professional networks for sample recruitment was intentional. It aligned with the

study's objective to investigate ChatGPT usage for IELTS preparation among active learners, particularly university students and young professionals. Social media platforms and messaging apps were chosen due to their widespread use and ability to reach tech-savvy individuals who are most likely to engage with generative AI tools like ChatGPT. This recruitment strategy allowed access to a relevant demographic for the study, as younger individuals often pursue IELTS preparation to improve their educational and career prospects. The skewed age and educational background distribution, with 74.4% of respondents aged 18-25 and 53.6% holding a senior high school education, reflects the primary population likely to adopt such tools (see Table 1). While this approach may introduce selection bias, the sample aligns with the study's target audience. It effectively captures the perspectives of the primary user base of ChatGPT for IELTS preparation, making the findings particularly applicable to the intended user group.

The issue of non-normality was addressed by using partial least square-structural equation modeling (PLS-SEM) through SmartPLS 4.0, which is particularly well-suited for analyzing non-normally distributed data. Unlike covariance-based SEM, PLS-SEM does not rely on strict normality assumptions and is robust when working with small to medium sample sizes or data that deviate from normality. This methodological choice ensures the robustness and reliability of the statistical analysis, providing confidence in the validity of the findings.

Data was collected between December 2023 and January 2024, yielding 248 responses. After data cleaning, including removing 64 respondents who failed the manipulation check (i.e., selecting 'writing' as the assignment type), 13 who failed the attention check (i.e., selecting 'neutral' as an answer), and 3 responses below the standard deviation threshold of 0.25, 168 valid responses were used for analysis. The attention and manipulation checks ensured that only engaged and attentive respondents were included, enhancing the data's reliability and validity. This sample size is considered sufficient for structural equation modeling (Hair et al., 2019). Initial statistical analysis was conducted using SPSS 23.0 software, while the proposed theoretical model was tested utilizing SmartPLS 4.0 through partial least square-structural equation modeling (PLS-SEM).

SmartPLS 4.0 was selected over other PLS-SEM tools due to several key advantages. First, it offers a user-friendly interface and enhanced visualization features, making interpreting complex models and results easier. Second, SmartPLS supports non-normal data and is robust for small-to-medium sample sizes, addressing the data characteristics in this study (Hair et al., 2019). Third, compared to tools like WarpPLS and ADANCO, SmartPLS 4.0 provides more comprehensive functionality, including advanced algorithm options, model fit indices, and a bootstrapping procedure for statistical significance testing. These capabilities make it particularly well-suited for exploratory research and theory testing. Given these advantages, SmartPLS 4.0 was deemed the most appropriate tool for conducting rigorous and reliable PLS-SEM analysis in this study.

FINDINGS AND DISCUSSION

Findings

Table 1 reveals that most participants (74.4%) preparing for the IELTS exam are aged between 18 and 25, followed by the 26–35 age group (16.7%). This indicates that IELTS preparation is most prevalent among young adults, likely pursuing higher education or professional opportunities requiring English proficiency. Educational background data supports this, as 53.6% of participants have completed senior high school, reflecting learners at the early stages of their academic or professional journey. Additionally, a notable proportion of participants holding bachelor's (17.9%) and master's degrees (14.3%) highlights that IELTS is also pursued by advanced learners aiming for postgraduate studies or career advancement. Regarding preparation patterns, the majority of participants (78.6%) have been studying for the IELTS exam for less than a year, indicating that preparation is typically short-term and goal-oriented. This trend aligns with the structured nature of IELTS courses and the immediate need for test results. A smaller proportion of participants have been preparing for 1–2 years (10.1%) or more than four years (7.7%). These findings underscore the

relevance of integrating AI tools like ChatGPT into IELTS preparation to address the diverse needs of learners.

Table 1 Demographic Statistics

Variable	Level	N	Distribution (%)
Age	Under 18	4	2.4
	18-25	125	74.4
	26-35	28	16.7
	36-45	9	5.4
	46-55	1	0.6
	56-65	1	0.6
Education	Elementary school	1	0.6
	Junior high school	-	0
	Senior high school	90	53.6
	Diploma degree (D1/D2/D3/D4)	22	13.1
	Bachelor's degree (S1)	30	17.9
	Master's degree (S2)	24	14.3
	Doctoral Degree (S3)	1	0.6
Been learning IELTS for how many years?	Less than a year	132	78.6
	1 - 2 years	17	10.1
	2 - 4 years	6	3.6
	More than 4 years	13	7.7

Data analyses were performed using SmartPLS 4. The measurement model was evaluated to confirm the reliability and validity of the latent variables (see Table 2). The factor loadings for all items in the model exceeded the recommended value of 0.7 (Vinzi et al., 2010). Consequently, all items were retained for further analysis. Cronbach's alpha and composite reliability were employed to determine the reliability of the latent variables. Since the values of all these metrics surpassed 0.700, the reliability of all latent variables was deemed high (Henseler et al., 2015). Convergent validity was acceptable as the average variance extracted (AVE) for all latent variables was above 0.500. Finally, discriminant validity was established by comparing the correlations among the latent variables with the square root of AVE (Fornell & Larcker, 1981). Additionally, discriminant validity was confirmed by ensuring that the heterotrait-monotrait ratio of correlations (Henseler et al., 2015) was below the threshold of 0.850 (see Table 3).

Table 2 Convergent Validity and Reliability

Construct	Item Code	M	SD	Loading	Cronbach's Alpha	CR (rho_c)	AVE
Performance Expectancy	PE1	3.90	0.868	0.853	0.773	0.869	0.690
	PE2	3.79	0.942	0.881			
	PE3	3.56	1.078	0.752			
Effort Expectancy	EE1	3.93	0.958	0.824	0.840	0.893	0.675
	EE2	3.75	0.905	0.835			
	EE3	4.33	0.770	0.823			
	EE4	3.92	1.006	0.804			
Social Influence	SI1	2.58	1.008	0.903	0.882	0.927	0.809
	SI2	2.60	1.069	0.921			
	SI3	2.61	1.034	0.873			
Facilitating Conditions	FC1	3.94	0.949	0.901	0.851	0.910	0.771
	FC2	3.90	0.940	0.893			
	FC3	3.86	0.899	0.839			
Hedonic Motivation	HM1	3.97	0.963	0.947	0.915	0.947	0.856
	HM2	3.95	0.972	0.953			
	HM3	3.73	1.026	0.873			
Price Value	PV1	3.41	1.217	0.701	0.848	0.900	0.752
	PV2	3.45	1.017	0.949			

	PV3	3.51	1.000	0.929			
Habit	HA1	2.73	1.125	0.872	0.806	0.884	0.718
	HA2	2.26	1.087	0.840			
	HA3	2.29	1.027	0.829			
Intention to Use ChatGPT for Learning IELTS	IU1	3.36	1.055	0.894	0.838	0.903	0.756
	IU2	3.09	1.087	0.893			
	IU3	2.89	1.089	0.820			

Table 3 Discriminant Validity

Construct	PE	EE	SI	FC	HM	PV	HA	IU
PE	0.831	0.670	0.553	0.603	0.599	0.396	0.326	0.883
EE	0.540	0.822	0.351	0.709	0.671	0.472	0.505	0.682
SI	0.457	0.307	0.899	0.197	0.380	0.355	0.387	0.538
FC	0.488	0.595	0.172	0.878	0.468	0.408	0.328	0.514
HM	0.502	0.590	0.342	0.415	0.925	0.435	0.492	0.600
PV	0.356	0.435	0.335	0.393	0.428	0.867	0.361	0.354
HA	0.261	0.427	0.335	0.279	0.433	0.334	0.847	0.580
IU	0.718	0.577	0.466	0.440	0.525	0.344	0.484	0.870

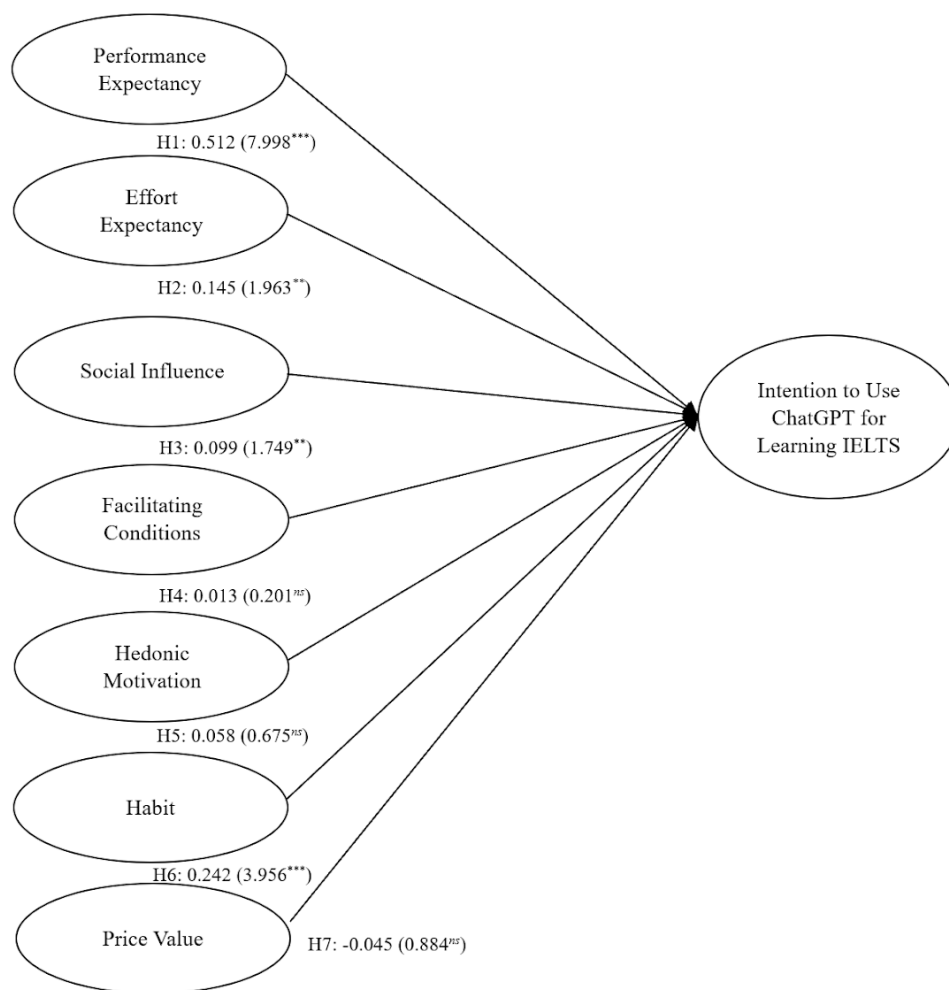
The structural model represents the hypothesized paths in the theoretical model. This model is evaluated using R2, Q2, and the significance of the paths. According to Hair et al. (2019), the R2 value for the dependent variable should be at least 0.1 to indicate the model's adequacy. They further mentioned that a higher R2 value signifies greater explanatory power, with an R2 value of 0.75 being considered substantial. In this research, the R2 value was found to be 0.635, suggesting that the model has moderate adequacy.

The Q2 value was also examined to evaluate the model's predictive accuracy. The structural model demonstrates significant predictive relevance with a Q2 value of 0.591, which is above zero and exceeds 0.50 (Hair et al., 2019). Moreover, collinearity among the predictor constructs was checked to ensure it did not skew the regression outcomes (Hair et al., 2019). All variance inflation factor (VIF) values were below 3, indicating that collinearity is not a concern in this study. Table 4 contains detailed information on the R2, Q2, and VIF values.

Table 4 R-Square, Q² and Values

Dependent variable	R-square	R-square adjusted	
IU	0.635	0.619	
	Q ² predict	RMSE	MAE
	0.591	0.647	0.481
Path	VIF		
PE → IU	1.844		
EE → IU	2.201		
SI → IU	1.420		
FC → IU	1.727		
HM → IU	1.814		
HA → IU	1.384		
PV → IU	1.415		

Figure 4 Structural Model



The developed hypotheses were tested to examine the significance of the relationship between constructs in the model. The partial least square-structural equation modeling (PLS-SEM) algorithm with the bootstrapping technique of 5,000 samples in a one-tailed test was used. The results in Figure 4 illustrate the structural model derived from PLS-SEM, which examines the relationships between various constructs influencing the intention to use ChatGPT for learning IELTS. The model reveals that Performance Expectancy (PE) has a significant positive impact on Intention to Use (IU) with a strong path coefficient ($\beta = .512$, $t = 7.998$, $p < .001$), supporting H1. Effort Expectancy (EE) also significantly affects IU, albeit with a smaller effect size ($\beta = .145$, $t = 1.963$, $p < .05$), supporting H2. Social Influence (SI) shows a weak but significant positive relationship with IU ($\beta = .099$, $t = 1.749$, $p < .05$), supporting H3. Habit (HA) further demonstrates a significant positive effect on IU ($\beta = .242$, $t = 3.956$, $p < .001$), supporting H6. However, Facilitating Conditions (FC), Hedonic Motivation (HM), and Price Value (PV) do not significantly influence IU, as indicated by their respective path coefficients ($\beta = .013$, $t = 0.201$, $p > .1$; $\beta = .058$, $t = 0.675$, $p < .1$; $\beta = -0.045$, $t = 0.884$, $p < .1$), leading to the rejection of H4, H5, and H7. These findings highlight that constructs such as Performance Expectancy, Effort Expectancy, Social Influence, and Habit play a critical role in shaping users' intention to use ChatGPT. At the same time, factors like Facilitating Conditions, Hedonic Motivation and Price Value have minimal impact. This model provides key insights into the drivers of adoption, offering practical implications for educators and developers aiming to enhance user engagement with ChatGPT for learning purposes. A summary of the direct relationship between constructs is provided in Table 5.

Table 5 Predictive Validity

Path	Path coef.	M	SD	t value	p values	Results
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H1: PE → IU	0.512	0.511	0.064	7.998	0.000	supported
H2: EE → IU	0.145	0.144	0.074	1.963	0.025	supported
H3: SI → IU	0.099	0.104	0.057	1.749	0.040	supported
H4: FC → IU	0.013	0.015	0.064	0.201	0.420	not supported
H5: HM → IU	0.058	0.054	0.086	0.675	0.250	not supported
H6: HA → IU	0.242	0.242	0.061	3.956	0.000	supported
H7: PV → IU	-0.045	-0.040	0.050	0.884	0.188	not supported

Discussion

This study explored the application of UTAUT2 theory within the context of ChatGPT technology used for learning IELTS, the standardized English test. These findings provide valuable insights into the factors influencing people's intention to adopt ChatGPT for IELTS preparation. Performance expectancy, effort expectancy, social influence and habit were the significant drivers of people's intention to use ChatGPT for IELTS preparation. Meanwhile, facilitating conditions, hedonic motivation and price value had non-significant relationships with behavioral intention. Specifically, price value had a negative non-significant relationship with behavioral intention.

To begin with, the significant relationship between performance expectancy and behavioral intention implies that people believe that using ChatGPT can help them improve their IELTS scores, thanks to its ability to provide relevant practice, learning resources and feedback. More personalized learning experiences tailored to each individual's specific needs, such as targeted practice in weaker areas of the IELTS exam, could be the driving factor behind people's intention to use the technology. This finding corroborates the findings of previous studies (Dong, 2024; Polyportis & Pahos, 2024; Sabeh, 2024). Regarding effort expectancy, findings suggest that the ease of using ChatGPT is crucial to influencing people's willingness to adopt the technology for IELTS preparation, echoing the findings of Dong (2024). The more intuitive, accessible, user-friendly and simple the technology is, the higher the likelihood of adoption. This comfort will reduce the learning curve and help build confidence in navigating AI-based tools as part of their IELTS preparation routine.

Regarding social influence, if individuals perceive that important people around them recommend using ChatGPT, they are more likely to follow suit. As such, the opinions of educators, peers or influencers can play a significant role in people's decision to use ChatGPT for IELTS preparation, supporting the findings of Polyportis and Pahos (2024). This could indicate a broader cultural shift in society towards embracing AI-powered educational tools. When people see that AI has become the standard in learning environments, they might feel compelled to adopt ChatGPT to keep up with modern learning practices. The last significant factor is habit. Once people start using ChatGPT frequently until it becomes a habit, they will believe that the technology is the go-to resource for many purposes (Strzelecki, 2023, 2024), including for IELTS preparation. Combined with the performance expectancy factor, people's habitual use of ChatGPT engenders the sense that the technology is consistent and reliable in delivering quality content, leading to the incorporation of the technology into people's daily study routines.

Meanwhile, this study found facilitating conditions, hedonic motivation and price value to be non-significant factors, diverging from some prior findings in educational technology literature. For facilitating conditions, users may feel confident in their ability to use ChatGPT without much external support due to its intuitive design and ease of access. Unlike other technologies requiring significant infrastructure or training, ChatGPT is readily available on commonly used devices like smartphones or laptops, reducing reliance on external tools or resources. This contrasts with Dong's (2024) findings, which emphasized the importance of facilitating conditions in improving writing proficiency. The difference could stem from the task-specific nature of Dong's study, where more structured support may have been necessary compared to the broader scope of IELTS preparation. However, respondents may also be unaware of potential external resources, such as advanced tutorials or integration with

learning management systems, that could enhance their experience.

For hedonic motivation, the enjoyment or pleasure derived from using ChatGPT may not be a primary driver for adoption in this context. IELTS preparation is a highly goal-oriented and serious task, where users prioritize tangible outcomes, such as improving test scores, over enjoying the process. This practical mindset likely reduces the relevance of hedonic motivation. This finding diverges from Strzelecki's (2023, 2024) studies, which highlighted the role of enjoyment in general learning among university students. The discrepancy might arise because university students engaging in broader learning contexts may find enjoyment more influential when the stakes and goals are less rigid.

Lastly, price value was insignificant, though negatively associated with behavioral intention. This may be explained by other free or low-cost alternatives, which could influence users' perception of ChatGPT's value. Unlike Strzelecki's (2024) study, where price value was a significant predictor of behavioral intention, this study's participants may view ChatGPT's perceived benefits, such as effectiveness and ease of use, as outweighing its cost. Additionally, a free tier for ChatGPT could reduce price concerns. However, it is also plausible that respondents were not fully aware of the pricing structures or the potential costs associated with advanced features, leading to limited consideration of this factor in their decision-making. While cost may still be a factor for some users, it appears secondary to functional aspects in this highly outcome-driven context.

These findings suggest that respondents found these factors irrelevant within their specific context or lacked awareness of their potential significance when using ChatGPT for IELTS preparation. This underscores the importance of contextualizing constructs like facilitating conditions, hedonic motivation, and price value in educational technology adoption frameworks. Future studies should explore these aspects more deeply by probing user perceptions through qualitative methods to clarify their role in shaping behavioral intentions.

CONCLUSIONS AND SUGGESTION

Theoretically, this study extends the application of UTAUT2 in educational contexts, particularly for language learning and test preparation. The results validate the relevance of constructs such as performance expectancy, effort expectancy, social influence and habit in adopting learning technologies. However, the non-significant impact of facilitating conditions, hedonic motivation and price value highlight potential gaps in the model's applicability to educational technology.

The non-significant impact of facilitating conditions might reflect the minimal technical infrastructure required to use ChatGPT, as most users access it via widely available devices like smartphones or laptops. In contexts like IELTS preparation, users may prioritize self-reliance over external support systems, diminishing the importance of this construct. The hedonic motivation was also non-significant, likely due to the goal-oriented nature of test preparation, where users focus on achieving tangible outcomes rather than enjoyment. Similarly, price value may have been less relevant as ChatGPT offers a free tier, reducing the perception of cost as a barrier.

Its constructs and operationalisation may need refinement to adapt the UTAUT2 model for educational contexts. First, facilitating conditions could be redefined to capture the specific infrastructural and pedagogical support required for educational technology adoption, such as digital literacy training or integration with existing learning management systems. Second, hedonic adaptation may need to be reconceptualized, as enjoyment may not directly influence adoption in goal-oriented educational settings. Instead, constructs like intrinsic motivation or learning engagement could be more relevant, emphasizing the educational value of the tool. Third, price value should consider cost and perceived value for outcomes, particularly for free or freemium AI tools like ChatGPT. Additionally, contextual moderators like cultural factors, educational goals and teacher involvement could enhance the model's explanatory power, especially considering their relevance in collectivist societies like Indonesia. These adaptations would better align the UTAUT2 model with the unique demands of educational technology adoption, allowing for a deeper understanding of how generative AI tools can be effectively leveraged for specific learning purposes.

Furthermore, this study calls for more research on how consumer technology for general use, which is the original context of the UTAUT2 model's development, should be further differentiated from educational technology since educational technologies like ChatGPT's usage in this study context might prioritize functional and goal-oriented aspects over enjoyment or cost. Lastly, future research could explore the mechanisms of the formation of ChatGPT's habitual usage and its long-term impact on continued use in educational settings to see if repeated interactions with a learning tool contribute to sustained engagement and better learning outcomes.

On the practical front, these findings inform developers of educational AI-powered tools for test preparation that they should prioritize effectiveness and ease of use to ensure that the tool is both user-friendly and capable of delivering strong learning outcomes. To communicate the value of ChatGPT for IELTS preparation, marketing should leverage social influence by promoting testimonials and endorsements. This approach will help stimulate faster AI adoption across many contexts, including education purposes such as test preparation. The more habitual people use ChatGPT, the more innovative they become when problem-solving using AI-powered technology.

REFERENCES

- Baskara, R., & Mukarto, M. (2023). Exploring the implications of ChatGPT for language learning in higher education. *Indonesian Journal of English Language Teaching and Applied Linguistics*, 7(2), 343–358.
- Bessadok, A. and Hersi, M. (2023), A structural equation model analysis of English for specific purposes students' attitudes regarding computer-assisted language learning: UTAUT2 model. *Library Hi Tech*. <https://doi.org/10.1108/LHT-03-2023-0124>
- Bhat, A., Tiwari, C. K., Bhaskar, P., & Khan, S. T. (2024). Examining ChatGPT adoption among educators in higher educational institutions using extended UTAUT model. *Journal of Information, Communication and Ethics in Society*. <https://doi.org/10.1108/JICES-03-2024-0033>
- Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly*, 13(3), 319. <https://doi.org/10.2307/249008>
- Dong, L. (2024). "Brave new world" or not?: A mixed-methods study of the relationship between second language writing learners' perceptions of ChatGPT, behaviors of using ChatGPT, and writing proficiency. *Current Psychology*, 43(21), 19481–19495. <https://doi.org/10.1007/s12144-024-05728-9>
- Du, Y., & Gao, H. (2021), Determinants affecting teachers' adoption of AI-based applications in EFL context: An analysis of analytic hierarchy process. *Education and Information Technologies*, 27, 9357–9384. <https://doi.org/10.1007/s10639-022-11001-y>
- Edmett, A., Ichaporia, N., Crompton, H., & Crichton, R. (2023). *Artificial intelligence and English language teaching: Preparing for the future*.
- Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, 18(1), 39. <https://doi.org/10.2307/3151312>
- Giray, L. (2023). Prompt engineering with ChatGPT: A guide for academic writers. *Ann Biomed Eng*, 51, 2629–2633. <https://doi.org/10.1007/s10439-023-03272-4>
- Gursoy, D., Chi, O. H., Lu, L., & Nunkoo, R. (2019). Consumers acceptance of artificially intelligent (AI) device use in service delivery. *International Journal of Information Management*, 49, 157–169. <https://doi.org/10.1016/j.ijinfomgt.2019.03.008>
- Habibi, A., Muhaimin, M., Danibao, B. K., Wibowo, Y. G., Wahyuni, S., & Octavia, A. (2023). ChatGPT in higher education learning: Acceptance and use. *Computers and Education: Artificial Intelligence*, 5, 100190. <https://doi.org/10.1016/j.caeai.2023.100190>
- Hair, J. F., Babin, B. J., Black, W. C., & Anderson, R. E. (2019). *Multivariate data analysis* (8th ed.). Cengage.
- Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the Academy of Marketing Science*, 43(1), 115–135. <https://doi.org/10.1007/s11747-014-0403-8>
- Kasneci, E., Sessler, K., Küchemann, S., Bannert, M., Dementieva, D., Fischer, F., Gasser, U., Groh, G., Günemann, S., Hüllermeier, E., Krusche, S., Kutyniok, G., Michaeli, T., Nerdel, C., Pfeiffer, J., Poquet, O., Sailer, M., Schmidt, A., Seidel, T., ... Kasneci, G. (2023). ChatGPT for good? On opportunities and challenges of large language models for education. *Learning and Individual Differences*, 103, 102274. <https://doi.org/10.1016/j.lindif.2023.102274>
- Kim, J.-H., & Jang, S. (Shawn). (2014). A scenario-based experiment and a field study: A comparative examination

- for service failure and recovery. *International Journal of Hospitality Management*, 41, 125–132. <https://doi.org/10.1016/j.ijhm.2014.05.004>
- Kohnke, L., Moorhouse, B. L., & Zou, D. (2023). ChatGPT for Language Teaching and Learning. *RELC Journal*, 54(2), 537–550. <https://doi.org/10.1177/00336882231162868>
- Liu, X., & Pei, J. (2023). Effects of IELTS reading education by using new media learning environments effectively. *Interactive Learning Environments*, 31(8), 4977–4993. <https://doi.org/10.1080/10494820.2021.1990086>
- Muluk, S., Zainuddin, Z., & Dahliana, S. (2022). Flipping an IELTS writing course: Investigating its impacts on students' performance and their attitudes. *Studies in English Language and Education*, 9(2), 591–612. <https://doi.org/10.24815/siele.v9i2.23314>
- Oppenlaender, J., Linder, R., & Silvennoinen, J. (2024). Prompting AI Art: An Investigation into the Creative Skill of Prompt Engineering. *International Journal of Human-Computer Interaction*, 1–23. <https://doi.org/10.1080/10447318.2024.2431761>
- Polyportis, A., & Pahos, N. (2024). Understanding students' adoption of the ChatGPT chatbot in higher education: the role of anthropomorphism, trust, design novelty and institutional policy. *Behaviour & Information Technology*, 1–22. <https://doi.org/10.1080/0144929X.2024.2317364>
- Sabeh, H. N. (2024). What drives IT students toward ChatGPT? Analyzing the factors influencing students' intention to use ChatGPT for educational purposes. *2024 21st International Multi-Conference on Systems, Signals & Devices (SSD)*, 533–539. <https://doi.org/10.1109/SSD61670.2024.10548826>
- Strzelecki, A. (2023). To use or not to use ChatGPT in higher education? A study of students' acceptance and use of technology. *Interactive Learning Environments*, 1–14. <https://doi.org/10.1080/10494820.2023.2209881>
- Strzelecki, A. (2024). Students' acceptance of ChatGPT in higher education: An extended unified theory of acceptance and use of technology. *Innovative Higher Education*, 49(2), 223–245. <https://doi.org/10.1007/s10755-023-09686-1>
- Sutrisno, D. B. (2023). Practicing IELTS writing for L2 writers with ChatGPT; An exploratory self-study. *English Department of UMMU Journal*, 3(2).
- Teng, M. F. (2024). "ChatGPT is the companion, not enemies": EFL learners' perceptions and experiences in using ChatGPT for feedback in writing. *Computers and Education: Artificial Intelligence*, 7, 100270. <https://doi.org/10.1016/j.caeai.2024.100270>
- Venkatesh, V., Morris, M. G., Davis, G. B., & Davis, F. D. (2003). User acceptance of information technology: Toward a unified view. *MIS Quarterly*, 27(3), 425–478.
- Venkatesh, V., Thong, J. Y. L., & Xu, X. (2012). Consumer acceptance and use of information technology: Extending the unified theory of acceptance and use of technology. *MIS Quarterly*, 36(1), 157–178.
- Vinzi, V. E., Trinchera, L., & Amato, S. (2010). PLS path modeling: From foundations to recent developments and open issues for model assessment and improvement. In *Handbook of Partial Least Squares* (pp. 47–82). Springer Berlin Heidelberg. https://doi.org/10.1007/978-3-540-32827-8_3
- Wang, L., Xu, S., & Liu, K. (n.d.). Understanding students' acceptance of ChatGPT as a translation tool: A UTAUT model analysis. *ArXiv*.
- Warsidi, Damayanti, N., & Syurganda, A. (2024). The rhetorical model of IELTS speaking test band 7 or above. *Journal of English Education and Applied Linguistics*, 13(2).
- Woo, D. J., Guo, K., & Susanto, H. (2024). Exploring EFL students' prompt engineering in human-AI story writing: an activity theory perspective. *Interactive Learning Environments*, 1–20. <https://doi.org/10.1080/10494820.2024.2361381>
- Xiao, Y., & Zhi, Y. (2023). An exploratory study of EFL learners' use of ChatGPT for language learning tasks: Experience and perceptions. *Languages*, 8(3), 212. <https://doi.org/10.3390/languages8030212>
- Xu, S., Chen, P., & Zhang, G. (2024). Exploring Chinese University Educators' Acceptance and Intention to Use AI Tools: An Application of the UTAUT2 Model. *Sage Open*, 14(4). <https://doi.org/10.1177/21582440241290013>
- Xu, X., Su, Y., Zhang, H., Zhang, Y., & Hao, S. (2024). Beyond theory: A mixed-methods investigation of postgraduate engagement with ChatGPT for IELTS speaking. *Research Square (Preprint)*.