Students' Perceptions on the Adoption of Generative AI in Language Learning

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ABSTRACT

The rapid advancement of generative artificial intelligence (AI) has significantly transformed language learning by providing personalized, interactive, and efficient learning support. As such, understanding students' perceptions toward its adoption is essential in evaluating its role in contemporary educational settings. This study examines students' perceptions of generative AI in language learning based on the Diffusion of Innovations Theory. A quantitative cross-sectional survey design was employed, involving 172 respondents from UiTM Negeri Sembilan selected through non-probability quota sampling. Data were collected using a structured questionnaire and analysed using SPSS. The study focuses on five factors of relative advantage, compatibility, trialability observability and motivation. Descriptive statistics were used to summarise responses to individual questionnaire items and composite scores. Normality was assessed using the Kolmogorov–Smirnov and Shapiro–Wilk tests. Given the statistically significant deviations from normality observed in the composite scores, as well as the perception-based nature of the data, Spearman's rank-order correlation was employed to examine the bivariate relationships between the four factors and motivation. All four relationships are positive and statistically significant ($p < 0.001$). Compatibility has the strongest association with motivation (X_2; $rho = 0.692$), followed by relative advantage (X_1; $rho = 0.686$), observability (X_4; $rho = 0.609$) and trialability (X_3; $rho = 0.584$). These results provide useful insights for educators and institutions in understanding how generative AI is perceived and integrated into learning practices.

Keywords: generative artificial intelligence; language learning**;** technology adoption**;** perceptions**;** higher education

INTRODUCTION

Students are increasingly turning to tools such as ChatGPT, Google Gemini, Microsoft Copilot, Grammarly and QuillBot to support and enhance their learning, with language learning being one of the areas where this trend is most evident (Noroozi et al., 2024; Saienko et al., 2025; Obari, 2024; Alqaed, 2024). Among these advances, generative AI stands out as a particularly notable development, referring to systems capable of producing responses and content that resembling human output based on the input they receive (Creely, 2024). This can be seen in (Zaim et al., 2025) where the technologies are assisting students in vocabulary learning, grammar

correction, speaking practice, and content generation in English language learning (Militansina, 2025; Pang et al., 2025).

Nevertheless, concerns regarding the use of generative AI in education continue to emerge (Barus et al., 2025; Owidi et al., 2025; Weng & Fu, 2025) outlined information inaccuracy, unreliable algorithm and students' dependency on the responses provided by AI. Other researchers have highlighted issues related to academic integrity, ethical use and students' over-reliance on AI-generated content (Alqaed, 2024; Li et al., 2024; Zhai et al., 2024). While generative AI offers significant opportunities for language learning, these concerns suggest that its integration should be approached carefully (Kaur, 2026). Other than that, limited internet access, lack of digital literacy, and technical restrictions (Dhanapal et al., 2024; Khor & Che' Lah, 2025; Laili et al., 2025), and unclear policies regarding generative AI may discourage students from exploring these tools openly. At the same time, it is also significant for the students to self-regulate their learning by having the willingness to take risks with emerging technologies and educators still hold the key in exposure towards responsible use of AI (Mohd Noor, 2025). Understanding students' perceptions is therefore important because their acceptance, attitudes, and willingness to use AI may influence the effectiveness of its implementation in educational settings (Vrågård et al., 2024).

Therefore, this study examines students' perceptions of adopting generative AI in language learning through the lens of Rogers' Diffusion of Innovations Theory. It offers a useful framework for understanding how new technologies such as AI are introduced, accepted and adopted within a social system such as education (Raman et al., 2024; Almaiah et al., 2022). Rogers identified several important factors influencing adoption; (i) relative advantage, (ii) compatibility, (iii) complexity, (iv) trialability, and (v) observability (Singh & Strzelecki, 2026). Rogers argues that an innovation is more likely to be adopted when potential users see it as advantageous relative to existing alternatives, compatible with their needs and prior experience, open to being tried out, and capable of producing outcomes that can be observed, namely relative advantage, compatibility, trialability, and observability (Singh & Strzelecki, 2026; Abdalla et al., 2024).

Although complexity is one of the five original innovation factors proposed in the Diffusion of Innovation Theory, it is not included in the present study. Rogers (2003) acknowledges that the influence of innovation attributes may vary according to the characteristics of the innovation, the context, and the adopter population. In the present study, the participants are university students who are increasingly exposed to and familiar with artificial intelligence (AI) technologies in their academic activities. Recent research has demonstrated that university students possess adequate levels of AI literacy and are able to understand, evaluate, and apply AI tools within educational settings, indicating that AI technologies have become an integral part of their learning environment (Mansoor et al., 2024; Wakeman et al., 2024). Given this familiarity, perceived complexity is unlikely to serve as a significant differentiating factor influencing students' adoption-related perceptions. As a result, complexity was excluded from the study. Instead, the study examines how the remaining factors, namely relative advantage, compatibility, trialability, and observability, influence students' motivation to use AI technologies.

Furthermore, empirical evidence strongly supports motivation as a significant predictor of technology adoption and continued usage. According to the Self-Determination Theory, individuals who are motivated are more likely to initiate, sustain, and actively engage with technology because they perceive personal value, relevance, and satisfaction in its use (Ryan & Deci, 2000). Similarly, technology acceptance research has demonstrated that behavioural intention and actual usage are strongly influenced by motivational factors, including performance expectations, perceived usefulness, and personal interest (Venkatesh et al., 2003). In educational technology environments, motivated learners are more likely to persist in using innovative technologies despite initial challenges or learning difficulties, thereby reducing the influence of perceived complexity as a barrier to use. Therefore, positioning motivation as the outcome variable influenced by the factors in the Diffusion of Innovation Theory is both theoretically and empirically justified. It also reflects the realities of students' interactions with AI technologies in contemporary higher education settings.

Previous studies support the relationship between AI adoption and theory. For example, technological tools have been shown to increase students' motivation and concentration in learning environments, while interactive applications help to enhance students' enthusiasm (İlter, 2015; Maran & Hashim, 2022). Furthermore, a study

in Malaysian university demonstrated a finding of students' perceptions towards the usefulness and effectiveness of AI technologies significantly influence their willingness to adopt such innovations (Mohd Noor, 2025). AI tools that assist in completing exercises, presentations, and assessments are found to have a positive impact on students which immediately boosts their motivation (Khor & Che' Lah, 2025). Also, students may have their perception shifted due to peers' recommendations by sharing experiences and strategies related to AI usage (Zaim et al., 2025). On a different note, a study conducted by (İlter, 2015) highlighted that technology has a more significant impact when exposed earlier in assisting language acquisition from a real virtual setting. Nonetheless, adult facilitators are the key assistance in this case for it to be used appropriately. Many students begin using generative AI informally before integrating it fully into their academic activities. Therefore, the theory is considered as a suitable framework for understanding students' motivation, perceptions, and adoption behaviour towards generative AI in language learning environments as this study investigates if the tools will likely be perceived positively when its capability has been recognised and trusted by the students.

Although studies conducted have examined students' perceptions specifically within language learning contexts (Abd Rahim et al., 2023; Abd Hadi et al., 2024; Ibrahim et al., 2025), many of the existing works concentrate on the general benefits and challenges of AI, or on the technical capabilities of AI tools (Laili et al., 2025; Mohd Noor, 2025), rather than on the factors that drive students' acceptance and adoption of generative AI for language learning (Shaari & Morat, 2025). In addition, few studies have drawn on Rogers' Diffusion of Innovations Theory to investigate how relative advantage, compatibility, trialability and observability shape students' motivation and perceptions toward adopting generative AI in this context (Ashraaf et al., 2025; Sallihudin et al., 2026). This gap highlights a clear need for further empirical work to better understand how students in local educational settings perceive and adopt these technologies. This study, thus, aims to fill in this gap of understanding how students perceive and adopt the generative AI tools in language learning environments that specifically grounded in Rogers' Diffusion of Innovations Theory.

METHOD

This study employed a cross-sectional research design, allowing for data collection at a single point in time using a quantitative approach. The study consists of five factors, such as compatibility, observability, relative advantage, trialability and motivation. All measurement items across the five constructs were assessed using a five-point Likert scale. Primary data were obtained through a structured online questionnaire. A non-probability quota sampling technique was utilised to ensure proportional representation across eight programmes at UiTM Negeri Sembilan, with a total of 172 respondents participating in the study. As a non-probability sampling technique was used, the findings are limited in their generalisability to the broader population of students at UiTM Negeri Sembilan. Thus, the results are applicable only to the sample involved in this study.

The questionnaire was adapted from established measurement literature to suit the context of generative AI adoption in language learning, as the dimensions of the Task–Technology Fit scales developed by Goodhue and Thompson (1995) differed from those examined in this study. The questionnaire items and research objectives were revised to align with the five constructs of relative advantage, compatibility, trialability, observability and motivation. A pilot study involving 41 respondents was conducted, with all Cronbach's alpha values exceeding 0.70 (overall $\alpha = 0.937$), indicating acceptable internal consistency. The validity of the adapted questionnaire was considered by examining the relevance and suitability of the items in the context of generative AI adoption in language learning. The items were adapted to align with the study constructs and the target respondents.

Eligible participants were students taking English as a subject who had experience using AI tools for English language learning. GPower indicated a minimum sample size of 92 respondents, based on five predictors, a medium effect size ($f^2 = 0.15$), a significance level of 0.05 and a statistical power of 0.80. A larger sample of 172 was obtained to enhance the robustness of the findings and support further analyses. Ethical considerations, including informed consent, voluntary participation, confidentiality and institutional ethical approval were addressed in accordance with the study procedures.

Data analysis was conducted using the Statistical Package for the Social Sciences (SPSS) to address the following research objectives.

1) examine students' perceptions on the benefits of using AI in language learning compared to traditional methods

2) assess the extent to which AI use aligns with students' learning styles, academic goals, and values.

3) investigate students' opportunities to experiment with AI before fully adopting it in their language learning activities.

4) explore students' awareness of visible outcomes and benefits of AI use among peers and within the language learning environment.

5) examine students' motivation in using generative AI based on the dimensions in 'Diffusion of Innovations Theory'.

6) To examine the descriptive statistics of the composite scores for relative advantage, compatibility, trialability, observability and motivation.

7) To examine the bivariate relationships between relative advantage, compatibility, trialability, observability and motivation.

Descriptive Statistics

Descriptive statistics were used to summarise respondents' responses to individual questionnaire items and the composite scores for each key factor. For individual questionnaire items, percentages were reported to describe the distribution of respondents' answers. Subsequently, the items under each key factor were combined to calculate a composite mean score, providing an overall assessment of respondents' perceptions of each factor related to students' perceptions of the adoption of generative AI in language learning. The mean, standard deviation and skewness were then examined to describe the central tendency, variability and distribution of the composite scores.

Normality Test

Normality was assessed using the Kolmogorov–Smirnov and Shapiro–Wilk tests, supplemented by an examination of skewness values obtained from the descriptive statistics. Both tests indicated statistically significant deviations from normality across all five composite variables ($p < 0.001$). The findings from the normality tests, together with the observed skewness patterns informed the selection of an appropriate correlation analysis. Given the non-normal distributions of the composite scores and the perception-based nature of the data, Spearman's rank-order correlation was employed to examine the relationships between the study variables. The hypotheses for the normality tests were formulated as follows:

H_0: The composite scores are normally distributed

H_1: The composite scores are not normally distributed

Correlation Analysis

Spearman's rank-order correlation was conducted to examine the bivariate relationships between relative advantage, compatibility, trialability, observability and motivation. Spearman's correlation coefficients and corresponding p-values were reported to indicate the direction, strength and statistical significance of each relationship. Statistical significance was evaluated at the 0.05 level. The general hypotheses formulated for the correlation analysis were as follows:

H_0: There is no significant association between Xi and Y

H_i: There is a significant association between Xi and Y

RESULTS AND DISCUSSION

In this section, the results of the research are explained and discussed comprehensively.

Demographic Profile

Table 1 presents the demographic profile of the respondents in terms of gender and programme level of study. In terms of gender distribution, most respondents were female, comprising 131 participants (76.2%), while only 41 respondents (23.8%) were male. A total of 122 (70.9%) respondents were from the diploma level, followed by 36 respondents (20.9%) of them from the degree level and the pre-diploma students represented the smallest proportion with 14 respondents (8.1%).

Table 1. Demographic profile

Demographic		**Frequency**	**Percent**
Gender	Male	41	23.8
	Female	131	76.2
Programme level	Pre-diploma	14	8.1
	Diploma	122	70.9
	Degree	36	20.9

Frequency of Generative AI Tool Usage

As shown in Table 2, ChatGPT is the most frequently used generative AI tool among respondents, with 93.0% reporting its use. This reflects its strong dominance in supporting language learning activities and highlights its role as the primary tool for AI-assisted learning among students. Google Gemini also shows a high adoption rate (70.3%), suggesting that a substantial proportion of students engage with more than one generative AI platform. Microsoft Copilot records a lower but still notable usage rate (26.7%), indicating that it serves as a supplementary tool rather than a primary choice for most students. In contrast, other generative AI tools collectively account for 9.3% of usage. These include DeepSeek, QuillBot, Grammarly, Canva AI, Gauth, Google AI Mode, Perplexity and CICI AI which are used by a small proportion of respondents, indicating limited and specialized usage compared to mainstream platforms.

Table 2. Frequency and Percentage of Generative AI Tools Used by Students

Tool / Application	**Frequency**	**Percentage (%)**
ChatGPT	160	93.0
Google Gemini	121	70.3
Microsoft Copilot	46	26.7
Others	16	9.3

Perceptions of AI Adoption in Language Learning

This section presents and discusses findings for the five (5) objectives of the present study based on the collected data.

Students' perceptions on the benefits of using generative AI in language learning compared to traditional methods

Table 3. Relative Advantage of AI in Language Learning

Item	SD	D	N	A	SA
Using Generative AI helps me to complete language assignments more quickly than traditional methods.	0.0	2.3	24.4	**50.5**	**23.3**
Generative AI improves the quality of my written language work.	0.6	1.2	20.9	**51.7**	**25.6**
Generative AI allows me to generate ideas and perspectives that I might not think of on my own.	0.0	2.9	17.4	**46.5**	**33.1**
I believe Generative AI enhances my overall performance in language learning assessments.	0.6	1.2	17.4	**52.3**	**28.5**

Table 3 shows that the combined agreement scores (Agree and Strongly Agree) of relative advantage of AI highly dominate the findings and a very low percentage of respondents stated strongly disagree and disagree with the four items. This indicates positive consensus among students regarding the integration of AI into their language learning in comparison to the traditional methods. Data presented in Table 3 shows that 73.8% of respondents acknowledge that AI helps them complete language assignments more quickly than traditional methods. 77.3% of students believe AI actively improves the quality of their written language work. This finding corroborates with (Laili et al., 2025) that completing exercises, presentations and assessments with the AI assistance has a positive impact on students, which immediately boosts their motivation. 79.6% of the participants reported that AI helps them to unlock creative ideas and perspectives that they might not have conceived independently, highlighting its significant role, particularly during the brainstorming phase prior to producing the final written work. Meanwhile, 80.8% of the respondents believed that AI enhances their overall success in language learning assessments. Although there is disagreement across all the 4 surveyed items, the percentage is rather small (less than 3.5%), underscoring a complete lack of resistance to these tools.

The extent to which generative AI use aligns with students' learning styles, academic goals, and values

Table 4. Compatibility

Item	SD	D	N	A	SA
Generative AI fits well with the way I usually study for language courses.	0.6	4.7	28.5	**48.8**	**17.4**
Using Generative AI is consistent with my personal learning goals.	0.6	2.9	40.7	**41.3**	**14.5**
Generative AI supports the language skills I need to develop (such as writing, reading, grammar, or vocabulary).	0.0	0.6	15.1	**55.8**	**28.5**
The use of Generative AI matches my preferred learning style.	0.6	2.9	32.0	**44.2**	**20.3**

Table 4 illustrates a strong positive consensus regarding how AI aligns with students' language learning styles, academic goals and values. The dataset presented in Table 4 shows that across all four surveyed items, disagreement scores are rather low (not more than 5.3%), which indicates a lack of resistance towards incorporating AI into language learning. A high percentage (84.3%) of student respondents agree or strongly agree that AI supports the development of essential language skills, such as grammar, writing, reading, and vocabulary. This high percentage suggests that students realise the value of AI as an instructional tool in language

learning. In addition, more than half of the student respondents (64.5%) also reported that AI matches and blends well with their preferred learning style and study goals. This supports (Khor & Che' Lah, 2025) claim that the flexibility of AI allows students to personalise their learning experiences and learning styles more effectively than conventional approaches.

Students' opportunities to experiment with generative AI before fully adopting it in their language learning activities

Table 5. Trialability

Item	SD	D	N	A	SA
I have opportunities to try Generative AI on small language tasks before using it for major assessments.	0.0	0.6	34.3	**45.9**	**19.2**
My lecturers encourage responsible experimentation with Generative AI for learning purposes.	0.0	2.9	40.1	**41.3**	**15.7**
I feel comfortable testing Generative AI tools before using them in graded assignments.	0.6	4.7	28.5	**48.8**	**17.4**
I can practice using Generative AI without fear of negative academic consequences.	1.7	12.2	40.7	**33.7**	**11.6**

Results presented in Table 5 show that 65.1% of the respondents agree or strongly agree that they have sufficient opportunities to test AI on minor language tasks before using it for major assessments, and a high percentage of them (66.2%) feel comfortable in testing this tool before submitting their assignments. Table 5 also illustrates that 57.0% of the respondents agreed that they received positive support and encouragement from lecturers to experiment with AI for language learning purposes. Meanwhile, 40.1% of them showing neutrality on this item suggests that many students are still uncertain about the experimentation of AI for learning purposes perhaps due to ethical use and academic integrity, which have also been highlighted in previous studies (Alqaed, 2024; Zaim et al., 2025). Interestingly, 45.3% of them agree to the use of AI without fear of negative academic consequences indicating their awareness of negative academic consequences for irresponsible use of AI in their learning activities. The dataset also shows that neutral responses reach a peak of 40.7%, suggesting that although the students have access and are willing to explore the tool, many still hesitate due to concerns regarding academic policy and guidelines.

Students' awareness of visible outcomes and benefits of generative AI use among peers and within the language learning environment

Table 6. Observability

Item	SD	D	N	A	SA
I have observed my classmates benefiting from using Generative AI in language learning.	1.2	1.2	26.2	**51.2**	**20.3**
The advantages of using Generative AI in language assignments are clear to me.	0.0	2.9	26.2	**49.4**	**21.5**
I can easily show others how Generative AI helps improve my language work.	0.0	5.2	30.2	**47.7**	**16.9**

I notice that lecturers recognize improvements in students' work supported by Generative AI.	0.0	5.2	37.8	**37.2**	**19.8**

The next analysis focuses on students' awareness of visible outcomes and benefits of generative AI use among peers and within the language learning environment. Data presented in Table 6 indicates that students, in general, observe the various benefits of adopting AI in language learning work. A very high percentage of the students (71.5%) reported that they observed their classmates benefiting from using AI tools, and 70.9% responded that they could see the advantages of utilising AI in completing language assignments. The dataset shows that the disagreement for the surveyed items (items 1 and 2) in Table 6 is minor (less than 3%), which suggests that the value of AI is widely recognized within the student population. These findings support (Almaiah et al., 2022) that students are more likely to adopt AI tools when they perceive the technology positively and recognise its benefits in supporting their language learning process. Observing the values of AI indirectly increases the students' confidence in using this tool. Approximately 64.6% of the students responded that they can easily explain to others how AI enhances their language work. However, more than half of the student respondents (57.0%) are aware that lecturers know the improvements in their language work are supported by AI. Datasets in Table 6 also display the percentage of neutral responses increases as the items shift from peer observation (items 1 and 2) to lecturers' evaluation (item 4), with the percentage of 26.2% to 37.8%, respectively. This suggests that while students are certain and confident in the use of AI, they are less certain about how their lecturers perceive and evaluate AI-assisted work.

Students' motivation in using generative AI based on the dimensions in 'Diffusion of Innovations Theory'

Table 7. Motivation

Item	**SD**	**D**	**N**	**A**	**SA**
I am motivated to use Generative AI because it helps improve my academic achievement in language learning.	0.0	0.6	9.9	**53.5**	**36.0**
I am motivated to use Generative AI because it helps me perform better in language tasks and assignments.	0.0	0.6	13.4	**53.5**	**32.6**
I enjoy using Generative AI for language learning activities.	0.6	1.2	19.8	**44.8**	**33.7**
Using Generative AI increases my curiosity to explore language topics and skills.	0.0	0.6	16.3	**43.6**	**39.5**
Overall, I am motivated to use Generative AI to support my language learning.	0.0	1.2	15.1	**46.5**	**37.2**

Table 7 presents data in relation to students' motivation in using AI based on the five (5) dimensions in 'Diffusion of Innovations Theory'. The dataset shows that the respondents have a very high level of motivation in using AI in language learning, with cumulative agreement (Agree and Strongly Agree) more than 78% across all five dimensions surveyed. Conversely, combined disagreement (Disagree and Strongly Disagree) is very small and did not exceed 1.8% across all the dimensions. These findings indicate that AI is highly regarded by students as a necessary tool for them to succeed academically. Results indicate that the students' strongest motivational factors are performance-based outcomes. 89.5% of the respondents are motivated by the ability of AI in improving their overall academic achievement, while 86.1% of them are motivated to use AI because it can specifically enhance their performance in language learning tasks and assignments. Similarly, item five also demonstrates that 83.7% of the students responded that their motivation to use AI is to support their studies. Apart from academic grades, students reported that AI also enhances their participation and develops curiosity. 78.5% of the student respondents responded that they enjoy using AI for language activities, suggesting that user experience with the use of AI is undoubtedly rewarding. Furthermore, 83.1% stated that AI increases their

curiosity to explore new language topics and skills, and this particular item received the highest "Strongly Agree" response (39.5%) across all surveyed items under motivation.

Factor-Level Descriptive Results

Subsequently, the items under each key factor were combined to calculate a composite mean score, providing an overall assessment of students' perceptions of the adoption of generative AI in language learning. The mean, standard deviation and skewness were then examined to describe the central tendency, variability and distribution of the composite scores. Table 8 presents the descriptive statistics of the constructs related to the adoption of generative AI in language learning. Overall, respondents demonstrated positive perceptions across all constructs, with mean scores ranging from 3.68 to 4.19, indicating general agreement or favourable evaluations. Motivation recorded the highest mean ($M = 4.19$), suggesting a strong internal drive among students to adopt generative AI in language learning. In contrast, trialability showed the lowest mean ($M = 3.68$), indicating more limited opportunities to experiment with generative AI tools. The standard deviation values (0.60 – 0.67) indicated relatively low variability, suggesting consistency in responses across items. Regarding distribution, most constructs exhibited negative skewness, indicating that responses tended to cluster toward higher agreement levels. Trialability, however, showed slight positive skewness (0.29), reflecting a tendency toward comparatively lower ratings for this construct. Overall, the findings suggest that students held generally favourable perceptions of generative AI adoption in language learning, with higher mean scores reflecting stronger agreement with the respective constructs (Mohd Rosley et al., 2025).

Table 8. Descriptive Statistics for Key Factors

Variables	**Mean**	**Standard deviation**	**Skewness**
Motivation (Y)	4.19	0.60	– 0.46
Relative Advantage (X_1)	4.03	0.62	– 0.24
Compatibility (X_2)	3.84	0.64	– 0.08
Trialability (X_3)	3.68	0.65	0.29
Observability (X_4)	3.81	0.67	– 0.13

Correlation Analysis

Given the substantial negative skewness observed in the composite scores and the statistically significant results of the Kolmogorov–Smirnov and Shapiro–Wilk normality tests ($p < 0.001$), Spearman's rank-order correlation was selected to examine the relationships among the five variables. The composite scores were calculated by averaging responses to multiple items measured on a five-point Likert scale, the observed departures from normality supported the use of a non-parametric correlation method. Spearman's rho was therefore employed to assess the strength and direction of the associations between relative advantage, compatibility, trialability, observability and motivation. Unlike multiple regression analysis, which examines the relationships of multiple independent variables with a dependent variable simultaneously, correlation analysis in this study assessed each pair of variables separately to determine the strength and direction of their associations. Specifically, the following hypotheses were formulated:

H_1: There is a significant association between relative advantage and motivation.

H_2: There is a significant association between compatibility and motivation.

H_3: There is a significant association between trialability and motivation.

H_4: There is a significant association between observability and motivation.

All four relationships are positive and statistically significant. compatibility (X_2) has the strongest association with motivation (X_2; $\rho = 0.692$), followed by relative advantage (X_1; $\rho = 0.686$), observability (X_4; $\rho = 0.609$) and trialability (X_3; $\rho = 0.584$). The strong association between compatibility and motivation may suggest that students are more motivated to adopt generative AI when the technology aligns with existing learning practices, individual preferences and language learning needs. When generative AI tools are perceived as compatible with established learning routines, students may be more willing to integrate the tools into language learning activities. However, as the analysis was correlational, the findings indicate associations rather than causal relationships.

Table 9. Spearman's Rank-Order Correlation between the Independent Variables and Motivation

Hypothesis	Variables	Spearman's, ρ	p-value	Result
H_1	$X_1 - Y$	0.686	< 0.001	Significant
H_2	$X_2 - Y$	0.692	< 0.001	Significant
H_3	$X_3 - Y$	0.584	< 0.001	Significant
H_4	$X_4 - Y$	0.609	< 0.001	Significant

Note. X_1 = Relative advantage, X_2 = Compatibility, X_3 = Trialability, X_4 = Observability, Y = Motivation

CONCLUSION

This study examined students' perceptions towards generative artificial intelligence (AI) adoption in language learning among students at UiTM Negeri Sembilan. The findings indicate the students hold highly positive perceptions towards the adoption of generative AI. The relationships among the five factors were evaluated through the lens of the Diffusion of Innovation Theory, with motivation emerging as the most influential factor. The findings further reveal that students readily embrace platforms like ChatGPT to enhance their academic performance, improve the quality of their writing, and stimulate creative idea generation. However, the comparatively lower score in trialability highlights a critical gap where many students remain hesitant to try and experiment with AI due to a fear of negative academic consequences and a lack of clear guidance regarding its appropriate use. All four factors showed positive and statistically significant associations with motivation. Compatibility had the strongest association with motivation, followed by relative advantage, observability, and trialability. These findings suggest that students who perceived generative AI as compatible with their learning needs and preferences tended to report higher motivation to adopt it. However, this study examined the relationships between variables individually using correlation analysis and did not assess the combined influence of the four factors on motivation. Future studies could use multiple regression analysis or Partial Least Squares Structural Equation Modelling (PLS-SEM) to examine how these factors relate to motivation simultaneously and determine the individual contribution of each factor when the others are considered. Therefore, it is important for educators and higher education institutions to actively establish clear, supportive policies that are able to address academic integrity and promote the ethical use of AI. In conclusion, this study provides valuable insights into students' perceptions of generative AI adoption in language learning. The findings offer useful information for educators and have the potential to empower students to confidently leverage generative AI as a collaborative extension of their language learning journey, rather than viewing it with fear or uncertainty.

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C : **C**onceptualization	I : **I**nvestigation	Vi : **Vi**sualization
M : **M**ethodology	R : **R**esources	Su : **Su**pervision
So : **So**ftware	D : **D**ata Curation	P : **P**roject administration
Va: **Va**lidation	O : Writing - **O**riginal Draft	Fu : **Fu**nding acquisition
Fo : **Fo**rmal analysis	E : Writing - Review & **E**diting	

Conflict Of Interest Statement

The author declares that there is no conflict of interest regarding the publication of this paper.

Informed Consent

We have obtained informed consent from all individuals involved in this study.

Data Availability

The data that support the findings of this study are available from the corresponding author, [RK], upon reasonable request.

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