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# Acceptance of Artificial Intelligence in English Learning: Perceptions of A2-B1 Level University Students at the University of Guayaquil

Aceptación de la inteligencia artificial en el aprendizaje del inglés:  
percepciones de estudiantes universitarios de nivel A2-B1 de la Universidad de  
Guayaquil

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## Abstract

Artificial intelligence (AI) has gained relevance in language learning within higher education by enabling personalized practice, immediate feedback, and autonomous support. This study examined university students' acceptance of AI tools in learning English as a foreign language at the A2 and B1 proficiency levels, based on the Technology Acceptance Model (TAM). A quantitative, non-experimental, cross-sectional, and correlational design was employed. Using non-probabilistic convenience sampling, 296 students from the University of Guayaquil participated in the study. The instrument consisted of a 15-item Likert-scale questionnaire grounded in TAM, validated through expert judgment and piloted with 30 students to ensure clarity and reliability. Data were analyzed using SPSS. The results demonstrated strong internal consistency ( $\alpha = .879-.912$ ) and statistically significant positive correlations among perceived usefulness and behavioral intention ( $r = .767, p < .001$ ), perceived ease of use and behavioral intention ( $r = .709, p < .001$ ), and perceived usefulness and perceived ease of use ( $r = .694, p < .001$ ). Findings indicate a generally favorable perception of AI tools; however, their sustained pedagogical integration requires structured guidance and strengthened digital literacy among students.

**Keywords:** Artificial intelligence, language instruction, higher education, student attitude, information technology.

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## Resumen

La inteligencia artificial (IA) ha adquirido relevancia en el aprendizaje de idiomas en educación superior al facilitar prácticas personalizadas, retroalimentación inmediata y apoyo autónomo. Este estudio analizó la aceptación de herramientas de IA en el aprendizaje del inglés como lengua extranjera en estudiantes universitarios de nivel A2 y B1, a partir del Modelo de Aceptación Tecnológica (TAM). Se adoptó un enfoque cuantitativo con diseño no experimental, transversal y correlacional. Mediante muestreo no probabilístico por conveniencia se trabajó con 296 estudiantes de la Universidad de Guayaquil. El instrumento fue un cuestionario Likert de 15 ítems, validado por juicio de expertas y pilotado con 30 estudiantes. El análisis en SPSS evidenció adecuados niveles de confiabilidad ( $\alpha = .879-.912$ ) y correlaciones positivas y significativas entre utilidad percibida e intención de uso ( $r = .767, p < .001$ ), facilidad de uso e intención de uso ( $r = .709, p < .001$ ) y utilidad y facilidad de uso ( $r = .694, p < .001$ ). Los hallazgos muestran una percepción favorable hacia la IA; sin embargo, su integración sostenida requiere orientación pedagógica y fortalecimiento de la alfabetización digital.

**Palabras clave:** Inteligencia artificial, enseñanza de idiomas, educación superior, actitud del estudiante, tecnología de la información.

## Introduction

Artificial intelligence (AI) has established itself as an emerging tool in teaching and learning processes, particularly in the teaching of English as a foreign language, where its application enables the creation of personalized activities, provides immediate feedback, and facilitates self-directed learning (Peña-Acuña & Corga Fernandes Durão, 2024; Moradi, 2025). In the context of higher education, these technologies have been associated with improvements in motivation, academic performance, and engagement with linguistic content (Ekizer, 2025; Guzmán Alvarado & Naranjo Andrade, 2025).

Various studies have indicated that students' acceptance of AI does not depend solely on technological availability, but on perceptual factors related to its usefulness, ease of use, and trust in the tool (Annamalai et al., 2025; Ursavaş et al., 2025). In this regard, the Technology Acceptance Model (TAM), proposed by Davis (1989), has been widely used to explain the adoption of educational technologies, establishing that the intention to use is determined primarily by perceived usefulness (PU) and perceived ease of use (PEOU).

Although the TAM has been criticized for its parsimony and for failing to incorporate complex social or contextual variables, recent research continues to validate its relevance in exploratory studies on emerging technologies in higher education, especially when analyzing initial perceptions of adoption (Kanont et al., 2024; Mittal et al., 2025). In the field of AI-mediated English learning, the model has proven useful for identifying patterns of acceptance and willingness to use among university students (Huang & Mizumoto, 2024; Mehrvarz et al., 2025).

Internationally, most empirical studies on AI acceptance in English language learning focus on Asian and Middle Eastern contexts (Alotaibi et al., 2025; Moradi, 2025), while

evidence from Latin American public universities remains limited. In Ecuador, existing research has focused primarily on descriptive analyses of the impact of AI or on conceptual reviews of its challenges and opportunities (Jara Alcívar, 2024; Michilena et al., 2025), without delving into explanatory models that allow for an understanding of the factors influencing usage intention from the student's perspective.

In this context, the present study aimed to analyze the perceptions of A2 and B1 level university students regarding the acceptance of artificial intelligence in English language learning, based on the three dimensions of the TAM model: perceived usefulness, perceived ease of use, and intention to use. This analysis seeks to provide empirical evidence that helps understand how students value AI as an educational resource and how these perceptions relate to one another within the context of Ecuadorian public higher education.

## Materials and methods

The study adopted a quantitative, non-experimental, cross-sectional, and correlational approach, with the aim of analyzing the relationship between perceived usefulness, perceived ease of use, and the intention to use artificial intelligence in English language learning.

The research was conducted at the University of Guayaquil, in the language department, where English courses are taught to students from various faculties. This setting was chosen due to the institution's interest in strengthening the teaching of English as a foreign language. Despite being a public university, the institution has invested in external platforms such as the Buckingham Center and English Discoveries, demonstrating its commitment to incorporating technological resources into teaching and learning processes.

The study population consisted of university students at levels A2 and B1, according to the Common European Framework of Reference for Languages (CEFR). Non-probabilistic convenience sampling was used, taking into account the availability and accessibility of the study groups. The final sample consisted of 296 students, mostly women (67.9%) and young people between the ages of 18 and 19. 83.4% were at level A2 and 16.6% at level B1. Regarding the use of artificial intelligence, the majority reported using it occasionally (57.8%), with ChatGPT being the most widely used tool (67.6%), followed by Grammarly and DeepL. These data suggest a moderate and gradual adoption of the technology by students.

The data collection instrument was a structured questionnaire using a five-point Likert scale (1 = strongly disagree to 5 = strongly agree), designed based on Davis's (1989) Technology Acceptance Model (TAM) and adapted to the context of learning English through AI tools. The questionnaire included 15 items distributed across three dimensions: perceived usefulness (6 items), perceived ease of use (5 items), and intention to use (4 items). The instrument underwent a content validation process through expert judgment. Three university professors specializing in English language teaching evaluated the appropriateness, clarity, and relevance of each item using a four-point scale. The observations made were minor and allowed for adjustments to wording

details without altering the structure of the instrument. Subsequently, a pilot study was conducted with 30 students whose characteristics were similar to those of the final sample. This pilot study confirmed understanding of the items and provided preliminary evidence of reliability. The Cronbach's alpha values obtained in this phase ranged from .814 to .871, indicating adequate internal consistency prior to the final application.

To ensure methodological transparency and the study's replicability, representative examples of the wording used in each dimension of the instrument are presented. In the perceived usefulness (PU) dimension, one of the items was: "The use of artificial intelligence tools improves the quality of my English assignments." For perceived ease of use (PEOU), the statement "Interacting with AI platforms to learn vocabulary is clear and understandable to me" was included. Finally, in the intention to use (BI) dimension, an example was: "I intend to continue using artificial intelligence in my future academic work in English." These items were adapted to the context of English language learning while maintaining the conceptual structure originally proposed by Davis (1989).

The questionnaire was administered virtually via Google Forms, ensuring the anonymous and voluntary participation of respondents. The data obtained were processed using SPSS software, applying descriptive statistics (mean, standard deviation, minimum and maximum values) and Pearson's correlation coefficient to analyze the relationship between the variables

## Results

To ensure the validity of subsequent analyses, the internal consistency of the instrument was first assessed. The Cronbach's alpha values obtained indicated high reliability across the three dimensions of the TAM model, with coefficients exceeding .87, confirming the internal consistency of the scales used.

Descriptively, the results show a favorable perception of artificial intelligence in English language learning. The perceived ease of use (PEOU) dimension had the highest mean ( $M = 3.47$ ;  $SD = 0.86$ ), followed by perceived usefulness (PU) ( $M = 3.34$ ;  $SD = 0.87$ ) and intention to use (BI) ( $M = 3.26$ ;  $SD = 0.90$ ). Although all three dimensions fall above the midpoint of the Likert scale (3), a slight descending hierarchy is observed from the perception of ease to the final behavioral intention.

Correlational analysis using Pearson's correlation coefficient revealed positive and statistically significant associations among the model's variables. The strongest relationship was found between perceived utility and intention to use ( $r = .767$ ,  $p < .001$ ), indicating that the higher the perceived utility, the greater the willingness to use artificial intelligence in academic activities. Likewise, ease of use showed a significant correlation with usage intention ( $r = .709$ ,  $p < .001$ ), while the relationship between perceived usefulness and ease of use was also strong ( $r = .694$ ,  $p < .001$ ).

Taken together, these results confirm the theoretical structure of the Technology Acceptance Model in the context studied, demonstrating that perceptions of utility and

ease of use operate as interrelated factors that influence students' stated intention to use.

Descriptive statistics, reliability statistics, and bivariate correlations are presented in an integrated manner in the following table:

**Table 1.** *General matrix of empirical results*

Dimensión	$\alpha$	Media	DE	PU	PEOU	BI
Utilidad percibida (PU)	.912	3.34	0.87	—	.694**	.767**
Facilidad de uso percibida (PEOU)	.879	3.47	0.86	.694**	—	.709**
Intención de uso (BI)	.909	3.26	0.90	.767**	.709**	—

**Figure 1**

Radial representation of the average dimensions of the TAM model

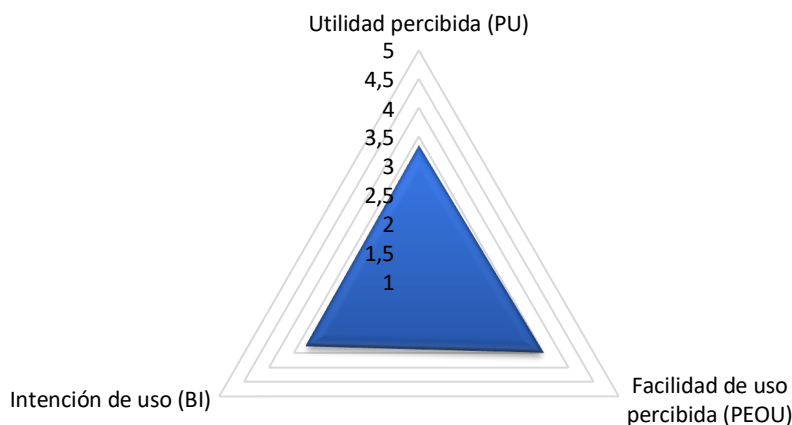


Figure 1 illustrates the slight hierarchy among the dimensions, showing a greater emphasis on perceived ease of use, followed by perceived usefulness, and finally, intention to use.

The results obtained provide a clearer understanding of how A2- and B1-level university students perceive artificial intelligence in their English learning. First, the high reliability of the instrument and the high scores on perceived usefulness, ease of use, and intention to use indicate that the TAM model functions appropriately in this context. These results align with those reported in recent international research, where students demonstrate a favorable attitude toward AI when they perceive it as facilitating their

tasks and offering immediate support (Hwang et al., 2025; Shahzad et al., 2024; Wu et al., 2024).

Furthermore, the high and statistically significant correlations found between perceived usefulness, ease of use, and behavioral intention reinforce the structure proposed by the Technology Acceptance Model, according to which these dimensions maintain direct and predictive relationships with one another (Davis, 1989). This structural pattern confirms that, in the context of AI-mediated English learning, the explanatory logic of the TAM holds empirical consistency.

An important finding of this study is that perceived usefulness scored the highest average. From a teaching perspective, this makes sense because students tend to value tools that “directly help them” with immediate tasks: correcting a text, generating examples, or practicing vocabulary. AI offers visible benefits in a short time, which explains why this dimension ranks as the primary predictor of usage intention. This pattern has also been observed in international studies, where utility has proven to be the most decisive factor in technology adoption (Hwang et al., 2025).

However, although the TAM demonstrates explanatory power in this study, it is important to note that it was initially developed to analyze the acceptance of traditional technological systems (Davis, 1989). In the case of generative artificial intelligence, student-technology interaction may involve additional dynamics, such as the perceived accuracy of responses, trust in the generated information, and the pedagogical support necessary for its academic use. In this regard, while the core dimensions of the model proved predictive, future research could expand the theoretical framework by incorporating complementary variables that deepen our understanding of the phenomenon in AI-mediated educational settings.

On the other hand, ease of use also yielded high scores, indicating that students do not perceive significant technical difficulties. This perception may be related to the demographic profile of the sample: mostly young people who already interact with technology on a daily basis. However, the use of AI is still occasional for many of them. This behavior reveals something that, as a teacher, can be frequently observed: students recognize the potential of these tools but have not yet managed to integrate them systematically into their learning. In this regard, ease of use alone does not guarantee consistent use; it requires support, usage models, and spaces for guided practice.

In particular, given that this is a public university, factors such as access to stable connectivity, availability of personal devices, and the conditions of computer labs may indirectly influence the perception of ease of use (PEOU). Although this study did not specifically measure these variables, the previously cited studies on technology integration in higher education (Jara Alcívar, 2024; Torres et al., 2024; Michilena et al., 2025) suggest that infrastructure and institutional support influence the student’s technological experience. Therefore, the observed ease of use cannot be understood solely as an intrinsic characteristic of the tool, but also as the result of the educational environment in which it is implemented.

Intention to use was also high, indicating that students are willing to continue using AI. However, this willingness does not necessarily imply that they will integrate it into their academic routine in a critical or responsible manner. Here an important nuance emerges: AI is perceived as useful and easy; however, its adoption depends on other factors not accounted for by the TAM model. For example, digital self-efficacy, intellectual curiosity, the level of trust in AI-generated information, or even the teacher's perception of its use. These elements can influence how and to what extent students decide to incorporate AI into their learning. Authors such as Ursavaş et al. (2025) and Wu et al. (2024) have highlighted the importance of these additional variables, which could deepen our understanding of the phenomenon.

Another relevant aspect is the Ecuadorian context, where the integration of advanced technologies into higher education is in the process of consolidation. Although institutional initiatives exist, their pedagogical use has not yet been fully incorporated (Jara Alcívar, 2024; Torres et al., 2024; Michilena et al., 2025). In this context, this study demonstrates that Ecuadorian students are open to this innovation, which represents an opportunity for universities seeking to strengthen English language instruction with digital resources. However, this openness must be accompanied by teacher guidance, because students do not always know how to distinguish between appropriate use and excessive dependence.

Nevertheless, the results must be interpreted with certain methodological limitations in mind. First, non-probabilistic convenience sampling was used, which limits the generalizability of the findings to other university populations. Second, the research was conducted at a single institution of higher education and with students at A2 and B1 levels, which limits its extrapolation to other academic contexts or levels of language proficiency. Furthermore, the cross-sectional and correlational design allowed for the identification of significant associations between variables but did not establish causal relationships among them. These limitations do not invalidate the results obtained, but they do suggest the need to expand the sample and methodological scope in future research.

Finally, the analysis of the results suggests that artificial intelligence has the potential to become a valuable ally in English language learning, provided that its integration is carried out responsibly. To achieve this, institutions must promote training that not only teaches how to use these tools but also fosters critical thinking, digital ethics, and the mindful use of technology. This will enable students not only to accept AI but also to learn how to use it as a meaningful support in their educational

## Conclusions

This study demonstrated that university students at the A2 and B1 levels at the University of Guayaquil hold a positive perception of the use of artificial intelligence as a tool to support English language learning. The dimensions evaluated using the technology acceptance model—namely, perceived usefulness, ease of use, and intention to use—showed high averages and significant correlations with one another, supporting the model's validity in Ecuadorian higher education contexts.

Among the most notable findings is that perceived usefulness was the highest-rated dimension. This suggests that students recognize the practical benefit of artificial intelligence tools, especially when these allow them to efficiently complete tasks such as writing, proofreading, or practicing vocabulary. Although they also consider these tools to be accessible and easy to use, their use remains occasional, indicating that the adoption of these technologies requires more systematic guidance.

The results also highlight that while the intention to use is high, it may be influenced by factors not included in the TAM model. These include trust in information generated by artificial intelligence, the level of digital literacy, technological self-efficacy, and the teacher's attitude toward the use of these tools. Incorporating these variables into future studies would allow for a more comprehensive understanding of the processes of technological acceptance in educational settings.

Ultimately, artificial intelligence represents a valuable opportunity to strengthen English language learning, provided that its implementation is accompanied by institutional policies that promote teacher training, critical digital literacy, and the pedagogical and ethical use of technology. Promoting these conditions will enable students not only to adopt these tools but also to integrate them consciously and strategically into their academic education.

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