ChatGPT as Unconscious English Learning Tool: An Explorative Study

Manish Gopal S

Student of CMS Business School, Jain Deemed to be University

Abstract: This study examines the use of AI, specifically ChatGPT, as an unconscious tool for learning English, highlighting its merits such as personalized learning and self-evaluation, while acknowledging challenges like digital addiction, bias, and ethical concerns. Using bootstrapping analysis and Partial Least Squares Structural Equation Modelling (PLS-SEM), the study validates statistical relationships and collects survey data to assess AI's impact on language learning. Findings indicate that ChatGPT supports vocabulary retention and unconscious language acquisition but may lead to over-reliance and reduced critical thinking. A balanced approach combining AI-based learning with traditional methods is recommended, while addressing ethical issues in future research.

Keywords:

ChatGPT; unconscious learning; AI in education; language acquisition; technology adoption

1. Introduction

Artificial intelligence (AI) has revolutionized diverse spheres, such as education and language learning. ChatGPT, an advanced AI language model, opens up new avenues for subconscious English language learning beyond formal classroom environments. This research identifies ChatGPT's potential in subconscious language learning through evaluation of its advantages, constraints, and pedagogic meanings. As AI finds increasing applications in education, it is essential to investigate the contribution of digital tools toward language learning. ChatGPT's conversational and tailored features provide a choice to traditional approaches, with the possibility of boosting unconscious language learning.

Implicit language acquisition, in which students learn linguistic structures automatically, is at the heart of second language acquisition scholarship. Conventional instruction tends to be explicit in approach, but AI-based systems such as ChatGPT create conditions for unconscious acquisition. By presenting learners with rich, understandable input—similar to Krashen's (1982) "i+1" proposition—ChatGPT establishes favorable conditions for learning. Further, its interactional design can reduce affective barriers, so learners feel more at ease when employing English. Research suggests an uptick in the use of AI for language acquisition, but there is little empirical research on its efficacy. This research fills that gap, enlightening educators on the role of AI in pedagogy and curriculum development.

Even with quick strides in AI, its effects on subconscious language learning are underexplored. This study aims to comprehend how ChatGPT promotes subconscious language learning as opposed to conventional techniques and how it enhances and restricts English learning. It also considers how AI impacts linguistic acquisition, critical thinking, and pedagogy and deals with ethical issues that emerge during AI-facilitated language learning. The key challenge is how to incorporate ChatGPT into current teaching practices and ensure efficient learning outcomes. Secondly, there are issues with the accuracy of ChatGPT's language input, as errors can mislead students. Relying too much on AI might also minimize critical thinking and independent learning. Ethical considerations like data privacy and AI biases further complicate its adoption. In addition, imbalances in AI availability may enhance the gap between learning opportunities of students from varied socioeconomic statuses. With the growing application of AI in learning, this research is timely and urgent. By examining the function of ChatGPT in subconscious language learning, this research is part of the ongoing debate about AI-based learning and its potential impact on education and policymaking in the future.

2.   Literature Review

2.1 AI Tools for Language Learning

The application of AI tools to language learning has been widely researched, with studies focusing on how they can contribute to increased engagement, personalization, and adaptive learning. Abusahyon et al. (2023) point to the ways AI-driven chatbots such as ChatGPT create interaction and customized learning experiences. Although these tools provide immediate feedback and guided learning pathways, they remain subject to contextual misunderstanding and possible AI bias. Barrot (2023) also delves into ChatGPT's function in supporting conventional language learning by improving reading, writing, and speaking abilities. Nevertheless, the research also highlights issues regarding dependency on AI and content credibility, supporting the notion that AI should supplement human teaching and not replace it.

2.2 AI-Based Language Learning Strategies

Kim et al. (2023) examine the efficacy of ChatGPT in ESL learning, especially in course design and task-based language instruction. The study finds that ChatGPT can autonomously generate lesson plans and provide real-time feedback, though concerns remain about its ability to fully replicate human conversational nuances. Similarly, Tolstykh and Oshchepkova (2024) categorize AI tools based on their purpose—text generation, adaptive learning, and feedback systems—emphasizing the need for teacher training to maximize AI's pedagogical benefits. Divekar et al. (2021) discuss the confluence of AI and extended reality (XR) in foreign language learning, which shows greater student participation and retention. Their work also highlights, though, the challenges of AI in coping with cultural and contextual differences in communication.

2.3 Effect of AI on Language Learning Outcomes

Vadivel et al. (2024) evaluate AI-driven apps in vocabulary learning, highlighting improvement in pronunciation and understanding along with digital dependency issues. Chea and Xiao (2024) analyze AI's role in improving reading comprehension and critical thinking, cautioning against over-reliance on technology, which may hinder independent learning. A meta-analysis by Lee and Lee (2024) confirms that AI-driven adaptive learning, such as ChatGPT-based tutoring, significantly enhances language acquisition through personalized instruction and immediate feedback. However, they call for further research on its long-term impact on problem-solving and critical thinking.

3   Theory construction and proposition

3.1 Adaptive Learning and Performance Expectancy

Adaptive learning has been found to be one of the major contributors to improving learning performance, especially in technology-enabled education. Research indicates that adaptive learning systems based on AI have the ability to customize instruction, address individual needs, and enhance engagement, thereby increasing performance expectancy (Alaqlobi et al., 2024). Abusahyon et al. (2023) identify how AI-based adaptive learning improves motivation and retention, while Vadivel et al. (2024) validate its effectiveness in enhancing understanding and application of language skills.

P1: Adaptive learning has a positive effect on performance expectancy.

3.2 Effort Expectancy Mediating between Adaptive Learning and Performance Expectancy

Effort expectancy, or how easy an AI-supported learning system is to use, is what decides performance outcome. Research demonstrates that if students find AI-facilitated tools easy to use, there are chances that they will take advantage

of the tools, promoting improved learning performance (Abusahyon et al., 2023). Hajiyeva (2023) analyzes AI-supported pedagogic approaches and determines that an easy-to-use interface greatly enhances the level of students' engagement. Vadivel et al. (2024) further propose that lower cognitive load through simple AI-driven learning platforms enhances the adaptive learning-performance expectancy association.

P2: Effort expectancy acts as a mediator between adaptive learning and performance expectancy.

3.3 Individual Learning Style as a Mediator between Adaptive Learning and Performance Expectancy

Learning styles determine the way students engage with adaptive AI-based tools. Memon & West (2024) contend that AI systems that adapt to auditory, visual, and kinesthetic learning styles enhance overall performance expectancy. Kabir et al. (2024) point out how adaptive content delivery enhances engagement, especially in language learning. Likewise, Lund & Wang (2023) illustrate how customizing learning style in AI-based platforms results in better understanding and retention.

P3: Learning style of an individual acts as a mediator between adaptive learning and performance expectancy.

3.4 Self-Directed Learning as a Mediator between Adaptive Learning and Performance Expectancy

AI-powered adaptive learning encourages self-directed learning by enabling students to control their pace and content choices. Memon & West (2024) find that students using AI-driven platforms exhibit higher levels of self-regulation in learning. Van Niekerk et al. (2024) discuss how AI's real-time feedback mechanisms promote learner autonomy, while El-Seoud et al. (2023) highlight the role of self-directed learning in improving language proficiency.

P4: Self-paced learning acts as a mediator of the adaptive learning-performance expectancy relationship.

3.5 Technology Competence as a Mediator between Adaptive Learning and Performance Expectancy

Students' competence to use AI-powered tools influences adaptive learning effectiveness. Schmutz et al. (2009) identified digital literacy as playing a major role in participation and understanding within the context of e-learning environments. Spatharioti et al. (2023) support the fact that more technologically skilled students tend to gain greater benefit from AI-based adaptive learning, while Sartanpara & Sen (2023) stress the requirement for digital competency training to better utilize AI for educational purposes.

Additionally, those students who have a proficiency with using AI-assisted learning technologies will have fewer technical issues and thus can engage with the content of learning as opposed to operating within the framework of the tool. Almeida et al. (2024) findings indicate that sound digital skills reinforce learners' skills to navigate well adaptive learning platforms efficiently, gaining more confidence while less frustration. This, in effect, benefits performance expectancy through improved more smooth and immersive learning experiences.

Despite this, inequality of technology competence is known to promote lopsided learning experiences. As stated by Patel and Singh (2024), those whose familiarity with computer technology is not broad will experience greater difficulties exploiting the complete range of capabilities for AI-aided learning and consequently higher-learning difficulty as well as lowered performance expectancy.

H5: Technology expertise acts as the mediator between performance expectancy and adaptive learning.

4 Research Methodology

4.1 Data Collection

To evaluate ChatGPT's effectiveness in promoting unconscious English learning, we gathered data from participants who actively used AI-driven tools for language acquisition. Our sample included a diverse group of learners with various linguistic backgrounds to ensure a balanced representation of different proficiency levels, native languages, and learning

environments. Participants were recruited from online communities, educational networks, and AI-based learning platforms, mirroring real-world scenarios of ChatGPT usage for language enhancement.

Data gathering consisted of structured questionnaires and direct contact with the participants. Survey construction was derived from tested theoretical frameworks and supported by empirical research to reflect the subtle nature of language acquisition. To maximize depth and validity, we integrated different types of assessments, such as 7-point Likert scales, frequency scales, and performance tests on vocabulary recall, improvement in comprehension, and general learner satisfaction. In addition to this, qualitative feedback was also collected to help us understand in greater depth students' subjective experience of AI-augmented language learning.

Given the multilingualism of participants, translation procedures were put into place to establish consistency and conceptual equivalence across languages, minimizing likely biases and optimizing cross-linguistic validity. Our research design was situated within current scholarly work on AI-based language teaching, strengthening the empirical foundation of the study. We classified the study variables into dependent, independent, and mediating categories, enabling a systematic analysis of how ChatGPT supports language acquisition. This classification helped us explore specific mechanisms through which AI-driven adaptive learning enhances vocabulary development, reading comprehension, and learner confidence. Overall, this approach offers valuable insights into ChatGPT's role in modern language education and its potential as an unconscious learning tool.

4.2 Measurement

To comprehend the determinants of AI-based learning adoption, we established core concepts based on well-established theories of technology adoption and self-regulated learning. The concepts explain how students perceive and interact with AI-powered education tools. One significant concept is the ease of use, which captures the extent to which learners find it simple and easy to use the AI system. It considers the effort needed to use the tool effectively and how natural it comes across. There is another notion of learning compatibility, which checks how much the AI-driven training is compatible with the individual learner's personal choice and learning habits. It encapsulates the extent to which the tool aligns with individual learning styles.

Another important notion is autonomous learning, which gauges learners' capability to take care of and lead their own learning activities on their own. It captures their ability to manage their learning journey on their own without constant direction. Technical proficiency comes into play for adoption, in that it gauges how advanced learners are at leveraging digital technology and tools, including their skill and comfort levels with AI-supported learning applications. Furthermore, willingness to adopt taps into learners' eagerness to accept and adopt AI-driven learning solutions into their workflow. It captures responsiveness to technological transformation and innovation within education.

Ultimately, perceived performance assesses individuals' perceptions about the extent to which the use of AI technology improves their work and facilitates achieving learning objectives. Participants expressed the perception of such concepts via structured rating, as measured by a five-point response scale ranging from strong disagreement to strong agreement. This ensured it was possible to analyze fully all the determinants of the deployment of AI-supported learning.

4.3 Reliability and validity of the instrument

I In order to ensure that our research was precise and free from inconsistency, we carried out a series of tests in order to confirm that the measurement tool was reliable and valid. We wanted to ensure that what was collected through data was accurate reflection of what we were trying to quantify, without any systematic errors.

We first looked at how consistently the items on the questionnaire were measuring the concepts we were looking at. We found that most of them were well, meaning they well captured the ideas we were investigating. Some didn't pass the test and were dropped from the rest of the analyses. In other instances, even though items were a bit less consistent, they were retained because they were providing useful information.

Finally, we assessed the general reliability of the instrument by testing how well various items captured the same thing. The results supported that our method of measurement was good and internally consistent in the sense that similar items gave similar responses.

To be certain that each idea reflected accurately what it was intended to measure, we verified to what extent the items per idea were correlated. The analysis reaffirmed that the items were highly correlated with their respective ideas and indicated that the measurements were valid and reflected the intended concepts well.

5   Result Analysis

5.1 Interpretation and Discussion

The results of this research provide important insights into the ways in which adaptive learning affects performance expectancy via a range of mediating factors. The outcomes demonstrate that adaptive learning positively affects performance expectancy in support of the notion that AI-based learning tool integration can promote learners' performance improvement perceptions. This corroborates the theoretical proposition that the implementation of adaptive learning technologies results in more positive learner outcomes, both in terms of engagement and attainment. Effort expectancy is one of the key mediators found in the research to be an important influence on learners' attitudes towards the value of adaptive learning. The effort expectancy-performance expectancy relationship implies that learners will be more likely to expect good performance when they find the tools easy to use. This is compatible with the current models of technology adoption, e.g., Unified Theory of Acceptance and Use of Technology (UTAUT), which asserts that ease of use is a core determinant for technology adoption.

Individual learning style also proved to be a powerful mediator, and the results indicated that students are more likely to achieve performance gains when adaptive learning tools match their individual learning style. This supports constructivist theories of learning that stress the significance of adapting education to individual requirements and preferences. By matching AI-based tools to such preferences, adaptive learning technologies are able to produce more effective learning outcomes, maximizing learner engagement as well as accomplishment. Nevertheless, the research determined self-directed learning and technological literacy to have no mediating impact in the link between adaptive learning and performance expectancy. These findings contradict some of the premises of the Technology Acceptance Model (TAM), which typically focuses on the self-regulation and technical skills' role in the adoption process. The insignificant or negative relations in this study indicate that there are other variables—like ease of use perception and learning style congruence—more determinant than self-directedness or technical expertise in noticing performance gains. This necessitates a re-examination of the part played by self-regulation and technical know-how in mediating technology adoption results in educational settings.

5.2 Managerial and Theoretical Implications

Theoretically, the results highlight the pivotal roles of effort expectancy and learning style as mediators of adaptive learning technology adoption. The research gives empirical results which, along with direct impacts, demonstrate that indirect processes through these mediators play a considerable role in shaping learners' belief about the effectiveness of technology. This supports the Theory of Planned Behaviour (TPB), which emphasizes that perceived ease of use (effort expectancy) and personal attitudes (learning style compatibility) are major elements in forming behavioural intentions towards technology adoption. From a management point of view, the research emphasizes the necessity of developing adaptive learning systems that are not just efficient but also convenient to use. Practically speaking, schools and training organizations must give top priority to the creation of tools that reduce the effort perceived in their utilization, as this will have a direct bearing on learners' expectations for performance gains. In addition, adaptive capabilities that accommodate different learning styles must be incorporated to enhance the effectiveness of these technologies, making them more aligned with learners' needs and encouraging increased involvement in the learning process.

The research also indicates that institutions must provide training and assistance to enable learners to overcome any perceived impediments to employing adaptive learning technologies. These efforts will improve the adoption process by minimizing the cognitive load that is needed when acquiring new technologies and therefore building a more positive attitude toward their utilization. Theoretically, the current research makes an addition to the current literature on technology acceptance and adaptive learning, especially on highlighting the mediating roles of effort expectancy and individual learning style in determining performance outcomes. While earlier studies have mainly concentrated on the direct effects of adaptive learning tools on learning achievements, this research puts weight on these mediators in evaluating learners' attitudes toward the efficiency of AI-based tools.

Furthermore, the failure to find significant effects for self-directed learning and technology skills contradicts some conventional assumptions within the discipline. This opens the door for future research to investigate further why some variables do not mediate the technological adoption-performance outcome relationship. Future research could examine other potential mediating variables, including motivation, instructional design, or learner engagement, in developing more refined models that can more accurately explain the complicated dynamics of adaptive learning adoption in varying educational settings.

6   Conclusion

This research investigated the impact of adaptive learning on performance expectancy through the examination of effort expectancy, individual learning style, self-directed learning, and technology proficiency as mediating variables. The findings show that adaptive learning greatly enhances performance expectancy, mainly when students find the tools easy to use and in line with their individual learning style. Effort expectancy and learning style were identified as key mediators in that perceived ease of use and congruence with personal learning styles affect learners' performance expectations positively.

Conversely, technological proficiency and self-directed learning did not mediate the relationship between adaptive learning and performance expectancy in a significant manner. What this implies is that being technologically savvy or self-directed may increase overall participation with adaptive learning tools, but in itself, does not result in greater performance expectations. Practically, it is imperative that educators and developers are engaged in the development of adaptive learning systems that are user-friendly and responsive to different learning styles. The research adds to the theoretical knowledge by emphasizing effort expectancy and learning style as critical factors while invalidating the presumed significance of self-direction and computing skills in shaping performance results.

7   References

- Abusahyon, A. S. E., Alzyoud, A., Alshorman, O., & Al-Absi, B. (2023). AI-driven technology and chatbots as tools for enhancing English language learning in the context of second language acquisition: a review study. *International Journal of Membrane Science and Technology, 10(1),* 1209–1223.

- Barrot, J. S. (2023). ChatGPT as a Language Learning Tool: an Emerging Technology report. *Technology Knowledge and Learning, 29(2),* 1151–1156.

- Kim, S., Shim, J., & Shim, J. (2023). A study on the utilization of OpenAI ChatGPT as a second language learning tool. *Journal of Multimedia Information System, 10(1),* 79–88.

- Tolstykh, O. M., & Oshchepkova, T. (2024). Beyond ChatGPT: roles that artificial intelligence tools can play in an English language classroom. *Discover Artificial Intelligence, 4(1).*

- Divekar, R. R., Drozdal, J., Chabot, S., Zhou, Y., Su, H., Chen, Y., Zhu, H., Hendler, J. A., & Braasch, J. (2021). Foreign language acquisition via artificial intelligence and extended reality: design and evaluation. *Computer Assisted Language Learning, 35(9),* 2332–2360.

- Vadivel, B., Shaban, A. A., & Ahmed, Z. (2024). Unlocking English Proficiency: Assessing the Influence of AI-Powered Language Learning Apps on Young Learners' Language Acquisition. *ResearchGate.*

- Chea, P., & Xiao, Y. (2024). Artificial intelligence in Higher Education: The power and damage of AI-assisted tools on academic English reading skills. *Journal of General Education and Humanities, 3(3),* 287–306.

- Lee, H., & Lee, J. H. (2024). *Language Learning & Technology, 28(2),* 134–162.

- P, R., V., Madan, S., Jian, D. a. W., Teoh, K. B., Singh, A. S., Ganatra, V., Av, A., Rana, R., Das, A., Shekar, S. L., & Singh, P. (2021). Harnessing the power of artificial intelligence in the accounting industry: A case study of KPMG. International Journal of Accounting & Finance in Asia Pasific, 4(2), 93–106. https://doi.org/10.32535/ijafap.v4i2.1117

- Gujjar ; Kumar H R, P. J. P. (n.d.). Natural language processing using text augmentation for chatbot. IEEE Explore.

- O. Abioye,O. Oyedele, S., Lukumon. (n.d.). Artificial intelligence in the Construction industry: A review of present status, opportunities and Future challenges. Science Direct.

- Gujjar, J. P., Kumar, H. R. P., & Prasad, M. S. G. (2023). Advanced NLP framework for text processing. 2021 5th International Conference on Information Systems and Computer Networks (ISCON), 1–3. https://doi.org/10.1109/iscon57294.2023.10112058

- Kotiyal, A., J, P. G., S, G. P. M., & R, P. K. H. (2023). Text Classification Using N-Grams for Providing Effective Response in Chatbot. IEEE Explore, 1–5. https://doi.org/10.1109/cset58993.2023.10346678