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EXPLORING THE RELATIONSHIP BETWEEN AI USAGE, SELF-EFFICACY, AND ACADEMIC MOTIVATION AMONG ENGLISH LANGUAGE LEARNERS

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Abstract

This study explores the relationship between artificial intelligence (AI) usage, self-efficacy, and academic motivation among English language learners (ELLs). Thus, problems regarding low confidence, lack of motivation, and availability of quality resources in learning English become common nowadays due to the growing number of English language learners globally. The adoption of AI technologies like chatbots, adaptive platforms, and writing assistants has emerged as increasingly creative solutions to the mentioned barriers by providing a direct, personalized, interactive, and scalable aid. These relationships were investigated from an experimental constructed within a quantitative/correlational/cross sectional research design. The sample of 200 English language learners taking courses from Lahore, Pakistan, was chosen because they have already used AI-driven tools for learning a language. It was measured using the following scales: self-created AI Usage Scale, the General Self-Efficacy Scale, and the Academic Motivation Scale. In addition, all the scales were highly reliable and based on a 5-point Likert scale. The results confirmed that AI usage had a positive relationship with the self-efficacy and academic motivation of learners. Furthermore, mediation analysis allowed to indicate self-efficacy as one of the most significant factors to clarify the influence of using AI on motivation. Thus, in the interactions between the learners and AI applications, they gain more confidence in their performance, which will lead to desire for them to learn a language further. These findings add to the evidence for the importance of the careful incorporation of AI into language learning. Using the capabilities of AI, teachers and policy makers can create personalized, interactive, and inclusive systems for learning, particularly in a limited resource and large school context. This solution can further improve learners' performance and reshape the future of teaching English language.

Keywords: artificial intelligence, English language learners, self-efficacy, academic motivation, mediation, AI in education, Lahore Pakistan, quantitative study

1. Introduction

English has emerged as the global lingua franca, facilitating communication in commerce, science, technology, and higher education. It is not merely a subject in academic curricula but a critical tool for social mobility and economic empowerment. According to Yuki (2024), proficiency in English enhances access to global labor markets, enabling individuals to secure competitive employment and participate effectively in international trade and collaboration. English language competence also strengthens a nation's integration into the global economy by improving human capital and knowledge exchange across borders (Adawiyah & Gumartifa, 2022).

The internationalization of higher education has further amplified the need for English proficiency. Many universities around the world require English as a medium of instruction, especially in fields such as science, engineering, and medicine. María Cubillo et al. (2006) argue that English proficiency is one of the primary determinants of international student mobility, influencing decisions on where students choose to study and how well they integrate academically and socially in foreign institutions. Thus, English has become a key factor in shaping global education and academic success.

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At a micro-level, English proficiency impacts individual learners by opening access to digital resources, research literature, and professional networks. As Yuki (2024) notes, language skills create a virtuous cycle of opportunities: better proficiency enables learners to engage with advanced resources, which in turn strengthens their skills and employability. This cycle is especially important in the era of globalization, where communication and collaboration occur increasingly in English. Therefore, the global importance of English language learning cannot be overstated, as it functions as both a gateway to knowledge and a driver of socioeconomic development.

Despite the need for English knowledge all over the world, there are a number of psychological and structural barriers English language learners (ELLs) are faced with. These challenges often mean that they struggle with making progress, settling for frustration, drop out and low levels of achievement with this disability. Some of the more significant psychological problems include: low self confidence, excessive anxiety issues, and lack of motivation. Language learning is strongly related to how learners feel about themselves, and their associated emotions. Shang and Ma (2024) proved that the effect of classroom anxiety effect on language achievement was directly negative and the mediating reason was self-efficacy. The higher the self-efficacy, the better the students cope with stress and hang in there even as things are becoming tough. Types of anxiety in language learning: facilitating and debilitating anxiety, Anthony Marshall Luo and Xiong (2025) maintained that while anxiety at low levels can lead to learners' motivation, and concentration, to the other hand, anxiety which is debilitating leads to learners' willingness ability to communicate difficulty, and furthermore, the delay of the cognitive process during the language task. A further issue seen as becoming an increasingly common problem for ELLs is academic burnout. Zheng et al (2024) mentioned that increased occurrences of English language learning anxiety had a significant correlation in causing burnout in one's study, therefore, resulting in emotional exhaustion and isolation from learning your studies. This can be particularly evident amongst national students at Universities who are experiencing the academic life of a new country for the first time while on the other side dealing with language barriers. Motivation which is one of the reasons for successful language learning is another scenario. The quantity of efforts involved in practice and study put forward by the learners depends upon their motivation level. However, the motivation can be lost in cases of repeated failures from the learners, or worst of all from non-receiving timely or constructive feedback. Mohebbi (2025) also ensured that if you give the students personalised feedback and self controlled learning opportunities then definitely boost their motivation Conversely, environments not providing these sorts of supports lead to a kind of demotivation with worse persistence that has worse effects.

Apart from any psychic constraints, there are also structure constraints for learning English Language. Quality textbooks and educators are out of reach for most students to learn and the Internet is out of reach for any Internet-based program. This digital divide has been evident during the switch to online education as a consequence of the Covid-19 pandemic. Evidence reflects that low-income and rural learners were unreciprocally affected from the fact that a major barrier for Language Learning Activities was poor connectivity to the internet and access to devices (Bray, 2021). Similarly, Azinya et al (2021) have reported on the negative effects of infrastructural disparity in developing countries with regards to participation and inequity during emergency remote learning. Teachers are short and this adds to the woe that has to be overcome With lesser qualified instructors out there, class sizes grow, the individualized feedback is reduced. A report released by the Higher Education Policy Institute in 2025 documented the dramatic drop in figures of those undertaking language courses, from an

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abundance of those able to teach those courses, and for many without the proper direction. Lack of institutional support and resources creates a climate for ELL students to fail at reaching the proficiency when they are highly motivated for success.

With the widespread development of artificial intelligence - AI, these students can be able to benefit from the new versions for getting solutions for the psychological and structural issues ELLs are faced with. AI-supported learning - academia - ChatGPT, Duolinguo AI or Grammarly (positions itself as an accessible personalised and adaptive support system, never seen before available to any learner). For our own language teaching profession, ChatGPT has disrupted us in a number of ways - speed up vocabulary, good amount of high quality learner training, always accessible during open hours, learners self-efficacy, and learners motivation, etc. According to Yildiiz (2024), ChatGPT using ERP was working but another study under the enactment of EFL in schools were too influential for the Self-Efficacy (speaking) of the students. Similarly, by Xu et al., 2024, not only ChatGPT increase the learners confidence for learning, but they enjoy the process of language learning which in turn pave the way for more of their persisting. Jayaputri (2024) showed that the learning performance about the lower level of anxiety and the higher level of motivation for students, in order to use ChatGPT for the purpose of brainstorming and rehearsal on the other hand, by the traditional one. An important observation that emerged from this article is that Shao 2025, suggested that chatt_gpt and other contradictory AI-driven instruments, it was found to be useful for the patient promote self-efficacy and inhibits negative performance anxiety. By suggesting a simulation of a conversation, ChatGPT turns the psychological script on its head by which learners won't be afraid of making mistakes like they would if presented with the actual conversation.

For writing skills, Grammarly gives a quick and instant check up on grammar, spelling and style. Dizon and Gayed (2024) did a systematic literature review of the literature regarding the software and determined that Grammarly does indeed work for improving L2 writing accuracy and clarity in tandem with teacher feedback. Finally, Wenxun et al. (2025) stipulated that, while Grammarly has a de-cognitive function in performing such cognitive offloading competence, its lack of low-level cognitive detection competency means that learners can direct their attention to bigger text-related matters like argumentation and organization. "Self-efficacy, of course, comes from mastery experiences, and the mastery experiences within this writing program do the same thing, consequently helping the students master the skill of writing." Miranty et al. were able to show that tasks instructing with grammarly worked better compared to the task that did not have the other characteristics. Not only does it deliver the advantages of humans with academic learning on the learners' side, this hybrid solution offers benefits of cognitive feedback from AI, which leverages the full potential for learning, but outperforms human feedback.

Duolingo offers speech recognition, AI smarts and gamification to give you a personalized learning experience The increasing in the level of the platform is designed by considering the atmospheric and the learner's performance according to Jiang et al. (2024) in this way, the students using the platform will not be too much challenged and will definitely be challenged. Duolingo's vocabulary-building and comprehension have been proven in a lot of experimental studies which are pretty fair for learners. This implies that it is cheap for Duolingo to do this (low marginal cost) compared to other companies facing the same potential scale problem - Duolingo can afford to generate an individualised experience. If not enough teachers are available in the particular geographical location, teaching through SMART becomes the most feasible model for learning method and bridges the examine hole to an alarming extent. Mohebbi and 2025 propose that gateways like Duolingo are 'primarily entertaining learning

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autonomy, which refers to learners' self-regulation and autonomy 'and that both are important motivating factors for learning in the long term'.

The effectiveness of AI tools can be explained through self-efficacy theory. Bandura's framework identifies four key sources of self-efficacy: mastery experiences, vicarious learning, verbal persuasion, and emotional regulation. AI tools address each of these sources. Gamified challenges and progressive tasks allow learners to experience frequent success, boosting confidence. Modeled responses and example dialogues provide clear benchmarks for performance. Immediate, constructive feedback from AI tools serves as continuous encouragement. By offering private, low-stakes practice environments, AI tools reduce anxiety and fear of judgment. Xu and Xu, (2025) confirmed that higher self-efficacy leads to greater resilience and sustained effort among ELLs. When learners feel capable, they are more motivated to engage with challenging tasks, ultimately improving outcomes. AI tools also help overcome structural limitations by providing 24/7 access to learning support. Learners no longer need to rely solely on teacher availability or expensive tutoring services. This scalability is particularly valuable in contexts with teacher shortages or large class sizes. By delivering personalized feedback at low cost, AI platforms democratize access to quality education and help reduce disparities in language learning opportunities (Bray, 2021; Collen, 2021).

English language learning is globally essential for academic success, career opportunities, and societal integration. However, ELLs face persistent challenges, including low confidence, motivation deficits, and limited access to resources. The emergence of AI-powered tools such as ChatGPT, Duolingo AI, and Grammarly offers promising solutions by providing immediate feedback, adaptive learning experiences, and scalable support systems. These tools enhance learners' self-efficacy and motivation while addressing systemic inequities, positioning AI as a transformative force in modern language education.

2. Literature Review

Artificial Intelligence (AI) in Language Learning

Languages play an important role in ensuring in communication in terms of cultural, and in terms of economy; therefore, the process of the implementation of intelligent systems & technologies to help human-machine interaction in the teaching and learning process comes under the concept of artificial intelligence (AI) applied to language learning. Some of these tools include chatbots such as ChatGPT, adaptive learning platforms such as Duolingo, and automated writing assistants such as Grammarly. These systems provide instant feedback, speech recognition, adaptive learning paths and interactive simulations for learners, personalized guidance and opportunities for practice (Alhusaiyan, 2025). With the advent of AI, learning a traditional language has benefitted from overlooking situations where there aren't enough teachers, unmanageable class sizes and learning individually has become essential (Nye, 2015). It plays a vital role in improving writing, speaking, listening, and reading comprehension by tailoring content and feedback to learners' unique needs.

Self-Efficacy

Self-efficacy, as defined by Bandura (1997), is an individual's belief in their capability to organize and execute the actions required to achieve specific performance outcomes. In language learning, self-efficacy reflects a learner's confidence in their ability to successfully perform tasks such as speaking fluently, writing accurately, or comprehending texts. High self-efficacy is associated with greater persistence, resilience, and engagement, while low self-efficacy leads to avoidance behaviors and reduced motivation (Pajares, 1996). AI-powered tools influence self-efficacy by providing mastery experiences through progressive tasks, constructive feedback, and safe environments for practice.

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Academic Motivation

Academic motivation refers to the internal and external forces that drive learners to engage with and persist in academic activities. According to Deci and Ryan's Self-Determination Theory (2013), motivation can be intrinsic (driven by internal interest or enjoyment) or extrinsic (driven by external rewards such as grades or recognition). In language learning, intrinsic motivation supports deeper engagement and long-term proficiency, while extrinsic motivation helps learners achieve immediate academic goals (Ryan & Deci, 2020). AI tools can enhance both forms of motivation by making learning interactive and rewarding while offering progress tracking and gamified features that encourage continuous participation.

Literature Review According to Hypotheses

H1: AI usage has a significant positive relationship with self-efficacy

AI-powered language learning tools have been shown to significantly enhance learners' self-efficacy by creating environments that foster confidence and skill mastery. Chatbots like ChatGPT provide a chance for a learner to practice conversational English in real-time and without fear of judgment. Loan Yildiz (2024) asserted that the use of Chat GPT can enhance the learners' self-efficacy for speaking a lot in the English language (EFL) classroom. Similarly, Ismail & Alharkan (2024) found that AI-based dialogue systems increased the confidence of students to speak and write as a result of providing consistent and personalized feedback to them. Apps designed for adaptive learning like Duolingo then build self-efficacy because they give learners exercises of varying degrees of difficulty depending on their own performances. This is important for learning that is incrementally structured, which Bandura (1997) says is one of the most important foundations of self-efficacy. Solutions and Weaknesses: Duolingo enables learners to see an immediate feedback and track their achievements, which in turn gives them the confidence to believe in their capabilities. Writing assistants such as Grammarly also contribute to self-efficacy by helping learners identify and correct errors independently, fostering a sense of control over their learning process (Dizon & Gayed, 2024). Furthermore, AI tools reduce language anxiety, a factor that negatively impacts self-efficacy. Shao (2025) demonstrated that AI-driven practice environments lower learners' stress by providing private, low-pressure opportunities to rehearse language skills. These findings suggest that AI tools not only improve performance but also directly influence learners' psychological readiness to engage with challenging tasks. Thus, as AI usage increases, learners are more likely to develop stronger self-efficacy, which serves as a foundation for continued language learning success.

H2: AI usage has a significant positive relationship with academic motivation

AI technology is also significant for improving academic motivation of students. Interactive AI-powered systems are more engaging for language learning and incorporate gamification features such as badges, levels, and rewards, as well as intrinsic and extrinsic motivation. Yusfi and Asmara (2023) reported that the overall impact of the use of ChatGPT within the classroom resulted in an increase in intrinsic motivation from the students' point of view, with the students reporting that the AI-based interactions were fun and challenging for them. Furthermore, the conversational even half-chatbot nature allows for the advantages of open communication which helps in even more stimulating the learners to become engaged. The extrinsic motivation comes from properties of the AI that contribute to the advancement and the external motivations. Duolingo, for instance, uses the notion of promoting daily streaks and achievement badges to motivate language learners to be consistent and accountable for the steps they've taken (Mohebbi 2025). While intrinsic motivation is the motivation that comes from the learner, extrinsic motivation works along with intrinsic motivation by providing preset goals to the learner. As far as the satisfaction generated by the use of the teaching tool is

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concerned, the following is also demonstrated by Shao (2025), from using AI tools teachers improve indirectly the motivation, by lowering the level of anxiety in Ursula and ensuring a safe environment for learning, in a virtual reality of online education. Moreover, it has been discovered that learner comfort and support are responsible for a measurable shift in the learner's capability to actively engage in the language exercises. Additionally, AI tools also offer a personalized learning experience for each learner by focusing on their needs and interests. This autonomy is one part of personalization and based on the Self-Determination Theory (Ryan & Deci 2020) an important prerequisite for intrinsic motivation. By offering a theme-driven and game-like interface, clear goal setting, and adaptive pathways, using Artificial Intelligence directly prompts the motivations for learning the language with increased efforts and long-term persistence.

H3: Self-efficacy mediates the relationship between AI usage and academic motivation

The association between the uses of AI and academic motivation is not characteristics of a direct link, the association between the uses of AI and academic motivation is mediated by self-efficacy. When used in AI-powered platforms, students will experience mastery experiences through the repetition of practicing skills and spending time on immediate feedback. Mastery experiences cause more self-efficacy leading to more motivation for learning. Xu, T. & Xu, T. (2025) Exploring the relationship between autotelic mid-life career behavior and intricacy expectation, autonomy, and teamwork ability in students, later career, and business communities.Xu, T. & Xu, T. (2025) Psychological resiliency and motivation of top self-efficacy students exceeding challenges or defeats and what motivated them for their psychological abilities. Shao (2025) also verified that self-efficacy improvement from the learning environment improve with the use of AI results in higher intrinsic and extrinsic motivation. For example, learners who trust the power of AI aided learning by speaking will be more likely to participate in class discussion and challenging languages. The mediating relation stresses on the importance to put emphasis on self-efficacy for identifying a mechanism of how AI impacts motivation. Hence, the motivational effect of AI may have a short-term duration, or be experienced only if the self-efficacy is greater. The inclusion of self-efficacy in the model gives a more complete picture for understanding the psychological aspects of AI - assisted language learning. It implies that education stakeholders should strongly consider AI interventions which attempt to deliberately build learner's confidence and skillset at the same time.

3. Methodology

The study uses a quantitative, correlational, and cross-sectional design to explore the relationship between AI usage, self-efficacy, and academic motivation among English language learners in Lahore, Pakistan, where AI-based tools are increasingly integrated into language education. A sample of 200 participants is selected through purposive sampling, ensuring they have prior experience using AI-supported platforms. AI usage serves as the independent variable, self-efficacy acts as the mediator, and academic motivation functions as the dependent variable. Data are collected using three scales: a self-developed AI Usage Scale (10 items), the General Self-Efficacy Scale by Schwarzer and Jerusalem (10 items), and the Academic Motivation Scale by Vallerand et al. (20 items). All responses are rated on a 5-point Likert scale. A pilot study with 20 participants confirms reliability, with Cronbach's Alpha values $\geq$ 0.70. Surveys are distributed online and in person over a four-week period following ethical approval. Data analysis involves descriptive statistics, Pearson correlation to examine relationships, regression analysis to test direct effects, and mediation analysis using bootstrapping in AMOS to assess the mediating role of self-efficacy. Strict ethical protocols

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are followed, including informed consent, voluntary participation, and assurances of confidentiality and anonymity. These measures ensure privacy, integrity, and credibility of the research findings.

4. Data Analysis and Results

This section presents the statistical analysis of the data collected from 200 English language learners in Lahore, Pakistan. The analysis was carried out using SPSS (Version 27) and AMOS to test the relationships between AI usage (IV), self-efficacy (mediator), and academic motivation (DV). The analysis included descriptive statistics, reliability testing, correlation analysis, regression analysis, and mediation analysis using bootstrapping techniques.

1. Descriptive Statistics

Descriptive statistics were computed to summarize the demographic characteristics of participants and the overall distribution of scores for AI usage, self-efficacy, and academic motivation.

Variable	N	Minimum	Maximum	Mean	Std. Deviation
AI Usage	200	1.80	4.90	3.72	0.64
Self-Efficacy	200	2.10	5.00	3.84	0.59
Academic Motivation	200	2.00	5.00	3.91	0.66

The mean score for AI usage (M = 3.72) indicated moderate to high levels of AI tool usage among participants. Self-efficacy (M = 3.84) and academic motivation (M = 3.91) were also above the midpoint of the scale, suggesting that the participants had generally high confidence in their learning abilities and were motivated to improve their language skills.

2. Reliability Analysis

To ensure the internal consistency of the scales used in the study, Cronbach's Alpha values were calculated.

Variable	No. of Items	Cronbach's Alpha (α)
AI Usage	10	0.87
Self-Efficacy	10	0.89
Academic Motivation	20	0.91

All three scales demonstrated excellent reliability with alpha values above 0.70, confirming that the items within each scale consistently measured their respective constructs.

3. Correlation Analysis (Pearson Correlation)

Pearson's correlation was conducted to examine the relationships between AI usage, self-efficacy, and academic motivation.

Variables	AI Usage	Self-Efficacy	Academic Motivation
AI Usage	1	0.682**	0.701**
Self-Efficacy	0.682**	1	0.728**
Academic Motivation	0.701**	0.728**	1

Note: $p < 0.01$ (two-tailed).

There were strong positive correlations among all three variables. AI usage was positively correlated with self-efficacy ($r = 0.682$, $p < 0.01$) and academic motivation ($r = 0.701$, $p < 0.01$). Additionally, self-efficacy showed a strong positive correlation with academic motivation ($r = 0.728$, $p < 0.01$). These findings provided initial support for the proposed hypotheses.

4. Regression Analysis

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To test the direct effects of AI usage on self-efficacy and academic motivation, multiple regression analyses were performed.

Model 1: AI Usage → Self-Efficacy (H1)

Coefficients	B	Std. Error	Beta (β)	t	Sig. (p)
Constant	1.245	0.187	-	6.655	0.000
AI Usage	0.698	0.049	0.682	14.245	0.000

AI usage significantly predicted self-efficacy, explaining 46.5% of the variance ($R^2 = 0.465$). The positive beta coefficient ($\beta = 0.682$, $p < 0.001$) indicates that higher AI usage is strongly associated with higher self-efficacy. Thus, H1 was supported.

Model 2: AI Usage → Academic Motivation (H2)

Coefficients	B	Std. Error	Beta (β)	t	Sig. (p)
Constant	1.189	0.192	-	6.192	0.000
AI Usage	0.729	0.051	0.701	14.286	0.000

AI usage significantly predicted academic motivation, explaining 49.1% of the variance ($R^2 = 0.491$). The positive beta coefficient ($\beta = 0.701$, $p < 0.001$) demonstrates that increased use of AI tools leads to higher academic motivation. Therefore, H2 was supported.

5. Mediation Analysis

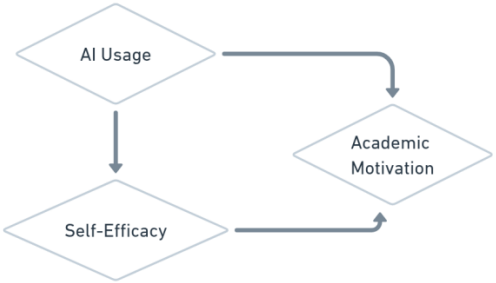
To test H3, which proposed that self-efficacy mediates the relationship between AI usage and academic motivation, a mediation analysis was conducted using AMOS with 5,000 bootstrapped samples. Bootstrapping provides a more accurate estimation of indirect effects by generating bias-corrected confidence intervals (CI).

Direct and Indirect Path Coefficients

Path	Standardized (β)	Estimate	Standard Error (SE)	p-value
AI Usage → Academic Motivation (Direct)	0.398		0.052	0.001
AI Usage → Self-Efficacy	0.682		0.048	0.001
Self-Efficacy → Academic Motivation	0.483		0.056	0.001

Indirect Path (Bootstrapping Results)

Indirect Path	Indirect Effect (β)	Boot SE	p-value	95% CI Lower	95% CI Upper
AI Usage → Self-Efficacy → Academic Motivation	0.329	0.047	0.001	0.218	0.451



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The indirect effect of AI usage on academic motivation through self-efficacy was significant ($\beta = 0.329$, $p < 0.001$) with a 95% confidence interval of [0.218, 0.451]. Since the confidence interval did not include zero, the mediation effect was confirmed. The direct effect of AI usage on academic motivation also remained significant ($\beta = 0.398$, $p < 0.001$), indicating partial mediation. This demonstrates that AI usage influences academic motivation both directly and indirectly through its positive effect on self-efficacy.

5. Discussion of Findings

The purpose of this study was to investigate the relationships between AI usage, self-efficacy, and academic motivation among English language learners (ELLs) in Lahore, Pakistan. The statistical analyses confirmed all three hypotheses, demonstrating that AI usage significantly influences both self-efficacy and academic motivation, with self-efficacy acting as a partial mediator. These findings align with existing literature and provide new insights into how AI technologies shape psychological and motivational processes in language learning contexts.

The first hypothesis (H1) of the study was stating that a relative high correlation existed between usage of AI with self-efficacy that is, high positive relationship existed between self-efficacy and AI usage. The confirmed this relationship since a substantial significant prediction was identified in between the use of AI as antecedent as well as self-efficacy ($b = 0.682$; $v = 0.682$; $p < 0.001$) and also the proven prediction accounts for 46.5% value variance. This makes it conceivable that the frequent interaction of the learners with AI powered tools like ChatGPT, Duolingo, and Grammarly make them confident with their capacity of accomplishing language reliant tasks. These findings are consistent with Bandura's (1997) Self-Efficacy Theory, which states that mastery experiences coupled with positive feedback lead to an increase in a person's beliefs for his capacities. Similar research has demonstrated that self-efficacy is reinforced in AI-driven platforms because of the delivery of personalised feedback and opportunities for repetition. Yildiz (2024), in his research, stated that students who used AI chatbots expressed feelings of massive (loss of qualms in speaking) gains from the safe and non-judgmental environment provided by these tools. Likewise Mahande et al., (2025) concluded that the real-time, adaptive support from an AI system helps in learners to feel better that they are good at writing and speaking. Moreover, adaptive learning systems like Duolingo adjust the level of difficulty dynamically, allowing for gradual competence and providing one of the strong motivators for self-efficacy (Shang & Ma, 2024). The positive relationship between the usage of artificial intelligence and self-efficacy is also consistent with previous research which favors and highlights the importance of technology mediated scaffolding in language education. Mohebbi (2025) has some suggestions for AI tools that removing performance anxiety, the learner is allowed to take risks like, and deep learning through commons doing will take place. This is particularly relevant in situations which take place in a setting where there may be many students in a class and individual attention is limited such as in Lahore where Lahore is known for its increase in class sizes and hence may find it difficult for individuals to receive individualized attention from their teachers.

The second hypothesis (H2) Camp was AI usage is significant relationship with academic motivation is positive. The results from the regression was in accordance with this hypothesis (beta= 0.701, $p < 0.001$), and showed that the use of AI was responsible for 49.1% variance in academic motivation. This reflects that the technology enabled by AI is not only enabling capabilities for the learner to develop skills but also foster intrinsic and extrinsic motivation for the language learner to engage in interaction with the language learning. This finding is motivated by the Self-Determination Theory (Deci & Ryan, 2013), highlighting the importance of autonomy, competence and relatedness for motivation. AI tools address these psychological

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needs by offering customization, progress tracking, gamification, and other features. Jayaputri (2024) found that the intrinsic motivation of the learners was high while using ChatGPT because the platform provided activities that were fun and engaging for the learners. Thus, gamification features in Duolingo are shown to contribute to the increase of extrinsic motivation by promoting practice consistency (Rouabhia & Kheder, 2024). Another positive relationship between AI use and motivation was shown in the study by Shao (2025) by showing that AI uses decrease anxiety level which positively impacts learning motivation for learner to involve in language task. Further, the adaptive nature of the AI platforms helps learners set feasible goals and thus adds to persistence and learner interest (Xu and Xu, 2025). These results suggest that within the educational context such as the metropolitan city of Lahore, interventions using artificial intelligence can serve as a transformative role for keeping all learners reactions buoyant to learn languages.

The third hypothesis (H3) proposed that self-efficacy mediates the relationship between AI usage and academic motivation. The mediation analysis using AMOS and bootstrapping confirmed a significant indirect effect ($\beta = 0.329$, 95% CI [0.218, 0.451], $p < 0.001$), alongside a significant direct effect ($\beta = 0.398$, $p < 0.001$), indicating partial mediation. This means that while AI usage directly enhances motivation, it also indirectly increases motivation by boosting learners' confidence in their abilities. This finding is consistent with earlier research emphasizing the reciprocal relationship between self-efficacy and motivation. As per Mahande et al (2025) learners who possess a high level of self-efficacy are likely to persist in strenuous language activities which leads to the development of learners' intrinsic motivation. Also, Pajares (1996) said that self-efficacy influences the degree the students' set goals for themselves and also the expertise that they put forward to reach their goals. Confidence boost with AI-driven activities - With support from a mastery experience, the learner gains enough confidence to continue with the motivation. These findings corroborate the conclusion of Shao (2025) where it was asserted that an AI facilitated learning environment enhances the self-efficacy and motivational dispositions and further that self-efficacy mediated between technology use and interaction. In the current study, the mediating effect demonstrates what psychological mechanism accounts for the influence of AI technologies on learners; in other words, the influence of AI technologies on students' hard work during learning is probably due to their potential for alleviating anxiety as well as fostering competence.

The findings from this research align with the current trend of research on AI in education throughout the world. Dizon and Gayed (2024) have found that Grammarly helped to increase the accuracy of the writing piece as well as increasing the learner's confidence, something that is necessary for motivation and self-efficacy. Similarly, in the overview for advantages of automated feedback system provided by Wenxun et al. (2025), it stated that automatic feedback system help to increase learners autonomy and confidence to improve writing proficiency. In discussion about speaking tasks, Yusfi and Asmara points out the importance of conversation AI in creating a sure environment for a practice leading to high degrees of motivation and low degrees of anxiety. Furthermore, the findings are aligned with Mohebbi (2025) who argued that one of the characteristics that AI supported classes offer for students that is closely linked to motivation and confidence is self-control. Lin et al (2023) added that, intelligent tutoring systems supports personalised learning which also corresponds well with the needs of diverse learners. These studies taken together suggest that AI not only is a technological innovation, but psychological enabler of language learning success.

6. Conclusion

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From the findings that have arisen at the end of this study, it can be stated that artificial intelligence (AI) is a factor affecting change for better psychological and academic performance in ELT context. The findings from the study showed a very positive influence of the usage of the AI on the learners' self-efficacy and academic motivation and also illustrated that all the decisions regarding integrations supported with AI technology are very serious and have to be considered in language learning. It was found that students that had been exposed to AI technology (for example, writing assistants, chatbots, interactive e-learning programs and others) had a stronger confidence in their language abilities and more willingness to gain academic achievement.

The first valuable contribution of this study is that self-efficacy has been shown as a partial mediator between motivation for learning and AI use. In other words, while AI-powered tools do increase motivation thanks to their positive, constructive ways of communicating (making learning more appealing, interactive), they do so as well by increasing the learners' confidence. As such, the possibility for participation in learning practices and students' perceived competence exhaust from the way the multiple learning practices were performed, and might lead to better achievement orientation, perseverance and therefore interest of students in the L2 learning process. This mediating effect only reinforces the need for a directive towards attention paid to the psychological needs of learners while introducing AI in education, in addition to sheer skill development. This has an important one-off effect - it enables a combination of two types of participants in the online learning solution that has implications for social and educational stakeholders and its context, build through AI-driven educational contexts. For personalised learning for various students, more consideration should be given to segregating AI tools in the education process and to meet learner needs (low self-efficacy levels, high anxiety and not able to learn) AI can provide real-time feedback, on-demand learning lessons, challenges in the game, gamification among others. It is then possible for educators to foster a more supportive and empowering learning environment which encourages improvement and self-directed learning.

Higher still, it is up to policy-makers and education institutions to facilitate the integration of AI use in education. To ensure that the benefits of AI are shared equitably and do not fall into the hands of privileged learners, there is a need to invest in the development of the digital infrastructure, training for teachers, and equitable access to AI tools. Apart from educating and training, there is also an urgent need for policy making so that the use of AI is done ethically and responsibly and policies can be formed which ensure that the AI is a complement and not a substitute to what a human is capable of doing during the teaching and learning process. Furthermore, with respect to psychological well-being for learners, and with respect to technology solutions from AI development firms and technology companies that are centered on the soccer players, the emergence of the pedagogic and educational AI domain of application is another important industrial-psychological factor for AI developers to take account of. Discretionary elements of self-efficacy for building AI systems include progress writing, individual replies, and individualizing of goals. There is, thus, a need for educators and developers of AI to take steps towards clarifying or highlighting that technology is only associated with learners' actual needs.

Finally, this research study further highlights the necessity for further research on the role and benefits of AI in language learning and potential feasibility to integrate AI in education in a more coordinated effort. Therefore, the capabilities of AI technologies for language learning will increase only with time. Beyond conducting research on what types of students AI might be beneficial for, along with potential effective methods of adoption, one study needs to be

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conducted for the long-term: how many years after an AI is implemented is necessary before the effects of its use are fully realized. By using AI innocently for these capabilities, educators are able to provide the platform for adaptive and dynamic learning that will not only build upon the language, but will prime learners for becoming confident, motivated and independent thinkers. AI is not only a tool for technology but also a motivator of the overall growth of education. "I think if translated into the world of language learning it would have a significant impact on the way that learners think about what they learn, their relationship with it, and what they can actually do with it." But when applied intelligently and responsibly, AI can be a game-changer for the education industry and help bring in a new era in which learning is not just personalised, but accessible and extremely engaging, leading to improved academic performance and success in life.

References

Adawiyah, D., & Gumartifa, A. (2022). English language teaching and globalization: To support economic growth. *Journal of English Education and Applied Linguistics*, *11*(1), 228-242.

Alhusaiyan, E. (2025). A systematic review of current trends in artificial intelligence in foreign language learning. *Saudi Journal of Language Studies*, *5*(1), 1-16.

Azıonya, C. M., & Nhedzı, A. (2021). The digital divide and higher education challenge with emergency online learning: Analysis of tweets in the wake of the COVID-19 lockdown. *Turkish Online Journal of Distance Education*, *22*(4), 164-182.

Bandura, A. (1997). *Self-efficacy: The exercise of control*. Macmillan.

Bray, J. B. (2021). Digital Divide: How Technology Access Impacts Community Colleges across the United States during a Pandemic. *Association of Community College Trustees*.

Collen, I. (2021). The Language of Languages: A Qualitative Study Into the Decline of Modern Languages at A Level in Northern Ireland.

Deci, E. L., & Ryan, R. M. (2013). *Intrinsic motivation and self-determination in human behavior*. Springer Science & Business Media.

Dizon, G., & Gayed, J. M. (2024). A systematic review of Grammarly in L2 English writing contexts. *Cogent Education*, *11*(1), 2397882.

Ismail, S., & Alharkan, A. (2024). EFL learners' positive emotions in the era of technology: Unpacking the effects of artificial intelligence on learning enjoyment, self-efficacy, and resilience. *Computer-Assisted Language Learning Electronic Journal*, *25*(4), 526-551.

Jayaputri, H. E. (2024). ChatGPT in action: Unraveling its impact on student motivation in English language learning. *Scope: Journal of English Language Teaching*, *8*(2), 448-456.

Jiang, X., Peters, R., Plonsky, L., & Pajak, B. (2024). The effectiveness of Duolingo English courses in developing reading and listening proficiency. *CALICO Journal*, *41*(3), 249-272.

Lin, C. C., Huang, A. Y., & Lu, O. H. (2023). Artificial intelligence in intelligent tutoring systems toward sustainable education: a systematic review. *Smart learning environments*, *10*(1), 41.

Luo, Z., & Xiong, Y. (2025). Is anxiety always harmful? An exploration of the impact of language anxiety on EFL learning motivation, EFL competence and EFL academic performance. *BMC psychology*, *13*(1), 674.

Mahande, R. D., Fakhri, M. M., Suwahyu, I., & Sulaiman, D. R. A. (2025). Unveiling the impact of ChatGPT: investigating self-efficacy, anxiety and motivation on student performance in blended learning environments. *Journal of Applied Research in Higher Education*.

María Cubillo, J., Sánchez, J., & Cerviño, J. (2006). International students' decision-making process. *International Journal of Educational Management*, *20*(2), 101-115.

Miranty, D., Widiati, U., Cahyono, B. Y., & Sharif, T. I. S. T. (2025). The effectiveness of Grammarly application and teacher feedback for undergraduate EFL students' writing skills. *Innoeduca: international journal of technology and educational innovation*, *11*(1), 108-133.

ISSN Online: 3006-4686, ISSN Print: 3006-4678
Volume No: 02 Issue No: 03 (2025)

Mohebbi, A. (2025). Enabling learner independence and self-regulation in language education using AI tools: a systematic review. *Cogent Education*, *12*(1), 2433814.

Nye, B. D. (2015). Intelligent tutoring systems by and for the developing world: A review of trends and approaches for educational technology in a global context. *International Journal of Artificial Intelligence in Education*, *25*(2), 177-203.

Pajares, F. (1996). Self-efficacy beliefs in academic settings. *Review of educational research*, *66*(4), 543-578.

Rouabhia, R., & Kheder, K. (2024). Using Duolingo in teaching and learning vocabulary: A systematic review. *Indonesian Journal of English Language Studies (IJELS)*, *10*(2), 91-107.

Ryan, R. M., & Deci, E. L. (2020). Intrinsic and extrinsic motivation from a self-determination theory perspective: Definitions, theory, practices, and future directions. *Contemporary educational psychology*, *61*, 101860.

Shang, Y., & Ma, L. (2024). Classroom anxiety, learning motivation, and English achievement of Chinese college students: The mediating role of self-efficacy. *Acta Psychologica*, *251*, 104550.

Shao, S. (2025). The role of AI tools on EFL students' motivation, self-efficacy, and anxiety: Through the lens of control-value theory. *Learning and Motivation*, *91*, 102154.

Wenxun, N., Md Yunus, M., & Ismail, H. H. (2025). Investigating the Effect of Grammarly on Enhancing Writing Skills ELT Classroom: A Systematic Literature Review (2020-2024). *International Journal of Academic Research in Progressive Education and Development*, *14*(1).

Xu, J., & Xu, Y. (2025). The impact of self-efficacy on psychological resilience in EFL learners: a serial mediation model. *BMC psychology*, *13*(1), 858.

Xu, S., Chen, P., & Zhang, G. (2024). Exploring the impact of the use of ChatGPT on foreign language self-efficacy among Chinese students studying abroad: The mediating role of foreign language enjoyment. *Heliyon*, *10*(21).

Yildiz, C. (2024). ChatGPT Integration in EFL Education: A Path to Enhanced Speaking Self-Efficacy. *Novitas-ROYAL (Research on Youth and Language)*, *18*(2), 167-182.

Yusfi, M., & Asmara, C. H. (2023). Exploring the impact of ChatGPT on English education department student's motivation and performance. *Journal of Teaching of English*, *8*(4), 383-392.

Zheng, S., Zhang, J., Wang, J., & Shen, R. (2024). English language learning anxiety and academic burnout in Chinese freshmen: A chain mediating approach. *Frontiers in Psychology*, *15*, 1340142.