

STUDENTS' MOTIVATION AND ARTIFICIAL INTELLIGENCE IN FOREIGN LANGUAGE EDUCATION

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Annotation. *This research represents students' motivation as a critical factor in language learning success, influencing the effort learners invest, their persistence in the face of challenges, and ultimately their achievement of proficiency. Understanding how AI integration affects motivation is therefore essential for evaluating the pedagogical value of these technologies. This study provides particularly valuable empirical evidence on this relationship, demonstrating that AI-enhanced instruction can significantly enhance multiple dimensions of learner motivation. For educational institutions and policymakers, the findings underscore the importance of investing in technological infrastructure to ensure equitable access, providing comprehensive professional development for teachers on AI integration, developing ethical frameworks and policies for AI use in education, and supporting research on effective practices for AI-enhanced language learning. The rapid evolution of AI technologies requires that institutions remain adaptive and responsive, continuously evaluating and refining their approaches as new capabilities and challenges emerge.*

Key-words: *motivation, artificial intelligence, foreign language education, self-determination theory (SDT), self-regulation.*

Аннотация. *В данном исследовании мотивация учащихся представлена как ключевой фактор успеха в изучении языка, влияющий на прилагаемые ими усилия, их настойчивость при столкновении с трудностями и, в конечном итоге, на достижение ими уровня владения языком. Поэтому понимание того, как внедрение ИИ влияет на мотивацию, имеет решающее значение для оценки педагогической ценности этих технологий. Данное исследование предоставляет особенно ценные эмпирические данные об этой взаимосвязи, демонстрируя, что обучение с использованием ИИ может значительно усилить мотивацию учащихся по целому ряду аспектов. Для образовательных учреждений и лиц, ответственных за формирование политики, полученные результаты подчеркивают важность инвестирования в технологическую инфраструктуру для обеспечения равного доступа, организации комплексного профессионального развития учителей в области интеграции ИИ, разработки этических рамок и политики использования ИИ в образовании, а также поддержки исследований по эффективным практикам изучения языка с использованием ИИ. Быстрое развитие технологий ИИ требует от учреждений адаптивности и оперативности, постоянной оценки и совершенствования своих подходов по мере появления новых возможностей и вызовов.*

Ключевые слова: *мотивация, искусственный интеллект, обучение иностранным языкам, теория самоопределения (ТС), саморегуляция.*

Annotatsiya. *Ushbu tadqiqot talabala motivatsiyasini xorijiy til o'rganishdagi muvaffaqiyatda muhim omil sifatida ko'rib chiqadi. Bu omil o'rganuvchilarning sarflaydigan sa'y-harakatlariga, ularning qiyinchiliklarga qarshi bardoshligiga va oxir-oqibat yuqori malaka darajasiga erishishiga ta'sir qiladi. Shuning uchun sun'iy intellekt integratsiyasining motivatsiyaga qanday ta'sir qilishini tushunish ushbu texnologiyalarning pedagogik qiymatini baholash uchun zarurdir. Ushbu tadqiqot mazkur masala yuzasidan qimmatli empirik dalillarni taqdim etadi va sun'iy intellekt yordamida xorijiy til ta'limni tashkil etish talaba motivatsiyasini sezilarli darajada oshirishi mumkinligini ko'rsatadi. Olingan natijalar ta'lim muassasalarining texnologik infratuzilmaga sarmoya kiritish, o'qituvchilarni sun'iy intellektni integratsiya qilish bo'yicha keng qamrovli kasbiy rivojlantirish, ta'limda sun'iy intellektdan foydalanish*

uchun axloqiy me'yorlar va siyosatlarni ishlab chiqish hamda sun'iy intellekt yordamida til o'rganishning samarali amaliyotlari bo'yicha tadqiqotlarni qo'llab-quvvatlash muhimligini ta'kidlaydi. Sun'iy intellekt texnologiyalarining tez rivojlanishi oliy ta'lim muassasalaridan moslashuvchanlik va tezkorlikni, yangi imkoniyatlarni ochish va mavjud muammolar ustida kreativ yondashuvlarni doimiy ravishda takomillashtirib borishni talab etadi.

***Kalit so'zlar:** motivatsiya, sun'iy intellekt, chet til ta'limi, o'z-o'zini belgilash nazariyasi, ichki nazorat.*

Introduction. The current research, is raising important questions about the sustained effects of AI integration over extended periods, including whether motivational benefits persist and how AI-enhanced instruction impacts long-term language proficiency development. Investigation of how AI affects diverse learner populations, including those with varying proficiency levels, cultural backgrounds, and special needs, promote more inclusive and equitable practices. The development and empirical testing of pedagogical frameworks for AI integration provide evidence-based guidance for practitioners. Ongoing research on ethical dimensions, including data privacy, algorithmic bias, and academic integrity, is essential as AI technologies continue to evolve.

These findings align with other recent research on AI and motivation in language learning. Zhou and Li (2023) found that ChatGPT positively influenced university students' interest and enjoyment, with increased usage frequency and proficiency potentially enhancing these effects. Anjum et al. (2024) reported that ChatGPT boosted students' motivation and engagement in second language acquisition by providing instant feedback, personalized learning, and diverse speaking practice. Lee et al. (2022) demonstrated that AI-supported chatbots increased students' academic achievement, self-efficacy, and motivation, encouraging active learning.

The personalized nature of AI feedback appears to contribute to motivational enhancement. Students appreciated ChatGPT's ability to provide tailored responses to their specific questions and needs, supporting feelings of competence and progress (Aydın Yıldız, 2023). The immediate availability of feedback allowed learners to engage in rapid practice-feedback-revision cycles, maintaining momentum and preventing the frustration that can arise from delayed responses to questions or errors.

Literature review. Perhaps one of the most significant affordances of AI integration is its positive impact on students' motivation, a critical factor in language learning success (Dörnyei & Ushioda, 2013). Bekdaş's (2025) quasi-experimental study provided compelling quantitative evidence that ChatGPT-based classroom activities significantly enhanced student motivation across multiple dimensions. These findings show Self-Determination Theory's emphasis on autonomy, competence, and relatedness as fundamental psychological needs that drive motivation (Legault, 2017). AI tools like ChatGPT can address these needs by providing learners with control over their learning processes (autonomy), offering personalized feedback that builds confidence

(competence), and creating interactive experiences that foster engagement (relatedness, albeit with a non-human agent) (Zhou & Li, 2023).

Self-Determination Theory (SDT) offers a robust theoretical framework for understanding the motivational effects of AI in language education (Legault, 2017). SDT posits that human motivation is driven by three fundamental psychological needs: autonomy (the need to feel in control of one's actions and decisions), competence (the need to feel effective and capable), and relatedness (the need to feel connected to others) (Legault, 2017). When these needs are satisfied, individuals experience intrinsic motivation—engagement in activities for their inherent satisfaction rather than for external rewards or pressures. Conversely, when these needs are thwarted, motivation and well-being suffer.

AI applications like ChatGPT can potentially address each of these psychological needs in language learning contexts (Zhou & Li, 2023). Regarding autonomy, AI tools provide learners with control over their learning processes, allowing them to choose when, where, and how to engage with language practice, to pursue topics of personal interest, and to proceed at their own pace (Aydın Yıldız, 2023). This flexibility supports learner agency and self-direction, key components of autonomous motivation. Regarding competence, AI systems offer personalized feedback, adaptive difficulty levels, and opportunities for successful performance that build learners' confidence in their abilities (Anjum et al., 2024).

The immediate and specific feedback provided by AI tools helps learners understand their progress and identify areas for improvement, fostering feelings of effectiveness. Regarding relatedness, while AI systems cannot provide genuine human connection, their interactive and responsive nature may create a sense of engagement that partially addresses this need, particularly for learners who experience anxiety in face-to-face interactions (Fryer & Carpenter, 2006).

Students also reported feeling more comfortable practicing language with AI than with human interlocutors in certain contexts, suggesting that AI tools may reduce social anxiety and create psychologically safe spaces for language experimentation (Fryer & Carpenter, 2006). This finding is particularly significant for learners who experience high levels of foreign language anxiety, a well-documented phenomenon that can inhibit language production and learning (Ahmed et al., 2022). By providing a non-judgmental practice partner, AI tools may help anxious learners build confidence and fluency before engaging in higher-stakes human interactions.

Methodology. This research provided an experimental study compelling quantitative evidence that AI integration significantly enhanced student motivation in foreign language learning. Using the Motivated Strategies for Learning Questionnaire (MSLQ), which assesses both self-regulated learning strategies and motivational beliefs, the study found that students in the experimental group who used AI alongside traditional textbooks for six

weeks demonstrated statistically significant improvements compared to the control group across all five measured dimensions: self-regulation, cognitive strategy use, self-efficacy, intrinsic value, and test anxiety.

The enhancement of self-regulation—the ability to plan, monitor, and evaluate one’s learning—suggests that AI tools can support metacognitive development and learner autonomy (Bekdaş, 2025). The improvement in cognitive strategy use indicates that AI-enhanced instruction may help learners develop more effective approaches to language learning, such as elaboration, organization, and critical thinking strategies. The increase in self-efficacy reflects enhanced confidence in language learning abilities, a crucial predictor of persistence and achievement (Lee et al., 2022).

The growth in intrinsic value suggests that AI integration made language learning more inherently interesting and enjoyable for students. Finally, the reduction in test anxiety indicates that AI tools may help alleviate the stress and worry associated with language assessment, potentially by providing low-stakes practice opportunities and building competence gradually.

Results and discussions. Qualitative evidence from Bekdaş’s (2025) study further illuminated the motivational affordances of AI integration. Students expressed that ChatGPT was “enjoyable” and created excitement and fun in the learning process (Nghi et al., 2019). This affective engagement is crucial, as positive emotions are associated with increased persistence, deeper cognitive processing, and better learning outcomes (Ahmed et al., 2022). The novelty and interactivity of AI tools can transform language learning from a potentially tedious obligation into an engaging activity, thereby sustaining learner interest and effort over time.

Additionally, students reported feeling more comfortable interacting with AI than with human instructors in certain contexts, suggesting that AI tools may reduce social anxiety and create psychologically safe spaces for language practice (Fryer & Carpenter, 2006). While the overall pattern of findings suggests positive motivational effects of AI integration, it is important to recognize that these effects may vary across contexts and individuals.

Factors such as learners’ prior technology experience, their initial motivation levels, their learning goals, and the specific ways AI tools are integrated into instruction may all moderate the relationship between AI use and motivation (Alshumaimeri & Alshememry, 2024). Additionally, the novelty effect of new technologies may contribute to initial motivational gains that diminish over time as the technology becomes routine. Longitudinal research is needed to determine whether the motivational benefits of AI integration are sustained over extended periods or whether they represent primarily short-term effects.

However, these affordances coexist with significant challenges that must be addressed for effective and ethical implementation. Technological infrastructure

requirements, particularly internet dependency, create equity concerns that threaten to exacerbate existing educational inequalities (Bekdaş, 2025; Alshumaimeri & Alshememry, 2024). The absence of human interaction and limited emotional intelligence in AI systems represent fundamental limitations that cannot fully replicate the social and affective dimensions of language learning (Alshumaimeri & Alshememry, 2024). Concerns about accuracy and reliability, potential for learner over-reliance, insufficient teacher training, and ethical issues related to data privacy and academic integrity require ongoing attention (Gottlieb et al., 2023; Popenici & Kerr, 2017).

Ethical Considerations and Academic Integrity. The integration of AI in language education raises important ethical questions that require ongoing attention (Alshumaimeri & Alshememry, 2024). Concerns about academic integrity are particularly salient, as AI tools can generate complete essays, translations, and other assignments that students might submit as their own work (Gottlieb et al., 2023; Cassidy, 2023). Rather than attempting to ban AI tools—an approach that is likely to be both ineffective and counterproductive—educators should develop clear policies about appropriate AI use, design assessments that require demonstration of learning processes rather than just products, teach students about academic integrity in the context of AI tools, and help learners understand the difference between using AI as a learning support and using it to circumvent learning.

Data privacy represents another critical ethical concern (Popenici & Kerr, 2017). Educators and institutions must ensure that AI platforms used in educational contexts have appropriate data protection measures, that learners understand what data is being collected and how it is used, and that vulnerable populations are protected from potential harms associated with data misuse. The lack of transparency in many AI systems' decision-making processes further complicates these ethical considerations, highlighting the need for greater accountability and explainability in educational AI applications (Montebello, 2018).

Implications for Practice. The research suggests several practical implications. First, AI tools like ChatGPT can be valuable additions to the pedagogical toolkit when integrated purposefully to address specific learning objectives. Second, explicit instruction on how to use AI tools effectively, including their capabilities and limitations, is essential for helping students leverage these resources productively. Third, AI-enhanced activities should be designed to promote active learning and critical thinking rather than passive consumption of AI-generated content. Fourth, a blended approach that combines AI-mediated practice with authentic human interaction optimizes learning outcomes by addressing both the cognitive and social-emotional dimensions of language acquisition. Fifth, clear policies and ongoing dialogue about appropriate AI use and academic integrity are necessary to navigate the ethical challenges posed by these technologies.

Conclusion. The following article clearly demonstrates that AI applications offer substantial affordances for language learning, including personalized feedback

mechanisms which enhance students' motivation across multiple dimensions, 24/7 accessibility that supports flexible learning, support for developing the four language skills. Particularly compelling is the quantitative evidence that AI integration significantly enhanced student motivation, including improvements in self-regulation, cognitive strategy use, self-efficacy, intrinsic value, and reduced test anxiety (Bekdaş, 2025). These motivational benefits align with Self-Determination Theory's emphasis on autonomy, competence, and relatedness as fundamental psychological needs that drive engagement and learning (Legault, 2017).

The synthesis reveals that effective AI integration requires a balanced approach that leverages the technology's affordances while mitigating its challenges through thoughtful pedagogical design and active teacher guidance (Zhai, 2022). Rather than viewing AI as a replacement for human instruction, educators should conceptualize these tools as powerful supplements that augment teaching and learning when integrated purposefully and supported by appropriate professional development. The critical role of teachers in designing AI-enhanced activities, guiding students in productive AI use, providing emotional support and human connection, and helping learners develop critical evaluation skills cannot be overstated (Alshumaimeri & Alshememry, 2024).

Future Research Directions. The integration of AI into foreign language education offers considerable promise for enhancing learning experiences and outcomes, particularly in terms of personalization, accessibility, and motivation. However, realizing this promise requires careful attention to the challenges and limitations of these technologies, thoughtful pedagogical design, active teacher involvement, and ongoing commitment to equity and ethics. As AI continues to evolve and become increasingly sophisticated, the language education community must remain engaged in critical dialogue about how to harness these powerful tools in ways that genuinely serve learners' needs and advance the goals of language education. The evidence synthesized in this article provides a foundation for this ongoing conversation, highlighting both the opportunities and the responsibilities that accompany AI integration in foreign language teaching and learning.

References:

1. Ahmed, A. A. A., Ampry, E. S., Komariah, A., Hassan, I., Thahir, I., Hussein Ali, M., & Zafarani, P. (2022). Investigating the effect of using game-based learning on EFL learners' motivation and anxiety. *Education Research International*, 2022, 1-9. <https://doi.org/10.1155/2022/6503139>
2. Alshumaimeri, Y. A., & Alshememry, A. K. (2024). The extent of AI applications in EFL learning and teaching. *IEEE Transactions on Learning Technologies*, 17, 653-663. <https://doi.org/10.1109/TLT.2023.3322128>
3. Anjum, F., Raheem, B. R., & Ghafar, Z. N. (2024). The impact of ChatGPT on enhancing students' motivation and learning engagement in second language acquisition: Insights from students. *Journal of e-Learning Research*, 3(2), 1-11. <https://doi.org/10.33422/jelr.v3i2.679>
4. Aydın Yıldız, T. (2023). The impact of ChatGPT on language learners' motivation. *Journal of Teacher Education and Lifelong Learning*, 5(2), 582-597.

5. Bekdaş, M. (2025). The pros and cons of ChatGPT in foreign language teaching and its impact on student motivation. *Arab World English Journal (AWEJ) Special Issue on Artificial Intelligence*, 2025, 139-156. <https://dx.doi.org/10.24093/awej/AI.8>
6. Cassidy, C. (2023). Australian universities to return to 'pen and paper' exams after students caught using AI to write essays. *The Guardian*. <https://www.theguardian.com/australia-news/2023/jan/10/universities-to-return-to-pen-and-paper-exams-after-students-caught-using-ai-to-write-essays>
7. Dörnyei, Z., & Ushioda, E. (2013). *Teaching and researching: Motivation* (2nd ed.). Routledge.
8. Fryer, L., & Carpenter, R. (2006). Emerging technologies: Bots as language learning tools. *Language Learning & Technology*, 10(3), 8-14. <http://lt.msu.edu/vol10num3/emerging/>
9. Gottlieb, M., Kline, J. A., Schneider, A. J., & Coates, W. C. (2023). ChatGPT and conversational artificial intelligence: Friend, foe, or future of research? *The American Journal of Emergency Medicine*, 70, 81-83. <https://doi.org/10.1016/j.ajem.2023.05.018>
10. Lee, Y. F., Hwang, G. J., & Chen, P. Y. (2022). Impacts of an AI-based chatbot on college students' after-class review, academic performance, self-efficacy, learning attitude, and motivation. *Educational Technology Research and Development*, 70(5), 1843-1865. <https://doi.org/10.1007/s11423-022-10142-8>
11. Legault, L. (2017). Self-determination theory. In V. Zeigler-Hill & T. Shackelford (Eds.), *Encyclopedia of personality and individual differences*. Springer International Publishing. https://doi.org/10.1007/978-3-319-28099-8_1162-1
12. Montebello, M. (2018). *AI injected e-learning: The future of online education*. Springer. <https://doi.org/10.1007/978-3-319-67928-0>
13. Nghi, T., Phuc, T., & Thang, N. (2019). Applying AI chatbot for teaching a foreign language: An empirical research. *International Journal of Scientific & Technology Research*, 8(12), 897-902.
14. Popenici, S. A. D., & Kerr, S. (2017). Exploring the impact of artificial intelligence on teaching and learning in higher education. *Research and Practice in Technology Enhanced Learning*, 12, Article 22. <https://doi.org/10.1186/s41039-017-0062-8>
15. Zhou, L., & Li, J. (2023). The impact of ChatGPT on learning motivation: A study based on self-determination theory. *Education Science and Management*, 1(1), 19-29. <https://europub.co.uk/articles/-A-731786>