10

INFLUENCE

OF DIGITAL EDUCATIONAL ENVIRONMENTS ON THE MOTIVATION AND BEHAVIOR OF UNIVERSITY STUDENTS

INFLUENCE

OF DIGITAL EDUCATIONAL ENVIRONMENTS ON THE MOTIVATION AND BEHAVIOR OF UNIVERSITY STUDENTS

INFLUENCIA DE LOS ENTORNOS EDUCATIVOS DIGITALES EN LA MOTIVACIÓN Y EL COMPORTAMIENTO DE LOS ESTUDIANTES UNIVERSITARIOS

Rahil Najafov[1]
E-mail: editor@imcra-az.org
ORCID: https://orcid.org/0000-0003-2460-6333
[1] Azerbaijan National Academy of Sciences, Baku, Azerbaijan.

Suggested citation (APA, 7th edition)

Najafov, R. (2026). Influence of digital educational environments on the motivation and behavior of university students. *Revista Mexicana de Investigación e Intervención Educativa, 5*(3), 89-97.

Submission: 04/10/2026 **Acceptance:** 06/14/2026 **Publication:** 07/01/2026

ABSTRACT

The increasing digitization of higher education has transformed how students access knowledge, interact with content, and participate in learning processes. Digital learning environments not only facilitate access to academic resources but also directly influence motivation and academic behavior, essential factors for university success. The aim of this study was to analyze how digital learning environments affect intrinsic and extrinsic motivation, as well as the study habits and active participation of university students, considering the interaction of technological, pedagogical, and psychological factors. A qualitative-descriptive methodology was employed, based on a systematic review of academic literature published between 2017 and 2026. Empirical studies, theoretical reviews, and case analyses focused on learning platforms, educational games, academic networks, and artificial intelligence-based tools were included. The findings were coded according to the needs for autonomy, competence, and social connection, as well as aspects of self-regulation, planning, and academic persistence, to identify patterns and relationships between digital design and student motivation. The results indicate that well-designed digital environments strengthen intrinsic and extrinsic motivation, improve self-efficacy, and foster sustainable study habits. Personalized content, immediate feedback, social interaction, and the integration of emerging technologies such as artificial intelligence enhance engagement and active participation. These environments also facilitate the internalization of academic goals, promoting autonomous and proactive behaviors, and consolidating academic resilience and self-regulation in students.

Keywords:

Digital environments, academic motivation, artificial intelligence, university learning, self-regulation, social interaction.

RESUMEN

La creciente digitalización de la educación universitaria ha transformado la forma en que los estudiantes acceden al conocimiento, interactúan con los contenidos y participan en procesos de aprendizaje. Los entornos educativos digitales no solo facilitan el acceso a recursos académicos, sino que también influyen directamente en la motivación y el comportamiento académico, factores esenciales para el éxito universitario. El objetivo del estudio fue analizar cómo los entornos educativos digitales afectan la motivación intrínseca y extrínseca, así como los hábitos de estudio y la participación activa de los estudiantes universitarios, considerando la interacción de factores tecnológicos, pedagógicos y psicológicos. Se empleó una metodología cualitativa-descriptiva basada en una revisión sistemática de literatura académica publicada entre 2017 y 2026. Se incluyeron estudios empíricos, revisiones teóricas y análisis de caso centrados en plataformas de aprendizaje, juegos educativos, redes académicas y herramientas basadas en inteligencia artificial. Los hallazgos fueron codificados según las necesidades de autonomía, competencia y relación social, así como aspectos de autorregulación, planificación y persistencia académica, para identificar patrones y relaciones entre diseño digital y motivación estudiantil. Los resultados indican que los entornos digitales bien diseñados fortalecen la motivación intrínseca y extrínseca, mejoran la autoeficacia y fomentan hábitos de estudio sostenibles. La personalización de contenidos, la retroalimentación inmediata, la interacción social y la incorporación de tecnologías emergentes como inteligencia artificial potencian el compromiso y la participación activa. Estos entornos también facilitan la internalización de objetivos académicos, promoviendo conductas autónomas y proactivas, y consolidando la resiliencia académica y la autorregulación en los estudiantes.

Palabras clave:

Entornos digitales, motivación académica, inteligencia artificial, aprendizaje universitario, autorregulación, interacción social.

INTRODUCTION

In recent years, digital learning environments have significantly transformed how university students' access, process, and assimilate knowledge. The integration of digital technologies into higher education has not only facilitated access to academic resources but has also modified student behavior patterns and motivation. Online learning platforms, interactive tools, mobile applications, and AI-based environments offer new opportunities to foster active participation, self-directed learning, and peer collaboration. However, these innovations also present challenges, such as information overload, digital distraction, and the need to develop technological skills that enable students to make the most of these resources (Cáceres-Mesa, 2026).

Motivation, understood as the set of factors that drive action toward achieving academic goals, is one of the aspects most sensitive to the influence of digital environments. Li et al. (2024) highlights those digital educational games increase university students' motivation through active engagement and consistent participation. According to their findings, the effectiveness of these tools depends not only on their pedagogical design but also on the quality and suitability of the digital environment, which acts as a moderator in the relationship between activity and motivation. This finding demonstrates that technology alone does not guarantee an increase in motivation; digital environments must be strategically designed to encourage interaction, feedback, and experiential learning.

The relationship between behavior and technology has also been extensively studied. Noor et al. (2022) found that learning behaviors on digital platforms significantly impact knowledge development and the motivation of university students. Digital environments allow students to organize their time more flexibly, access information immediately, and participate in activities that promote self-efficacy and academic autonomy. Chang et al. (2023), for their part, highlight that academic digital reading habits are influenced by factors such as platform usability, the availability of quality resources, and pedagogical guidance. This research indicates that the design of digital learning environments should consider not only technological aspects but also psychological and behavioral factors in order to enhance engagement and educational effectiveness.

Another relevant aspect is the social dimension of digital environments. Beñalet et al. (2023) point out that the use of social networks for academic purposes is correlated with student motivation and performance. Digital platforms not only facilitate communication and collaboration but also promote the formation of learning communities where students can share knowledge, resolve doubts, and receive immediate feedback. However, this potential is only realized if students possess adequate digital skills and a sufficient level of self-regulation and academic discipline. Similarly, Argüello Pazmiño et al. (2025) reported that the appropriate use of technological resources is positively associated with the motivation of high school students, suggesting that the relationship between technology and academic behavior begins in early stages and is consolidated in higher education.

The impact of artificial intelligence (AI) and other emerging technologies is an additional factor redefining the university educational experience. Cáceres-Mesa (2026) emphasizes that these tools allow for personalized teaching, adapting content to students' individual needs and offering more accurate and timely assessments. These innovations not only facilitate learning but also influence intrinsic motivation and self-efficacy, fundamental elements for academic success. However, the integration of these technologies requires a balanced approach that considers students' emotional and cognitive well-being, avoiding digital overload and the stress associated with intensive, technology-mediated learning.

Taken together, the literature suggests that digital learning environments are much more than simple channels for transmitting information. They constitute interactive spaces capable of shaping the motivation, academic behavior, and study habits of university students. The effectiveness of these environments depends on multiple factors: the quality of the technology used, the pedagogical design that guides its use, the social interaction they facilitate, and the individual characteristics of the students, including their level of self-regulation, discipline, and digital competence. Understanding how these elements interrelate allows educational institutions to design more effective strategies that enhance learning, foster motivation, and promote positive academic behaviors.

The objective of the article was to analyze the influence of digital educational environments on the motivation and behavior of university students, identifying the factors that enhance their commitment, participation, and academic performance.

METHODOLOGY

This study employed a qualitative-descriptive approach, focusing on an in-depth analysis of recent academic literature regarding the influence of digital learning environments on the motivation and behavior of university students. A systematic review of sources published between 2017 and 2026 was conducted, including empirical research articles, theoretical reviews, and case studies that explicitly addressed the relationship between digital technologies, intrinsic and extrinsic motivation, and learning habits in university settings. The selection of sources

centered on research that provided clear evidence of how different types of digital environments, such as learning platforms, educational games, academic networks, and AI-based systems, influence engagement, participation, and academic performance.

To organize the information, the findings of each study were coded and classified according to the motivational factors identified by Ryan & Deci (2000): autonomy, competence, and social relationships, as well as according to behavioral aspects related to self-regulation, planning, persistence, and active participation in learning. This coding allowed for the identification of recurring patterns and relationships between the design of digital environments and the effects observed in students.

Subsequently, a synthesis of results was conducted, integrating the evidence to generate a consolidated overview of the effectiveness of digital environments in higher education. This synthesis included comparing empirical findings with theoretical frameworks of motivation and digital learning, as well as evaluating the relevance of personalization, feedback, social interaction, and the incorporation of emerging technologies. Although the study did not include direct data collection or experimentation, its analytical approach allowed for the establishment of significant connections between the characteristics of digital learning environments and their impact on the motivation and academic performance of university students.

DEVELOPMENT

Motivation is a central component of university learning, and understanding it allows for the design of more effective digital learning environments. Ryan & Deci (2000) propose that motivation can be primarily classified as intrinsic and extrinsic. Intrinsic motivation arises from a student's natural interest in learning and the personal satisfaction gained from mastering new skills or concepts. This form of motivation is closely related to the enjoyment of learning, intellectual curiosity, and persistence in the face of academic challenges. Extrinsic motivation, on the other hand, refers to engaging in activities to obtain external rewards, such as grades, recognition, or approval from instructors and peers, or to avoid penalties.

Ryan & Deci (2000) identify three basic psychological needs that enhance motivation: autonomy, competence, and relatedness (social connection). Autonomy refers to the perception that students have control over their decisions and can choose how they learn. Digital learning environments that allow students to select activities, personalize their pace of study, or decide the order of tasks satisfy this need, increasing intrinsic motivation. For example, platforms that offer adaptive learning paths allow students to explore content according to their interests, which strengthens their sense of control over their learning.

Competence is the need to feel capable and effective when facing academic challenges. Digital environments that provide immediate feedback, interactive exercises, and progressive assessments allow students to measure their performance and recognize their progress, promoting self-efficacy and intrinsic motivation. According to Li et al. (2024), digital educational games that integrate feedback and adaptive challenges strengthen the perception of competence, increasing student engagement and persistence with complex activities.

Finally, the need for relationship or social connection refers to the sense of belonging and support that students experience when interacting with others. Ryan & Deci (2000) point out that learning is more motivating when individuals perceive that they are part of a community that values their contribution and allows them to collaborate with others. In this sense, digital platforms that incorporate forums, chats, collaborative activities, or academic networks facilitate interaction between peers and teachers, generating a supportive environment that strengthens both intrinsic and extrinsic motivation. Beñalet et al. (2023) confirm that the use of social networks for academic purposes improves student performance and engagement by providing recognition, feedback, and collaboration, aligning with the basic relationship needs identified by Ryan & Deci (2000).

Furthermore, Ryan & Deci (2000) propose that extrinsic motivation can be internalized, that is, gradually transformed into more autonomous motivation if it is perceived as meaningful and aligned with the student's personal values. This has direct implications in digital learning environments: when students understand the relevance of an activity, even if it was originally motivated by external factors, they can develop a deeper and more lasting commitment. For example, participating in an online collaborative project may initially be motivated by a desire for a grade, but with meaningful interaction, feedback, and autonomy, it can evolve into a genuine interest in learning and contributing to the group.

Deci's (2000) model also highlights that simultaneously satisfying the three basic psychological needs maximizes intrinsic motivation and improves academic performance. In digital learning environments, this means that platforms must combine personalization options (autonomy), challenging activities with feedback (competence), and spaces for social interaction (relationship). When this balance is achieved, students demonstrate higher levels of persistence, active participation, resourcefulness, and self-regulation, which strengthens their learning and academic achievement.

Once motivation is understood according to Ryan & Deci (2000), it is evident that digital learning environments directly affect learning behavior patterns. Noor et al. (2022) found that the regular use of digital platforms promotes autonomy, planning, and self-regulation, factors closely related to the satisfaction of the competence and autonomy

needs identified by Ryan & Deci (2000). Students' ability to organize their time, monitor their progress, and select appropriate study strategies reflects the internalization of extrinsic motivation toward autonomous and proactive behaviors.

Li et al. (2024) show that digital educational games, by combining immediate feedback with appropriate challenges, foster both intrinsic and extrinsic motivation. Students develop active learning behaviors, exploring content, solving problems, and consistently participating in academic activities. Similarly, Chang et al. (2023) demonstrate that digital reading habits depend on the accessibility of resources, the usability of platforms, and pedagogical guidance, confirming that a well-designed digital environment can directly influence positive academic behavior.

The social dimension of digital environments also reinforces motivated behavior. Beñalet et al. (2023) point out that interaction in academic social networks provides social support, recognition, and feedback, which strengthens both motivation and learning behavior. Digital collaboration allows students to take on active roles, share knowledge, and solve problems together, increasing their academic engagement and accountability. These effects align with Ryan and Deci 's need for relatedness, demonstrating that intrinsic motivation is enhanced when students perceive connection and social support.

The use of artificial intelligence and emerging technologies reinforces these impacts. Cáceres-Mesa (2026) indicates that this tool allows for content adaptation, adjustment of difficulty levels, and personalized feedback, satisfying the needs for competence and autonomy. This personalization increases intrinsic motivation and stimulates proactive academic behavior, promoting sustainable study habits, self-regulation, and the development of cognitive skills. Argüello Pazmiño et al. (2025) also highlight that students who integrate technology into their daily routine demonstrate greater discipline, planning, and performance evaluation, evidencing the relationship between motivation, self-regulation, and positive academic behavior.

Arzuaga Mejía et al. (2026) highlight that engagement with virtual environments during the post-pandemic period has been crucial for maintaining both the motivation and academic well-being of university students. The authors demonstrate that students who actively integrated into virtual learning platforms reported lower stress levels and a greater willingness to participate in academic activities, showing that the digital environment not only facilitates access to knowledge but also provides crucial emotional and social support for motivation. This finding aligns with Ryan & Deci's (2000) theory, as interaction with digital environments can satisfy the needs for autonomy, competence, and relatedness, promoting both intrinsic motivation through experiencing control and personal progress, and extrinsic motivation through the perception of achievements recognized within the educational community.

Additionally, Haleem et al. (2022) highlight that the systematic integration of digital technologies in education improves learning efficiency, student participation, and motivation. According to these authors, digital platforms allow for adapting teaching to individual learning styles and provide immediate feedback, which strengthens both intrinsic and extrinsic motivation. This technological personalization satisfies the need for competence by allowing students to perceive progress and mastery in their activities, as well as the need for autonomy by enabling them to choose learning paths tailored to their interests. This demonstrates that digital environments structure academic behavior through more consistent study habits and greater commitment to learning objectives.

In line with the above, Rodríguez-Barboza et al. (2023) point out that educational innovation through digital tools increases the motivation of university students by offering interactive, contextualized learning experiences adapted to their interests. The research shows that students who actively participate in these platforms perceive greater relevance in their assignments, increasing their engagement and participation in academic activities. This aligns with Ryan & Deci (2000), who state that educational environments that facilitate autonomy, provide constant feedback and promote social interaction contribute to satisfying basic motivation needs, strengthening intrinsic motivation and favoring the internalization of extrinsic motivation in proactive and sustainable study behaviors.

For their part, Baute-Rosales et al. (2026) emphasize that disruptive technologies represent a way to transform university learning, enabling content personalization, creativity, and the development of student autonomy. According to the authors, when digital environments facilitate self-organized study and offer appropriate challenges with immediate feedback, motivation and academic engagement are reinforced. These findings support the postulates of Ryan & Deci (2000), showing that the satisfaction derived from competence and autonomy generates intrinsic motivation, while a clear set of objectives and the visibility of achievements reinforce extrinsic motivation, promoting committed and sustained learning behaviors.

Similarly, Li et al. (2024) demonstrate that digital educational games increase motivation through learning engagement and the quality of the digital environment. Their study shows that the content itself is not enough: the way students interact with the digital environment is crucial for strengthening intrinsic motivation, stimulating curiosity, exploration, and self-efficacy. At the same time, digital feedback, scoring, and achievement systems reinforce extrinsic motivation, confirming that digital environments that integrate elements of challenge, control, and recognition satisfy the needs for competence, autonomy, and relatedness, which are essential for adopting active and sustainable academic behaviors.

Similarly, Vieriu & Petrea (2025) point out that artificial intelligence has a positive impact on academic development, as it allows for personalized learning and provides immediate feedback. Artificial intelligence facilitates the delivery of content tailored to each student's level, reinforcing their sense of competence and promoting intrinsic motivation. Furthermore, by enabling decisions about how and when to learn, it satisfies the need for autonomy, while interaction with collaborative systems fosters the need for connection. Thus, digital environments based on artificial intelligence promote more autonomous, proactive, and engaged study behaviors.

Islam & Khan (2024) highlight that sustainability-oriented digital learning environments boost motivation by integrating meaningful and relevant objectives for students. According to the authors, when students perceive those digital activities contribute to a larger purpose, intrinsic motivation increases, and active participation is promoted, along with the development of cognitive and socio-emotional skills. This finding aligns with Ryan & Deci (2000), as perceived relevance satisfies the need for autonomy and fosters the internalization of extrinsic motivation, encouraging sustainable and responsible learning behaviors.

In addition, Sung & Huang (2022) conducted a review of motivational design in inclusive digital environments, concluding that environments that consider student diversity increase motivation and participation. The inclusion of interactive, adaptive, and collaborative elements strengthens intrinsic and extrinsic motivation, allowing students to experience competence, exercise autonomy, and maintain meaningful relationships with peers and teachers, thus promoting active and sustained academic behavior.

Lin (2017) confirms that digital learning has significant positive effects on motivation and academic outcomes. Students who use digital platforms show greater interest in learning, better performance on assessments, and a greater willingness to participate in academic activities. This finding indicates that digital environments, when designed with immediate feedback and interactive activities, satisfy the needs for competence and autonomy, increasing intrinsic motivation and fostering more proactive study habits, in line with the theoretical framework of Ryan & Deci (2000).

Khan et al. (2025) indicate that the transition from traditional blackboards to digital screens improves motivation, engagement, and academic behavior. Students exposed to interactive digital environments adopt more active behaviors, manage their learning better, and feel more responsible for their achievements. This demonstrates that intrinsic motivation is reinforced when digital environments provide autonomy and challenge, while extrinsic motivation is strengthened by rewards and recognition, generating consistent and committed academic behavior.

Liang et al. (2024) highlight that the adoption of technology-enhanced learning improves the performance, satisfaction, and motivation of university students. Perceived efficacy, interaction with digital resources, and technological accessibility influence active participation and the adoption of sustainable study habits, supporting the idea that digital environments, by satisfying needs for competence and autonomy, increase intrinsic motivation and contribute to the internalization of extrinsic motivation, reinforcing positive academic behavior.

Xiao & Hu (2025) analyzed how virtual technologies influence student motivation and engagement, showing that interactive and personalized environments increase participation and interest in learning. Intrinsic motivation grows when students perceive control and relevance in tasks, while extrinsic motivation is strengthened through feedback and recognition, demonstrating that the structure and design of the digital environment are key determinants of academic behavior and sustained engagement.

Li et al. (2026) propose strategies to foster enthusiasm for learning in first-year students through interactive activities, constant feedback, and personalized follow-up. Initial motivation, strengthened through digital environments that foster autonomy, competence, and connection, is fundamental for establishing lasting study habits and responsible academic behavior, highlighting the importance of digital environments from the earliest stages of university education.

Zang et al. (2022) show that online learning environments significantly influence the intrinsic motivation and engagement of international students. The accessibility of resources, the clarity of content presentation, and interaction with instructors and peers foster greater participation and persistence in learning. This confirms that the appropriate design of digital environments satisfies needs for autonomy, competence, and relatedness, strengthening motivation and academic behavior according to the principles of Ryan & Deci (2000).

Finally, Novikova et al. (2024) demonstrate that attitudes toward educational technologies vary according to academic motivation and personality traits. Students with higher intrinsic and extrinsic motivation show a more positive disposition toward digital environments, adopting active and sustained learning behaviors. This demonstrates that motivation interacts with individual characteristics and the design of the digital environment, modulating participation, academic self-regulation, and commitment to university learning.

Digital learning environments have proven essential for boosting the motivation and academic performance of university students. They not only facilitate access to information but also enable meaningful learning experiences tailored to students' individual interests and needs. Interactive platforms, educational games, artificial

intelligence, and innovative digital tools offer immediate feedback, personalized learning paths, and collaborative activities that reinforce both intrinsic and extrinsic motivation. The ability to make decisions about one's own learning, along with clear objectives and recognition of achievements, satisfies needs for autonomy and competence, while interaction with teachers and peers strengthens social relationships and a sense of belonging—fundamental elements according to Ryan & Deci 's (2020) principles.

Well-designed digital learning environments foster self-regulation and academic discipline by providing opportunities to organize, plan, and evaluate one's own learning. The combination of autonomy, competence, and connection allows students to develop sustained engagement, maintain persistence in the face of challenges, and be willing to explore new knowledge. The integration of intrinsic and extrinsic motivation facilitates students' internalization of academic goals, their assumption of responsibility for their learning, and their adoption of more active and proactive academic behaviors. At the same time, the relevance and significance of tasks within these digital environments generates a sense of purpose that reinforces intrinsic motivation and contributes to the consolidation of sustainable study habits.

Furthermore, inclusive and personalized digital environments cater to diverse learning styles, increasing participation, collaboration, and engagement. By offering appropriate challenges, self-assessment opportunities, and meaningful experiences, students develop cognitive, socio-emotional, and critical thinking skills. The combination of interactive experiences, constant feedback, and social connectivity allows students not only to acquire knowledge but also to strengthen their academic resilience, persistence in the face of difficulties, and capacity for independent learning. In this sense, digital learning environments are becoming a key factor in improving academic performance, strengthening self-regulation, and promoting active participation in all dimensions of university learning, ensuring that motivation translates into effective and sustainable results throughout academic life.

CONCLUSIONS

Literature analysis reveals that digital learning environments play a central role in the motivation and academic behavior of university students. When these environments are carefully designed, they not only facilitate access to information but also create meaningful learning experiences that satisfy the psychological needs for autonomy, competence, and social connection, as outlined in Ryan & Deci (2000). Autonomy is enhanced when students can choose the order of their activities, personalize their pace of study, and decide how to approach the content, which strengthens intrinsic motivation and fosters self-efficacy.

Competence is strengthened through digital platforms that offer immediate feedback, interactive exercises, and adaptive challenges, allowing students to perceive their progress and mastery of the content. This increases both intrinsic and extrinsic motivation and promotes sustainable study habits, effective planning, and self-regulated learning. Additionally, the social dimension of digital environments, through forums, chats, academic networks, and collaborative activities, reinforces the sense of belonging and support among peers and instructors, leading to greater academic commitment and responsibility.

Furthermore, the integration of emerging technologies, such as artificial intelligence and digital educational games, enables the personalization of content and the adjustment of difficulty levels to students' individual needs. This personalization not only enhances their sense of competence and autonomy but also encourages proactive, sustained, and goal-oriented learning behaviors. When students perceive the relevance of activities, even those initially driven by external factors, they tend to internalize the objectives and actively engage in their learning process.

In conclusion, the effectiveness of digital learning environments depends on a balance between pedagogical design, social interaction, technological personalization, and attention to students' individual needs. Environments that combine these elements not only increase intrinsic and extrinsic motivation but also consolidate independent study habits, foster academic resilience, and enable motivation to translate into effective and sustainable results throughout university life. In this sense, digital learning environments are established as a key factor in improving academic performance, strengthening self-regulation, and promoting active participation across all dimensions of university learning.

REFERENCES

Argüello Pazmiño, A. M., Rivera Becerra, L. D., Rojas Aimacaña, D. A., Sánchez Tamayo, E. G., & Serrano Garcés, G. M. (2025). Correlación entre el uso de recursos tecnológicos y la motivación de los estudiantes de bachillerato. SAGA: Revista Científica Multidisciplinar, 2(2), 725-736. https://doi.org/10.63415/saga.v2i2.150

Arzuaga Mejía, R. G., Torres Peinado, L. A., Rivero Gutiérrez, E., & Escobar Rodríguez, N. M. (2026). Conexión con entornos virtuales y su influencia en la motivación y la salud universitaria post-pandemia. Retos, 75, 607-619. https://doi.org/10.47197/retos.v75.118202

Baute-Rosales, M., Espinosa-Soria, M. J., Soler-McCook, J. M., & Chávez-Cárdenas, M. d. C. (2026). Las tecnologías disruptivas: vía para la transformación del aprendizaje. Sophia Editions.

Beñalet, C. E., Pacquiao, E., Hatagi, M. C., Iñigo, E. O., & Edig, M. M. (2023). The influence of social media usage and the level of motivation on students' academic performance: A linear regression analysis. International Journal of Research and Innovation in Social Science, 7(10), 2033–2048. https://doi.org/10.47772/IJRISS.2023.71065

Cáceres-Mesa, M. L. (Comp.). (2026). Educación Superior en tiempos de inteligencia artificial: pedagogía, evaluación y bienestar. Sophia Editions.

Chang, L., Wang, Y., Liu, J., Feng, Y., & Zhang, X. (2023). Study on factors influencing college students' digital academic reading behavior. Frontiers in psychology, 13, 1007247. https://doi.org/10.3389/fpsyg.2022.1007247

Haleem, A., Javaid, M., Qadri, M. A., & Suman, R. (2022). Understanding the role of digital technologies in education: A review. Sustainable Operations and Computers, 3, 275–285. https://doi.org/10.1016/j.susoc.2022.05.004

Islam, Q., & Khan, S. M. F. A. (2024). Sustainability-infused learning environments: Investigating the role of digital technology and motivation for sustainability in achieving quality education. International Journal of Learning, Teaching and Educational Research, 23(1). https://doi.org/10.26803/ijlter.23.1.25

Khan, S. A., Poletti, G., & Khan, F. N. (2025). From chalkboards to digital screens: How classroom technology influences student academic behavior, engagement and motivation. Formazione & insegnamento, European Journal of Research on Education and Teaching, 23(2). https://doi.org/10.7346/-fei-XXIII-02-25_12

Li, M., Chitbanchong, S., Punchatree, N., & Klaysuwan, M. (2026). A guidelines of development learning enthusiasm for first-year student's Faculty of Information Engineering at Nanning University. Open Journal of Social Sciences, 14(3). https://doi.org/10.4236/jss.2026.143011

Li, Y., Chen, D., & Deng, X. (2024). The impact of digital educational games on student's motivation for learning: The mediating effect of learning engagement and the moderating effect of the digital environment. PloS one, 19(1), e0294350. https://doi.org/10.1371/journal.pone.0294350

Li, Y., Chen, D., & Deng, X. (2024). The impact of digital educational games on student's motivation for learning: The mediating effect of learning engagement and the moderating effect of the digital environment. PLoS ONE, 19(1), e0294350. https://doi.org/10.1371/journal.pone.0294350

Liang, Y. (D.), Chen, S., Abeysekera, R., O'Sullivan, H., Bray, J., & Keevill-Savage, I. (2024). Examining the adoption of technology-enhanced learning in universities and its effects on student performance, satisfaction, and motivation. Computers and Education Open, 7, 100223. https://doi.org/10.1016/j.caeo.2024.100223

Lin, M.-H. (2017). A study of the effects of digital learning on learning motivation and learning outcome. EURASIA Journal of Mathematics, Science and Technology Education, 13(7), 3553–3564. https://doi.org/10.12973/eurasia.2017.00744a

Noor, U., Younas, M., Aldayel, H. S., Menhas, R., & Qingyu, X. (2022). Learning behavior, digital platforms for learning and its impact on university student's motivations and knowledge development. Frontiers in Psychology, 13. https://doi.org/10.3389/fpsyg.2022.933974

Novikova, I. A., Bychkova, P. A., Shlyakhta, D. A., & Novikov, A. L. (2024). Attitudes towards digital educational technologies among university students of different fields of study: Role of academic motivation and personality traits. RUDN Journal of Psychology and Pedagogics, 21(4), 1036–1063. https://doi.org/10.22363/2313-1683-2024-21-4-1036-1063

Rodriguez-Barboza, J. R., Pablo-Huamani, R., Deneri Sáenz, E. G., Ramos Morales, D. V., & Rodriguez Rojas, M. L. (2023). Innovación educativa en acción: herramientas digitales y su impacto en la motivación de estudiantes universitarios. Horizontes. Revista de Investigación en Ciencias de la Educación, 7(30), 1739–1751. https://doi.org/10.33996/revistahorizontes.v7i30.624

Ryan, R. M., & Deci, E. L. (2000). Intrinsic and extrinsic motivations: Classic definitions and new directions. Contemporary Educational Psychology, 25(1), 54–67. https://doi.org/10.1006/ceps.1999.1020

Sung, J.S.. & Huang, W.D. (2022). Motivational Design for Inclusive Digital Learning Innovation: A Systematic Literature Review. The Journal of Applied Instructional Design, 11(2), 113-129. https://doi.org/10.59668/377.8287

Vieriu, A. M., & Petrea, G. (2025). The impact of artificial intelligence (AI) on students' academic development. Education Sciences, 15(3), 343. https://doi.org/10.3390/educsci15030343

Xiao, Y., & Hu, Q. (2025). The influence of virtual technologies on motivation and engagement: A comparative analysis of male and female students. Interactive Learning Environments, 33(3), 2524–2537. https://doi.org/10.1080/10494820.2024.2412066

Zang, F., Tian, M., Fan, J., & Sun, Y. (2022). Influences of Online Learning Environment on International Students' Intrinsic Motivation and Engagement in the Chinese Learning. Journal of International Students, 12(S1), 61-82. https://doi.org/10.32674/jis.v12iS1.4608

Conflicts of Interest:

The author declares no conflicts of interest.

Author Contributions:

Rahil Najafov: Conceptualization, data curation, formal analysis, investigation, methodology, supervision, validation, visualization, original draft writing, and writing, review, and editing.

Ethical statement:

The study was based on the analysis of documentary sources and publicly available data, and therefore did not involve the direct participation of human subjects. No personally identifiable information was handled.