

Motivational factors for university students in the post-pandemic

Factores motivacionales para estudiantes universitarios en la postpandemia

  Carlos Alberto Gómez Cano¹

  Verenice Sánchez Castillo²

  Rolando Eslava Zapata³

¹ Corporación Universitaria Minuto de Dios, Colombia

² Universidad de la Amazonia, Colombia

³ Universidad Libre de Colombia, Colombia

Fecha de recepción: 01.10.2024

Fecha de aprobación: 31.11.2024

Fecha de publicación: 17.12.2024

Cómo citar: Gómez Cano, C., Sánchez Castillo, V. & Eslava Zapata, R. (2024). Motivational factors for university students in the post-pandemic. *Psiquemag* 13 (2), e130208. <https://doi.org/10.18050/psiquemag.v13i2.3132>

Autor de correspondencia: Carlos Alberto Gómez Cano

Abstract

The article explores the challenges and opportunities that the COVID-19 pandemic has brought to the motivation of university students. The transition to online learning presented significant challenges, such as reduced hands-on experiences and decreased self-efficacy; but it opened the door to more flexible and personalized educational methods that have improved student motivation. In addition, the importance of creating learning environments that promote autonomy, competence and belonging are highlighted, key aspects for the comprehensive well-being of students. The pandemic also exacerbated mental health issues and social disconnection, leading to increased focus on students' emotional and social well-being. Finally, there is a growing interest in careers that have a positive impact on society, such as health sciences and STEM, as well as in social justice issues, reflecting an alignment of academic studies with personal and social values. of students, boosting their commitment and motivation in post-pandemic education.

Keywords: Online learning, Emotional well-being, STEM careers, Student motivation, Post-pandemic.

Resumen

El artículo explora los desafíos y oportunidades que la pandemia de COVID-19 ha traído a la motivación de los estudiantes universitarios. La transición al aprendizaje en línea presentó retos significativos, como la reducción en las experiencias prácticas y la disminución de la autoeficacia; pero abrió la puerta a métodos educativos más flexibles y personalizados que han mejorado la motivación estudiantil. Además, se destaca la importancia de crear entornos de aprendizaje que fomenten la autonomía, la competencia y la pertenencia, aspectos clave para el bienestar integral de los estudiantes. La pandemia también exacerbó problemas de salud mental y desconexión social, lo que llevó a una mayor atención en el bienestar emocional y social de los estudiantes. Finalmente, se observa un creciente interés en carreras que tienen un impacto positivo en la sociedad, como las ciencias de la salud y STEM, así como en temas de justicia social, lo que refleja un alineamiento de los estudios académicos con los valores personales y sociales de los estudiantes, e impulsa su compromiso y motivación en la educación postpandémica.

Palabras clave: Aprendizaje en línea, Bienestar emocional, Carreras STEM, Motivación estudiantil, Postpandemia.

INTRODUCTION

The COVID-19 pandemic has had a profound and multifaceted impact on higher education worldwide. It has altered, in addition to the way education is delivered, the motivation and well-being of university students (Laplagne & Urnicia, 2023; Ballesteros & Magomedova, 2023; Gomez & Sanchez, 2023). Prior to the pandemic, university students' motivational factors focused on academic achievement, social interaction, and integration into the university community (Lopez et al., 2024). However, the abrupt shift to online education, loss of face-to-face experiences, and increased emotional and mental health concerns have significantly transformed students' motivational landscape (Henadirage & Gunarathne, 2023; Ng et al., 2023; Kulal et al., 2024).

During the pandemic, many students faced unique challenges, such as adapting to new teaching modalities, social isolation, and uncertainty about their academic and professional futures. These conditions affected their academic performance, their sense of belonging, and their ability to stay motivated in a distant and sometimes discouraging learning environment. The abrupt transition to digital education revealed the urgent need to rethink traditional educational models and adopt approaches that respond to the new technological realities, recognize and address the complex emotional and psychological needs of students (Hernández et al., 2023; Hinostroza et al., 2024; Dabija et al., 2024).

In the post-pandemic context, higher education institutions face the challenge of rebuilding student motivation in an environment that continues to evolve (Perez et al., 2023). Student motivation is now influenced by a combination of internal factors, such as self-efficacy and autonomy management, and external factors, such as the quality of interaction with teachers and peers (Anthonysamy & Singh, 2023; Banihashem et al., 2023). In addition, the collective experiences of the pandemic have highlighted the importance of educational approaches that integrate social-emotional support with academic instruction to foster a more holistic and resilient learning experience.

In this scenario, the need arises to explore and understand what motivational factors are most relevant to university students in the post-pandemic, and how institutions can adapt their practices to enhance the educational experience and promote greater academic engagement and success. This article seeks to analyze these factors in light of recent transformations in higher education and provides a framework for identifying and implementing effective strategies to motivate students in this new educational era.

METHOD

Type of study

This article was developed through a documentary review (David & Thélusma, 2024; Pérez *et al.*, 2024; Rodríguez *et al.*, 2024; Sánchez *et al.*, 2024; Velásquez & Paredes, 2024) with the objective of identifying and analyzing the motivational factors that influence university students in the post-pandemic context. The review focused on the collection of information from academic articles and publications in specialized journals in higher education and educational psychology. Databases such as PubMed, SpringerLink, Scopus and Google Scholar were used to locate relevant studies published between 2022 and 2024.

Selection criteria

The selection criteria included studies that addressed student motivation, the impact of the pandemic on education, and pedagogical adaptations implemented in university settings. Studies that were not directly related to the university context or that focused exclusively on different educational levels, such as primary or secondary, were excluded.

Search strategy

The sources were selected based on the following search strategy: “student motivation” AND “post-pandemic” AND “online learning” AND “emotional well-being”. Priority was given to texts written in Spanish or English, published in scientific journals between 2022 and 2024. The variety of journals, authors and regions was taken into account. Once the sources were identified, those that did not fit the objective of this article

were discriminated, and the correspondence among words, keywords, title, abstract and results was analyzed.

Analysis of the information

For the documentary review, articles that had this type of methodology were analyzed and included bibliometric analysis (Gómez & Sánchez, 2024; Padilla, 2024; Sánchez & Gómez, 2024; Zapata *et al.*, 2024; Jiménez & Hernández, 2024) and scientometric analysis (Tiwari *et al.*, 2023; Meléndez, 2024; Sánchez *et al.*, 2024) in order to determine patterns and trends in terms of data representation in tables, figures and graphs. This was done with the use of VOSviewer software, the Lens.org platform and the Canva tool.

The information obtained was analyzed qualitatively to identify patterns and trends in motivational practices, as well as emerging challenges and opportunities in post-pandemic education. This review allowed synthesizing key findings and formulating conclusions about effective strategies to support university students' motivation and well-being in this new educational scenario (Cardeno *et al.*, 2023; Eduardo de Jesús *et al.*, 2023; Cantón, 2024; Duque, 2024; Gonzaga *et al.*, 2024).

RESULTS

Creation of Inclusive Learning Environments and Support for Autonomy

A key trend in the post-pandemic is the creation of learning environments that promote student autonomy, competence, and belonging (Alon *et al.*, 2023; Conesa *et al.*, 2023; Gherghel *et al.*, 2023; Li *et al.*, 2023; Gortazar *et al.*, 2024). These elements are fundamental to motivate students to actively engage in their educational process and improve their academic performance. Autonomy, understood as the ability of students to make decisions about their own learning, can be fostered by offering choices about how and when to complete assignments, as well as allowing students to participate in developing curricula and making decisions about due dates and types of assessments. This approach enhances not only students' perceived control over their learning, but also their accountability and engagement as they feel that their opinions

and preferences are valued.

Competence, or students' perception that they have the ability to overcome academic challenges, is reinforced by allowing for revisions and improvements in assignments, which fosters a positive feedback cycle. Instead of viewing mistakes as definitive failures, students learn to perceive them as opportunities for continued growth and learning, which can significantly increase their intrinsic motivation (Wynne & Garrow, 2024). In addition, providing constructive and detailed feedback that focuses on effort and effective strategies, rather than simply on the end result, helps students develop a growth mindset and persevere in their academic goals.

Fostering a classroom community is also crucial to strengthening the sense of belonging, which is another fundamental pillar of motivation. Social interaction and a sense of connection with classmates and teachers help students feel supported and valued within the academic environment. Strategies such as promoting group discussions, collaborative projects, and activities that integrate active participation can help reduce feelings of isolation and increase students' engagement with their education. Establishing an environment that values each student's contributions and promotes inclusion and mutual respect can create an atmosphere that not only motivates, but enriches the entire learning experience.

The integration of these strategies responds to an emerging need in post-pandemic education: to recognize and adapt pedagogical practices to the changing emotional, social, and academic realities of students. By supporting autonomy, competence, and belonging, educators can create more motivating and resilient environments that align with academic expectations and also address the broader needs of students on their path towards success.

The main categories addressed up to this point were represented in a keyword co-occurrence graph using VOSviewer software, in which a total of 70 items and 10 clusters were linked. The following stand out: higher education, online education, teaching-learning strategies, COVID-19, fundamentally (Figure 1).

Figure 1
Correlation of keywords..

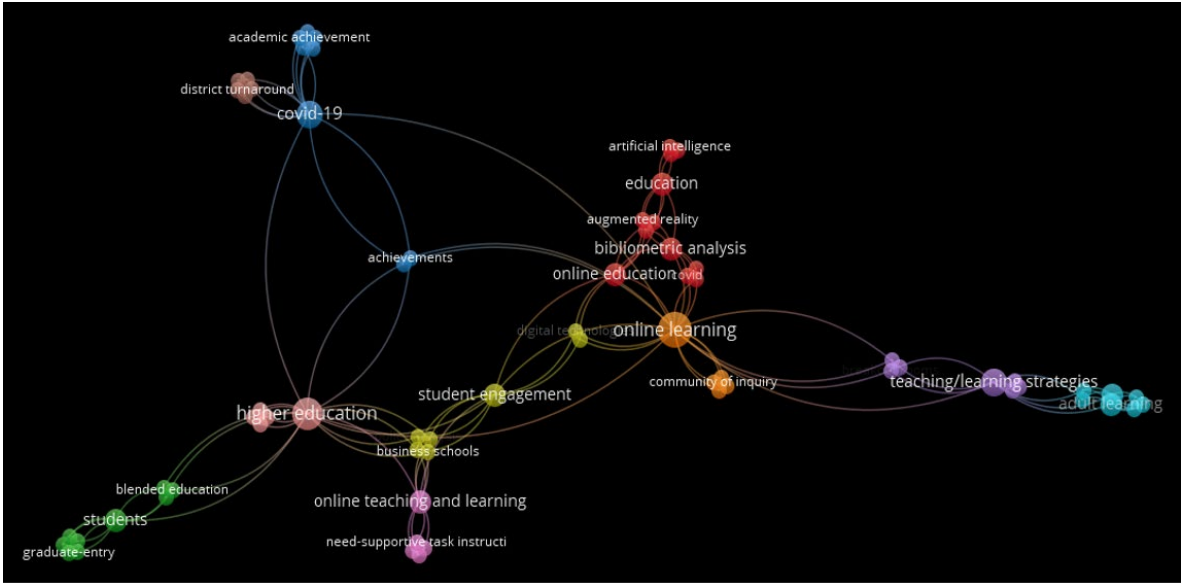


Figure 2 shows the frequency of publications related to the topic in a period between 2022 and 2024, according to areas of knowledge. Psychology (n=40), Computer Science (n=31), Mathematics Education and Medicine stand out with (n=27) each. The mean among other sciences and disciplines is (n=7).

Figure 2
Frequency of publications by areas of knowledge

11	4	8	6	3
Artificial intelligence	Association (psychology)	Biology	Blended learning	Chemistry
4	31	3	16	4
Class (philosophy)	Computer science	Cooperative learning	Coronavirus disease 2019 (COVID-19)	Curriculum
3	16	3	3	4
Descriptive statistics	Disease	Distance education	Ecology	Economics
17	5	3	4	8
Educational technology	Engineering	Engineering ethics	Epistemology	Higher education
3	16	3	13	4
Human-computer interaction	Infectious disease (medical specialty)	Internal medicine	Law	Library science
4	4	27	16	27
Linguistics	Mathematics	Mathematics education	Medical education	Medicine
6	4	4	4	5
Multimedia	Neuroscience	Online learning	Operating system	Paleontology
14	14	18	4	7
Pandemic	Pathology	Pedagogy	Perception	Philosophy
15	40	4	4	11
Political science	Psychology	Psychotherapist	Public relations	Social psychology
8	14	4	4	4
Social science	Sociology	Student engagement	Test (biology)	World Wide Web
>37.5				0

Adaptation to New Methodologies and Technologies

The transition to online learning during the pandemic presented a number of significant challenges, such as decreased opportunities for hands-on learning and reduced self-efficacy in virtual environments (Szopiński & Bachnik, 2022; Mendoza *et al.*, 2023; Parida *et al.*, 2023; Wilkins *et al.*, 2023; Giday & Perumal, 2024; Sitar *et al.*, 2024). Many students experienced difficulties adapting to the lack of face-to-face interaction and less immediate feedback from their professors, which affected their motivation and confidence in their abilities to learn effectively in a digital environment. In addition, the need to develop new technological skills and manage the academic load autonomously amplified these challenges, and has left some students feeling overwhelmed and disconnected.

However, this same transition also opened up a range of opportunities to implement more flexible and personalized teaching methods adapted to the individual needs of students. Asynchronous learning, for example, allowed students to access materials and complete assignments at their own pace, which can be especially beneficial for those with outside obligations, such as work or family responsibilities. This flexibility reduces the stress associated with rigid deadlines and empowers students to take a more active role in managing their time and resources, strengthening their sense of autonomy and control over their own learning process.

In addition, open-ended evaluations and the inclusion of projects and assignments that allow for multiple ways of demonstrating acquired knowledge have promoted greater personalization of learning, as well as encouraging students to apply their skills in contexts that are relevant and meaningful to them. The use of technologies such as digital learning platforms, online collaboration tools, and multimedia resources has facilitated the creation of more dynamic and interactive learning experiences, which can better engage students' attention and interest (Rodriguez *et al.*, 2023; Wandelt *et al.*, 2023; Mvr & Fontes, 2024).

The influence of these strategies and technologies derived from remote learning is evident in the structure of post-pandemic teaching (Bhutoria & Aljabri, 2022). Educational institutions are increasingly aware of the need to

design learning experiences that not only convey academic content, but also strengthen students' self-confidence and their ability to manage their own learning effectively (Saliba, 2024). This includes practices that foster self-efficacy, such as offering constructive and detailed feedback, promoting reflection on one's own learning process, and creating a supportive environment where students feel safe to explore and make mistakes.

In summary, while the transition to online learning presented initial challenges, it has also catalyzed a shift toward more flexible, student-centered approaches that have the potential to motivate and empower students in a post-pandemic educational environment. The key is to take advantage of these opportunities to continue to improve pedagogical practices, ensuring that both the academic and emotional needs of students are addressed to build more resilient and effective learning.

Impact of Socio-cultural and Emotional Factors

The COVID-19 pandemic intensified mental health problems and feelings of social disconnection among university students, which negatively impacted their academic motivation and overall well-being. Social restrictions, prolonged isolation, and uncertainty about the future contributed to an increase in anxiety, depression, and other emotional disorders (Patel *et al.*, 2021; Caero & Libertelli, 2023; Harbatkin *et al.*, 2023; Barrera *et al.*, 2024). This situation highlighted the critical need to support students' academic achievement, emotional and social well-being as an essential component of their educational success.

In response to these challenges, a renewed and more holistic approach to student well-being has emerged, highlighting the importance of programs and strategies that integrate emotional support, the building of meaningful relationships, and the promotion of an inclusive and empathetic learning environment (Ramirez *et al.*, 2023; Restrepo *et al.*, 2023; Rodriguez *et al.*, 2023; Torres, 2023; Rosario & Humbertovich, 2024; Rocha *et al.*, 2024). Educational institutions have begun to implement psychological counseling services, stress management workshops, and activities designed to foster social connectedness, even in virtual environments. This attention to well-being helps mitigate the negative effects of

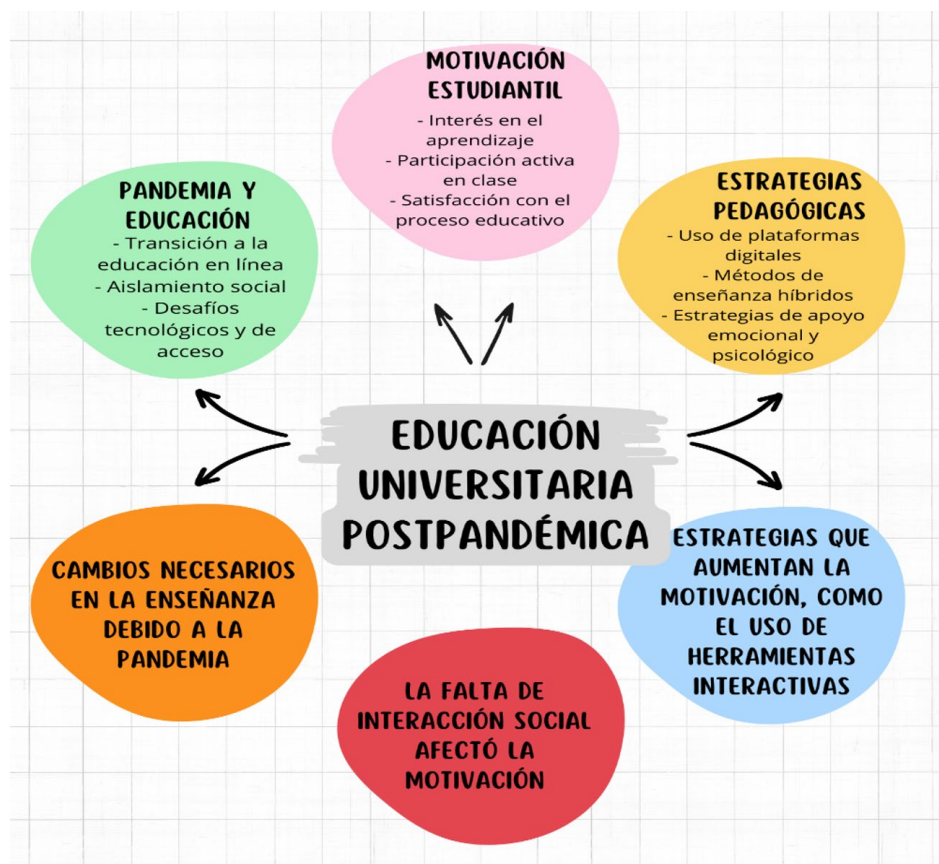
social disconnection and can revitalize academic motivation by creating an environment where students feel safe, supported, and valued.

In parallel, these emotional challenges have also led to increased student interest in careers that have a positive impact on society, such as health sciences, technology, engineering and mathematics (STEM). The pandemic highlighted the importance of professionals in these fields and has inspired many students to pursue careers that directly contribute to community and global well-being. The perception of social relevance and the possibility of making a tangible difference have emerged as strong motivators for students, prompting them to align their studies with their personal values and aspirations.

In addition, a growing interest in social justice and community issues has become a key driver for many students. The pandemic exposed social and economic inequalities, catalyzed global movements advocating for equity, human rights and inclusion. As a result, many students seek to align their academic choices with their social ideals and commitments, choosing programs and projects that allow them to address issues such as social justice, sustainability and equity. This trend reflects a shift in the way students perceive their education, seeing it as a tool for personal development and also as a means to contribute meaningfully to society.

Figure 3 summarizes what has been discussed so far in the literature regarding the relationship among education, university motivation and post-pandemic.

Figure 3
Summary graph



Although the pandemic exacerbated mental health issues and feelings of disconnection, it also acted as a catalyst for a broader and deeper focus on holistic student well-being. This approach considers academic achievement and values emotional and social connectedness. It inspires students to pursue careers that resonate with their values and aspirations for positive impact in the world.

CONCLUSIONS

The implementation of flexible and personalized teaching methods, such as asynchronous learning and open-ended evaluations, has proven to be effective in improving students' motivation and engagement post-pandemic. These strategies allow students to better manage their time and resources, thus fostering autonomy and self-confidence in their learning process, which is critical to their academic success in a changing and digital environment.

The pandemic highlighted the need for a broader approach to student well-being, integrating social and emotional support with academic education. Institutions that prioritize the creation of inclusive and empathetic learning environments that promote belonging and competence contribute significantly to student motivation, helping them overcome challenges related to mental health and social disconnection.

The post-pandemic has led to an increase in students' interest in careers that have a positive impact on society, such as health sciences and STEM, and in social and community justice. This alignment between academic studies and students' personal and social values has become a key motivational factor, prompting them to become more actively involved in their studies and to seek ways to contribute to positive change in their communities and the world in general.

Acknowledgments:

The authors would like to thank the open access databases.

Funding:

Self-financed

Authors Roles:

CAGC: Design concept, results analysis and review.

VSC: Design concept, results analysis and review.

REZ: Design concept, results analysis and review.

Competing interests: The authors declare under oath that they have no conflict of interest in the preparation of this article.

REFERENCES

- Alon, L., Sung, S., Cho, J., & Kizilcec, R. F. (2023). From emergency to sustainable online learning: Changes and disparities in undergraduate course grades and experiences in the context of COVID-19. *Computers & Education*, 203, 104870. <https://doi.org/https://doi.org/10.1016/j.compedu.2023.104870>
- Anthony Samy, L., & Singh, P. (2023). The impact of satisfaction, and autonomous learning strategies use on scholastic achievement during Covid-19 confinement in Malaysia. *Heliyon*, 9(2), e12198. <https://doi.org/https://doi.org/10.1016/j.heliyon.2022.e12198>
- Ballesteros, M., & Magomedova, N. (2023). Impactful social entrepreneurship education: A US-Spanish service learning collaborative online international learning (COIL) project. *The International Journal of Management Education*, 21(3), 100866. <https://doi.org/https://doi.org/10.1016/j.ijme.2023.100866>
- Banihashem, S. K., Noroozi, O., den Brok, P., Biemans, H. J. A., & Kerman, N. T. (2023). Modeling teachers' and students' attitudes, emotions, and perceptions in blended education: Towards post-pandemic education. *The International Journal of Management Education*, 21(2), 100803. <https://doi.org/https://doi.org/10.1016/j.ijme.2023.100803>

- Barrera, D., Tello, R. Y., Ramos, F., & Pérez, A. J. (2024). Acompañamiento a la promoción de proyectos de vida de jóvenes seropositivos. Un estudio cualitativo complejo. *Región Científica*, 3(1), 2024248. <https://doi.org/10.58763/rc2024248>
- Bhutoria, A., & Aljabri, N. (2022). Patterns of cognitive returns to Information and Communication Technology (ICT) use of 15-year-olds: Global evidence from a Hierarchical Linear Modeling approach using PISA 2018. *Computers & Education*, 181, 104447. <https://doi.org/https://doi.org/10.1016/j.compedu.2022.104447>
- Caero, L., & Libertelli, J. (2023). Relación entre Vigorexia, uso de esteroides y práctica de musculación recreacional y efectos del cierre de los centros de entrenamiento por pandemia Covid-19 en jóvenes de Argentina. *AG Salud*, 1, 18. <https://doi.org/10.62486/agsalud202318>
- Cantón, A. L. (2024). El estado de las habilidades ciudadanas en estudiantes universitarios de Chile, Colombia y México. *Región Científica*, 3(1), 2024244. <https://doi.org/10.58763/rc2024244>
- Cardeño, N., Cardeño, E. J., & Bonilla, E. (2023). TIC y transformación académica en las universidades. *Región Científica*, 2(2), 202370. <https://doi.org/10.58763/rc202370>
- Conesa, P. J., Duñabeitia, J. A., Onandia, I., & González, D. (2023). Satisfying students' psychological needs in the classroom: Benefits of an online intervention to help primary school teachers during a pandemic academic year. *Teaching and Teacher Education*, 133, 104281. <https://doi.org/https://doi.org/10.1016/j.tate.2023.104281>
- Dabija, D. C., Brătianu, C., Dominici, G., & Vătămănescu, E. M. (2024). Unveiling e-learning and knowledge sharing during the pandemic: From expert skills perception to student satisfaction. *Technology in Society*, 77, 102538. <https://doi.org/https://doi.org/10.1016/j.techsoc.2024.102538>
- David, J. B., & Thélusma, M. F. (2024). Immigration and work, considerations about the challenges in Brazil: bibliographic review of the literature. *Community and Interculturality in Dialogue*, 4, 128. <https://doi.org/10.56294/cid2024128>
- Duque, A. P. (2024). Estudio sistemático de la participación del marketing ambiental, como método para fomentar la conciencia ambiental de estudiantes universitarios. *Región Científica*, 3(2), 2024306. <https://doi.org/10.58763/rc2024306>
- Eduardo de Jesús, P. B., Naranjo, O. V., Barrios, L., Arencibia, L. G., & Bernardo, M. G. (2023). Hybrid teaching: a departmental teaching innovation participating in university digital transformation. *Seminars in Medical Writing and Education*, 2, 28. <https://doi.org/10.56294/mw202328>
- Gherghel, C., Yasuda, S., & Kita, Y. (2023). Interaction during online classes fosters engagement with learning and self-directed study both in the first and second years of the COVID-19 pandemic. *Computers & Education*, 200, 104795. <https://doi.org/https://doi.org/10.1016/j.compedu.2023.104795>
- Giday, D. G., & Perumal, E. (2024). Students' perception of attending online learning sessions post-pandemic. *Social Sciences & Humanities Open*, 9, 100755. <https://doi.org/https://doi.org/10.1016/j.ssaho.2023.100755>
- Gómez, C. A., & Sánchez, V. (2023). Systematic review on Augmented Reality in health education. *Gamification and Augmented Reality*, 1, 28. <https://doi.org/10.56294/gr202328>
- Gómez, C. A., & Sánchez, V. (2024). Scholarly Output on Computer Networks and Communication: A Ten-Year Bibliometric Analysis in Scopus (2013-2022). *Gamification and Augmented Reality*, 2, 29. <https://doi.org/10.56294/gr202429>
- Gonzaga, A., Paucar, A., & Chuncho, C. (2024). La investigación formativa. Experiencias de la carrera Ingeniería Ambiental de la Universidad Nacional de Loja. *Región Científica*, 3(2), 2024294. <https://doi.org/10.58763/rc2024294>
- Gortazar, L., Hupkau, C., & Roldán, A. (2024). Online tutoring works: Experimental evidence from a program with vulnerable children. *Journal of Public Economics*, 232, 105082. <https://doi.org/https://doi.org/10.1016/j.jpubeco.2024.105082>
- Harbatkin, E., Strunk, K. O., & McIlwain, A. (2023). School turnaround in a pandemic: An examination of the outsized implications of COVID-19 on low-performing turnaround schools, districts, and their communities. *Economics of Education Review*, 97, 102484. <https://doi.org/https://doi.org/10.1016/j.econedurev.2023.102484>

- Henadirage, A., & Gunarathne, N. (2023). Retaining remote teaching and assessment methods in accounting education: Drivers and challenges in the post-pandemic era. *The International Journal of Management Education*, 21(2), 100810. <https://doi.org/https://doi.org/10.1016/j.ijme.2023.100810>
- Hernández, G., Rodríguez, Y., Villalonga, Y. S., & Jiménez, G. A. (2023). *Las redes sociales y las TIC como herramientas de globalización cultural en la pandemia "COVID-19"*. <http://rein.umcc.cu/handle/123456789/2158>
- Hinostroza, J. E., Armstrong, S., & Villafaena, M. (2024). Roles of digital technologies in the implementation of inquiry-based learning (IBL): A systematic literature review. *Social Sciences & Humanities Open*, 9, 100874. <https://doi.org/https://doi.org/10.1016/j.ssaho.2024.100874>
- Jiménez, G. A. & Hernández, J. M. (2024). Applications of Artificial Intelligence in Contemporary Sociology. *LatIA*. 2(12). <https://doi.org/10.62486/latia202412>
- Kulal, A., Dinesh, S., Abhishek, N., & Anchan, A. (2024). Digital access and learning outcomes: a study of equity and inclusivity in distance education. *International Journal of Educational Management*, 38(5), 1391-1423. <https://doi.org/https://doi.org/10.1108/IJEM-03-2024-0166>
- Laplagne, C., & Urnicia, J. J. (2023). Protocolos de B-learning para la alfabetización informacional en la Educación Superior. *Región Científica*, 2(2), 202373. <https://doi.org/10.58763/rc202373>
- Li, L., Zhang, R., & Piper, A. M. (2023). Predictors of student engagement and perceived learning in emergency online education amidst COVID-19: A community of inquiry perspective. *Computers in Human Behavior Reports*, 12, 100326. <https://doi.org/https://doi.org/10.1016/j.chbr.2023.100326>
- López, M. M., Inguanzo Ardila, A. M., & Guerra, E. (2024). La Orientación Educativa. Desafíos teóricos y prácticos. *Región Científica*, 3(1), 2024245. <https://doi.org/10.58763/rc2024245>
- Meléndez, M. L. (2024). Revisión cuantitativa y bibliométrica sobre redes y ecosistemas de emprendimiento. *Región Científica*, 3(2), 2024300. <https://doi.org/10.58763/rc2024300>
- Mendoza, N. B., Yan, Z., & King, R. B. (2023). Supporting students' intrinsic motivation for online learning tasks: The effect of need-supportive task instructions on motivation, self-assessment, and task performance. *Computers & Education*, 193, 104663. <https://doi.org/https://doi.org/10.1016/j.compedu.2022.104663>
- Mvr, R., & Fontes, A. J. (2024). Availability of retracted Covid-19 papers on Internet research-sharing platforms. *Seminars in Medical Writing and Education*, 3, 54. <https://doi.org/10.56294/mw202454>
- Ng, D. T., Ching, A. C., & Law, S. W. (2023). Online learning in management education amid the pandemic: A bibliometric and content analysis. *The International Journal of Management Education*, 21(2), 100796. <https://doi.org/https://doi.org/10.1016/j.ijme.2023.100796>
- Padilla, S. G. (2024). Inteligencia Artificial en los servicios bancarios. Una revisión bibliométrica. *Región Científica*, 3(2), 2024335. <https://doi.org/10.58763/rc2024335>
- Parida, S., Dhakal, S. P., Dayaram, K., Mohammadi, H., Ayentimi, D. T., Amankwaa, A., & D'Cruz, D. (2023). Rhetoric and realities in Australian universities of student engagement in online learning: Implications for a post-pandemic era. *The International Journal of Management Education*, 21(2), 100795. <https://doi.org/https://doi.org/10.1016/j.ijme.2023.100795>
- Patel, R., Hoppman, N. L., Gosse, C. M., Hagen-Moe, D. J., Dunemann, S. K., Kreuter, J. D., Preuss, S. A., Winters, J. L., Sturgis, C. D., Maleszewski, J. J., Solanki, M. H., Pritt, B. S., Rivera, M., Mairose, A. M., Nelsen, M. A., Hansing, K. L., Lehman, S. M., Gruhlke, R. C., & Boland, J. M. (2021). Laboratory Medicine and Pathology Education During the COVID-19 Pandemic—Lessons Learned. *Academic Pathology*, 8, 23742895211020487. <https://doi.org/https://doi.org/10.1177/23742895211020487>
- Pérez, A. J., García, Y., García, J. & Raga, L. M. (2023). La configuración de proyectos de vida desarrolladores: Un programa para su atención psicopedagógica. *Actualidades Investigativas en Educación*, 23(1), 398-431. <https://dx.doi.org/10.15517/aie.v23i1.50678>

- Pérez, Y. O., Rojas, G. A., Sánchez, V. & Pérez, A. J. (2024). La categoría bienestar psicológico y su importancia en la práctica asistencial: una revisión semisistemática. *Revista Información Científica*, 103. http://scielo.sld.cu/scielo.php?script=sci_arttext&pid=S1028-99332024000100018&lng=es&tlng=es
- Ramírez, J. A., Rodríguez, E., & Zamora, J. R. (2023). Estrategias recreativas para suplir las carencias de niños y jóvenes en situaciones de la Covid-19 en el municipio Morón (Cuba). *Región Científica*, 2(1), 202328. <https://doi.org/10.58763/rc202328>
- Restrepo, L. C., Restrepo, K. J., Zúñiga, L. M., & Amaya, A. Y. (2023). La salud mental en tiempos de covid-19: un análisis de Colombia antes y durante la pandemia. *AG Salud*, 1, 11. <https://doi.org/10.62486/agsalud202311>
- Rocha, R. G., Paço, A., & Alves, H. (2024). Entrepreneurship education for non-business students: A social learning perspective. *The International Journal of Management Education*, 22(2), 100974. <https://doi.org/https://doi.org/10.1016/j.ijme.2024.100974>
- Rodríguez, E., Pérez, A. J., & Camejo, Y. (2023). Formación del liderazgo distribuido en los estudiantes de la carrera Gestión Sociocultural para el Desarrollo. *Atenas* (61). <https://pf.umcc.cu/index.php/atenas/article/view/778>
- Rodríguez, M. P., De Jesús, M. T., Nieves, D. O., Velarde, D. V., Olguín, C. M., Bracho, M. A., Bracho, R. I., Ramos, R. L., Villacorta, J. R., Romero, R., Rosillo, N., Bracho, A. S., Mora, J. G., Román, A., Rodríguez, A. M., Carbache, C., Ormazá, E. d. C., Vera, B. S., & Buelna, R. (2024). Redes sociales y la salud mental de los adolescentes: una revisión de literatura. *AG Salud*, 2, 46. <https://doi.org/10.62486/agsalud202346>
- Rodríguez, C., Alvarez, J., Pérez, A. D., & Ron, M. (2023). Distance education during the COVID-19 pandemic: experience at a public university. *Seminars in Medical Writing and Education*, 2, 32. <https://doi.org/10.56294/mw202332>
- Rosario, F. J., & Humbertovich, N. (2024). Evidencias psicométricas del test de dependencia al móvil en los jóvenes de Lima en el contexto de la pandemia. *AG Salud*, 2, 40. <https://doi.org/10.62486/agsalud202440>
- Saliba, R. (2024). Transformation in transformative learning: A reversed experience of faculty members teaching in transnational higher education institutions in Qatar. *Social Sciences & Humanities Open*, 9, 100823. <https://doi.org/https://doi.org/10.1016/j.ssaho.2024.100823>
- Sánchez, V., & Gómez, C. A. (2024). Paz, justicia e instituciones sólidas en Latinoamérica (ODS 16): un análisis bibliométrico (2013-2022). *Jurídicas CUC*, 20(1), 204-222. <https://doi.org/10.17981/juridcuc.20.1.2024.08>
- Sánchez, V., Gómez, C. A., & Pérez, A. J. (2024). La Economía Azul en el contexto de los objetivos del desarrollo sostenible: una revisión mixta e integrada de la literatura en la base de datos Scopus. *AiBi Revista de Investigación, Administración e Ingeniería*, 12(2), 206-221. <https://doi.org/10.15649/2346030X.4028>
- Sánchez, V., Pérez, A. J. & Gómez, C. A. (2024). Trends and evolution of Scientometric and Bibliometric research in the SCOPUS database. *Bibliotecas. Anales de Investigación*, 20(1), 1-22. <http://revistas.bnjm.sld.cu/index.php/BAI/article/view/834>
- Sitar, D.-A., Mican, D., & Moisesescu, O. I. (2024). To be (online) or not to be? The antecedents of online study propensity and e-learning-dependent dropout intention in higher education. *Technological Forecasting and Social Change*, 207, 123566. <https://doi.org/https://doi.org/10.1016/j.techfore.2024.123566>
- Szopiński, T., & Bachnik, K. (2022). Student evaluation of online learning during the COVID-19 pandemic. *Technological Forecasting and Social Change*, 174, 121203. <https://doi.org/https://doi.org/10.1016/j.techfore.2021.121203>
- Tiwari, C. K., Bhaskar, P., & Pal, A. (2023). Prospects of augmented reality and virtual reality for online education: a scientometric view. *International Journal of Educational Management*, 37(5), 1042-1066. <https://doi.org/https://doi.org/10.1108/IJEM-10-2022-0407>
- Torres, M. L. (2023). Estudio de casos de éxito y fracaso de emprendedores a raíz del COVID-19 en Bucaramanga y su área metropolitana. *Región Científica*, 2(1), 202332. <https://doi.org/10.58763/rc202332>

Velásquez, L. A., & Paredes, J. A. (2024). Revisión sistemática sobre los desafíos que enfrenta el desarrollo e integración de las tecnologías digitales en el contexto escolar chileno, desde la docencia. *Región Científica*, 3(1), 2024226. <https://doi.org/10.58763/rc2024226>

Wandelt, S., Sun, X., & Zhang, A. (2023). AI-driven assistants for education and research? A case study on ChatGPT for air transport management. *Journal of Air Transport Management*, 113, 102483. <https://doi.org/https://doi.org/10.1016/j.jairtraman.2023.102483>

Wilkins, S., Butt, M. M., Hazzam, J., & Marder, B. (2023). Collaborative learning in online breakout rooms: the effects of learner attributes on purposeful interpersonal interaction and perceived learning. *International Journal of Educational Management*, 37(2), 465-482. <https://doi.org/https://doi.org/10.1108/IJEM-10-2022-0412>

Wynne, S., & Garrow, A. (2024). Exploring the motivations, expectations, and experience of graduate-entry nursing students: A qualitative research study. *Nurse Education Today*, 142, 106342. <https://doi.org/https://doi.org/10.1016/j.nedt.2024.106342>

Zapata, R. E., Guerrero, E. C., & Montilla, R. E. (2024). Emerging Technologies in Education: A Bibliometric Analysis of Artificial Intelligence and its Applications in Health Sciences. *Seminars in Medical Writing and Education*, 3, 49. <https://doi.org/10.56294/mw202449>