REVISTA INVECOM
ISSN en línea: 2739-0063

Active methodologies in Latin American education: A systematic review on their impact on meaningful learning

Metodologías activas en la educación latinoamericana: una revisión sistemática sobre su impacto en el aprendizaje significativo

Received: 12/04/2025 - **Accepted:** 11/07/2025

Sybile Yesenia Caballero Meneses
https://orcid.org/0009-0006-8828-2226
scaballerome@ucvvirtual.edu.pe
Universidad César Vallejo. Lima, Peru

Elen Solemi Vergara Causo
https://orcid.org/0000-0001-6260-780X
evergara29@ucvvirtual.edu.pe
Universidad César Vallejo. Lima, Peru

Victoria Gardi Melgarejo
https://orcid.org/0000-0001-6016-8719
gardimelgarejov@gmail.com
Universidad César Vallejo. Lima, Peru

Jhonny Richard Rodriguez-Barboza
https://orcid.org/0000-0001-9299-6164
jrodriguez13@ucvvirtual.edu.pe
Universidad César Vallejo. Lima, Peru

Abstract

This study conducts a systematic review of the use and impact of active methodologies in Latin American educational contexts, with an emphasis on their contribution to meaningful learning. Using the PRISMA 2020 protocol, 26 empirical and theoretical studies published between 2020 and 2024 were identified in databases such as SciELO, Latindex, and institutional repositories. The results were categorized into four thematic areas: active strategies, educational technology, skills development, and innovative pedagogical models. The evidence collected highlights that the use of methodologies such as project-based learning, the flipped classroom, and gamification promotes greater autonomy, motivation, and critical thinking. Likewise, an increase in academic performance and student participation is observed when these strategies are applied in a contextualized manner and with institutional support. The discussion suggests that, despite the structural limitations of some education systems, the integration of active approaches represents a viable way to democratize knowledge and respond to the demands of the 21st century. It concludes that teacher training, technological infrastructure, and inclusive education policies are determining factors for effective implementation.

Keywords: active methodologies, meaningful learning, education.

Resumen

El presente estudio desarrolla una revisión sistemática sobre el uso e impacto de las metodologías activas en contextos educativos latinoamericanos, con énfasis en su contribución al aprendizaje significativo. A través del protocolo PRISMA 2020, se identificaron 26 estudios empíricos y teóricos publicados entre 2020 y 2024 en bases de datos como SciELO, Latindex y repositorios institucionales. Los resultados fueron categorizados en cuatro ejes temáticos: estrategias activas, tecnología educativa, desarrollo de competencias y modelos pedagógicos innovadores. La evidencia recopilada destaca que el uso de metodologías como el aprendizaje basado en proyectos, el aula invertida y la gamificación promueve una mayor autonomía, motivación y pensamiento crítico. Asimismo, se observa un incremento en el rendimiento académico y la participación estudiantil cuando estas estrategias son aplicadas de manera contextualizada y con soporte institucional. La discusión plantea que, pese a las limitaciones estructurales de algunos sistemas educativos, la integración de enfoques activos representa

una vía viable para democratizar el conocimiento y responder a las demandas del siglo XXI. Se concluye que la formación docente, la infraestructura tecnológica y las políticas educativas inclusivas son factores determinantes para una implementación efectiva.

Palabras clave: metodologías activas, aprendizaje significativo, educación.

Introduction

In recent decades, educational systems worldwide have faced significant challenges in responding to the demands of a constantly transforming social and technological environment. The traditional pedagogical model, focused on the unidirectional transmission of content, has proven to be limited in meeting the demands of an education that promotes critical thinking, autonomy, and participation (Escarbajal & Martínez, 2023). This gap between current pedagogical practices and the educational needs of the 21st century requires a profound reconfiguration of the roles of both teachers and students.

Internationally, organizations such as UNESCO (2019) have warned that structural issues persist, including educational inequality, the exclusion of vulnerable groups, cultural biases, and the lack of approaches that promote active citizenship. These limitations not only affect access to knowledge but also the manner in which it is constructed. In Latin American countries, educational systems exhibit delays in integrating methodological proposals that connect schools with real-world challenges (Díaz & Canosa, 2021; Ruiz-Rosa et al., 2021).

In the case of Peru, these tensions are reflected in the insufficient teacher training in active methodologies, low investment in pedagogical innovation, and the prevalence of rote learning approaches that reduce students to passive receivers. As noted by Arteaga (2022) and Portero and Medina (2024), the lack of sustained policies to transform the classroom limits the consolidation of meaningful learning. Furthermore, there is weak articulation between curriculum, evaluation, and active strategies, which hinders students from developing transferable skills and autonomous thinking.

In light of this issue, active methodologies have gained prominence as student-centered approaches where learning involves researching, creating, collaborating, and reflecting. Experiences such as project-based learning, gamification, flipped classrooms, and technopedagogical strategies have demonstrated their effectiveness in various contexts by improving academic performance, motivation, and student engagement in their learning processes (Gómez-Zambrano & Pérez-Iribar, 2023; Vélez, 2023).

When these methodologies are coherently integrated with the curriculum and adequate teacher training, they contribute to a more inclusive, participatory, and contextualized education (Lantarón, 2023; Echeverría & Velasco, 2024). However, institutional barriers persist, such as resistance to change, the administrative burden on teachers, and the lack of technological infrastructure in rural and marginalized urban areas.

Against this backdrop, the present study aims to analyze the scientific literature published between 2021 and 2024 on the use and impact of active methodologies in the educational sphere, with a particular emphasis on basic and secondary education. The following guiding questions are proposed: What concrete benefits do these methodologies offer in the teaching-learning process? In which contexts have they been most effective? What are the most common challenges that impede their comprehensive implementation in educational systems like that of Peru?

Methodology

This study was developed under a systematic review approach, aimed at identifying, analyzing, and categorizing the main scientific evidence regarding the application of active methodologies in various educational contexts. The methodological strategy was designed following the guidelines of the PRISMA 2020 model (Page et al., 2021), which ensured transparency, reproducibility, and rigor in the search, selection, and analysis process of the included studies.

The search process was conducted between April and June 2025, using major information sources such as SciELO, Latindex, Latindex 2.0, Web of Science, and institutional university repositories. Combinations of keywords such as “active methodologies,” “meaningful learning,” “gamification,” “virtual education,” and “educational inclusion” were applied using Boolean operators AND/OR to optimize results. The retrieved documents were initially screened by title and abstract, and subsequently analyzed through a comprehensive reading of the full text to assess their relevance to the objectives of the review.

For the final selection, specific inclusion criteria were applied: studies published between 2021 and 2024, written in Spanish, with full access to the text, and presenting a rigorous approach to active methodologies in formal educational settings. Both peer-reviewed scientific articles and academic theses and book chapters with

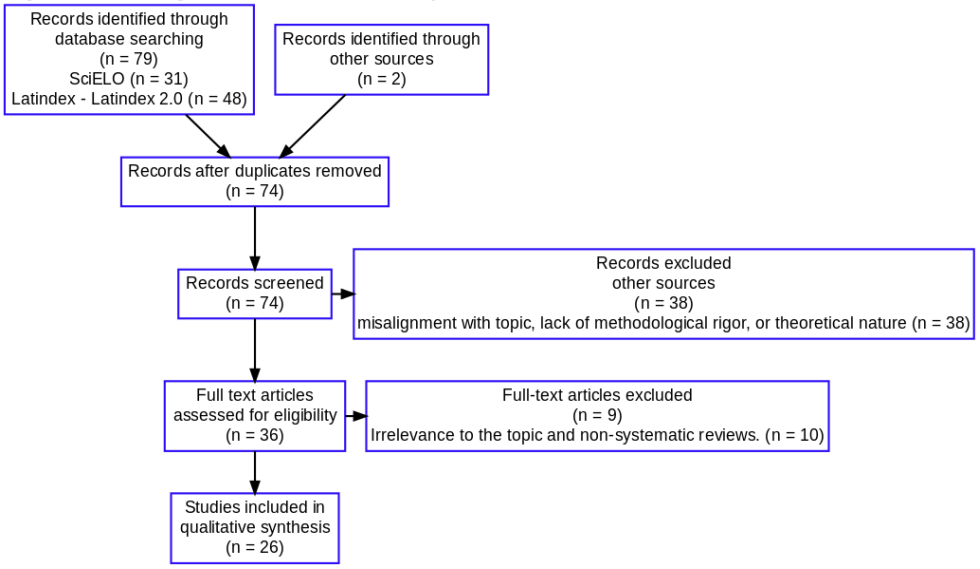
institutional backing were accepted. Conversely, documents in other languages, duplicate publications, studies lacking clear methodological foundations, and non-peer-reviewed materials were excluded.

Table 1
Inclusion and exclusion criteria applied in the study selection

Inclusion criteria	Exclusion criteria
Studies published between 2021 and 2024	Publications prior to 2021 or without verifiable date
Documents in Spanish	Studies in other languages (English, Portuguese, etc.)
Peer-reviewed scientific articles, academic theses, and book chapters	Non-peer-reviewed material or without academic backing (blogs, technical sheets, etc.)
Research on active methodologies in educational contexts	Approaches unrelated to the educational field or with little relation to active methodologies
Available in full text and open access	Documents with restricted access or without complete availability
From recognized databases (SciELO, Latindex, WoS, university repositories)	Duplicate publications or unreviewed preliminary versions
With clear methodological rigor (descriptive, qualitative, review, etc.)	Lack of explicit methodology, without verifiable academic analysis

The final corpus consisted of a total of 26 studies, distributed as follows: 14 from journals indexed in Latindex and Latindex 2.0, 9 extracted from journals registered in SciELO (including those from Cuba, Brazil, Costa Rica, Ecuador, and Venezuela), 1 article indexed in Web of Science, and 2 open-access university theses.

Figure 1
PRISMA flow diagram showing the article selection process



Source. Content generated from https://hollyhartman.shinyapps.io/PRISMAFlowDiagram/

The thematic classification of the articles was conducted through an inductive-categorical analysis, allowing the organization of findings into four emerging categories: practical application, inclusion and values, technological innovation, and pedagogical design.

Table 2
Categorization by databases

Database or repository	Number of studies	Observations
Latindex / Latindex 2.0	14	Includes journals such as Ciencia Latina, Pentaciencias, Revista Transformar, REDU, among others recognized in Latindex.
Scielo	9	Comprises journals from SciELO in Cuba, Brazil, Venezuela, Ecuador, Costa Rica, and Mexico.
Web of Science	1	Corresponds to the journal New Approaches in Educational Research.
Institutional Repositories	2	Includes the repository of UNLP (Argentina) and the Universidad a Distancia de Madrid.

This methodology allowed for the integration of relevant and updated evidence, ensuring a comprehensive and well-founded systematic review that provides an overview of the use, benefits, and challenges of active methodologies in contemporary education.

Results and discussion

The analysis of the 26 selected studies identified patterns, approaches, and significant contributions regarding the use of active methodologies across various educational levels and contexts. The findings were organized into four emerging thematic categories that synthesize the main lines of contribution: practical application and its pedagogical effects; the connection with inclusion and ethical training; technological mediation as a catalyst for active learning; and pedagogical design as a structural foundation for implementation. This classification not only facilitates a systematic reading of the state of the art but also provides a solid basis for future pedagogical interventions and educational innovation proposals.

Table 3
Thematic categorization of reviewed studies (2021–2024)

Thematic category	No. Of studies	Related authors	Comments aligned with the category
1. Practical application and results of using active methodologies	10	Arguello et al. (2023), Curipoma et al. (2023), Peralta (2023), Vera (2022), Frutos & Galera (2023), Matamoro (2023)	Gathers research focused on concrete classroom application experiences. Highlights benefits such as meaningful learning, skill development, and student motivation. The empirical focus of this category validates the positive impact of these methodologies in real contexts.
2. Inclusion, ethics, and values training through	6	Muntaner-Guasp et al. (2022), Pereira et al. (2023), Villalobos-López (2022), Díaz & Canosa (2021)	This category evidences how active methodologies can promote inclusive education, ethical training, and social responsibility. They align with the SDGs and foster a

Thematic category	No. Of studies	Related authors	Comments aligned with the category
active methodologies			values-centered education, especially in early levels and sensitive contexts.
3. Didactic innovation mediated by technology: gamification, virtual environments, and digital resources	6	Daher et al. (2022), Carpio & Cabrera (2021), Cárdenas Cordero et al. (2023), Roa González et al. (2021), Jarrín Miranda (2023)	Aggregates studies where ICT and digital platforms support active methodologies, enhancing interaction, gamification, and collaborative learning. Reflects a growing trend towards the digitalization of educational processes with an active focus.
4. Didactic design and pedagogical strategies in implementing active methodologies	4	Arteaga-Marín et al. (2022), Silva et al. (2024), Garcés Suárez et al. (2022), Paguay Guacho et al. (2022)	Addresses pedagogical design, didactic structuring, and methodological planning as key elements for the success of active methodologies. Emphasizes the need for teacher training and curricular alignment to achieve effectiveness in implementation.

Category 1: Practical application and results of using active methodologies

The experiences gathered across different levels of the educational system reveal that the implementation of active methodologies enhances student participation and fosters a more dynamic and meaningful learning environment. Research conducted by Arguello et al. (2023), Frutos and Galera (2023), and Curipoma et al. (2023) confirms that their incorporation in basic and secondary education classrooms not only strengthens cognitive skills but also improves student motivation and engagement. These strategies, applied in real contexts, facilitate the internalization of content through collaborative, playful activities or problem-solving-based approaches. The inclusion of methodologies such as project-based learning, cooperative learning, or the chalkboard plan strategy demonstrates their effectiveness in promoting critical thinking and student autonomy (Matamoro, 2023; Peralta, 2023).

In higher education, studies such as those by Vera (2022) and Paguay Guacho et al. (2022) show that these methodologies are associated with better academic outcomes and greater student involvement in the teaching-learning process. Adaptations during the pandemic, as described by Cárdenas Zea et al. (2022), revealed that even in virtual environments, active methodologies retained their pedagogical effectiveness. Additionally, Curipoma et al. (2023) highlight the positive impact on the development of transversal competencies such as leadership, effective communication, and teamwork. This evidence consolidates the idea that practical, contextualized, and participatory experiences are fundamental for achieving lasting and transferable learning.

Category 2: Inclusion, ethics, and values training through active methodologies

Various studies demonstrate that active methodologies also play a fundamental role in constructing an inclusive and humanistic education. Muntaner-Guasp et al. (2022) emphasize how these strategies can address diversity in the classroom by adapting activities that respond to different learning paces and styles. Villamizar Cañas (2021) underscores the importance of play as a pedagogical means to develop empathy and respect among early education students. These proposals not only facilitate the integration of all classroom participants but also promote an educational culture based on recognizing differences as an opportunity for collective enrichment.

From a deeper formative perspective, studies by Pereira et al. (2023) and Villalobos-López (2022) argue that active methodologies can effectively articulate with the teaching of ethical and deontological principles. In this sense, Díaz and Canosa (2021) argue that these didactic practices foster committed citizenship, especially when linked to the Sustainable Development Goals. Through service-learning projects, collaborative experiences, or the use of resources like photovoice (Lantarón, 2023), integrated training spaces are created where democratic values and critical thinking are reinforced in an experiential and participatory manner.

Category 3: Didactic innovation mediated by technology: gamification, virtual environments, and digital resources

The use of digital tools has allowed for the reconfiguration of active methodologies, endowing them with greater versatility, scalability, and responsiveness to changing educational contexts. Research by Daher et al. (2022) and Carpio and Cabrera (2021) supports the idea that the incorporation of digital platforms, interactive resources, and strategies like gamification contributes to revitalizing the teaching process, facilitating greater retention of knowledge. In particular, Roa González et al. (2021) document how gamification, applied in secondary contexts in Spain, enhances student participation and enthusiasm for learning curricular content.

Similarly, the development of well-structured e-learning experiences, such as those analyzed by Jarrín Miranda (2023) and Cárdenas Cordero et al. (2023), shows that ICT not only allow for the continuation of teaching in remote contexts but also strengthen student autonomy. These authors highlight that when technologies are integrated critically, intentionally, and pedagogically mediated, students' collaborative, creative, and reflective capacities are enhanced. The fusion of active methodologies and technological resources, as shown by Silva et al. (2024), can also align with artificial intelligence, generating personalized and adaptive learning environments.

Category 4: Didactic design and pedagogical strategies in implementing active methodologies

Beyond application or technological mediation, several studies reflect on the need for robust pedagogical design to achieve effective implementation of active methodologies. Arteaga-Marín et al. (2022) emphasize the necessity of a didactic framework that includes planning, sequencing, and evaluation of learning. In this vein, Garcés Suárez et al. (2022) argue that didactic techniques must be articulated based on clear educational objectives, which requires teachers to engage in reflective, critical, and continuous work. This category highlights that active methodologies are not merely a set of techniques but an epistemological approach that must be anchored in curricular planning.

Silva et al. (2024) and Paguay Guacho et al. (2022) agree that for sustainable results, it is essential to train teachers in methodological and technopedagogical competencies. The design of didactic units based on collaborative work, interdisciplinary approaches, and the strategic use of innovation is key to achieving meaningful learning. These studies underscore the importance of a systemic approach, where resources, strategies, and evaluation align with the principles of active and transformative teaching.

The findings of this systematic review confirm that in Latin America, there is a growing adoption of active methodologies in response to the structural challenges of its educational systems. Research by Arguello et al. (2023), Peralta (2023), and Frutos and Galera (2023) reveals that the implementation of strategies such as project-based learning, gamification, or collaborative work has significantly improved student engagement, especially in basic and secondary education. These approaches have not only elevated levels of motivation and academic performance but have also transformed the teacher's role, positioning the educator as a mediator of learning rather than a unidirectional transmitter of content. In contexts such as Ecuador, Peru, or Colombia, where access and quality gaps persist, these methodologies have allowed for a rethinking of pedagogical practices from a more inclusive and student-centered perspective.

Furthermore, the use of digital technologies has been crucial in enhancing these methodologies in hybrid and virtual environments. Studies conducted in countries like Mexico (Carpio & Cabrera, 2021) and Chile (Silva et al., 2024) show that the incorporation of technopedagogical tools not only facilitates adaptation to changing contexts—such as during the pandemic—but also promotes the development of digital competencies, critical thinking, and autonomous work. However, significant challenges persist in the region, such as limited technological infrastructure in rural areas, institutional resistance to change, and insufficient teacher training in active approaches. These barriers, also highlighted by Portero and Medina (2024) and Díaz and Canosa (2021), underscore the need for public policies that strengthen ongoing teacher training and sustained investment in educational innovation.

Conclusions

It is concluded that the application of active methodologies in secondary education significantly contributes to collaborative, participatory, reflective, and autonomous learning. These strategies not only enhance student engagement but also benefit teaching practices by being based on problem-solving and the use of digital technologies, allowing for the addressing of real situations and generating more dynamic environments in the teaching-learning process.

In summary, this systematic review demonstrates that active methodologies constitute a highly relevant and effective pedagogical resource for reconfiguring teaching-learning dynamics in Latin America. Their implementation fosters participatory, inclusive, and reflective environments in which students assume a leading

role in knowledge construction. The analyzed evidence reveals concrete improvements in academic performance, intrinsic motivation, and the development of transversal competencies, confirming their potential to overcome the limitations of the traditional educational model.

Nonetheless, the effective implementation of these methodologies requires addressing various structural challenges. Among the most relevant are continuous teacher training in pedagogical innovation, curricular adaptation, technological availability, and institutional commitment to consolidating sustainable changes. Only through coherent articulation between educational policies, applied research, and teaching practice will it be possible to build a more equitable, dynamic, and aligned training model with the demands of the 21st century.

References

Arguello, M. J. C., Armijos, M. A. C., & Medina, Y. M. S. (2023). Aplicación de metodologías activas para el aprendizaje en educación general básica. *Ciencia Latina Revista Científica Multidisciplinar, 7*(6), 3590–3604. https://www.ciencialatina.org/index.php/cienciala/article/view/8940

Arteaga, M. (2022). Revisión sistemática y propuesta para la implementación de metodologías activas en la educación STEM. *Educateconciencia, 30*(36). https://doi.org/10.58299/ex92v043

Arteaga-Marín, M., Sánchez-Rodríguez, A., Olivares-Carrillo, P., & Maurandi-López, A. (2022). Revisión sistemática y propuesta para la implementación de metodologías activas en la educación STEM. *Educateconciencia, 30*(36). http://educateconciencia.com/index.php/revistaeducate/article/view/87

Cárdenas Cordero, N. M., Guevara Vizcaíno, C. F., Moscoso Bernal, S. A., & Álvarez Lozano, M. I. (2023). Metodologías activas y las TIC en los entornos de aprendizaje. *Conrado, 19*(91), 397–405. http://scielo.sld.cu/scielo.php?pid=S1990-86442023000200397&script=sci_arttext&tlng=en

Cárdenas Zea, M. P., Morales Torres, M., Aguirre Pérez, R., Carranza Quimi, W. D., Reyes Pérez, J. J., & Méndez Martínez, Y. (2022). Metodologías activas en la educación en línea en época de pandemia. *Revista Universidad y Sociedad, 14*(2), 344–350. http://scielo.sld.cu/scielo.php?pid=S2218-36202022000200344&script=sci_arttext&tlng=pt

Carpio, C. R. M., & Cabrera, E. E. P. (2021). La tecnopedagogía: enlace crucial entre metodologías activas y herramientas digitales en la educación híbrida universitaria. *Revista Scientific, 6*(22), 248–269. https://dialnet.unirioja.es/servlet/articulo?codigo=9583404

Correa, K. N. P., Carbo, M. M. L., Carbo, M. B. L., & Villamar, L. M. B. (2024). Importancia de la unidad didáctica basada en metodologías activas para fomentar el aprendizaje colaborativo e interdisciplinario a través de tecnologías e innovación educativa. *Revista Mapa, 8*(35). https://www.revistamapa.org/index.php/es/article/view/439

Curipoma, C. N. G., Ocampo, M. E. N., Cajilima, D. P. C., & Peralta, S. R. T. (2023). Metodologías activas en el proceso de enseñanza-aprendizaje: implicaciones y beneficios. *Ciencia Latina Revista Científica Multidisciplinar, 7*(3), 3311–3327. https://ciencialatina.org/index.php/cienciala/article/view/6409

Daher, M., Rosati, A., Hernández, A., Vásquez, N., & Tomicic, A. (2022). TIC y metodologías activas para promover la educación universitaria integral. *Revista Electrónica de Investigación Educativa, 24.* https://www.scielo.org.mx/scielo.php?pid=S1607-40412022000100108&script=sci_arttext

Díaz, A. L., & Canosa, V. F. (2021). Los Objetivos de Desarrollo Sostenible en la formación de los futuros maestros: Uso de metodologías activas. *Campo Abierto, Revista de Educación, 40*(2). https://revista-campoabierto.unex.es/index.php/campoabierto/article/view/4039

Echeverría Quiñonez, B. R., & Velasco Gómez, A. H. (2024). *Metodologías activas para transformar el aula: Una guía práctica*. Editorial Saga. https://libros.editorialsaga.com/index.php/saga/catalog/book/1

Escarbajal Frutos, A., & Martínez Galera, G. (2023). El uso de metodologías activas en centros educativos: Percepciones y efectos en el aprendizaje. *New Approaches in Educational Research, 12*(2), 45–60. https://revistas.uma.es/index.php/NEIJ/article/view/16452

Frutos, A. E., & Galera, G. M. (2023). Uso de las metodologías activas en los centros educativos de educación infantil, primaria y secundaria. *International Journal of New Education, (11)*, 5–25. https://dialnet.unirioja.es/servlet/articulo?codigo=9142340

Garcés Suárez, E. F., Garcés Suárez, E. M., & Alcívar Fajardo, O. D. (2022). Las técnicas didácticas y su articulación en el diseño de metodologías activas: consideraciones necesarias. *Revista Universidad y Sociedad, 14*(3), 409–416. http://scielo.sld.cu/scielo.php?pid=S2218-36202022000300409&script=sci_arttext&tlng=pt

Gómez-Zambrano, R., & Pérez-Iribar, G. (2023). Influencia de las metodologías activas en el rendimiento académico en bachillerato. *Revista MQR: Investigación Multidisciplinaria, 7*(1), 55–70. https://www.investigarmqr.org/ojs/index.php/mqr/article/view/310

Jarrín Miranda, J. J. (2023). Aplicación de metodologías activas en modalidad e-learning en el año 2022: caso carrera de comunicación de la Universidad de Guayaquil. *Revista Científica UISRAEL, 10*(1), 99–114. http://scielo.senescyt.gob.ec/scielo.php?script=sci_arttext&pid=S2631-27862023000100099

Lantarón, B. S. (2023). Uso de metodologías activas en las aulas: experiencia educativa de aprendizaje-servicio y fotovoz. *REDU: Revista de Docencia Universitaria, 21*(1), 53–69. https://dialnet.unirioja.es/servlet/articulo?codigo=9016721

Matamoro, R. F. J. (2023). Plan de Pizarra como metodología activa del aprendizaje significativo y amigable en Matemáticas para la educación secundaria en Nicaragua. *Revista Científica Estelí, (45)*, 108–130. https://camjol.info/index.php/FAREM/article/view/16040

Muntaner-Guasp, J. J., Mut-Amengual, B., & Pinya-Medina, C. (2022). Las metodologías activas para la implementación de la educación inclusiva. *Revista Electrónica Educare, 26*(2), 85–105. https://www.scielo.sa.cr/scielo.php?script=sci_arttext&pid=S1409-42582022000200085

Olivero, E. D. F., & Medina, N. M. S. (2022). Revisión bibliográfica sobre el uso de metodologías activas en la Formación Profesional. *Contextos Educativos. Revista de Educación, (30)*, 131–155. https://publicaciones.unirioja.es/ojs/index.php/contextos/article/view/5362

Page, M. J., McKenzie, J. E., Bossuyt, P. M., Boutron, I., Hoffmann, T. C., Mulrow, C. D., et al. (2021). The PRISMA 2020 statement: An updated guideline for reporting systematic reviews. *BMJ, 372*, n71. https://doi.org/10.1136/bmj.n71

Paguay Guacho, E. P., Cantuña Adriano, G. H., Carrillo Baldeón, M. D., & Cevallos Vizuete, M. G. (2022). Metodologías activas de enseñanza-aprendizaje para propiciar la innovación en la educación superior. *Revista Científica Arbitrada Multidisciplinaria PENTACIENCIAS, 4*(3), 73–87. https://editorialalema.org/index.php/pentaciencias/article/view/135

Parrales, V. V. D., Pincay, I. H. P., Muñiz, L. K. F., & Plúa, C. R. C. (2022). Metodologías activas en el proceso de enseñanza aprendizaje en los alumnos de nivelación. *Revista Científica Arbitrada Multidisciplinaria PENTACIENCIAS, 4*(4), 328–344. http://www.editorialalema.org/index.php/pentaciencias/article/view/245

Peralta, S. R. T. (2023). Metodologías activas: promoviendo un aprendizaje significativo y motivacional. *Ciencia Latina Revista Científica Multidisciplinar, 7*(4), 2031–2145. https://ciencialatina.org/index.php/cienciala/article/view/7038

Pereira, M. D. S., Spagnol, C. A., Guimarães, E. M. P., Godoy, S. C. B., Silva, S. F. D., & Silva, J. G. R. (2023). Metodología activa en la educación permanente para abordar la ética y la bioética. *Revista Bioética, 30*, 725–733. https://www.scielo.br/j/bioet/a/X3qmx6Q6DMSrQmd3Bj37M6B/?lang=es

Portero, F. B., & Medina, R. P. (2024). Estudio teórico sobre metodologías activas en la educación básica: Una revisión sistemática. *Revista Científica Arbitrada de la Fundación MenteClara, 9*(1), 189–209. https://doi.org/10.32351/rca.v9.1.2024.1323

Roa González, J., Sánchez Sánchez, A., & Sánchez Sánchez, N. (2021). Evaluación de la implantación de la gamificación como metodología activa en la educación secundaria española. *ReiDoCrea. Revista de Investigación y Docencia Creativa, 10*(12), 1–9. https://udimundus.udima.es/handle/20.500.12226/888

Rueda, P. E. R., & Lenis, D. A. G. (2023). Fortalezas y desafíos en la articulación del currículo por competencias y las metodologías activas. *Ciencia Latina Revista Científica Multidisciplinar, 7*(2), 9284–9297. https://ciencialatina.org/index.php/cienciala/article/view/6032

Ruiz-Rosa, I., Gutiérrez-Taño, D., & García-Rodríguez, F. J. (2021). El aprendizaje basado en proyectos como herramienta para potenciar la competencia emprendedora. *Cultura y Educación, 33*(2), 316–344. https://doi.org/10.1080/11356405.2021.1904657

Silva, M., Correa, R., & Mc-Guire, P. (2024). Metodologías activas con inteligencia artificial y su relación con la enseñanza de la matemática en la educación superior en Chile: Estado del arte. *Universidad Nacional de La Plata.* https://sedici.unlp.edu.ar/handle/10915/168188

UNESCO. (2019). *Educación para la ciudadanía mundial: Preparar a los educandos para los retos del siglo XXI*. Organización de las Naciones Unidas para la Educación, la Ciencia y la Cultura. https://unesdoc.unesco.org/ark:/48223/pf0000227729

Vélez, M. (2023). *Aprendizaje basado en proyectos: Un enfoque educativo innovador.* Editorial Académica Española.

Vera, F. (2022). Implementación de metodologías activas en la educación superior mexicana: Análisis desde la perspectiva docente. *Transformar, 3*(3), 47–59. https://revistatransformar.cl/index.php/transformar/article/view/66

Villalobos-López, J. A. (2022). Metodologías activas de aprendizaje y la ética educativa. *Revista Tecnológica-*

Educativa Docentes 2.0, 13(2), 47–58. https://ve.scielo.org/scielo.php?script=sci_arttext&pid=S2665-02662022000400047

Villamizar Cañas, M. D. L. Á. (2021). Metodologías activas a través del juego y el interés de los niños y niñas de 5 a 6 años en Preescolar. *Revista Educación, 45*(2), 566–576. https://www.scielo.sa.cr/scielo.php?pid=S2215-26442021000200566&script=sci_arttext