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Evidence-based decision-making to strengthen educational quality and institutional management

Toma de decisiones basada en evidencia para fortalecer la calidad y gestión educativa institucional

Tomada de decisões baseada em evidências para fortalecer a qualidade e a gestão educacional institucional

Styliani Karapylafi
: stkarapy@sch.gr
: https://orcid.org/0009-0002-4532-0561
Ministry of Education, Religious Affairs and Sports

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Abstract

The aim of this study was to analyze the foundations, processes, and applications of evidence-based decision-making in education, highlighting its contribution to strengthening educational quality and institutional management. The research was conducted using a qualitative approach with a documentary design and a descriptive-interpretative scope. Information was collected through a systematic review of scientific literature related to educational assessment, institutional management, academic research, and informed decision-making. The results showed that the use of scientific evidence, assessment data, and teachers' professional experience promoted more objective, relevant, and results-oriented decisions. Likewise, it was identified that the processes of data collection, analysis, and interpretation strengthened educational planning, the improvement of pedagogical practices, and institutional evaluation. It was concluded that evidence-based decision-making constitutes a fundamental strategy for promoting more efficient, transparent, and innovative educational systems, as it facilitates the implementation of actions supported by reliable and contextualized information. Furthermore, the study emphasized the need to strengthen analytical and reflective competencies among educational stakeholders to ensure the proper use of scientific evidence in the continuous improvement of education.

Keywords: educational decisions, scientific evidence, educational management, educational quality.

Resumen

El presente estudio tuvo como objetivo analizar los fundamentos, procesos y aplicaciones de la toma de decisiones basada en evidencia en el ámbito educativo, destacando su contribución al fortalecimiento de la calidad y gestión institucional. La investigación se desarrolló mediante un enfoque cualitativo, con diseño documental y alcance descriptivo-interpretativo. Para la recopilación de información se realizó una revisión sistemática de literatura científica relacionada con evaluación educativa, gestión institucional, investigación académica y toma de decisiones informadas. Los resultados evidenciaron que el uso de evidencias científicas,

datos de evaluación y experiencia profesional docente favorece decisiones más objetivas, pertinentes y orientadas a resultados. Asimismo, se identificó que los procesos de recolección, análisis e interpretación de datos fortalecen la planificación educativa, la mejora de prácticas pedagógicas y la evaluación institucional. Se concluyó que la toma de decisiones basada en evidencia constituye una estrategia fundamental para promover sistemas educativos más eficientes, transparentes e innovadores, debido a que facilita la implementación de acciones sustentadas en información confiable y contextualizada. Además, se destacó la necesidad de fortalecer competencias analíticas y reflexivas en los actores educativos para garantizar una adecuada utilización de las evidencias científicas en la mejora continua de la educación.

Palabras clave: decisiones educativas, evidencia científica, gestión educativa, calidad educativa.

Resumo

O presente estudo teve como objetivo analisar os fundamentos, processos e aplicações da tomada de decisões baseada em evidências no contexto educacional, destacando sua contribuição para o fortalecimento da qualidade e da gestão institucional. A pesquisa foi desenvolvida por meio de uma abordagem qualitativa, com desenho documental e alcance descritivo-interpretativo. Para a coleta de informações, realizou-se uma revisão sistemática da literatura científica relacionada à avaliação educacional, gestão institucional, pesquisa acadêmica e tomada de decisões informadas. Os resultados evidenciaram que o uso de evidências científicas, dados de avaliação e experiência profissional docente favorece decisões mais objetivas, pertinentes e orientadas para resultados. Além disso, identificou-se que os processos de coleta, análise e interpretação de dados fortalecem o planejamento educacional, a melhoria das práticas pedagógicas e a avaliação institucional. Concluiu-se que a tomada de decisões baseada em evidências constitui uma estratégia fundamental para promover sistemas educacionais mais eficientes, transparentes e inovadores, pois facilita a implementação de ações sustentadas em informações confiáveis e contextualizadas. Também foi destacada a necessidade de fortalecer competências analíticas e reflexivas nos atores educacionais para garantir o uso adequado das evidências científicas na melhoria contínua da educação.

Palavras-chave: decisões educacionais, evidência científica, gestão educacional, qualidade educacional.

Introduction

In contemporary educational systems, decision-making constitutes a fundamental process for ensuring the quality, relevance, and sustainability of pedagogical and institutional actions. Current educational environments are characterized by high levels of complexity, uncertainty, and constant transformation, requiring decisions to be based not only on intuition or empirical experience but also on the rigorous analysis of relevant and verifiable information. In this context, educational guidance and institutional management require approaches capable of responding efficiently and contextually to social and academic demands. Tahull Fort (2025) argues that education in postmodern society requires strategies capable of addressing dynamic and changing scenarios through reflective and evidence-informed processes.

The growing availability of educational data has strengthened management models supported by scientific and analytical evidence. Consequently, evidence-based decision-making has emerged as a strategic approach aimed at optimizing teaching, learning, and educational administration processes. Mendoza Zambrano (2022) highlights that the application of learning analytics enables the interpretation of academic and behavioral information to improve planning and institutional performance across diverse educational contexts. In this way, the systematic use of data makes it possible to identify needs, evaluate outcomes, and design more relevant and effective interventions.

Evidence-based decision-making involves the integration of quantitative, qualitative, and scientific information to guide educational actions in an objective and informed manner. This approach promotes the use of research findings, institutional diagnoses, performance indicators, and contextualized experiences as essential elements for the formulation of educational policies and pedagogical practices. Fernández-Sánchez, King, and Enríquez-Hernandez (2020) point out that the systematic synthesis of scientific knowledge facilitates a comprehensive understanding of educational phenomena and strengthens informed decision-making processes. In this regard, scientific evidence constitutes an indispensable tool for reducing subjectivity and promoting more coherent and effective educational practices.

Furthermore, the articulation between scientific knowledge and educational practice represents a permanent challenge within educational systems. Molina-Andrade and Mojica (2013) argue that teaching should function as a bridge between different forms of knowledge, enabling educational decisions to be contextualized according to the real needs of students and communities. This implies recognizing that evidence should not be interpreted in isolation but rather in relation to specific cultural, social, and pedagogical factors. Therefore, evidence-based decision-making requires not only access to reliable information but also analytical and reflective capacities on the part of educational stakeholders.

From the perspective of institutional management, this approach significantly contributes to strengthening educational quality and organizational efficiency. Educational institutions require evaluation and monitoring mechanisms that enable the continuous identification of strengths, weaknesses, and opportunities for improvement. González Carella and Zanfrillo (2010) affirm that the transfer of scientific and technological knowledge within educational institutions promotes innovation and the optimization of management processes. Consequently, scientific evidence becomes a strategic resource for guiding educational policies, improving resource allocation, and strengthening decision-making at different levels of the educational system.

However, one of the main challenges in education lies in the persistent gap between theory and practice. In many cases, pedagogical and institutional decisions continue to be based on traditional criteria or subjective perceptions, limiting the implementation of innovative and effective strategies. Álvarez-Álvarez (2015) warns that the distance between theoretical knowledge and educational practice generates inconsistencies in teaching processes and hinders the resolution of real problems within institutions. This situation highlights the need to promote an organizational culture oriented toward the critical and systematic use of evidence at all educational levels.

In this context, the rationale for this study lies in the importance of strengthening decision-making processes grounded in epistemological and scientific foundations that contribute to improving educational quality. Cabrera-Ramírez and Cepeda-Retana (2022) maintain that epistemology serves as an essential guide for understanding the construction of scientific knowledge and its application across different fields of study. From this perspective, the analysis of evidence-based decision-making is relevant because it contributes to the development of more transparent, objective, and results-oriented educational practices. Furthermore, it supports the consolidation of an institutional culture centered on evaluation, innovation, and continuous improvement.

Therefore, the objective of this study is to analyze the foundations, processes, and significance of evidence-based decision-making in education, highlighting its contribution to strengthening institutional management and pedagogical practices aimed at enhancing educational quality.

Methodology

This research was conducted using a qualitative approach, as it enabled an in-depth understanding of the foundations and processes related to evidence-based decision-making in the educational field. This approach facilitated the interpretative analysis of concepts,

experiences, and perspectives associated with educational management and practice, taking into account the social and institutional contexts in which such decisions are made. Manuel et al. (2020) argue that qualitative methodologies facilitate the understanding of complex educational phenomena through reflective and analytical processes focused on social reality. Consequently, the study prioritized the critical interpretation of scientific information related to the research topic.

The methodological design corresponded to a documentary and descriptive study aimed at the systematic analysis of specialized academic and scientific sources. Documentary research made it possible to collect, organize, and interpret information derived from scientific articles, books, and indexed publications related to evidence-based decision-making, educational management, and the use of scientific data in education. Díaz Barriga and Luna Miranda (2014) affirm that educational research requires rigorous methodological strategies capable of understanding complex phenomena from different theoretical and contextual perspectives. Based on this premise, a critical review of relevant literature was conducted to identify conceptual contributions and research trends concerning the object of study.

Additionally, the hermeneutic-interpretive method was employed to understand the meanings and contributions of the different theoretical perspectives analyzed. This approach facilitated the interpretation of scientific content from a reflective and contextualized perspective, enabling connections between the epistemological foundations of scientific evidence and contemporary educational practices. Carabajo (2008) points out that phenomenological-hermeneutic methodology promotes the understanding of experiences and meanings within the educational field through processes of in-depth analysis and interpretation. Therefore, the study prioritized a critical understanding of categories related to educational quality, institutional management, and informed decision-making.

Likewise, documentary analysis was used as the primary research technique, through which various scientific sources relevant to the research topic were examined. The selected documents were evaluated according to criteria of currency, academic relevance, and thematic pertinence. Cuevas Cajiga and Mireles Vargas (2016) emphasize that educational research based on representations and documentary analysis makes it possible to identify methodological approaches, study categories, and trends in scientific production. Finally, the collected information was organized and systematized into analytical categories, enabling the formulation of coherent interpretations regarding the importance of evidence-based decision-making for strengthening educational quality and institutional management.

Development

Sources of Evidence in Education

Evidence-based decision-making in education requires the use of diverse sources of information that enable an objective and contextualized understanding of educational reality. These sources of evidence contribute to strengthening planning, evaluation, and institutional improvement processes, fostering more relevant and effective decisions. In the educational field, evidence may originate from quantitative data, scientific research, and professional experience, all of which help interpret the needs and challenges present in teaching and learning contexts. In this regard, the integration of multiple sources of information promotes a comprehensive understanding of educational phenomena and enhances the quality of pedagogical and institutional decision-making.

Learning Assessment Data

Data derived from learning assessment constitute one of the primary sources of evidence in education because they enable the identification of students' progress, difficulties, and learning needs. Assessment should not be understood merely as a measurement mechanism but as a process aimed at generating relevant information for educational improvement.

Barrientos-Hernán et al. (2020) point out that authentic and learning-oriented assessment promotes reflective processes that support competency development and continuous feedback. Therefore, assessment results provide valuable information for guiding pedagogical decisions grounded in evidence and adapted to the characteristics of the educational context.

Furthermore, learning assessment contributes to identifying factors associated with academic performance and the achievement of educational objectives. Sánchez Mendiola (2018) argues that educational assessment involves complex processes requiring clear criteria, appropriate instruments, and sound interpretive analyses to understand the results obtained. From this perspective, evidence derived from assessment facilitates the implementation of intervention strategies aimed at improving student performance and strengthening educational quality. Consequently, assessment data represent essential tools for pedagogical and administrative decision-making within educational institutions.

Academic Research

Academic research constitutes another essential source of evidence for guiding educational decisions based on scientific foundations. Scientific studies make it possible to analyze educational issues, identify factors associated with learning, and propose improvement strategies supported by verifiable findings. Ocaña Fernández (2011) states that various academic variables influence student performance, including pedagogical, motivational, and contextual factors, which should be considered when designing educational policies and actions. In this way, scientific research provides systematic knowledge that contributes to a deeper understanding of educational processes.

In recent years, evidence-based education has gained prominence as an approach aimed at strengthening educational policies and practices through the use of reliable scientific information. Fernández Navas and Póstigo Fuentes (2023) highlight that this approach offers both political and scientific advantages by promoting decisions grounded in rigorous and verifiable research. However, they also warn about the risks of interpreting evidence in a reductionist or decontextualized manner. Therefore, the use of academic research should be complemented by a critical analysis of the institutional and social realities in which educational decisions are implemented.

Likewise, Hederich Martínez et al. (2014) argue that advancing toward evidence-based education requires strengthening the research culture and promoting the articulation between scientific production and pedagogical practice. This implies that teachers and administrators should develop competencies for interpreting research findings and applying them in educational planning and evaluation. Consequently, academic research not only contributes theoretical knowledge but also promotes innovation and the continuous improvement of educational processes.

Professional Teaching Experience

Professional teaching experience represents a relevant source of evidence in educational decision-making because the knowledge acquired through practice enables educators to understand specific pedagogical situations and respond effectively to the needs of the school context. Teaching experience is constructed through continuous processes of interaction, reflection, and adaptation to educational challenges. Sánchez-Olavarría (2020) notes that teachers' professional trajectories significantly influence the consolidation of pedagogical competencies and the ability to address complex classroom situations. Therefore, professional experience constitutes a valuable resource for guiding contextualized pedagogical decisions.

Moreover, professional teacher identity is closely linked to the conceptions, values, and knowledge developed throughout educational practice. Cantón and Tardif (2018) argue that teacher identity integrates theoretical knowledge, practical experience, and professional socialization processes that influence how educators interpret and solve educational problems.

In this regard, professional experience should not be considered separate from scientific evidence but rather as a complementary component that enriches educational decision-making processes.

Evidence-Based Decision-Making Processes

Evidence-based decision-making encompasses a series of systematic processes aimed at collecting, analyzing, and interpreting relevant information to support educational actions. These processes make it possible to transform data into useful knowledge for planning and institutional improvement, promoting more objective and effective decisions. The appropriate use of evidence requires analytical, methodological, and reflective skills that facilitate the understanding of educational phenomena from multiple perspectives. Consequently, evidence-based decision-making involves not only access to information but also the ability to interpret and apply it appropriately.

Data Collection and Analysis

Data collection and analysis constitute fundamental stages within evidence-based decision-making because they provide accurate information about educational and organizational processes. Data may be collected through quantitative and qualitative instruments such as surveys, interviews, observations, and academic records. Montoya Suárez and Yáñez Barbosa (2022) affirm that data analytics has become a significant trend in strengthening decision-making within organizations by facilitating the identification of patterns and institutional needs. In this way, data analysis contributes to generating more accurate diagnoses aimed at educational improvement.

Furthermore, the quality of collected data depends on the validity and reliability of the instruments used during the research process. Duarte Sánchez and Guerrero Barreto (2024) emphasize that surveys constitute one of the most widely used instruments in scientific research, provided that methodological rigor is ensured in their design and implementation. In the educational field, the use of valid instruments enables the collection of reliable information regarding student performance, institutional management, and stakeholder perceptions. Therefore, appropriate data collection is an essential prerequisite for supporting effective and coherent educational decisions.

Interpretation of Results

The interpretation of results constitutes an essential process within evidence-based decision-making, as it transforms collected data into meaningful information that can guide educational actions. Interpretation requires analytical and reflective processes that make it possible to understand the implications of the results obtained in relation to institutional and pedagogical objectives. Garmendia and Monserrat (2018) argue that the interpretation of statistical results must be conducted critically and contextually to avoid erroneous conclusions or inappropriate simplifications. Consequently, the analysis of results should consider both quantitative and qualitative aspects in order to achieve a comprehensive understanding of educational reality.

Moreover, managerial and educational decision-making requires evaluating different courses of action based on the available information. Solano (2003) states that decision-making involves selecting strategies aimed at solving problems and achieving organizational objectives through rational and analytical processes. In the educational context, the proper interpretation of results facilitates the design of pedagogical interventions, the optimization of resources, and the strengthening of institutional processes. Therefore, the ability to critically interpret information constitutes a fundamental competency for administrators and teachers committed to continuous improvement.

Implementation of Informed Actions

The implementation of informed actions represents the stage at which collected and analyzed evidence is translated into concrete educational intervention strategies. This process involves designing and executing actions aimed at improving learning outcomes, institutional management, and overall educational quality. Bello Castillo and Pérez Castillo indicate that informed decision-making depends on the quality and relevance of the data used, as these determine the effectiveness of the actions implemented. In this regard, educational institutions require monitoring and evaluation mechanisms that make it possible to verify the impact of adopted decisions.

Similarly, school planning constitutes a key element in implementing evidence-based actions within educational institutions. Colca Almonacid et al. (2016) argue that informed decision-making promotes more organized, participatory, and results-oriented planning processes. This implies that educational institutions should foster a culture of evaluation and continuous analysis that facilitates the adaptation of strategies according to identified needs. Consequently, the implementation of informed actions strengthens institutional capacity to respond effectively to contemporary educational challenges.

Applications in the Educational Field

Evidence-based decision-making has multiple applications within the educational field, as it contributes to strengthening policies, pedagogical practices, and institutional evaluation processes. The use of scientific evidence and contextual data enables the development of strategies aimed at improving educational quality and ensuring more transparent and efficient processes. Furthermore, this approach promotes innovation and continuous improvement across different levels of the educational system.

Educational Policy Design

The design of educational policies constitutes one of the primary areas of application for evidence-based decision-making. Educational public policies must be grounded in diagnoses, research findings, and evaluations that enable responses to the real needs of students and educational institutions. Amador Hernández (2008) argues that evaluation plays a fundamental role in educational policy design because it provides relevant information for identifying problems and establishing intervention priorities. Consequently, scientific evidence supports the formulation of more relevant and improvement-oriented educational policies.

Moreover, Espinoza (2009) states that educational policies should be understood as dynamic processes influenced by social, economic, and cultural factors. From this perspective, evidence-based decision-making promotes the development of more objective and contextualized policies capable of responding to contemporary educational demands. Thus, scientific evidence contributes to strengthening the transparency and legitimacy of decisions adopted by educational systems.

Improvement of Pedagogical Practices

In the pedagogical field, evidence-based decision-making facilitates the implementation of more effective and relevant teaching strategies. Teachers can use information derived from assessments, research, and classroom experiences to adapt their practices according to students' needs. Bujardón Mendoza and Macías Llanes (2006) argue that educational guidance constitutes an essential element in promoting human values and supporting students' comprehensive development. Therefore, pedagogical decisions grounded in evidence contribute to improving the quality of teaching and learning processes.

Likewise, Tobón et al. (2018) emphasize that the analysis of pedagogical practices through conceptual approaches promotes teacher reflection and educational innovation. Consequently, scientific evidence and continuous assessment make it possible to identify strengths and weaknesses in teaching methodologies, fostering more efficient pedagogical processes centered on meaningful learning.

Institutional Evaluation

Institutional evaluation constitutes another important application of evidence-based decision-making, as it enables the assessment of the functioning and performance of educational institutions. Simoneau (1991) states that institutional evaluation encompasses systematic processes aimed at analyzing the quality and effectiveness of educational organizations. Through the collection and analysis of information, institutions can identify opportunities for improvement and design strategies aimed at organizational strengthening.

Furthermore, Bolívar (2006) argues that institutional evaluation should balance accountability with internal improvement, promoting participatory and reflective processes within educational institutions. Similarly, Rodríguez Espinar (1997) highlights that university institutional evaluation contributes to strengthening academic and administrative quality through continuous processes of analysis and feedback. In this context, evidence-based decision-making significantly contributes to the development of more efficient, transparent, and excellence-oriented educational institutions.

Discussion

Evidence-based decision-making has become a relevant approach for strengthening the quality and effectiveness of contemporary educational systems. The findings of this study revealed that the use of data, scientific research, and professional experience promotes more organized, reflective, and results-oriented management processes. Consistent with Tahull Fort (2025), current educational contexts are characterized by complex and uncertain scenarios that require strategies grounded in reliable information and critical analysis. This highlights the need for educational institutions to establish continuous evaluation and analytical mechanisms in order to respond effectively to contemporary social and pedagogical transformations.

One of the main contributions identified concerns the relevance of evidence sources in the development of more objective and contextualized educational decisions. Data derived from learning assessment provide valuable information regarding students' academic needs and facilitate the design of pedagogical intervention strategies. In this regard, Barrientos-Hernán et al. (2020) argue that learning-oriented assessment promotes continuous feedback processes that strengthen competency development and educational improvement. Likewise, Sánchez Mendiola (2018) states that educational assessment constitutes a complex process that requires clear criteria and appropriate interpretive analyses to ensure the relevance of decisions adopted within educational institutions.

Furthermore, the study demonstrated that academic research represents a fundamental support for the development of scientifically grounded educational policies and practices. Scientific studies make it possible to identify educational problems, analyze variables associated with academic performance, and propose improvement alternatives based on verifiable findings. Ocaña Fernández (2011) emphasizes that various academic and contextual factors directly influence student performance, demonstrating the need to consider multiple dimensions when planning educational actions. Similarly, Hederich Martínez et al. (2014) argue that advancing toward evidence-based education requires strengthening the research culture and fostering the integration of scientific production with pedagogical practice.

However, the results also indicate that the application of scientific evidence in education faces several limitations and challenges. Fernández Navas and Póstigo Fuentes (2023) warn that evidence-based education may present risks when research findings are interpreted in a reductionist or decontextualized manner. This situation is consistent with the arguments of Álvarez-Álvarez (2015), who identifies the persistent gap between theory and educational practice as one of the major challenges within educational systems. Consequently, evidence-based decision-making should not be limited to the mechanical application of scientific

findings; rather, it requires critical analysis and contextual adaptation according to institutional and social characteristics.

On the other hand, professional teaching experience emerged as an essential component in the interpretation and application of educational evidence. Pedagogical practice enables teachers to develop situated knowledge that facilitates the understanding of specific classroom challenges. Sánchez-Olavarría (2020) maintains that teachers' professional trajectories strengthen competencies related to problem-solving and adaptation to complex contexts. Furthermore, Cantón and Tardif (2018) argue that professional teacher identity integrates both theoretical and practical knowledge that significantly influences pedagogical decision-making. This demonstrates that scientific evidence becomes more effective when complemented by the professional experience and reflective practice of educational stakeholders.

Regarding decision-making processes, the study identified that data collection, analysis, and interpretation constitute indispensable stages for ensuring relevant and effective educational decisions. Montoya Suárez and Yáñez Barbosa (2022) indicate that data analytics facilitates the identification of institutional needs and strengthens organizational processes through the strategic use of information. Likewise, Duarte Sánchez and Guerrero Barreto (2024) emphasize the importance of employing valid and reliable instruments to ensure the quality of collected data. This finding highlights that the effectiveness of educational decisions depends largely on the methodological rigor applied throughout research and institutional analysis processes.

Finally, the applications of evidence-based decision-making reflect its positive impact on educational policy design, the improvement of pedagogical practices, and institutional evaluation. Amador Hernández (2008) argues that evaluation constitutes an essential element for formulating more relevant and results-oriented educational policies. Similarly, Tobón et al. (2018) highlight that the reflective analysis of pedagogical practices promotes innovation and strengthens teaching-learning processes. At the institutional level, Bolívar (2006) and Rodríguez Espinar (1997) agree that institutional evaluation supports continuous improvement and organizational strengthening processes. Therefore, evidence-based decision-making emerges as an indispensable strategy for building more efficient, transparent, and quality-oriented educational systems.

Conclusions

Evidence-based decision-making constitutes a fundamental approach for strengthening educational quality and optimizing institutional and pedagogical management processes. The analysis conducted made it possible to identify that the systematic use of data, scientific research, and professional experience promotes more objective, relevant, and results-oriented decisions. Likewise, it was found that the integration of quantitative and qualitative information contributes to a broader understanding of the needs and challenges present in educational contexts. Consequently, the use of scientific evidence represents a strategic tool for promoting more efficient, reflective, and responsive educational processes adapted to the contemporary demands of education.

Similarly, the study established that sources of educational evidence, such as learning assessments, academic research, and professional teaching experience, play an essential role in the formulation of informed educational decisions. These sources of evidence facilitate the identification of strengths, weaknesses, and opportunities for improvement within educational institutions, supporting more rigorous planning and evaluation processes. However, it was also recognized that the application of evidence requires critical and contextualized interpretation, avoiding reductionist approaches or perspectives disconnected from educational realities. Therefore, it is essential to strengthen the analytical and reflective

capacities of teachers and educational leaders to ensure the appropriate use of scientific information.

Finally, it is concluded that evidence-based decision-making has significant applications in educational policy design, the improvement of pedagogical practices, and institutional evaluation. This approach promotes the development of more transparent, innovative, and continuously improving educational institutions. Furthermore, it fosters an organizational culture grounded in evaluation, analysis, and the responsible use of information for solving educational problems. In this regard, the consolidation of decision-making processes based on scientific evidence represents an indispensable condition for strengthening the quality, equity, and sustainability of contemporary educational systems.

Study Limitations

This study was conducted under a documentary and qualitative approach; therefore, its findings were primarily based on the analysis and interpretation of bibliographic and scientific sources related to evidence-based decision-making in education. In this regard, one of the main limitations was the absence of fieldwork and the application of empirical instruments that would have allowed the findings to be contrasted within specific educational contexts. Likewise, the availability and diversity of research on the topic influenced the interpretive scope of the study.

Future Research

Future studies are encouraged to deepen the empirical analysis of evidence-based decision-making through case studies, mixed-methods approaches, and practical applications in educational institutions at different levels and within diverse contexts. Likewise, it would be valuable to investigate the impact of data analytics and digital technologies on educational management and planning processes. Further research is also recommended to explore the professional competencies required by teachers and educational leaders to effectively interpret and utilize scientific evidence in the improvement of educational processes.

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Conflict of Interest Statement

The author declares that there are no personal, academic, professional, financial, or institutional conflicts of interest that may have influenced the development, interpretation, or publication of this research.

References

Álvarez-Álvarez, C. (2015). Teoría frente a práctica educativa: algunos problemas y propuestas de solución. *Perfiles educativos*, *37*(148), 172-190.

Amador Hernández, J. C. (2008). La evaluación y el diseño de políticas educativas en México. *Documento de trabajo, Centro de Estudios Sociales y de Opinión Pública*, (35).

Barrientos-Hernán, E. J., López-Pastor, V. M., & Pérez-Brunicardi, D. (2020). Evaluación auténtica y evaluación orientada al aprendizaje en educación superior. Una revisión en

bases de datos internacionales. *Revista Iberoamericana de Evaluación Educativa*, *13*(2), 67-83.

Bello Castillo, J. S., & Perez Castillo, D. H. Toma de decisiones informada: El rol clave en la calidad de datos. [Tesis de grado, Universidad Abierta y A distancia, Colombia]. URI: https://repository.unad.edu.co/handle/10596/78992

Bolívar, A. (2006). Evaluación institucional: entre el rendimiento de cuentas y la mejora interna. *Gest. Ação, Salvador*, *9*(1), 37-60.

Bujardón Mendoza, A., & Macías Llanes, M. E. (2006). La orientación educativa, una necesidad para la educación en valores humanos. *Humanidades Médicas*, *6*(2), 0-0.

Cabrera-Ramírez, S., & Cepeda-Retana, J. (2022). La epistemología, guía para el conocimiento científico. *Portal de la Ciencia*, *3*(2), 123-133.

Cantón, I., & Tardif, M. (Eds.). (2018). *Identidad profesional docente* (Vol. 48). Narcea Ediciones.

Carabajo, R. A. (2008). La metodología fenomenológico-hermenéutica de M. Van Manen en el campo de la investigación educativa. Posibilidades y primeras experiencias. *Revista de investigación educativa*, *26*(2), 409-430.

Colca Almonacid, R., Incio Sierra, N. E., Lauro Guzmán, C., Saenz Hostos, C. M., Talavera Forlin, G., & Tintinapón Ramirez, F. (2016). Planificación escolar: la toma de decisiones informadas. Texto del módulo 2.

Cuevas Cajiga, Y., & Mireles Vargas, O. (2016). Representaciones sociales en la investigación educativa. Estado de la cuestión: producción, referentes y metodología. *Perfiles educativos*, *38*(153), 65-83.

Díaz Barriga, Á., & Luna Miranda, A. B. (2014). *Metodología de la investigación educativa: Aproximaciones para comprender sus estrategias*. Ediciones Díaz de Santos.

Duarte Sánchez, D. D., & Guerrero Barreto, R. (2024). La encuesta como instrumento de recolección de datos, confiabilidad y validez en investigación científica. *Revista De Ciencias Empresariales, Tributarias, Comerciales Y Administrativas*, *3*(2), 94–107. Recuperado a partir de https://educaciontributaria.com.py/revista/index.php/rcetca/article/view/70

Espinoza, O. (2009). Reflexiones sobre los conceptos de" política", políticas públicas y política educacional. *Education Policy Analysis Archives/Archivos Analíticos de Políticas Educativas*, *17*, 1-13.

Fernández Navas, M., & Póstigo Fuentes, A. Y. (2023). Educación basada en la evidencia. Peligros científicos y ventajas políticas. *Revista de educación*, *400*, 0-0.

Fernández-Sánchez, H., King, K., & Enríquez-Hernandez, C. B. (2020). Revisiones Sistemáticas Exploratorias como metodología para la síntesis del conocimiento científico. *Enfermería universitaria*, *17*(1), 87-94.

Garmendia, J. G., & Monserrat, F. M. (2018). Interpretación de resultados estadísticos. *Medicina intensiva*, *42*(6), 370-379.

González Carella, M. I., & Zanfrillo, A. I. (2010). Análisis de las actividades de transferencia de conocimiento científico y tecnológico en una institución educativa argentina de gestión pública. In *V Congreso Internacional de Sistemas de Innovación para la Competitividad (SINNCO)* (pp. 1-20).

Hederich Martínez, C., Martínez Bernal, J., & Rincón Camacho, L. (2014). Hacia una educación basada en la evidencia. *Revista Colombiana de Educación*. (66), pp. 19-54

ISolano, A. I. (2003). Toma de decisiones gerenciales. *Tecnología en marcha*, *16*(3), 44-51.

Manuel, I., Fontalvo, S., Alfredo, L., Monroy, G., José, S., & Ariza, E. (2020). *Metodologías cualitativas en la investigación educativa*. Editorial Unimagdalena.

Mendoza Zambrano, K. A. (2022). La aplicación de la analítica del aprendizaje para mejorar la toma de decisiones en educación: Casos de estudio en diferentes contextos educativos. *Revista Ingenio Global*, *1*(1), 26-37.

Molina-Andrade, A., & Mojica, L. (2013). Enseñanza como puente entre conocimientos científicos escolares y conocimientos ecológicos tradicionales. *Magis. Revista Internacional de Investigación en Educación*, *6*(12), 37-53.

Montoya Suárez, E., & Yáñez Barbosa, D. Y. (2022). Analítica de datos: Una tendencia para la toma de decisiones empresariales en las organizaciones.

Ocaña Fernández, Y. O. (2011). Variables académicas que influyen en el rendimiento académico de los estudiantes universitarios. *Investigación educativa*, *15*(27), 165-180.

Rodríguez Espinar, S. (1997). La evaluación institucional universitaria. *Revista de investigación educativa*, *15*(2), 179-214.

Sánchez Mendiola, M. (2018). La evaluación del aprendizaje de los estudiantes: ¿es realmente tan complicada?. *Revista digital universitaria*, *19*(6).

Sánchez-Olavarría, C. (2020). Trayectorias profesionales docentes: ¿una cuestión de experiencia?. *Revista de la educación superior*, *49*(196), 39-56.

Simoneau, R. (1991). La evaluación institucional: conceptos teóricos. *Revista de la educación superior*, *3*(79), 205-217.

Tahull Fort, J. (2025). Orientación educativa en la sociedad posmoderna: estrategias para navegar en la complejidad y la incertidumbre. *Revista Internacional de Desarrollo Humano y Sostenibilidad*, *2*(1), 117-133.

Tobón, S., Martinez, J. E., Valdez, E., & Quiriz, T. (2018). Prácticas pedagógicas: Análisis mediante la cartografía conceptual. *Revista espacios*, *39*(53).