



Research Approaches and Methods in Educational Management Studies: A Literature Review and Future Research Directions

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ABSTRACT

This study aims to examine how educational management research is conducted by mapping research approaches, research designs, data collection methods, and data analysis techniques, while also identifying methodological trends and future research directions. The study employs a literature review approach by examining scholarly publications relevant to educational management, educational administration, and educational leadership. Relevant literature was identified through searches of academic databases using keywords related to educational management and research methodology. The selected literature was thematically analyzed by identifying and categorizing methodological characteristics, including quantitative, qualitative, and mixed methods approaches, research designs, data collection techniques, and data analysis strategies. The findings indicate that educational management research employs diverse methodological approaches in response to the characteristics of research questions and the organizational contexts under investigation. Quantitative approaches are widely used to examine relationships among organizational variables, whereas qualitative approaches provide deeper insights into organizational processes, experiences, and contextual dynamics. Mixed methods approaches offer opportunities to integrate empirical patterns with contextual explanations. The review further highlights the need for stronger methodological integration through longitudinal designs, multilevel analyses, cross-context comparative studies, and the use of more diverse data sources. This study provides a methodological synthesis that can serve as a reference for researchers in selecting appropriate research approaches and developing future research agendas in educational management.

Keywords: Research Approaches, Research Methods, Educational Management

INTRODUCTION

Educational management is an evolving field of study that has become increasingly complex alongside changes in the management of educational organizations. Transformations in the educational environment, driven by digital transformation, demands for improved quality, policy changes, and the need for adaptive organizational governance, have broadened the scope of educational management research. The field is no longer concerned solely with the administrative dimensions of educational institutions but also encompasses educational leadership, organizational development, change management, organizational culture, human resource management, and institutional effectiveness (Mukul & Büyüközkan, 2023). This growing complexity requires diverse research approaches capable of capturing the multifaceted nature of educational management phenomena.

The development of educational management research has been accompanied by the increasing use of diverse research paradigms and designs. Quantitative research is widely employed to examine relationships among educational management variables, assess the effects of leadership on organizational



performance, and test theoretical models through statistical analysis. In contrast, qualitative approaches provide opportunities to explore the experiences of educational actors, decision-making processes, and the social dynamics underlying organizational practices. Mixed methods approaches have also emerged as an important alternative for integrating numerical evidence with contextual understanding (Zhou & Machtmes, 2024). This methodological diversity indicates that educational management represents a multidimensional field that cannot be adequately understood through a single research approach.

Research methodology plays a critical role in determining the quality and contribution of scholarly inquiry. The selection of research designs, data collection procedures, and analytical strategies needs to correspond to the research objectives and the characteristics of the phenomena under investigation. Research on educational methodology has identified substantial variation in how researchers design studies, report methodological procedures, and develop empirical arguments (Ngulube, 2023). Such variation highlights the importance of understanding methodological patterns within educational research, particularly in educational management, where organizational phenomena involve complex interactions among individuals, institutions, and contextual factors.

Several previous studies have attempted to examine methodological developments in education through literature-based approaches. Chong et al. (2022), for example, conducted a methodological review of research in higher education and identified substantial variation in research designs, analytical strategies, and standards of methodological reporting. Similarly, Matos et al. (2023) conducted a systematic literature review of research methodologies in teaching and learning and demonstrated the use of quantitative, qualitative, and mixed methods approaches according to different research purposes. Turnbull et al. (2020), through a review of methodological research in learning management systems, further demonstrated that mapping research methods can provide insights into the methodological development of a field and identify opportunities for future research.

Despite these contributions, important gaps remain in the methodological understanding of educational management research. First, previous reviews have predominantly focused on specific areas, such as educational technology, teaching and learning, or higher education, and therefore provide limited insight into the methodological characteristics of educational management research as a distinct field. Second, existing literature reviews have often emphasized publication trends, research topics, or substantive findings rather than systematically examining how researchers select and apply research approaches, designs, data collection methods, and analytical techniques. Third, there remains a need for a methodological synthesis that can provide researchers with a clearer understanding of the range of methodological choices available for investigating educational management phenomena and the implications of these choices for future research.

In response to these limitations, this study focuses specifically on mapping research approaches and methods used in educational management studies. The study examines how educational management research has been conducted, which research approaches and designs have been employed, how data have been collected, and which analytical strategies have been applied. Rather than focusing primarily on what educational management research has found, this study shifts attention toward ****how knowledge in the field has been produced****. This methodological perspective is important for identifying patterns

in research practice and understanding how methodological choices shape the development of knowledge in educational management.

Accordingly, this study contributes a methodological framework for understanding research approaches and methods in educational management. By synthesizing methodological patterns across the literature, the study provides a basis for identifying methodological strengths, limitations, and opportunities for future research. The findings are expected to assist students, academics, and researchers in making more informed methodological choices and in developing future educational management studies that are methodologically appropriate, contextually sensitive, and capable of addressing the increasing complexity of educational organizations.

METHODS

This study employed a literature review approach to identify, examine, and synthesize research approaches, methodological designs, data collection techniques, and analytical strategies used in educational management studies. This approach was selected because the primary objective of the study was to develop a comprehensive understanding of how research in educational management has been conducted and how methodological choices have evolved across the literature. A literature review serves not only to gather information from previous studies but also to facilitate conceptual understanding, identify patterns within a field of inquiry, and reveal opportunities for further research through the synthesis of scholarly sources (Snyder, 2024).

The literature analyzed in this study consisted of scholarly publications addressing educational management, educational administration, and educational leadership. Relevant journal articles were identified through searches of academic databases, including Scopus, Web of Science, ScienceDirect, and Google Scholar. The selection of literature was guided primarily by its relevance to the objectives of the study, particularly publications that explicitly addressed research approaches, research designs, data collection methods, or data analysis techniques within the context of educational management.

The literature search employed combinations of keywords relevant to the focus of the study. The keywords included “educational management,” “educational administration,” “educational leadership,” “research approach,” “research method,” “research design,” “qualitative research,” “quantitative research,” and “mixed methods research.” These combinations were used to identify scholarly publications that provided methodological information regarding how educational management research had been designed and conducted.

The identified literature was examined based on its relevance to the scope of the study. Particular attention was given to peer-reviewed journal articles published between 2015 and 2025 that addressed educational management, educational administration, or educational leadership and provided information concerning research methodology. Publications that were not directly relevant to the methodological focus of educational management research were not considered in the analysis. This process was intended to ensure that the literature examined was sufficiently aligned with the research objectives and could contribute meaningful methodological information to the synthesis.

The literature was analyzed using thematic analysis to identify recurring methodological patterns and themes. The analysis involved coding information related to the methodological characteristics of the studies reviewed. The literature was subsequently organized into several analytical categories,

including research approaches (quantitative, qualitative, and mixed methods), research designs (survey, case study, phenomenology, ethnography, evaluation research, and comparative research), data collection methods (questionnaires, interviews, observations, and document analysis), and data analysis techniques employed in previous studies.

The categorized literature was then interpreted comparatively to identify methodological tendencies within educational management research. The analysis focused on examining patterns in the use of research approaches and methods, identifying methodological limitations, and determining opportunities for methodological development. Rather than merely describing the methods reported in individual studies, the analysis sought to synthesize recurring methodological patterns across the literature and use these patterns as a basis for developing a broader understanding of the methodological directions of educational management research.

To enhance the credibility of the review, the literature was assessed in terms of its relevance, publication credibility, and alignment with the research focus. The use of multiple academic databases and scholarly sources was intended to broaden the range of literature considered and reduce dependence on a single source of information. The synthesis was subsequently developed by comparing methodological characteristics across the reviewed literature, thereby providing a broader representation of research practices and methodological developments in educational management.

RESULTS AND DISCUSSION

1. Overview of Educational Management Research Literature

Research on educational management has evolved substantially alongside the increasing complexity of educational organizations and changing demands within contemporary education systems. In its earlier development, educational management research primarily focused on administrative concerns, including resource management, school organizational structures, and leadership effectiveness. Over time, however, the field has expanded to encompass strategic leadership, organizational development, decision-making, educational innovation, and institutional governance in response to changing external environments (Bush, 2007). This development indicates a shift from a predominantly administrative perspective toward a multidimensional field informed by diverse theoretical and methodological perspectives.

The evolution of educational management research has also been driven by growing attention to the quality and effectiveness of educational organizations. Educational institutions are increasingly expected not only to fulfill their academic functions but also to manage organizational change, foster positive organizational cultures, and strengthen human resource capacity. Consequently, research in educational management has increasingly examined the relationships among leadership, school culture, teacher professionalism, decision-making, and educational quality improvement (Berkovich & Eyal, 2021). The expanding scope of these concerns has broadened the empirical domain of educational management and increased the need for methodological approaches capable of capturing its diverse organizational dimensions.

Recent scholarship further demonstrates the multidisciplinary character of educational management research, which increasingly intersects with organizational management, psychology, sociology, and public policy. This interdisciplinary orientation enables educational organizations to be

examined not merely as administrative institutions but as complex social systems involving multiple actors, interests, relationships, and organizational processes. Grissom et al. (2021), for example, highlight the growing scholarly attention to the mechanisms through which educational leadership and management practices influence organizational processes and educational outcomes. This development has shifted research attention beyond formal organizational structures toward the processes and mechanisms through which management practices operate in educational settings.

Methodological diversity represents another important characteristic of educational management research. Quantitative approaches are commonly employed to examine relationships among organizational variables and test theoretical models, whereas qualitative approaches provide deeper insights into the experiences, practices, and interpretations of educational actors. Mixed methods research offers an additional strategy by integrating numerical evidence with contextual and experiential accounts. Such methodological diversity reflects the complexity of educational management phenomena, which often involve measurable organizational relationships alongside social processes and context-dependent practices. Consequently, methodological fit between research questions, study designs, data sources, and analytical strategies becomes essential for producing robust explanations of educational management phenomena.

Despite the growing body of research in educational management, relatively limited attention has been devoted specifically to mapping how research in this field is conducted. Existing studies have predominantly addressed substantive issues such as educational leadership, school effectiveness, organizational behavior, and educational quality. Research on educational leadership, for instance, has frequently examined the effects of leadership practices on teacher performance or organizational outcomes, while other studies have focused on factors associated with school management effectiveness. However, studies that systematically bring together information on research approaches, research designs, data collection techniques, and analytical strategies across educational management research remain comparatively limited.

This limitation highlights the need for a methodological perspective that examines not only what is being studied in educational management but also how it is being studied. Understanding methodological patterns is important because research methods shape how educational phenomena are conceptualized, investigated, interpreted, and transformed into scholarly knowledge. Accordingly, this study contributes by synthesizing the methodological characteristics of educational management research, with particular attention to research approaches, designs, data collection methods, and analytical strategies. The resulting synthesis is intended to provide a methodological reference for researchers and support the development of more coherent and contextually appropriate research agendas in educational management.

2. Research Approaches in Educational Management Studies

Research approaches provide the conceptual foundation that determines how an educational phenomenon is understood, data are collected, and scientific conclusions are drawn. In educational management research, the complexity of educational organizational phenomena has led researchers to employ various research approaches to develop an understanding that corresponds to the characteristics of the problems under investigation. Based on the synthesis of the literature, educational management

research can generally be categorized into three main approaches: the quantitative approach, the qualitative approach, and the mixed methods approach.

These three approaches differ in their characteristics, purposes, and analytical strategies. The quantitative approach is more commonly used to examine relationships among variables and develop predictive models of educational management phenomena. In contrast, the qualitative approach is used to understand the processes, experiences, and meanings constructed by educational actors within specific organizational contexts. Meanwhile, the mixed methods approach has developed as an integrative approach that combines the strengths of quantitative and qualitative data to provide a more comprehensive understanding of the phenomena under investigation (Creswell & Clark, 2011).

Table 1. Classification of Research Approaches in Educational Management Studies

Research Approach	Main Characteristics	Research Objectives	Common Methods
Quantitative Approach	Uses numerical data and statistical analysis to examine measurable relationships among variables	To test relationships, effects, predictions, and causal models in educational management	Survey, correlation analysis, regression analysis, Structural Equation Modeling (SEM)
Qualitative Approach	Uses narrative data and contextual interpretation to explore social phenomena	To understand experiences, processes, practices, and organizational dynamics in educational settings	Case study, interview, observation, document analysis
Mixed Methods Approach	Integrates quantitative and qualitative evidence within a single research design	To provide a comprehensive understanding of complex educational management phenomena	Sequential explanatory design, sequential exploratory design, convergent design

The quantitative approach is one of the dominant approaches in educational management research, particularly in studies aimed at testing theories and explaining relationships among variables within educational organizations. This approach is based on the assumption that certain social phenomena can be represented through systematically measurable indicators, thereby enabling hypotheses to be tested using statistical analysis.

Within the context of educational management, quantitative approaches are widely used to examine educational leadership effectiveness, school organizational behavior, teacher motivation, job satisfaction, organizational culture, and the relationships between management practices and institutional performance. For example, research on transformational leadership frequently employs surveys to examine the relationship between school principals’ leadership styles, organizational commitment, and teacher performance (Leithwood et al., 2020).

In addition to conventional survey methods, advances in data analysis technologies have expanded the use of advanced statistical methods, such as Structural Equation Modeling (SEM), multilevel analysis, and latent variable modeling. These techniques enable researchers to develop theoretical models that explain complex relationships among variables within educational organizations (Whittaker, T. A., & Schumacker, 2022).

Table 2. Applications of Quantitative Methods in Educational Management Research

Quantitative Method	Research Purpose	Examples of Educational Management Topics
Survey Research	Measuring perceptions, attitudes, and organizational characteristics from large populations	School leadership, teacher motivation, organizational culture
Correlation Analysis	Identifying relationships among educational management variables	Relationship between leadership style and teacher performance
Regression Analysis	Examining predictive relationships between independent and dependent variables	Factors influencing school effectiveness
Structural Equation Modeling (SEM)	Testing complex theoretical models involving multiple variables and pathways	Relationships among leadership, organizational commitment, and institutional performance
Multilevel Analysis	Analyzing hierarchical or nested educational data	Differences between individual, classroom, and school-level factors

The qualitative approach holds an important position in educational management research because it is capable of explaining processes and contextual dimensions that cannot be adequately captured through statistical measurement. This approach assumes that social reality is constructed through individuals' experiences, interactions, and interpretations within particular environments.

In educational management research, qualitative approaches are frequently used to understand how educational leaders make decisions, how organizational change is implemented, how school cultures develop, and how educational actors interpret and assign meaning to particular policies.

Case study is one of the most frequently used research designs because educational organizations possess unique characteristics and are strongly influenced by their local contexts. Through case study research, researchers can explore management phenomena in depth by drawing on multiple sources of data, including interviews, observations, and organizational documents (Yin, 2018).

Table 3. Qualitative Research Designs in Educational Management Studies

Qualitative Research Design	Main Focus	Common Data Sources
Case Study Research	Investigating educational management phenomena within specific organizational contexts	Interviews, observations, institutional documents
Phenomenological Research	Understanding lived experiences of educational actors	In-depth interviews and personal reflections
Ethnographic Research	Exploring organizational culture and social practices within educational settings	Field observations, participant interaction, field notes

Narrative Research	Examining personal experiences and professional journeys	Personal narratives and life stories
Document Analysis	Analyzing policies, regulations, and organizational records	Policy documents, strategic plans, institutional reports

The strength of the qualitative approach lies in its ability to provide an in-depth understanding of the dynamics of educational organizations. However, its limitation concerns the generalizability of research findings. Findings derived from a particular educational institution often require careful interpretation when applied to different contexts.

The mixed methods approach has developed partly in response to the limitations of using quantitative and qualitative approaches separately. This approach combines the collection and analysis of quantitative and qualitative data within a single study to provide a more comprehensive understanding of the phenomenon under investigation.

In educational management research, this approach is increasingly relevant because educational organizations are complex systems that require an understanding of both relational patterns and the social contexts that shape those patterns. For example, research on school principal effectiveness may employ surveys to statistically identify leadership patterns and subsequently use interviews to explain how such leadership practices are implemented in practice.

Table 4. Mixed Methods Designs in Educational Management Research

Mixed Methods Design	Research Sequence	Main Purpose	Example Application
Explanatory Sequential Design	Quantitative → Qualitative	Explaining quantitative findings through deeper qualitative exploration	Surveying leadership effectiveness followed by interviews with school leaders
Exploratory Sequential Design	Qualitative → Quantitative	Developing concepts, models, or instruments based on qualitative findings	Exploring leadership practices and developing measurement scales
Convergent Design	Quantitative + Qualitative simultaneously	Comparing and integrating two types of evidence	Combining teacher surveys and interview data to evaluate school management practices

Based on the literature reviewed above, the development of educational management research indicates a shift from the use of single approaches toward more integrative approaches. The quantitative approach continues to play an important role in generating empirical evidence regarding relationships among variables; however, it often has limited capacity to explain the social mechanisms operating within educational organizations. In contrast, qualitative research makes a substantial contribution to understanding the processes and experiences of educational actors but faces challenges concerning the generalizability of its findings. Therefore, mixed methods research represents one important direction for future research because it can integrate the strengths of both approaches.

3. Data Collection and Data Analysis Methods in Educational Management Studies

Data collection and data analysis constitute fundamental aspects of educational management research because they determine how educational management phenomena are constructed, explained, and developed into scientific knowledge. The complexity of educational organizations requires researchers to employ various data collection strategies that correspond to the objectives of the study and the characteristics of the phenomena under investigation. Matias (2021) explains that the selection of research methods needs to consider the alignment among the research problem, data characteristics, and analytical techniques in order to produce valid and accountable findings.

Survey instruments and questionnaires remain widely used in quantitative educational management research to measure various constructs, including educational leadership, organizational culture, work motivation, and institutional effectiveness. These methods enable researchers to obtain data from large numbers of respondents and examine relationships among variables through statistical analysis. However, the quality of research findings depends substantially on the appropriateness of the instruments employed. Cong-Lem (2025) emphasizes that instrument development requires the conceptualization of indicators, construct validity testing, and reliability assessment to ensure that the variables being measured accurately represent their underlying theoretical concepts.

In-depth interviews, observations, and document analysis constitute major techniques in qualitative research for understanding educational management practices within their contexts. These techniques enable researchers to explore the experiences of school principals, teachers, administrators, and other stakeholders in responding to organizational change and implementing educational policies. Thunberg and Arnell (2022) indicate that technological developments have expanded the use of digital interviews as an alternative approach to qualitative data collection, although the quality of interaction and depth of information remain important factors in maintaining research credibility. The use of multiple data sources also enables researchers to develop a more comprehensive understanding of phenomena from diverse perspectives.

Data analysis techniques in educational management research have also evolved in response to the increasing complexity of research questions. Quantitative analysis is no longer limited to descriptive statistics and basic regression but has expanded to include methods such as Structural Equation Modeling (SEM), multilevel analysis, and predictive modeling to examine relationships among organizational variables more comprehensively. Meanwhile, qualitative analysis frequently employs approaches such as thematic analysis and content analysis to identify patterns, categories, and meanings within research data. Klingberg et al. (2024) explain that thematic analysis offers considerable flexibility in interpreting social phenomena because it can connect empirical data with broader conceptual constructions.

Taken together, the literature indicates that educational management research has evolved from the use of isolated data collection and analytical methods toward more integrative research strategies. Quantitative approaches contribute to identifying relational patterns and testing theoretical models, whereas qualitative approaches strengthen understanding of organizational contexts, processes, and the experiences of educational actors. These methodological developments suggest that future research should expand the integration of multiple data sources, employ more adaptive analytical designs, and adopt multidimensional research strategies to develop a more comprehensive understanding of educational organizational dynamics.

4. Data Collection and Data Analysis Methods in Educational Management Studies

Data collection and data analysis methods constitute important components of educational management research because they determine the quality of empirical evidence used to explain phenomena within educational organizations. The complexity of educational institutions requires researchers to employ various data collection techniques that correspond to the objectives of the study, ranging from survey instruments to context-based forms of inquiry. Adeyemi (2024) argues that the quality of social research is strongly influenced by the appropriateness of the instruments selected, data collection procedures, and the alignment between theoretical concepts and the measurement indicators employed.

Survey instruments remain widely used in educational management research, particularly in studies examining educational leadership, organizational behavior, teacher engagement, and school effectiveness. The use of questionnaires enables researchers to examine relationships among variables through statistical techniques, although it continues to face challenges related to construct validity and measurement bias. Fakhreddin (2023) explains that survey-based research needs to pay careful attention to instrument design and validation procedures to ensure that the resulting analysis provides an accurate representation of the phenomenon under investigation.

Qualitative approaches employ interviews, observations, and document analysis to develop a deeper understanding of educational management practices. These techniques are frequently used to explore the experiences of educational leaders, policy implementation, and organizational change processes. Kuckartz and Radiker (2023) emphasize that qualitative data analysis requires systematic coding procedures to generate conceptual patterns from empirical data. At the same time, technological developments have encouraged the use of digital tools in data collection and analysis, thereby expanding opportunities for research on educational organizations.

The foregoing discussion indicates that educational management research has developed from the use of isolated methods toward more adaptive and integrative research strategies. Quantitative methods contribute to identifying relational patterns and testing theoretical models, whereas qualitative methods strengthen understanding of the context and social dynamics of educational organizations. These developments suggest that future research should optimize the combination of diverse data sources, analytical techniques, and methodological approaches capable of addressing the complexity of educational management more comprehensively.

5. Methodological Trends, Research Gaps, and Future Directions in Educational Management Research

Research in educational management has increasingly shifted from a predominant reliance on conventional quantitative designs toward more diverse and context-sensitive methodological approaches. The methodological review by Karimi and Khawaja (2023) indicates that educational leadership research continues to rely substantially on quantitative approaches, while qualitative and mixed methods approaches also play important roles in explaining the complexity of leadership phenomena. This pattern suggests that methodological diversity has become an important characteristic of the development of educational management research.

This trend is further reflected in the growing use of research designs capable of examining relationships, mechanisms, and contextual dimensions of educational phenomena in greater depth. Mifsud (2024), for example, demonstrates that research on distributed leadership has developed through

diverse research purposes, conceptualizations, and methodological approaches. Similarly, Özdemir et al. (2024) identify a tendency in school leadership research toward models that consider both direct and indirect relationships between leadership and educational outcomes. These methodological developments can be summarized as follows:

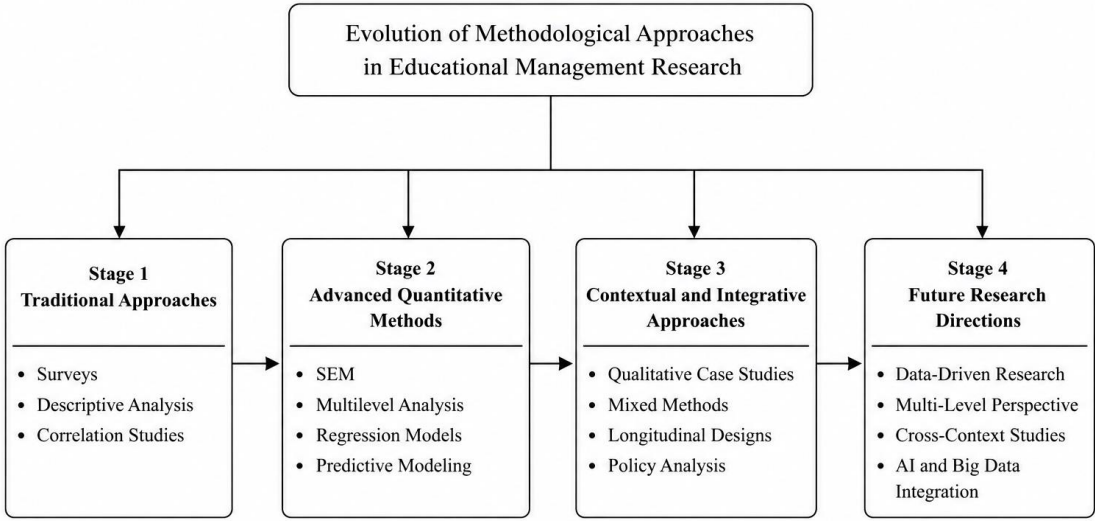


Figure 1. Evolution of Methodological Approaches in Educational Management Research

Several methodological gaps remain evident in this development. Mertkan and Gümüş (2026) show that systematic reviews in educational leadership and management continue to exhibit imbalances in terms of topic coverage, geographical representation, and the characteristics of the studies reviewed. This condition indicates that the existing literature has not yet provided a sufficiently balanced methodological picture across different contexts. Educational management research also requires designs capable of connecting multiple levels of analysis, particularly when management phenomena are simultaneously influenced by individual, organizational, policy, and educational-environmental factors.

The synthesis of the literature indicates that the future direction of educational management research lies not merely in the application of increasingly sophisticated analytical techniques but in the capacity to integrate research designs, data sources, and levels of analysis in a more coherent manner. The development of longitudinal research, mixed methods, cross-context comparative studies, and the utilization of digital data can expand the capacity of research to explain changes within educational organizations. This direction positions methodology not merely as a set of technical research tools but as a foundation for developing stronger explanations of how educational management practices emerge, evolve, and produce consequences across different contexts.

CONCLUSION

This study shows that educational management research has developed through diverse approaches that reflect the complexity of educational management phenomena. Quantitative approaches contribute to identifying relationships and patterns among variables, whereas qualitative approaches strengthen understanding of organizational processes, experiences, and contexts. The development of mixed methods reflects a growing tendency toward methodological integration to generate more comprehensive evidence. Theoretically, these findings reinforce the importance of methodological fit as

a foundation for aligning research questions, theoretical perspectives, research designs, data sources, and analytical strategies.

Several methodological gaps remain, particularly the predominance of cross-sectional designs, reliance on perceptual data, limited use of longitudinal research, and concentration on particular actors and contexts. These conditions constrain the ability of existing research to explain organizational change and relationships across different levels of the educational system. From a practical perspective, researchers and educational managers should promote more integrative research designs through mixed methods, multilevel analysis, comparative studies, source triangulation, and the utilization of administrative and digital data. Such strategies can generate stronger evidence to support decision-making and the development of educational management practices.

Overall, this study provides a methodological synthesis connecting research approaches, designs, data collection techniques, analytical strategies, and emerging directions in educational management research. Future research should move beyond simply selecting research methods toward designing studies capable of explaining what occurs, how processes unfold, why particular phenomena emerge, and under what conditions their outcomes may differ. The integration of cross-level perspectives, longitudinal approaches, cross-context comparisons, and emerging data sources represents an important opportunity to build a stronger, more context-sensitive, and more relevant knowledge base for both the theoretical and practical advancement of educational management.

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