

THE EFFECTIVENESS OF PRINCIPALS' AND TEACHERS' ROLES IN ENHANCING LEARNING MANAGEMENT IN SECONDARY SCHOOLS

Syahrudin¹, Yudin Citriadin², Hazat Usman Mashwani³

¹⁻²Islamic Education Management, Universitas Islam Negeri Mataram, Indonesia

³Non-Formal Education, Sayed Jamaluddin Afghani University, Afghanistan

Corresponding email: syahrudin.ntb@gmail.com, yudin.citriadin@uinmataram.ac.id,
usman.kunar@gmail.com

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ABSTRACT

This study aims to systematically review and analyze the effectiveness of principals' and teachers' roles in enhancing learning management in secondary schools. Utilizing the Systematic Literature Review (SLR) method, this research examines an initial pool of scholarly articles retrieved from the Dimensions and Scopus databases, published over the past 10 years, which were screened using predefined inclusion and exclusion criteria, resulting in the final studies synthesized through a thematic analysis approach. The primary focus of the study is to identify the contributions of principals and teachers in improving the quality of learning, while also examining the role of educational technology as a supporting strategy within learning management. The findings indicate that principals contribute through instructional leadership, policy implementation, and school culture development, whereas teachers enhance learning management through pedagogical innovation, classroom practices, and effective technology integration. Educational technology offers significant benefits in supporting learning management; however, its success is not uniform. Key factors such as technology design, user acceptance, and applied pedagogical strategies are critical in determining its effectiveness. This study concludes that effective collaboration between principals and teachers, supported by well-planned technology integration, constitutes a key strategy for improving learning management in secondary schools and provides a conceptual framework for future educational practice and research.

Introduction

The roles of principals and teachers in learning management are crucial to the quality of education in secondary schools. The principal, as the primary leader, is responsible for designing and managing educational policies, creating a supportive learning environment, and ensuring the effective implementation of the curriculum. Meanwhile, teachers play a direct role in the classroom by designing innovative teaching methods, motivating students, and adapting teaching strategies to meet the diverse needs of learners. A harmonious collaboration between principals and teachers in establishing effective learning management will create an environment conducive to both academic and personal development, enabling students to reach their full potential (Waziroh et al., 2022). With good learning management, the quality of education can be enhanced, which, in turn, contributes to the overall improvement of student learning outcomes.

The principal serves as the primary leader in schools, significantly influencing various aspects of educational management, including curriculum development, policy implementation, and teacher professional development. Their leadership style directly impacts the school climate and the overall quality of learning. Principals are responsible for designing and implementing policies that align with the school's vision and mission, as well as managing the curriculum to ensure it meets local needs and supports effective teaching practices (Choeda, 2023; Febyola et al., 2023). Moreover, effective leadership strategies, such as coaching, contribute to enhancing teacher performance and engagement in professional development. Principals who actively involve teachers in decision-making foster a positive school climate, characterized by collaboration and support among staff, which leads to improved morale and job satisfaction. Research indicates that schools with strong principal leadership report higher teacher retention rates and student achievement levels. For instance, a study found that schools with engaged principals saw a 20% increase in student test scores over three years (Nazarova, 2020). Furthermore, the principal's influence on teacher professional development is directly correlated with student learning outcomes. Schools led by competent principals exhibit better student performance due to the promotion of innovative teaching methods and continuous improvement (Wulandari et al., 2023). However, challenges such as budget constraints and resistance to change can hinder the effective implementation of policies and professional development initiatives, potentially limiting the positive effects of principal leadership on school quality.

The relationship between principal leadership and teacher performance is significant, as effective leadership styles enhance teacher effectiveness in the classroom. Transformational leadership, for example, positively influences teacher performance, with studies indicating a direct relationship between this leadership style and improved teacher effectiveness (Arifin, et al., 2023). Similarly, participative leadership plays a critical role, as research shows it accounts for approximately 90.1% of the variance in teacher performance, emphasizing its importance in fostering a conducive work environment (Arina et al., 2023). In addition to leadership styles, principals support teachers through professional training and

resource allocation. Providing opportunities for professional development, such as seminars and workshops, is essential. For instance, principals are encouraged to facilitate access to both national and international training programs for teachers (Urriza, 2023). Furthermore, adequate resource allocation, including teaching materials and technology, enhances teacher performance and engagement (Hadi et al., 2023). A supportive work culture also plays a pivotal role in improving teacher performance. A positive work environment that fosters collaboration and communication among teachers accounts for 44.90% of the variance in teacher performance (Dewi et al., 2023). However, despite the potential of effective leadership to significantly enhance teacher performance, challenges such as inadequate resources or limited professional development opportunities can hinder this relationship, underscoring the need for systemic support to ensure sustained improvement.

The challenges faced by principals and teachers in learning management within secondary schools are complex and significantly impact educational quality. Resource constraints are a major issue, particularly in low-income countries, where schools often lack adequate teaching materials and well-equipped laboratories (Alemu, 2023). During the COVID-19 pandemic, unstable internet access affected 55% of school administrators, severely limiting the effectiveness of online learning (Poobalan et al., 2022). Another significant challenge is the lack of time for planning, as teachers often juggle lesson preparation with administrative duties and adapting to students' prior knowledge (Marvi, 2023). This issue was intensified during the pandemic when principals and teachers had to rapidly transition to online teaching without sufficient preparation (Karahoca & Ozrecheroglu, 2023). Managing heterogeneous classrooms further complicates the teaching process. Teachers frequently struggle to address the diverse learning needs of students, which can lead to ineffective strategies and disengagement, particularly among students with varying levels of prior knowledge. Despite these challenges, some argue that they can drive innovation in teaching practices, as educators are pushed to develop creative solutions to engage students and improve learning outcomes. This perspective underscores the potential for growth and adaptation even in challenging circumstances.

The aim of this research is to identify, evaluate, and interpret all relevant research findings regarding the roles of principals and teachers in enhancing learning management in secondary schools. The urgency of this study arises from the increasing complexity of educational leadership and learning management in response to rapid technological advancements, evolving pedagogical practices, and the growing demand for improving educational quality in secondary schools. Although numerous studies have examined principals' leadership and teachers' instructional roles separately, comprehensive evidence synthesizing their interconnected contributions to effective learning management remains limited. This study seeks to provide a comprehensive understanding of the topic through the Systematic Literature Review (SLR) approach. By utilizing this approach, the research aims to systematically collect and analyze data from various relevant sources and draw conclusions that offer insights into the effectiveness, challenges, and potential advancements

in the roles of principals and teachers in learning management. The novelty of this study lies in its integration of findings from diverse empirical studies to present a holistic perspective on the collaborative roles of principals and teachers, while simultaneously identifying emerging themes, research gaps, and future directions in educational leadership and learning management research. This synthesis is expected to contribute to the development of evidence-based strategies for strengthening leadership practices and improving learning management in secondary schools. The study also aims to identify existing research gaps and provide directions for future research to improve learning management in secondary schools.

Method

This research is a qualitative study employing the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guideline and the Systematic Literature Review (SLR) approach. This method is used to identify, evaluate, and interpret all relevant research findings regarding the roles of principals and teachers in enhancing learning management in secondary schools. The SLR approach enables researchers to systematically collect and analyze data from various relevant sources, providing a comprehensive understanding of the topic under study. The data in this study were sourced from the Dimensions database (<https://app.dimensions.ai>) and Scopus (<https://www.scopus.com>) through searches conducted between January and March 2024. The search strategy employed Boolean operators (AND, OR) using keywords including "learning management," "educational leadership," "teacher effectiveness," "school principal," and "school improvement." The search was performed in the title, abstract, and keywords fields, with a publication interval of the last 10 years to ensure the inclusion of current and relevant studies related to learning management and the contributions of school leaders and educators. Data eligibility criteria in this study were established to ensure that only high-quality and relevant literature was analyzed. The criteria include (1) scientific articles published in reputable national and international journals; (2) studies specifically discussing the effectiveness of principals' and teachers' roles in learning management or related fields such as educational leadership and instructional strategies; (3) publications from the last 10 years; and (4) articles available in full text and written in English. The selection process followed the PRISMA framework, including identification, screening, eligibility assessment, and inclusion stages. Duplicate records and studies that did not meet the predefined eligibility criteria were excluded. Furthermore, the methodological quality of the included studies was assessed using the Critical Appraisal Skills Programme (CASP) checklist to ensure that only studies with acceptable methodological quality were synthesized. The research procedure is detailed in Figure 1.

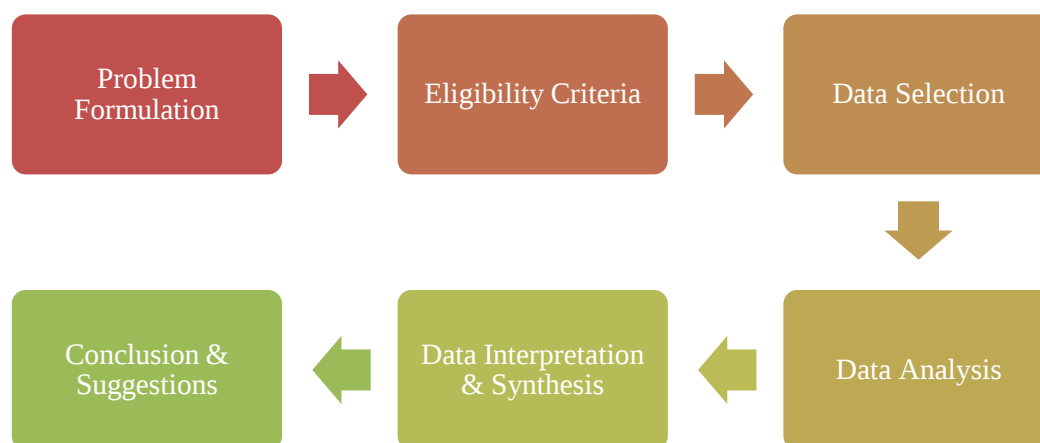


Figure 1. Research procedures

Figure 1 illustrates that this research was conducted in several stages, namely problem formulation, determining eligibility criteria, data selection, data analysis, data interpretation and synthesis, and drawing conclusions. The problem formulation stage was crucial to define the scope of the study, focusing on the effectiveness of principals' and teachers' contributions to learning management in secondary schools. Eligibility criteria were determined to filter data that fit the topic with relevant keywords such as "learning management," "educational leadership," "teacher effectiveness," and "school improvement." Following this, data were collected from the Dimensions and Scopus databases, with a filter applied for publications from 2015 to 2024. The identification, screening, eligibility, and inclusion processes were documented using a PRISMA flow diagram to ensure transparency and reproducibility of the review. The selected data were then imported into VOSviewer (version 1.6.20) to visualize keyword relationships and thematic clusters in the field. Bibliometric analyses included keyword co-occurrence, network visualization, overlay visualization, and cluster analysis using a minimum keyword occurrence threshold of five. The use of these tools facilitated an in-depth exploration of data trends, including the frequency of themes, the evolution of strategies, and the identification of research gaps.

The results of the bibliometric analysis and qualitative synthesis were then interpreted to provide insights into the effectiveness, challenges, and potential advancements of principals' and teachers' roles in learning management. Finally, the findings from the data analysis and synthesis were used to formulate key conclusions and implications for both theoretical understanding and practical applications. To enhance the credibility of the review, the literature selection and quality assessment processes were independently conducted by two reviewers. Any disagreements were resolved through discussion until consensus was reached, and an audit trail documenting each stage of the review process was maintained to ensure the validity and reliability of the review. The researcher also outlined potential directions for future research to address identified gaps and further improve the effectiveness of educational leadership and teacher involvement in enhancing learning management. These conclusions are expected to contribute to advancing the field of

educational management and the development of more effective strategies for improving learning outcomes in secondary schools.

Results and Discussion

The search conducted within the indexing database identified a total of 17,995 records related to the research topic. Following the data selection process, 15,653 articles were found to be relevant and met the eligibility criteria. Of these, 4,409 were journal articles, and 243 were conference proceedings. After the screening, eligibility assessment, and quality appraisal based on the PRISMA framework and CASP checklist, a total of 24 articles fulfilled all inclusion criteria and were included in the final qualitative synthesis and analysis. The distribution of data based on the year of publication is presented in Figure 2, illustrating the trend in research on principals' and teachers' roles in enhancing learning management in secondary schools over the past decade.

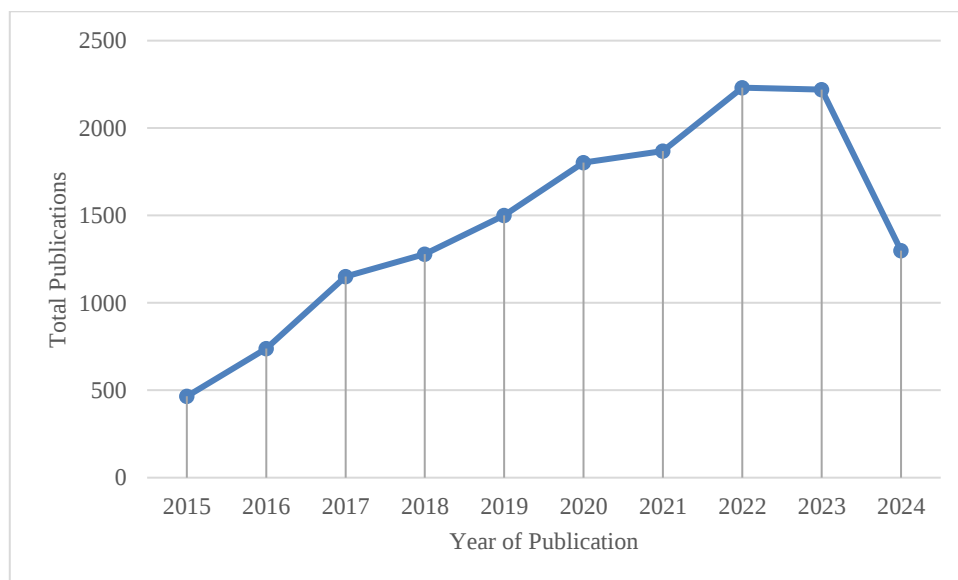


Figure 2. Number of Publications 2015-2024

Figure 2 presents the trend in the total number of academic publications by year of publication over the period from 2015 to 2024. This graph illustrates the dynamics of research development on a specific topic that has been the focus of attention during this timeframe. Such information is crucial for evaluating academic productivity levels, research interest patterns, and shifting trends within the scholarly community. The graph above depicts the total number of publications released each year from 2015 to 2024. There is a significant upward trend in publication numbers, peaking in 2022 and 2023 with figures nearing 2,000 publications. In the initial period, in 2015, the number of publications was around 500, which then gradually increased year by year, culminating in a peak of productivity. However, in 2024, the total number of publications shows a sharp decline compared to the previous two years. This decrease may indicate changes in publication

dynamics, potentially driven by external factors such as shifts in research focus, funding policies, or global conditions impacting academic activities. Overall, the trend reflected in this graph demonstrates fluctuating yet generally increasing scientific productivity, reaching a peak before experiencing a decline. This data provides valuable insights into the scholarly contributions within a specific field over the past decade.

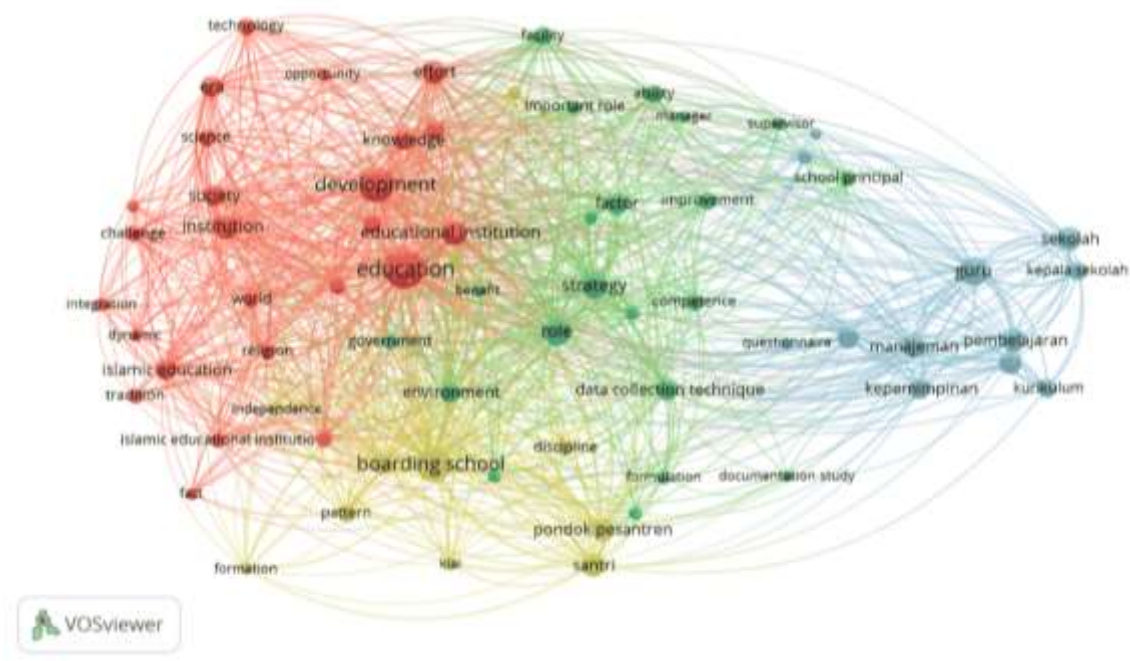


Figure 3. Network Visualization

Figure 3 is a network visualization of all the variables studied over the past 10 years and depicts four different color groups: green, red, yellow, and blue. The interpretation is as follows.

1. **Red Cluster: Educational Development and Technological Challenges**
Keywords such as development, technology, education, era, society, and challenge dominate this cluster. This cluster highlights the strong connection between technological advancements and the challenges faced by educational institutions in integrating innovation into their systems. It underscores the need for educational institutions to be responsive to the changing era and to leverage technological opportunities to achieve more inclusive and efficient educational goals.
2. **Green Cluster: Strategies and Roles of Educational Institutions**
This cluster includes keywords like strategy, role, environment, factor, and improvement. The primary focus of this cluster is on how educational institutions can design strategies to enhance competencies and learning environments. These keywords suggest that the success of education is significantly influenced by the

ability of institutions to adapt to societal needs through well-structured strategic approaches.

3. Yellow Cluster: Islamic Boarding Schools as a Model for Traditional Education

Keywords such as boarding school, Islamic educational institution, kiai, and santri dominate this cluster. It emphasizes the role of Islamic boarding schools (pesantren) in shaping students' character through education grounded in religious values and traditions. Islamic boarding schools are viewed as institutions that preserve Islamic identity while striving to integrate modern elements.

4. Blue Cluster: The Role of Teachers and School Principals in Educational Management

This cluster includes keywords such as teacher, school principal, leadership, and learning management. It highlights the importance of the role of school principals and teachers in designing and implementing effective curricula. This cluster also emphasizes the leadership responsibilities in improving the quality of education.

The Impact of Technology on the Effectiveness of Learning Processes in Educational Institutions

The integration of technology in educational institutions has the potential to significantly enhance learning processes, although its effectiveness depends on various factors. Research indicates that technology can improve cognitive skills and critical thinking, ultimately leading to better academic performance (Suyuti et al., 2023). Collaborative tools such as Zoom and Google Docs have been shown to foster student communication and interaction, making the learning experience more engaging (Velayutham et al., 2022). Additionally, the use of Information and Communication Technology (ICT) enhances student engagement and access to information, thereby positively influencing academic productivity (Balaji & Sahija, 2022). However, the effectiveness of technology is influenced by its design and the quality of interaction between users and tools; poor implementation can impede learning outcomes (Taha & Abdulrahman, 2023). Stakeholder perceptions also play a significant role in determining the successful integration of technology into educational practices (Chugh et al., 2023). While technology offers substantial benefits, addressing its challenges is crucial to maximizing its potential. Balancing technology use with sound pedagogical strategies remains essential for achieving optimal learning outcomes.

This research emphasizes that the impact of technology on the effectiveness of learning processes is not entirely uniform. Although technology offers significant benefits, its success heavily depends on factors such as technological design, user acceptance, and the pedagogical strategies applied. For instance, when tools like ICT are intuitively designed and integrated with active learning methods, they are likely to enhance student engagement. Conversely, unplanned or irrelevant use of technology can hinder learning goals, potentially causing confusion for both students and educators. Moreover, the perceptions of teachers, school leaders, and other stakeholders influence decisions on technology integration,

highlighting the importance of training and awareness regarding the use of technology in education. From an evaluative perspective, this research indicates that while technology can serve as a powerful tool for improving learning outcomes, its success relies not only on its presence but also on how it is utilized. Studies show that tools like Zoom and Google Docs have the potential to create more collaborative and engaging learning environments. However, the lack of training or understanding of how to use these tools effectively can be a significant barrier. Additionally, there is a risk that technology might replace effective traditional teaching methods if implemented without careful planning. Therefore, the main challenge lies in balancing the use of technology with sound pedagogical strategies. Overall, the reviewed studies consistently demonstrate that technology contributes to effective learning management only when supported by complementary factors, including instructional leadership, teacher readiness, and learner-centered pedagogical practices. These findings suggest that technological innovation alone is insufficient to improve learning management; rather, its effectiveness emerges through the interaction between technological resources, leadership support, and teachers' instructional competence. This synthesis highlights that school principals play a strategic role in establishing policies, providing professional development opportunities, and fostering a supportive environment for technology integration, while teachers are responsible for translating these technological resources into meaningful classroom practices. Consequently, effective learning management requires a holistic approach in which technology, educational leadership, and pedagogical quality operate as interconnected components rather than as independent factors.

Leadership Strategies for Improving Teachers' Competence and Educational Quality

Improving teachers' competence and educational quality requires strategic leadership from school principals, emphasizing a range of development strategies that enhance teacher performance and educational outcomes. Regular supervision and the promotion of ethical responsibilities foster a culture of integrity and professionalism among educators (Estiani & Hasanah, 2022), while effective communication and coaching strategies help develop teachers' pedagogic and professional competencies, ultimately improving educational quality (Hairudin et al., 2023). Establishing mentor-mentee relationships and providing real-time feedback are critical for motivating teachers and enhancing their performance (B. Perez & F. Banayo Ed.D, 2023). Additionally, continuous professional development programs aimed at mobilizing teacher education encourage innovative and adaptive learning practices, ensuring sustained growth in teacher competence (Anggraeni & Rugaiyah, 2023). Technology integration further equips teachers to meet modern educational demands by enhancing their technological proficiency and effectiveness in the classroom. Despite their efficacy, these strategies face challenges, including resistance to change and varying levels of teacher engagement, which must be addressed through targeted interventions to achieve long-term improvements in educational quality.

Research highlights that distributed leadership, where principals share responsibilities and empower teachers, significantly enhances teachers' competencies and educational outcomes. This approach encourages shared decision-making, increasing teacher engagement and competency, with studies showing a significant correlation ($r = .496$) between distributed leadership practices and teacher competency levels (Hata et al., 2020). Additionally, effective supervision and support from school leaders are critical for developing teachers' pedagogical skills, particularly in specialized contexts such as Islamic education. Continuous professional development aligned with teachers' needs and school goals fosters a culture of ongoing improvement, enhancing instructional quality even in low-income or crisis settings (Bubnys & Kauneckienė, 2017; Dhliwayo & Tshabalala, 2020). Academic supervision strategies, including direct and collaborative approaches, further strengthen teachers' pedagogical abilities, while a supportive school environment created through strategic leadership practices is essential for effective teaching and learning (Budiyanthi et al., 2021). Conversely, leadership styles such as laissez-faire or autocratic approaches may hinder educational quality by neglecting comprehensive teacher engagement (Lugo & Ferrer, 2019). Therefore, adopting a balanced leadership approach is imperative to fostering an environment conducive to teacher development and achieving educational excellence.

The research highlights a strong connection between leadership strategies and the successful enhancement of teacher competence. Regular supervision and the promotion of professional ethics establish a foundational culture of integrity and professionalism, which is essential for improving teaching quality. Effective communication and coaching foster collaborative relationships between school leaders and teachers, helping educators identify areas for growth. Mentor-mentee relationships and real-time feedback provide valuable insights for less experienced teachers, while continuous professional development (CPD) supports ongoing learning and adaptation to evolving educational challenges. Distributed leadership strengthens the role of teachers in decision-making, thereby boosting motivation and competence. However, resistance to change and varying levels of teacher engagement underscore the need for more adaptive and individualized approaches when implementing these strategies. While these proposed strategies are highly effective, their success is contingent upon the context of implementation. Regular supervision and ethics development are universal strategies applicable across various school types, but CPD programs and technology integration require significant resource investment, which may not be available in all schools, particularly in resource-limited areas. The distributed leadership approach, while effective, also necessitates a school leader who can foster trust and collaboration. Resistance to change remains a significant barrier, requiring clear communication and training to help teachers understand the benefits of new strategies.

The Relevance of Islamic Boarding Schools to the Challenges of Modernization

The relevance of Islamic boarding schools (*pesantren*) to the challenges of modernization has become increasingly important as these institutions strive to meet contemporary educational demands. In order to remain competitive and relevant in the 21st century, the integration of technology and modern pedagogical approaches is essential for Islamic education. This adaptation involves a variety of strategies aimed at enhancing the educational framework within *pesantren*. One key aspect of this modernization is the evolution of curricula, with many Islamic boarding schools transitioning from traditional (*Salaf*) to more contemporary (*Khalaf*) models. This shift involves incorporating new teaching methods and technologies that positively influence the educational dynamics of these institutions (Suheri, 2017). Furthermore, the role of *Kyai* (leaders) in *pesantren* is critical, as their professionalism ensures the maintenance of educational quality and the ability to adapt to societal changes (Muqit, 2018). Effective leadership in *pesantren* guarantees that graduates are well-prepared to navigate modern challenges (Muqit, 2018). Institutions such as Darussalam Gontor have been at the forefront of this transformation, implementing total quality control and continuous teaching methodologies to improve educational outcomes (Fasa, 2017). These modernization efforts are further supported by organizations like *Nahdlatul Ulama*, which plays a key role in coordinating educational policies and practices across various institutions (Muhammedi, 2016).

Pesantren are integrating modern subjects alongside traditional Islamic teachings to ensure that students are not only well-versed in religious knowledge but also equipped with the skills necessary to compete in the global job market (Kisyanto, 2023). Furthermore, innovative teaching methods, including the incorporation of technology, are being adopted to cater to the digital-savvy millennial generation, enhancing the learning experience and engaging students more effectively (Muhith et al., 2023). In terms of economic empowerment, institutions like Gontor are implementing sharia-based economic models, which focus on self-sufficiency and sustainability, aligning with the broader goals of economic independence and resilience within *pesantren* (Insawan, 2023). Additionally, there is a growing emphasis on vocational training and entrepreneurship, which equips students with practical skills to thrive in the modern economy (Kisyanto, 2023). *Pesantren* also continue to play a vital role in cultural preservation by engaging with local communities and adapting to modern influences, thereby maintaining their relevance in a rapidly changing society (Afista & Abu Bakar, 2021). Furthermore, *pesantren* place a strong emphasis on moral and ethical education, preparing students to navigate the complexities of modern life with integrity and sound judgment. However, as these schools modernize, concerns remain about the potential dilution of traditional values. The ongoing challenge for these institutions is to strike a delicate balance between embracing modernization and preserving the foundational principles of Islamic education.

The modernization of *pesantren* represents an effort to merge traditional Islamic teachings with the needs of the modern world. While these institutions continue to prioritize religious education, they acknowledge the necessity of integrating contemporary subjects

and teaching methods to better prepare students for the challenges of today's society. For example, the inclusion of technology enhances the learning experience and equips students with the skills needed to thrive in a digital age. However, this shift presents challenges, particularly in balancing the transition from the traditional *Salaf* model to the more modern *Khalaf* approach, which raises concerns about maintaining core Islamic values. As *pesantren* adopt modern educational practices, it is essential to find a balance between upholding Islamic teachings and embracing innovation. This responsibility falls heavily on the leadership of *pesantren*, particularly the *Kyai*, who plays a crucial role in ensuring that modernization does not compromise traditional values. Furthermore, the focus on economic empowerment and vocational training emphasizes the importance of preparing students for both spiritual and practical success. The increasing emphasis on equipping students with marketable skills highlights the growing need for economic independence within *pesantren* communities. The relevance of Islamic boarding schools in the context of modernization is thus both significant and complex. Efforts to modernize the curriculum, incorporate technology, and adopt new leadership strategies are necessary to ensure the continued relevance of *pesantren* in the 21st century. These initiatives help *pesantren* offer a comprehensive education that combines religious knowledge with practical skills, making students more competitive in the global job market. However, concerns remain about the preservation of Islamic traditions, as modernization could potentially dilute the unique identity of *pesantren*. The key challenge is ensuring that modern elements, such as technology and contemporary teaching methods, do not overshadow the foundational Islamic values that define these institutions. Maintaining Islamic moral and ethical teachings is essential to the identity of *pesantren*. Additionally, while the emphasis on economic empowerment and vocational training is beneficial, it may sometimes conflict with the traditional focus on spiritual education. Balancing these aspects requires careful consideration to ensure students are prepared not only for the workforce but also for a life rooted in strong ethical and moral principles. From the perspective of this review, these experiences reinforce the importance of adaptive leadership, teacher professionalism, curriculum innovation, and value-based learning management. Although derived from the context of Islamic boarding schools, these principles are applicable to secondary schools in supporting effective learning management, strengthening school leadership, and improving educational quality in response to contemporary educational challenges.

Conclusion

Based on the findings of this Systematic Literature Review, it can be concluded that the effectiveness of learning management in secondary schools is determined by the complementary roles of principals and teachers in creating a supportive and innovative learning environment. The analysis of the 24 selected studies indicates that principals contribute through instructional leadership, organizational support, and the promotion of teacher professional development, while teachers play a central role in implementing

effective pedagogical practices, integrating educational technology, and facilitating student-centered learning. Collectively, these findings demonstrate that effective learning management is achieved through the synergy between educational leadership, teacher professionalism, and appropriate technology integration. Theoretically, this study contributes to the educational leadership literature by synthesizing empirical evidence that highlights the interdependence of principals' leadership and teachers' instructional competence in improving learning management. Practically, the findings suggest that school principals should strengthen collaborative leadership and continuous professional development, while teachers should continuously enhance their pedagogical and technological competencies to improve learning quality in secondary schools.

This study is limited to English-language journal articles indexed in the Scopus and Dimensions databases published between 2015 and 2024, with only 24 studies meeting the predefined inclusion criteria for qualitative synthesis. Consequently, relevant studies from other databases, publication types, or languages may not have been included. Future research is recommended to expand the scope of literature sources, investigate broader educational contexts, and examine the long-term effects of collaborative leadership, teacher professional development, and technology-supported learning management through empirical and comparative studies. Such research is expected to strengthen the evidence base for educational leadership and provide more comprehensive recommendations for improving learning management in secondary schools.

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