

Educational Supervision in Improving the Quality Services in The Digital Era

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Abstract

The rapid development of digital technology has brought significant changes to the management and delivery of educational services, thereby requiring educational institutions to adapt their supervisory practices. This study aims to analyse the role of educational supervision in improving the quality of educational services in the digital era through a library research approach. Educational supervision is viewed as a strategic process that supports teachers, school leaders, and educational institutions in ensuring the effectiveness, efficiency, and sustainability of learning services. Research data were collected from national and international scholarly journals, books, and academic publications relevant to educational supervision, digital transformation, and the quality of educational services. Data analysis was conducted through content analysis and synthesis techniques to identify patterns, concepts, and key findings related to digital-based supervision practices. The findings indicate that educational supervision in the digital era plays a crucial role in improving the quality of educational services through real-time learning monitoring, enhanced communication between supervisors and educators, and support for continuous professional development via digital platforms. Digital supervision also promotes transparency, accountability, and data-driven decision-making in educational management. However, the implementation of digital-based supervision still faces several challenges, including limited technological infrastructure, disparities in digital literacy among educators, and resistance to technological change. Therefore, strengthening supervisors' digital competencies, providing adequate technological support, and developing clear supervision guidelines are essential steps to optimise the role of educational supervision in the digital era. This study is expected to contribute both theoretically and practically to policymakers and educational practitioners in improving the quality of educational services through effective supervision.

Keywords: Educational supervision; Quality of educational services; Digital era

Introduction

The success of an institution or school cannot be separated from the effectiveness of managing its human resources. One indicator of successful human resource management is when staff and employees are able to provide satisfactory services to all students, teachers, and the wider community. Therefore, individuals have an obligation to deliver the best possible service to others. One form of delivering the best service is through service satisfaction, whether in personal or public services.

Furthermore, educational institutions are closely related to school-based management (Putra, 2016). School-based management is one of the approaches used to improve the quality of education, as implemented in various countries. Through school-based management, a flexible management model is offered that

encourages the direct involvement of school communities and society (Nafiudin, 2019). The components of school-based management include curriculum management, learning management, educational personnel management, financial management, student affairs management, facilities and infrastructure management, public relations management, and special services management (Rohiat, 2020). These components are inseparable from how an institution manages quality. Quality management is fundamentally directed towards consistently meeting consumer needs and achieving continuous improvement in every aspect of educational activities. Quality management seeks to enhance work quality, productivity, and efficiency through improvements in both internal and external performance (Arifin & Barnawi, 2017).

The concept of service is not only found in the world of business and commerce but also in the field of education, which is often referred to as academic and non-academic services. Tjiptono argues that good and proper service quality is closely related to customer satisfaction, as high-quality services encourage people to feel satisfied and to build strong relationships with institutions or schools. Consequently, this creates positive expectations among customers regarding the fulfilment of their needs in the field of education. Services that possess distinctive quality characteristics (*quality nice*) are also referred to as prime services. The characteristics of good and proper service quality include speed, convenience, accuracy, reliability, and empathy from service staff, which are directly experienced by customers (Rahmayanty, 2010).

Good service has a positive impact on the sense of relief and satisfaction of those being served. When a service officer or staff member fulfils essential rights such as convenience, accuracy of information, and promptness in service delivery, satisfaction is likely to be achieved. In providing services, there are at least four basic requirements that must be met to ensure customer satisfaction: (1) politeness, (2) clear and easily understandable language for those who need the service, (3) timely delivery of information, and (4) friendliness (Febriani, 2014).

One of the functions of supervision in the quality of educational services is to implement quality assurance. Educational supervision is an integral part of the internal quality assurance system. It functions as a mechanism for evaluation and continuous improvement of educational services. Educational supervision plays a very important role in improving the quality of educational services in schools in the digital era. In the current digital era, educational supervision must be able to adapt to technological developments. Therefore, many strategies need to be implemented to master the latest technologies, particularly in the development of internet-based tasks for teachers and students (Chollisni et al., 2022).

In several cases, many schools have been unable to adapt to the digital era and technological developments, which has resulted in stagnation and even closure. Schools most affected by this lack of competitiveness are typically private schools. The benefits of educational supervision in the digital era cover several aspects, including developing and maintaining existing good service quality, formulating effective service strategies by utilising technology, ensuring that the technology used in learning services aligns with the curriculum, promoting the use of innovative technologies in learning services, and assisting teachers in evaluating learning services (Pianda, 2018).

In the digital era, problems related to supervision, particularly in the quality of educational services, will continue to exist and must be addressed. These problems include, first, the limited knowledge and skills of school teachers in using technology; second, issues of security and privacy in the use of technology; and lastly, the lack of support and budget allocation for technological development to improve the quality of educational

services. Therefore, appropriate strategies need to be designed to generate new innovations in the utilisation of technology as a learning medium ([Bestari, 2023](#)).

This article discusses the role of educational supervision in improving the quality of educational services in the digital era, as well as the challenges and strategies in implementing educational supervision in the digital era. It is expected that this article will provide additional knowledge and a deeper understanding of the importance of educational supervision in the digital era, as well as offer insights for readers on how to implement effective educational supervision in the digital context.

Methodology

The research method applied in this article is a library research or literature review approach. Library research is a research method conducted by searching for, reviewing, and analysing various reference sources that are relevant to the focus of the study. These sources include scholarly journals, academic books, research articles, and other documents related to the topic under investigation.

In its implementation, the author carried out a systematic process of searching for and selecting literature to ensure the relevance and credibility of the sources used. The selected literature was then analysed in depth through stages of data collection, critical reading, and comprehension of the substance of the studies. Subsequently, the data obtained were organised thematically to facilitate the analysis process. The final stage of this library research was the preparation of a synthesis and the drawing of comprehensive conclusions as a basis for addressing the research problem ([Nasution et al., 2023](#)).

The library research method has several advantages, including greater efficiency and cost-effectiveness because it does not require large research expenditures, the ability to provide a deeper and more comprehensive understanding of the topic under study, and the possibility of conducting research within a relatively short period of time. Through the review of various scholarly sources, researchers can obtain broad conceptual and empirical insights into the research problem. However, library research also has certain limitations, such as the potential for bias in the selection and interpretation of data sources, as well as limited control over research variables because the data are obtained indirectly from previous research findings ([Creswell, 2014](#)).

In this article, the author applied the library research method by collecting various pieces of literature relevant to the role of educational supervision in improving the quality of learning in the digital era. The literature reviewed included scholarly journals, academic books, research articles, and other supporting documents related to the research focus. The selected literature was then analysed systematically through processes of thematic categorisation, content interpretation, and comparison of findings across sources. The final stage of this process was the development of a synthesis and the drawing of conclusions that comprehensively describe the role of educational supervision in improving the quality of learning within the context of the digital era.

Results and Discussion

The discussion in this paper focuses on the role of educational supervision in improving the quality of educational services in the digital era. The role of educational supervision is very important in enhancing

service quality, particularly in the digital era, because through supervision, teachers can be more guided and integrated in carrying out the learning process by utilising digital technology. The role of educational supervision in improving the quality of educational services in the digital era can be implemented through several aspects, including curriculum development, the enhancement of teachers' competencies, and service evaluation ([Mahlopi, 2022](#)).

Challenges, Roles, and Strategies of Supervision in Improving the Quality of Educational Services in the Digital Era

The main challenge faced in the implementation of educational supervision in the digital era is the limitation of technological infrastructure, particularly in remote areas that do not yet have adequate internet access. This inequality makes technology-based supervision difficult to implement evenly across all regions ([Mulyanti, 2024](#)). The digital divide in terms of technological access and infrastructure also contributes to resistance to changes from old systems to new technologies, as well as the limited digital skills of teachers and supervisors. In addition, low levels of digital literacy among teachers and supervisors constitute another major barrier, considering that technology requires specific competencies that not all educators possess ([Sa'duh, 2024](#)). Issues of data security and privacy in the use of digital platforms further increase the risk of personal data breaches and information misuse, as digital supervision involves sensitive information that must be managed carefully ([Santoso, 2024](#)).

The role of educational supervision in improving the quality of educational services in the digital era is a crucial activity designed to enhance the effectiveness and efficiency of teachers in the learning process, which in turn contributes to improving the quality of education in Indonesia. In the context of rapid technological development, educational supervision must adapt to the latest technologies in order to optimize its outcomes. Educational supervision in the digital era plays a strategic role in supporting more effective and relevant learning that meets the demands of the times. One of the main roles of supervision is to assist teachers in delivering learning more efficiently and innovatively. The use of technological tools such as applications and dashboards not only increases the transparency of the supervision process but also accelerates decision-making for improvements in the learning system ([Akmaliah, 2024](#)).

Educational supervision strategies in the digital era focus on integrating technology to improve efficiency and quality, shifting the role of supervisors from inspectors to mentors by using digital platforms for observation, strengthening the digital competencies of teachers and supervisors through intensive training, and building virtual learning communities and adaptive digital leadership. These strategies also aim to overcome infrastructure and digital literacy challenges through collaboration and strong regulatory support. Cross-sector collaboration is another important strategy. Technology-based supervision needs to be supported by the government through policies that ensure adequate technological infrastructure, supportive regulations, and robust data security measures. In addition, technology-based supervision can be strengthened through the development of digital platforms specifically designed for supervision and evaluation, thereby making the supervision process more accessible.

By adopting these strategies, educational supervision can become a driving force for transformation, creating an innovative, adaptive, and high-quality education system in the digital era. Supervision is no longer merely a monitoring tool; rather, educational supervision in the digital era has great potential to significantly improve the quality of learning.

Similarities and Differences in the Implementation of Educational Supervision in Improving the Quality of Educational Services in the Digital Era.

The implementation of educational supervision in the digital era shares the same fundamental goals and basic principles. Similarities in the literature indicate that technology-based supervision is an important step in improving educational quality, while differences in implementation reflect the need to adapt approaches based on local contexts. Successful supervision that optimally utilises technology requires a combination of continuous training, strengthened digital collaboration, and adequate infrastructure support. However, there are significant differences in approaches, methods, and tools used, particularly in the way technology is employed to achieve greater efficiency and objectivity.

Educational supervision in schools is an activity aimed at improving the quality of learning. In the digital era, educational supervision must also adapt to technological developments. The implementation of supervision is carried out through various processes that focus on problem-solving to enhance teachers' effectiveness and efficiency. Most studies indicate that digital technology can accelerate data-based evaluation and increase teachers' engagement in the supervision process. The similarities in digital supervision implementation remain focused on improving the quality of learning and developing teachers' professionalism, while the basic principles of effective and objective supervision continue to be relevant and are applied within the digital context.

Digital supervision, like face-to-face supervision, focuses on guidance and support to improve learning situations. On the other hand, [Santoso \(2024\)](#) emphasises digital collaboration as a means of creating innovation in education. According to this study, supervision that uses collaborative tools such as video conferencing applications, online discussion forums, and digital-based management tools can create closer working relationships among supervisors, teachers, and school stakeholders. This collaboration not only improves coordination but also opens up opportunities for sharing ideas and solutions to learning challenges, thereby maximising the potential of technology in educational supervision.

The main differences in the implementation of digital supervision emerge in several aspects, particularly in how technology is integrated into the process. Digital supervision feedback can be provided in real time through video conferencing platforms or asynchronously through learning management systems. The use of monitoring dashboard applications, evaluation tools, or LMS enables more systematic, evidence-based, and transparent data management. Digital supervision implementation depends heavily on stable internet connections, the availability of hardware, and adequate applications. The digital divide, resistance to technology, and data privacy issues make digital-based supervision difficult to implement effectively. This study highlights the need for policy support from the government to provide more equitable technological infrastructure and adequate access across all regions ([Halawa, 2024](#)). In summary, digital supervision transforms supervisory practices into more efficient and data-driven processes, while the essence of guidance and the development of teachers' professionalism remains central to both traditional and digital approaches.

The implementation of quality management in education requires appropriate strategies so that all educational components can operate in accordance with established standards. According to Juran, the application of quality management in education involves quality control in every aspect, ranging from planning to evaluation. In the educational context, this implementation includes curriculum planning, classroom management, and continuous evaluation systems ([Afriantoni, 2025](#)).

Quality education is the expectation of all stakeholders and becomes the main focus and concern of all components, including education providers, users, and observers. Operationally, quality is determined by two factors: the fulfilment of predetermined specifications and the fulfilment of expected specifications based on the demands and needs of service users. The first type of quality is referred to as *quality in fact* (actual quality), while the second is known as *quality in perception* (perceived quality) (Sallis, 1993).

In the *Complete Dictionary of the Indonesian Language*, quality is defined as a value or a condition. Other definitions of quality have been proposed by experts from different perspectives. Edward Deming defines quality as “a predictive degree of uniformity and dependability at a low cost, suited to the market.” Joseph M. Juran describes quality as “fitness for use, as judged by the user.” Philip B. Crosby defines it as “conformance to requirements,” while Armand V. Feigenbaum refers to quality as “full customer satisfaction.” Meanwhile, according to the Regulation of the Minister of National Education (Permendiknas) No. 63 of 2009, educational quality is the level of national intellectual development that can be achieved through the implementation of the National Education System. The concept of an educational quality management system is an important foundation for understanding how an educational institution can manage and improve the quality of its services. This system not only serves as a guideline but also as a framework that enables educational institutions to achieve educational goals in an effective and efficient manner. In essence, an educational quality management system is a structured and organised approach to managing and monitoring all aspects that contribute to the quality of education provided by an institution.

Indicators of Educational Service Quality in Indonesia

Standards or parameters are measures or benchmarks used to assess or evaluate something. This is important to understand, particularly in the effort to realise high-quality education. In Indonesia, reference is made to Government Regulation (PP) No. 13 of 2015 concerning National Education Standards. According to these National Education Standards, there are eight (8) key aspects that must be considered to achieve quality education, namely: (1) Graduate Competency Standards are criteria regarding the qualification of graduates' abilities, which include attitudes, knowledge, and skills. (2) Content Standards are criteria concerning the scope of subject matter and the level of competence required to achieve graduate competencies at specific levels and types of education. (3) Process Standards are criteria regarding the implementation of learning in an educational unit in order to achieve the Graduate Competency Standards. (4) Standards for Educators and Educational Personnel are criteria concerning pre-service education and professional eligibility, including mental readiness, as well as in-service education. (5) Facilities and Infrastructure Standards are criteria regarding learning spaces, sports facilities, places of worship, libraries, laboratories, workshops, playgrounds, creative spaces, and other learning resources required to support the learning process, including the use of information and communication technology. (6) Management Standards are criteria regarding the planning, implementation, and supervision of educational activities at the levels of educational units, districts/cities, provinces, and the national level in order to achieve efficiency and effectiveness in the provision of education. (7) Financing Standards are criteria concerning the components and the amount of operational costs for an educational unit applicable for one year. (8) Educational Assessment Standards are criteria regarding the mechanisms, procedures, and instruments for assessing students' learning outcomes.

These National Education Standards function as the basis for planning, implementation, and supervision in education in order to realise a high-quality national education system. They also aim to guarantee the quality

of national education in the effort to educate the life of the nation and to shape a dignified national character and civilisation. One of the most important standards to be emphasised is the standard for educators and educational personnel. Educators are required to possess competencies as learning agents at the levels of primary and secondary education as well as early childhood education, namely: pedagogical competence, personal competence, professional competence, and social competence (Zulaikah et al., 2024).

Conclusion

Educational supervision in the digital era has been proven to play a strategic role in improving the quality of educational services through the integration of technology into the learning process, teacher development, and school management. Supervision is no longer understood merely as an activity of monitoring and control, but rather as a quality assurance mechanism that encourages continuous improvement. Through the utilisation of digital platforms, supervision enables real-time monitoring of learning activities, strengthens communication between supervisors and educators, and supports data-driven decision-making. This has a direct impact on enhancing teachers' professionalism, learning effectiveness, and the consistency of the quality of educational services provided to students. Thus, educational supervision functions as an important instrument in ensuring the implementation of educational quality standards amid the demands of digital transformation.

However, the implementation of digital-based educational supervision still faces various challenges, including limited technological infrastructure, gaps in digital literacy among educators and supervisors, resistance to change, and risks related to data security and privacy. Therefore, comprehensive strategies are required, encompassing the strengthening of digital competencies for supervisors and teachers, the provision of adequate technological support, the formulation of clear supervision guidelines, and sustained government policy support. Cross-sector collaboration and the development of integrated supervision platforms are also essential steps to optimise the role of supervision in the digital era. Overall, educational supervision has great potential to become a driving force for transforming the quality of educational services in an innovative, adaptive, and learner-oriented manner, provided that it is supported by adequate systems and resources.

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