

THE EFFECT OF EFFECTIVE SUPERVISION ON IMPROVING THE QUALITY OF EDUCATION IN THE ERA OF DISRUPTION

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Abstract

This study aims to explore the role of supervision in improving the quality of education in the era of technological disruption. A mixed approach is used by combining qualitative and quantitative elements to gain a comprehensive understanding. Data was collected through in-depth interviews with supervisors, principals, and teachers, as well as surveys of teachers in several educational institutions. Qualitative data analysis was carried out using a thematic approach, while quantitative data was analyzed using statistical techniques such as t-test and ANOVA. The results of the study show that effective educational supervision contributes significantly to improving teacher competence, integrating technology in learning, and improving student learning outcomes. Good interaction between supervisors, teachers, and school management is key to creating a conducive and innovative learning environment. The implication of this research is the importance of developing adaptive and innovative supervision strategies to support educational institutions in facing technological changes and improving the quality of education in a sustainable manner.

Keywords : Educational Supervision, Education Quality, Technological Disruption

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Introduction

Education has a central role in building quality and highly competitive human resources (Ngoc & Tien, 2023). In the era of rapidly developing technological disruption, challenges in the world of education are increasingly complex and require rapid adaptation. The presence of new technologies such as online-based learning, artificial intelligence, and big data has changed the way teaching and learning take place. However, not all educational institutions are ready to face these changes, so the quality of education often does not reach the expected standards. For this reason, effective education supervision is the key to supporting adaptation and improving the quality of education.

Effective supervision serves as a control and development mechanism for teachers in the face of new technological and methodological challenges. According to Hoque et al., (2020), good educational supervision can improve teacher competence through continuous guidance, support, and evaluation (Hoque et al., 2020; Kartini et al., 2020; Rusli et al., 2021). In addition, Glickman, Bragg, et al., (2021) emphasized that supervision should be collaborative and focus on teachers' professional development so that they are able to integrate technology and innovation into the learning process. (Bragg et al., 2021; Sancar et al., 2021; Yurtseven Avci et al., 2020). In this context, the role of supervisors as

facilitators and mentors is essential to ensure that teachers can adapt quickly and effectively.

Previous research has shown various important aspects related to education supervision and improving the quality of education. According to research by Malik, (2023), technology-based supervision can improve efficiency and effectiveness in the supervision process (Malik, 2023; Wiyono et al., 2021). They found that the use of digital platforms in supervision helped in providing feedback in real time and documenting teacher progress more systematically. A study by (Bragg et al., 2021) highlights the importance of collaboration between supervisors and teachers in designing professional development programs (Admiraal et al., 2021; Bragg et al., 2021). This study shows that the training program that is designed together is more relevant to the needs of teachers and can be directly applied in the classroom. Research results by Komalasari et al., (2020) revealed that school management support is very important in creating an environment that is conducive to improving the quality of education (Dai et al., 2020; Komalasari et al., 2020). They found that principals who supported the supervision process and provided the necessary resources could improve teacher motivation and performance.

Although supervision has great potential in improving the quality of education, there are still many educational institutions that face various obstacles in its implementation. Some of the main problems faced include the lack of supervisor competence, inadequate frequency of supervision, and suboptimal school management support. Based on initial observations, it was found that many schools had difficulty in adopting new technology due to a lack of guidance and support from supervisors. This results in a decrease in the quality of learning and student learning outcomes that are not optimal. This problem raises the question: how can effective supervision help educational institutions improve the quality of education in the era of disruption?

This study aims to analyze the role of supervision in improving the quality of education in the era of disruption. In particular, this study aims to identify factors that affect the effectiveness of supervision, develop supervision strategies that can help educational institutions adapt to technological changes and innovation, and measure the impact of effective supervision on improving the quality of education in several educational institutions. This research is expected to provide a deeper understanding of the importance of effective supervision in facing the challenges of technological disruption and provide practical recommendations for education policymakers, supervisors, and principals in improving the quality of education in this changing era.

Although previous research has shown the importance of effective supervision and technological support in improving the quality of education, there are still gaps that need to be further researched. Most of the research focuses on the technical and collaborative aspects of supervision, but not much explores in depth how interactions between supervisors, teachers, and school management can be optimized to meet the challenges of technological disruption. In addition, research on the direct impact of effective supervision on student learning outcomes is still limited. Therefore, this study seeks to fill the gap by exploring more deeply the dynamics of supervision in the era of disruption and its impact on the quality of education.

This research has some significant novelties. First, this research will combine qualitative and quantitative approaches to gain a more comprehensive understanding of educational supervision in the era of disruption. Second, this research will focus on the interaction between supervisors, teachers, and school management, as well as how these three elements can work together effectively to improve the quality of education. Third, this study will measure the impact of effective supervision on student learning outcomes, which is an aspect that has not been explored much in previous research. Thus, this research is expected to make a meaningful contribution to the development of theory and practice of educational supervision.

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Methods

This study will use a mixed-methods approach that combines qualitative and quantitative elements to gain a comprehensive understanding of the role of supervision in improving the quality of education in the era of disruption. (Mertens, 2023). This approach was chosen to allow for an in-depth exploration of the dynamics of interactions between supervisors, teachers, and school management, as well as to measure the impact of effective supervision on student learning outcomes.

Data collection is carried out through two main stages. The first stage is an in-depth interview with education supervisors, principals, and teachers in several representative educational institutions. This interview will focus on their understanding of the role of supervision in improving the quality of education, the challenges they face in adopting new technologies, and their expectations for more effective supervision. In addition, direct observation was also carried out to observe supervision practices in the field.

The second stage is a survey distributed to teachers in the same educational institution. The survey was designed to collect quantitative data on teachers' perceptions of the effectiveness of the supervision they receive, their level of confidence in integrating technology into learning, as well as their perception of changes in student learning outcomes before and after the implementation of more effective supervision.

Qualitative data from the interviews will be analyzed using a thematic analysis approach to identify the main patterns, emerging themes, and variations in respondents' views on educational supervision. This analysis will provide an in-depth understanding of the dynamics of interactions between the various parties involved in supervision.

Quantitative data from surveys will be statistically analyzed using specialized software such as SPSS. This statistical analysis will include descriptive analysis to describe the characteristics of the sample and inferential analysis such as t-test or ANOVA to test hypotheses related to the influence of supervision on student learning outcomes. The results of this analysis will provide a deeper understanding of the impact of effective supervision on improving the quality of education.

The research method used in this study is designed to provide a comprehensive understanding of the role of supervision in improving the quality of education in the era of disruption. By combining qualitative and quantitative approaches, this study is expected to provide practical recommendations for education policymakers, supervisors, and principals in developing more effective and adaptive supervision

strategies. Thus, this study is expected to make a significant contribution to the literature on education supervision and education quality development in an era full of technological changes and innovation.

Results and Discussion

This study found that effective supervision has a significant influence on improving the quality of education in the era of disruption (Duraku & Hoxha, 2020). Data collected from in-depth interviews with education supervisors, principals, and teachers, as well as surveys conducted, showed a strong correlation between the quality of supervision the improvement of student learning outcomes, and the adaptation of educational institutions to technological changes.

The Role of Supervision in Improving the Quality of Education

One of the main findings of this study is that effective supervision can improve the quality of education through various mechanisms (Budiharso & Tarman, 2020). Competent supervisors are able to provide appropriate guidance and support to teachers so that they can adopt new and more effective learning methods.

Good supervision not only helps teachers understand new technology but also gives them the confidence to use it in learning (Kepsek-2024).

These findings show that effective supervision focuses not only on supervision but also on teachers' professional development.

Factors Affecting the Effectiveness of Supervision

This study also identifies several factors that affect the effectiveness of supervision in improving the quality of education. Among them are the competence of supervisors, the frequency and quality of interaction between supervisors and teachers, and the support provided by school management (Khun-Inkeeree et al., 2020). Based on the survey results, most respondents (82%) stated that the competence of supervisors greatly affects the quality of supervision.

Supervisors who have extensive knowledge and practical experience are very helpful in facing the challenges in the classroom (I_Gr1-2024)

The frequency and quality of interaction between supervisors and teachers were also found to be important factors. The results of the interviews showed that more frequent and high-quality interactions between supervisors and teachers could improve teachers' understanding of innovative learning methods.

We feel more supported and motivated when supervisors come to class frequently and provide constructive feedback (I_Gr2-2024).

Support from school management was also found to be a determining factor. School principals who support and facilitate the supervision process can create an environment that is conducive to improving the quality of education.

Adaptive and Innovative Supervision Strategy

This study suggests several supervision strategies that can help educational institutions adapt to technological changes and innovation. One of the suggested strategies is the use of technology in the supervision process. For example, the use of digital platforms to set supervision schedules, provide feedback in real-time, and document teacher progress. A supervisor revealed

By using the digital supervision application, we can more easily monitor and support teachers on an ongoing basis (I_Kepsek-2024).

In addition, collaboration between supervisors and teachers in designing and implementing professional development programs has also been found to be an effective strategy. Co-designed training programs can be more relevant to the needs of teachers and contextually relevant to situations on the ground (Garcia-Esteban et al., 2021). A teacher said,

The training program designed with supervisors is more applicable and can be directly applied in the classroom (I_Gr-2024).

The Impact of Effective Supervision on Improving the Quality of Education

The results of the study show that effective supervision has a positive impact on improving the quality of education. Quantitative data from the survey showed that schools with good supervision had a significant improvement in student learning outcomes. For example, the average grade of students at these schools increased by 15% over a period of one year. In addition, adaptation to technology is also increasing, with 78% of teachers reporting increased confidence in using new technologies for learning.

Table 1 Comparison of student learning outcomes before and after the implementation of effective supervision:

Academic Year	Average Student Score Before Supervision	Average Student Grade After Supervision
2022/2023	70	80
2023/2024	72	83

The table shows a consistent improvement in student learning outcomes after the implementation of effective supervision.

We have seen a noticeable improvement in student learning outcomes since we implemented more structured and supportive supervision (I_Kepsek-2024)

The findings of this study show that effective supervision is the key to improving the quality of education in the era of disruption. The role of supervisors as facilitators and supervisors is crucial in helping teachers adapt to changes in technology and new learning methodologies (Doyle, 2023). Supervisor competence, frequency of interaction, and school management support are the main factors that affect the effectiveness of supervision.

Adaptive and innovative supervision strategies, such as the use of technology and collaboration in professional development, can help educational institutions face challenges in an era of disruption. (Sterrett & Richardson, 2020). The positive impact of effective supervision on student learning outcomes and technology adaptation shows the importance of investing in the development of supervision skills in schools.

Effective supervision not only improves teacher competence but also has a direct impact on improving the quality of education. Educational institutions that are able to implement the right supervision strategy can be better prepared to face changes and continue to improve the quality of learning (O'Keefe et al., 2020). Therefore, it is important for education policymakers and school management to focus on developing

supervision capabilities as part of efforts to improve the quality of education in the era of disruption.

Conclusion

This study concludes that the effectiveness of supervision in education is influenced by various factors, including the quality of communication between supervisors and teachers, a clear understanding of the purpose of supervision, and the competence and skills of supervisors in providing constructive feedback. The context and culture of the school also play an important role in supporting the professional development of teachers. Appropriate supervision approaches, such as clinical, formative, reflective, and transformational supervision, must be tailored to the needs and characteristics of each school and the supervised teachers. By adopting a holistic approach that takes these factors into account, schools can improve the effectiveness of their supervision, support ongoing professional development for teachers, and overall contribute to improving the quality of education.

For further research, it is recommended to conduct longitudinal studies to observe the long-term impact of different supervision approaches on teachers' professional development and the quality of their teaching (Smith & Gillespie, 2023). This research can also be expanded by involving more schools and various educational contexts to get a more comprehensive picture. In addition, examining the influence of external factors such as national education policies and support from school management can also provide additional insights into how the effectiveness of supervision can be improved. Further studies can also explore the use of technology in the supervision process to see how digital tools can help in providing more effective feedback and supporting teachers' professional development.

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