



A Google Site-Based Academic Supervision Model to Improve Teacher Performance

Dewi Seftiyanti^{1*}, Sri Utaminingsih², Ahmad Hariyadi³

¹⁻³ Master of Elementary Education, Universitas Muria Kudus, Indonesia

*Corresponding Author: sri.utaminingsih@umk.ac.id

Abstract. The objectives of this study are (1) to examine the feasibility of the FARSIA learning media for fifth-grade elementary school students, (2) to examine the practicality of the FARSIA learning media for fifth-grade elementary school students, and (3) to examine the effectiveness of the FARSIA learning media for fifth-grade elementary school students. This study uses a Research and Development (R&D) approach by adopting the ten-step Borg and Gall development model, namely: (1) research and data collection, (2) planning, (3) development of the initial product draft, (4) limited testing, (5) product revision based on limited testing, (6) main field testing, (7) final product revision, (8) operational testing, (9) final product revision, and (10) dissemination and implementation. The research subjects included school principals, teachers, and supervisors at several elementary schools in the study area. The data in this study consist of qualitative data obtained through expert reviews and interviews, as well as quantitative data obtained through questionnaires. The research instruments used in this study were a validation questionnaire, an interview guide, and a response questionnaire. The triangulation method used in this study was source triangulation. The data obtained were then analyzed descriptively. The feasibility analysis of the Google Site-based academic supervision model utilized data processing from the questionnaires administered to validators. The practicality analysis of the Google Site-based academic supervision model was derived from the teacher response questionnaires.

Keywords: Academic Supervision; Borg and Gall; Digital Supervision; Google Site; Teacher Performance.

1. INTRODUCTION

Digital transformation in education requires schools and teachers to be able to adapt to technological developments in various aspects of learning and education management (Latifah et al., 2022). The rapid development of Information and Communication Technology (ICT) provides significant opportunities to improve the quality of education. The use of information technology has been proven to have a positive impact on teacher performance. Purwantiningsih & Suharso (2019) stated that improving the quality of education must be accompanied by improving the quality of teachers so that they can face the challenges of the digital era without shifting the fundamental role of teachers as educators. The use of information technology has a positive and significant impact on teacher performance (Firmansyah et al., 2023).

One of the important factors in determining the quality of learning in schools is the performance of teachers. Conceptually, teacher performance is the result of a complex interaction between teachers' competence, dedication, effectiveness, and ability to manage learning and accommodate student needs (Hariyadi, 2024). Therefore, systematic efforts are needed to improve teacher professionalism and performance, one of which is through academic supervision. Academic supervision plays an important role in improving teacher professionalism and instructional quality in schools (Wiyono et al., 2022). Sutrisno et al. (2026)

explained that the integration of digital technology in academic supervision can improve supervision efficiency, learning documentation, and teacher professionalism. However, in some elementary schools, the implementation of supervision is still carried out conventionally and tends to be administrative, so that documentation, monitoring, and supervision follow-up have not run optimally. In addition, the use of digital technology in academic supervision is still limited so that the supervision process has not supported teacher development effectively and sustainably. Based on field conditions, especially at SD Negeri Ruwit, academic supervision is still carried out manually and does not make optimal use of digital technology. Supervision documentation is not kept systematically, follow-up is not structured, and the integration of technology into the teacher development process is still low. This situation has an impact on uneven teacher performance and an improvement in the quality of learning that is not optimal.

Several previous studies have discussed academic supervision and the use of technology in education. Most of the previous research discussed the use of digital technology in the learning process and the development of learning media, while research on the digitization of academic supervision is still limited. Some studies on digital supervision generally focus on the use of digital platforms to improve the efficiency of supervision administration and communication, but not many have developed an academic supervision model that is integrated with supervising documentation, follow-up monitoring, and evaluation of teacher performance in one systematic digital platform (Sapwan et al., 2025). Research that develops a Google Sites-based academic supervision model at the elementary school level is still limited, especially those that integrate documentation of supervision, follow-up, teacher performance monitoring, and digital access in one platform. Google Sites was chosen because it is easy to use, free, and flexible, so it supports the management of supervised documentation, providing feedback, and accessing information in a structured and efficient manner. Additionally, Google Sites can be accessed through a variety of devices and supports more flexible collaboration between principals and teachers (HALIM & HALIM, 2024).

Based on the description of these problems, the development of an academic supervision model based on Google Sites is expected to provide practical and effective solutions to improve the supervision process and improve teacher performance in an ongoing manner in elementary schools. This model is expected to be able to assist school principals in documenting the results of supervision, providing structured feedback, monitoring supervision follow-up, and increasing the effectiveness of teacher coaching on an ongoing basis.

This research aims to identify the need for digital-based academic supervision in elementary schools, develop a Google Sites-based academic supervision model, and test and evaluate the practicality and effectiveness of the model in improving teacher performance. This research is expected to make a theoretical and practical contribution to the development of digital-based academic supervision in elementary schools. Theoretically, this study enriches the study of technology integration in academic supervision. In practical terms, the Google Sites-based academic supervision model is expected to help school principals in carrying out supervision in a more systematic, effective, and well-documented manner.

2. LITERATURE REVIEW

Teacher performance is one of the important aspects in determining the success of the learning process and the quality of education in schools. (Masrum, 2021) defines performance as the result of work or achievements shown by a person in carrying out his duties. In the context of education, teacher performance is reflected in the ability to prepare lesson plans, implement learning processes, and evaluate student learning outcomes (Firdaus et al., 2022). Thus, improving teacher performance is a key factor in improving the quality of education in schools.

In addition to teacher competence, the quality of education is also significantly influenced by the leadership of the principal. Rahman et al. (2022) stated that school principals play a strategic role in empowering teachers and improving the quality of learning through the implementation of academic supervision. Usman et al. (2023) stated that academic supervision is an important instrument in the development of the teacher profession. In line with this, Rahmadhani et al. (2024) also argue, academic supervision includes three main dimensions: planning, implementation, and evaluation and follow-up. Academic supervision aims to help teachers improve the quality of learning through a systematic and continuous coaching process. Novebri & Lubis (2022) in his research showed that academic supervision has a positive impact on improving teacher performance. This finding is supported by Hariyadi (2023) who states that academic supervision can improve the quality of the learning process and the professional competence of teachers. However, in practice, academic supervision in elementary schools is still mostly carried out conventionally and administratively, so it has a less significant impact on improving teacher professionalism (Afifatun, 2022).

Digital transformation in academic supervision allows the supervision process to be carried out in a more systematic, documented, and sustainable manner. According to Wiyono et al. (2022), digital-based supervision can increase the effectiveness of teacher coaching

because the supervision process becomes more transparent, flexible, and accessible to all related parties. In addition, according to Idris et al. (2025) the integration of technology in academic supervision also supports the development of teachers' professional culture through data-driven documentation and evaluation. Thus, the digitization of academic supervision has the potential to have a positive impact on improving teacher performance and the quality of learning in schools. The use of digital technology in academic supervision can also be explained through the Technology Acceptance Model (TAM) developed by Davis. This model explains that user acceptance of technology is influenced by perceived ease of use and perceived usefulness. In the context of this study, Google Sites is seen as having a high level of ease of use because it can be operated without special programming capabilities and provides benefits in supporting more effective documentation, monitoring, and follow-up of academic supervision. Therefore, the implementation of Google Sites has the potential to increase user acceptance and support the effectiveness of academic supervision in elementary schools (Scherer et al., 2019).

In the digital age, the integration of technology in academic supervision has become an unavoidable necessity. One of the platforms that can be leveraged is Google Sites. Subnarulloh et al. (2024) explained that Google Sites is a web-based platform that allows users to create websites easily without requiring special programming skills. Google Sites also integrates with Google Workspace, supporting effective digital collaboration and documentation. Prayetno (2023) stated that Google Sites can be used as a flexible digital learning and documentation medium because it can accommodate various forms of content such as text, video, and documents. Sulasmianti (2021) added that the use of websites in learning provides flexibility in time and place and increases the efficiency of material management and evaluation. As such, Google Sites has great potential to be integrated into academic supervision to improve the effectiveness, efficiency, and transparency of the teacher development process.

Satyawati et al. (2025) shows that the use of Google Sites in academic supervision can increase transparency and efficiency in the implementation of supervision. These findings suggest that integrating digital platforms into academic supervision has significant potential to improve the quality of teacher development. Therefore, it is necessary to develop a Google Sites-based academic supervision model that is systematically designed, implemented, and adapted to the needs of elementary schools. Other research also shows that the use of digital technology in academic supervision is able to increase the effectiveness of supervision and teacher professionalism. Rosmini et al. (2024) found that digital-based supervision helps school principals in monitoring learning in a more structured and efficient manner. Meanwhile,

Fauzan et al. (2025) explained that the use of digital platforms in academic supervision increases transparency, documentation, and teacher involvement in the supervision follow-up process. However, research related to the development of Google Sites-based academic supervision models at the elementary school level is still limited. Therefore, this research is focused on the development of a Google Sites-based academic supervision model that is in accordance with the needs of elementary schools and oriented towards improving teacher performance.

3. RESEARCH METHODS

This study employed a Research and Development (R&D) design aimed at developing and validating a Google Sites-based academic supervision model to improve teacher performance in elementary schools. The R&D approach was selected because this research not only seeks to examine a phenomenon but also to produce an innovative product that can be implemented in real educational settings. The development procedure adopted the Borg and Gall model, which consists of systematic stages including research and information gathering, planning, developing the preliminary product, preliminary field testing, product revision, main field testing, operational revision, operational field testing, final revision, and dissemination.

The research was conducted in several elementary schools, including SD Negeri Ruwit, SD Negeri Ngawen, SD Negeri Wedung, SD Negeri Buko, and SD Negeri Mandung. The participants of this study consisted of school principals, teachers, and expert validators (material and media experts). Teachers served as the primary subjects in testing the practicality and effectiveness of the developed supervision model, while principals implemented the supervision process using the Google Sites platform.

Data were collected using both qualitative and quantitative methods. Qualitative data were obtained through interviews and expert validation comments to identify needs, gather feedback, and improve the developed model. Quantitative data were collected through validation questionnaires and teacher response questionnaires using a Likert scale ranging from 1 (poor) to 4 (very good). Additionally, pre-test and post-test instruments were administered to measure the effectiveness of the supervision model in improving teacher performance.

The data analysis techniques included descriptive statistics to determine the feasibility and practicality of the product. The feasibility level was calculated using percentage analysis based on expert validation scores. Practicality was analyzed using teacher response percentages. To examine effectiveness, inferential statistical analysis was conducted, including paired sample t-test and independent sample t-test, to compare teacher performance before and

after the implementation of the Google Sites-based academic supervision model. Normality and homogeneity tests were also performed to ensure that the data met the assumptions required for parametric testing.

Through these systematic procedures, the study ensured that the developed supervision model was valid, practical, and effective for implementation in elementary schools.

4. RESULT AND DISCUSSION

Results of the Effectiveness Test of the Google Sites-Based Academic Supervision Model to Improve Teacher Performance

Table 1. Independent Sample T-Test.

		Levene's Test for Equality of Variances		t-test for Equality of Means				
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
Keefektifan Supervisi Akademik Berbasis Google Sites	Equal variances assumed	4.16	0.05	-24.45	70	0	-10.056	0.411
	Equal variances not assumed			-24.45	59.89	0	-10.056	0.411

Based on the results of the Independent Sample T-Test, a significance value (Sig. 2-tailed) was obtained of <0.001 with a calculated t-value = -24.454. Since the significance value was much smaller than 0.05 ($<0.001 < 0.05$), it can be concluded that there was a very significant difference between the effectiveness of academic supervision in the control class and the experimental class. The mean difference of -10.056 showed that the effectiveness of academic supervision in the experimental class was much higher than that of the control class after using the Google Site-based academic supervision model. A negative mark on the t-value indicates that the posttest score of the experimental class is consistently higher than that of the control class, so the difference is a very significant improvement. Thus, the use of Google Site-based academic supervision models in the implementation of academic supervision has been proven to have a very significant positive influence on increasing the effectiveness of academic supervision compared to conventional supervision methods used in control classes.

Development of Google Sites-Based Academic Supervision Model

The results of the study show that the Google Sites-based academic supervision model developed through ten systematic stages corresponds to the modified Borg and Gall development model. The development process begins with the identification of problems,

showing that academic supervision in elementary schools is still carried out conventionally and manually, resulting in documentation of non-optimal supervision results and providing structured follow-up to teachers. These findings are in line with Satyawati et al. (2025) research, which states that manual academic supervision tends to be poorly documented and makes it difficult for school principals to track the results of supervision from previous periods. Data collection through interviews with principals and teachers revealed the urgent need for a more structured, accessible, and digital-based surveillance system. Principals reported that time constraints and manual documentation systems were major obstacles to the implementation of sustainable academic supervision. These results are consistent with the research of Rahman et al. (2022), which emphasizes that school principals need a system that facilitates continuous monitoring of teachers' progress so that academic supervision can run optimally and have a real impact on improving the quality of learning. The initial product design includes the structure of the Google Sites platform, which includes academic supervision guidelines, classroom observation instruments, teacher performance assessment formats, and follow-up guidelines for proctoring outcomes. The design considers the principles of ease of access, intuitive navigation, and well-organized documentation. Google Sites has drag-and-drop features, theme settings, integration with Google Workspace, and responsiveness to various devices, making it very suitable for use as an academic supervision platform that requires flexibility and ease of access (Subnarullo et al., 2024).

The product validation stage by material experts and media experts resulted in average feasibility scores of 82.92%, 81.94%, 77.78%, and 84.58%, all of which are in the very feasible category. The validation results indicate that in terms of material substance, the model is in accordance with the national curriculum, relevant to academic supervision needs, and covers all necessary supervision aspects. Meanwhile, in terms of media, appearance, design, and technical feasibility, it is considered very supportive of the implementation of academic supervision effectively and efficiently. This finding supports the research of Wicaksono & Wijaya (2023) who found that Google Sites training can improve teachers' competency in utilizing digital technology to support their professional duties. The product revision process was carried out twice based on input from validators and the results of field trials. The first revision focused on refining the navigation structure and adding menus to make it more systematic and informative. The second revision added a component of the teacher digitalization task link which includes the Google Drive platform, Google Site Guru, the implementation plan download feature, the implementation plan poster download feature, and Deep Learning. The addition of these features aims to accommodate all aspects of learning

planning, implementation, and evaluation documentation in a digital and integrated manner. This aligns with research by Sulasmianti (2021), who stated that web-based learning with Google Sites offers benefits such as flexible access, ease of managing materials in various formats, and efficiency in the documentation and evaluation process. A small-scale trial phase involving 11 teachers showed an increase in the average score from 12.82 in the pretest to 15.36 in the posttest. This increase indicates that the Google Sites-based academic supervision model has a positive impact on teachers' understanding and ability to carry out academic supervision. The standard deviation decreased from 4.446 in the pretest to 3.472 in the posttest, indicating that the distribution of assessments is more uniform, meaning teachers are more consistent in providing positive assessments after using this model. Therefore, this model can be considered practical and feasible for wider application. The field trial phase with 36 teachers showed highly significant results with a mean difference value of 10.569 and a t-value of 19.222 ($p < 0.001$). These results indicate that there was a significant increase in teacher performance after participating in academic supervision using a Google Sites-based model. The 95% confidence interval, which ranged from 9.473 to 11.666, indicated that the increase was within a stable and predictable range. Academic supervision had a positive and significant impact on improving teacher performance in enhancing their competencies, and the use of technology platforms in learning can increase efficiency and innovation in delivering material (Rahmadhani et al., 2024).

Limited implementation in five elementary schools suggests that Google Sites-based academic supervision models can be used effectively by principals in supervising teachers. School principals find it easier to prepare monitoring instruments, observe learning, provide feedback, and document the results of supervision digitally. Teachers also state that this model helps them understand the aspects that need to be improved in learning in a clearer and measurable way through feedback provided by the principal through digital platforms. These findings are in line with Prayetno (2023) research which states that developing web media based on Google Sites can increase learning participation and facilitate more effective communication between educators and students. Overall, the development of the Google Sites-based academic supervision model has gone through a systematic and well-validated process. This model not only meets the eligibility criteria in terms of materials and media but also proves to be practical and effective in improving teacher performance. Thus, this model can be an important innovation in supporting the implementation of academic supervision that is more structured, transparent, and oriented towards improving the competence of the teacher profession in the digital era.

The Practicality of Google Sites-Based Academic Supervision Model

The results of the analysis of the practicality of the Google Sites-based academic supervision model show that the model falls into the practical category based on teacher assessments during the limited trial and field trial. In the limited trial, which involved 11 teachers, the average pretest score was 12.82, which increased to 15.36 in the posttest after using a Google Sites-based academic proctoring model. This improvement shows that teachers find the developed model easy to use, engaging, and help them better understand the academic proctoring process. This finding is in line with Milala et al. (2022) research, which states that learning media can be categorized as practical if the level of practicality is in the range of 70–85%. The standard deviation values, which decreased from 4.446 on the pretest to 3.472 on the posttest, showed that the distribution of teachers' responses was becoming more uniform, suggesting that teachers became more consistent in giving positive assessments of the model after using it. The average score also increased from 14.00 to 16.00, indicating that the majority of teachers rated higher after using the Google Sites-based academic proctoring model. These results are in line with research that digital learning media is considered very practical when tested with users due to its ease of access, attractive appearance, and easy-to-understand interaction (Prayetno, 2023).

Interviews with teachers during the limited trial phase showed that teachers found the Google Sites-based academic supervision model useful because they could access proctoring instruments, proctoring results, and coaching materials anytime and anywhere, without being constrained by time or place. This flexibility of access is one of the main advantages of Google Sites-based academic supervision models compared to conventional supervision, which requires physical presence and manual documentation. These findings are in line with the research of Sulasmianti (2021), who stated that web-based learning offers the benefits of flexibility in the time and place of learning, allowing users to access the material repeatedly to improve understanding. Teachers also reported that Google Sites' clean interface, clear navigation, and easy-to-understand instructions made it easy for them to operate the platform. Some teachers who were previously unfamiliar with digital technology stated that after using the Google Sites-based academic supervision model, they felt more confident in using technology to support their professional tasks. Google Sites training improves teachers' understanding and competence in utilizing digital technology as a learning medium (Wicaksono & Wijaya, 2023).

In the field test stage involving 36 teachers, the results of the descriptive analysis showed that the average pretest score of 7.22 increased to 16.92 in the posttest after using the Google

Sites-based academic supervision model. This very significant improvement shows that the Google Sites-based academic supervision model is really practical and effective to use in implementing academic supervision in elementary schools. The standard deviation in posttest 1,339 which was smaller than the pretest 1,869 showed that the distribution of posttest data results was more uniform, which meant that the improvement in comprehension did not only occur in a small number of teachers, but was even among almost all field trial participants. The results of the practical analysis are also supported by the finding that no teacher experienced significant difficulties in operating Google Sites after being given clear instructions for use. The teacher stated that the features available on Google Sites, such as a structured navigation menu, a supervising document storage system, space for notes and feedback, and access that can be restricted according to the user's role, make it very easy for them to conduct and receive academic supervision. These findings are in line with the research of Subnarulloh et al. (2024), who stated that Google Sites features a drag-and-drop editor, theme and display settings, integration with Google Workspace, team collaboration, and responsiveness to various devices, making it ideal for use as an academic supervision platform. In addition to ease of use, teachers also find the Google Sites-based academic supervision model to be very helpful in understanding aspects that need to be improved in learning. The feedback provided by the principal through the digital platform is accessible to teachers for continuous reflection and improvement. This is in line with the research of S. E. Utaminingsih & Mundilarno, that structured academic supervision and clear feedback can improve teacher performance in delivering materials, teacher-student interaction, and the use of more varied and interactive teaching methods (S. E. Utaminingsih & Mundilarno, 2015).

The results of the interviews also showed that principals found it easier to implement academic supervision using Google Sites because all supervision instruments, implementation schedules, and supervision results were well documented and easily accessible when needed. Principals stated that with the Google Sites-based academic supervision model, they can conduct supervision in a more structured, systematic, and continuous manner without worrying about losing supervision data, as is often the case with manual systems. These findings are in line with Satyawati et al. (2025) research which states that Google Sites effectively increases transparency and efficiency in the implementation of academic supervision and brings significant improvements in documentation and communication. Overall, the results of the practical analysis show that the Google Sites-based academic supervision model meets practical criteria because it is easy for principals and teachers to use, has an attractive appearance and clear navigation, and is able to provide real benefits in improving teacher

understanding and performance. The practicality of this model is determined not only by the ease of technical use, but also by the benefits that users feel in supporting the execution of their professional tasks. Thus, the Google Sites-based academic supervision model can be a practical and effective solution to improve the quality of academic supervision in elementary schools.

Effectiveness of Google Sites-Based Academic Supervision Model

The results of the effectiveness test of the Google Sites-based academic supervision model show that this model has a significant positive impact on improving teacher performance. Paired sample ttests in the experimental group revealed significant differences between pretest and posttest scores after using the model, with a t-value of 19.222, $df = 71$, and $p < 0.001$, well below the significance level of 0.05. A negative t-value for an average difference of 10,569 indicates that posttest scores are consistently higher than pretest scores, suggesting that teacher performance did indeed improve after principals used Google Sites-based academic supervision models. These findings are in line with research by Novebri & Lubis (2022), which found that academic supervision has a positive impact on teacher performance. The effectiveness of Google Sites-based academic supervision models was also confirmed through an Independent Sample T-Test that compared the experimental group to the control group. The test results showed a significance value of 0.001 with a $t = -24.454$ count, which is much smaller than 0.05. The mean difference value of -10.056 indicates that the effectiveness of academic supervision in the experimental group was much higher than in the control group after using the Google Sites-based academic supervision model. The control group that used conventional supervision even experienced a decrease in average score from 7.08 in the pretest to 6.86 in the posttest, while the experimental group experienced a very significant increase from 7.22 to 16.92. The received academic guidance experienced a significant improvement in teacher performance compared to the control group (S. Utaminingsih et al., 2022)

Improved teacher performance is also supported by features available in the Google Sites-based academic supervision model, such as integration with the Google Drive platform, Google Site Guru, the implementation plan download feature, the implementation plan poster download feature, and Deep Learning. These features enable teachers to digitally document all aspects of learning planning, implementation, and evaluation in an integrated manner, making it easier for principals to comprehensively monitor teacher performance. This finding aligns with research by Prayetno (2023), who stated that developing Google Sites-based web media can increase learning participation and facilitate more effective communication. The effectiveness of the Google Sites-based academic supervision model is also evident in teacher

motivation in improving learning quality. Teachers stated that having structured and accessible feedback through the digital platform makes them more motivated to continuously improve learning quality. Principals also stated that having a good documentation system allows them to provide more targeted and tailored coaching tailored to each teacher's needs. This finding aligns with research by Firdaus et al. (2022), who found that principals' academic supervision has a positive effect on teacher performance in developing learning programs, implementing the learning process, and assessing and evaluating learning outcomes. Overall, the effectiveness test results indicate that the Google Sites-based academic supervision model is highly effective in improving teacher performance in elementary schools. The model's effectiveness is demonstrated not only by the significant increase in average grades in the experimental group, but also by the consistent, even improvement across almost all teachers, as well as the positive impact felt by principals and teachers in implementing academic supervision. Thus, the Google Sites-based academic supervision model can be an effective solution for sustainably improving the quality of academic supervision and teacher performance in the digital era.

Discussion and Implications

Content Innovation

The innovation of this study lies in the development of a Google Sites-based academic supervision model that transforms conventional supervision into a structured, digital, and integrated system. Unlike traditional manual supervision, this model organizes supervision activities, planning, implementation, and evaluation within a single online platform that enables systematic documentation and continuous follow-up.

The model integrates various Google Workspace tools, allowing principals to provide structured feedback and monitor teacher performance efficiently. Teachers can upload lesson plans, instructional materials, and evaluation documents digitally, promoting transparency, collaboration, and accessibility.

Overall, the innovation is not merely the use of technology, but the redesign of the supervision process into a more efficient, data-driven, and sustainable digital supervision model that supports continuous teacher performance improvement.

Technological Integration

This study integrates Google Sites into the academic supervision process to create a structured and digital supervision system. By utilizing Google Workspace tools such as Google Docs, Google Drive, and Google Forms, supervision activities—including lesson plan review, observation, feedback, and documentation—are conducted efficiently and systematically. This

technological integration improves accessibility, transparency, and continuous monitoring, transforming conventional supervision into a more organized and data-driven process.

Organizational Restructuring

This study supports organizational restructuring by redefining the workflow of academic supervision within the school system. The implementation of a Google Sites-based supervision model reorganizes supervision procedures into a more systematic, transparent, and technology-driven process.

Through this restructuring, roles and responsibilities between principals and teachers become clearer, supervision activities are better documented, and follow-up actions are conducted in a more coordinated manner. As a result, the school's supervision system shifts from a conventional administrative approach to a more structured, collaborative, and performance-oriented framework..

Policy Support

This study provides policy support by offering a practical framework for implementing digital-based academic supervision in elementary schools. The developed Google Sites-based supervision model aligns with current educational policies that promote digital transformation, quality assurance, and continuous professional development for teachers.

The findings of this study may serve as a reference for school leaders and educational authorities in designing policies that encourage the integration of technology into supervision practices. By adopting this model, schools can strengthen accountability, improve documentation systems, and support sustainable teacher performance improvement in line with national education standards

Challenges and Opportunities

The implementation of a Google Sites-based academic supervision model presents several challenges and opportunities. One of the main challenges is the varying levels of digital literacy among school principals and teachers. Some educators may experience difficulties in adapting to technology-based supervision due to limited technical skills or inadequate internet infrastructure. In addition, resistance to change from conventional supervision practices to digital systems may slow down the adoption process. However, significant opportunities also emerge from this innovation. The integration of digital platforms enhances efficiency, transparency, and accessibility in supervision activities. It allows continuous documentation, real-time feedback, and data-driven decision-making to improve teacher performance. Moreover, the model supports professional collaboration and promotes a culture of digital transformation within schools. With proper training and institutional support, these

opportunities can outweigh the challenges and contribute to sustainable educational quality improvement.

5. CONCLUSIONS AND SUGGESTIONS

This study developed and validated a Google Sites-based academic supervision model designed to improve teacher performance in elementary schools. The findings indicate that the model is feasible, practical, and effective for implementation. Expert validation confirmed that the model meets content and technical standards, while field testing demonstrated significant improvements in teacher performance compared to conventional supervision practices.

The integration of digital technology into the supervision process enhances documentation, transparency, efficiency, and continuous monitoring. By transforming supervision from a manual and administrative activity into a structured, technology-supported system, the model promotes sustainable professional development for teachers.

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