



Support for the Digital Administrative Transformation of Madrasahs through the Optimization of Google Workspace for Education

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Abstract : This Community Service (PkM) activity aims to strengthen digital administrative governance in madrasahs through mentoring and optimization of the Google Workspace for Education platform. The program was conducted based on partner needs related to the limited utilization of digital technology in managing academic documents, administrative services, and collaborative work systems. The activities involved several stages, including needs identification, digital literacy strengthening, Google Workspace training, practical assistance, and evaluation. The implementation used participatory methods through presentations, hands-on practice, discussions, and mentoring sessions. The results showed improved participants' competencies in managing digital documents, organizing cloud-based archives, utilizing collaborative features, and developing more structured administrative workflows. The use of Google Drive, Google Docs, Google Sheets, and Google Forms supported a more efficient and integrated administrative management system. This program demonstrates that optimizing Google Workspace for Education can strengthen madrasah administrative capacity and support technology-based educational management. Continuous mentoring is needed to ensure sustainable implementation of digital administrative practices.

Keywords : Digital Administration; Google Workspace for Education; Madrasah Management; Digital Transformation.

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INTRODUCTION

The rapid advancement of digital technology has encouraged educational institutions to transform their administrative management systems. Digitalization in education is not only related to technology-based learning but also involves strengthening institutional governance through efficient document management, data organization, communication, and collaboration systems (Brehmer & Kosara, 2021; Nezami et al., 2022). In this context, digital administrative governance becomes an important aspect in improving the effectiveness, accuracy, and transparency of educational services (Bissaliyev, 2017; Su et al., 2011). Islamic elementary schools, including Madrasah Ibtidaiyah, are also required to develop digital capacity to support their institutional activities while maintaining their educational values and organizational characteristics.

However, the implementation of digital administrative governance in Islamic educational institutions remains a significant challenge. Many madrasahs still face limitations in utilizing digital platforms to support daily administrative activities, not only because of technological constraints but also due to limited human resource competencies (Masiko et al., 2022; Mendy & Rahman, 2019). The availability of digital tools does not automatically improve institutional management if teachers and educational staff do not have adequate skills to optimize their functions (Blumberg et al., 2025; Srivastava et al., 2022). Therefore, strengthening digital competence and developing structured administrative practices are essential steps in supporting sustainable digital transformation.

Based on preliminary observations and discussions with MI Al Hanafiyah, several challenges were identified in implementing digital administrative governance. Administrative activities, including document storage, data management, reporting, and internal coordination, are still conducted using conventional methods that are less integrated. These conditions create difficulties in organizing institutional information, accessing important documents, and ensuring effective collaboration among educational personnel. The absence of a structured digital administrative system indicates the need for practical assistance that can support the madrasah in improving its management capacity.

Another challenge faced by the institution is the limited experience of teachers and educational staff in utilizing collaborative digital platforms. Although various digital applications are widely available, their implementation requires systematic training and continuous mentoring based on institutional needs (Adeoye et al., 2025; Hidayah et al., 2024). Without appropriate guidance, technology utilization tends to be limited to basic functions and does not significantly contribute to improving administrative efficiency. Therefore, a capacity-building program is needed to help educational personnel understand, implement, and maintain digital administrative practices effectively.

Google Workspace for Education provides an accessible and integrated platform that can support the development of digital administrative governance in educational institutions (Akcil, Uzunboyly & Kinik, 2021). Through applications such as Google Drive, Google Docs, Google Sheets, and Google Forms, educational personnel can manage documents, organize data, collaborate in real time, and improve administrative workflows (Sopwandin & Junaidi, 2024). The utilization of this platform is considered relevant because it offers practical solutions that are affordable, flexible, and adaptable to the operational conditions of Islamic elementary schools.

This Community Service (PkM) activity is designed to strengthen digital administrative governance through the optimization of Google Workspace for Education. The program focuses on improving the competence of teachers and educational staff in managing digital documents, developing collaborative administrative systems, and implementing technology-based workflows. Through training and mentoring activities, participants are expected to gain practical skills that can be directly applied to support more effective, organized, and sustainable administrative management.

The implementation of this activity contributes to strengthening digital capacity in Islamic educational institutions by demonstrating how technology can support administrative improvement through a human-centered approach. The program does not position digital platforms as the sole solution but as supporting instruments that require competency development, institutional commitment, and continuous implementation. Therefore, optimizing Google Workspace for Education can become an initial strategy for improving digital administrative governance and enhancing the quality of educational management practices in madrasahs.

METHOD

This Community Service (PkM) activity was implemented using a participatory mentoring approach to strengthen digital administrative governance through the optimization of Google Workspace for Education. This approach was chosen to ensure that teachers and educational staff were not only introduced to digital platforms but also able to apply them in supporting administrative activities based on institutional needs. The program was carried out collaboratively between the PkM team and MI Al Hanafiyah as a partner institution through a series of training, mentoring, and evaluation activities.

The implementation process began with a needs identification stage through observations and discussions with the madrasah management and educational staff. This stage aimed to identify existing administrative practices, digital competency levels, and challenges faced by partners in utilizing technology for institutional management. The results of the initial assessment indicated that several administrative processes, including document storage, data management, and internal coordination, still required improvement through a more structured digital system. Based on these findings, the PkM team developed training materials focusing on the utilization of Google Workspace for Education, particularly Google Drive for digital document management, Google Docs and Google Sheets for collaborative administrative activities, and Google Forms for digital data collection.

The next stage involved training and mentoring activities using a practice-based learning approach. Participants were introduced to the concept of digital administrative governance and guided to directly practice the use of Google Workspace applications. The training emphasized the development of practical skills, including creating digital archives, organizing institutional documents, managing collaborative files, and developing simple

digital workflows to support administrative activities. After the training sessions, continuous mentoring was provided to assist participants in implementing the acquired skills within their daily tasks. This mentoring process included technical assistance, consultation, and guidance in adapting digital practices according to the operational conditions of the madrasah.

The final stage focused on monitoring and evaluation to assess the effectiveness of the program and the achievement of activity objectives. Evaluation was conducted through participant observation, feedback questionnaires, practical assessments, and discussions with the madrasah management. The evaluation indicators included participants' understanding of Google Workspace features, ability to manage digital documents, ability to utilize collaborative tools, and readiness to implement digital administrative practices independently. The evaluation results were used to identify improvements and formulate recommendations for maintaining the sustainability of digital administrative governance.

The success of this activity was also supported by active participation from the partner institution. The madrasah management contributed by providing institutional support, coordinating participants, and facilitating the implementation process. Meanwhile, teachers and educational staff participated as the main beneficiaries by attending training activities, practicing digital skills, implementing the introduced platforms, and providing feedback during evaluation. Through this collaborative approach, the program was expected to strengthen the capacity of educational personnel and encourage the development of more organized, efficient, and sustainable digital administrative practices in Islamic elementary education institutions.

RESULT AND DISCUSSION

1. Identification of Digital Administrative Needs and Program Preparation

The initial stage of the Community Service (PkM) activity focused on identifying partner conditions and preparing an intervention program based on the actual needs of the institution. This stage was important to ensure that the digitalization program implemented was not merely a technology introduction activity but a solution designed to address existing administrative challenges. The identification process involved document analysis, field observation, semi-structured interviews, and focus group discussions (FGD) with the madrasah principal, administrative staff, BOS treasurer, and educational technology operators.

The field assessment activities revealed the current condition of administrative management and the readiness of the institution in adopting digital-based systems. The observation focused on several administrative processes, including document filing, attendance management, student and teacher data management, reporting systems, and internal coordination mechanisms. The results of these activities showed that most

administrative processes were still managed using conventional methods, such as printed documents, manual records, and separated spreadsheet files. The documentation of the initial survey and discussion activities is presented in Figure 1.



Figure 1. Initial Needs Assessment and Discussion Activities with Madrasah Management

The findings from the initial assessment indicated several key challenges faced by the institution. First, administrative management was still highly dependent on manual processes, which affected efficiency in storing, accessing, and updating institutional documents. Second, although teachers and educational staff already had personal Gmail accounts, these accounts had not been utilized as collaborative institutional tools through Google Workspace for Education. Third, the institution had not yet developed standardized procedures for digital document management, data organization, and cloud-based administrative workflows.

These conditions demonstrate that the main challenge was not the absence of digital technology but the limited capacity of human resources in utilizing available platforms effectively. Digital tools such as Google Drive, Google Docs, Google Sheets, Google Forms, and Google Classroom have the potential to support administrative governance; however, their effectiveness depends on users' understanding and ability to integrate them into daily institutional practices. Therefore, the program was designed to focus on strengthening digital competencies and developing practical administrative workflows based on the needs of the madrasah.

Based on the identified problems, the PkM team developed a training and mentoring design that emphasized gradual and applicable digital adoption. The program materials were prepared to support participants in managing digital documents, developing collaborative work systems, organizing institutional data, and creating simple digital administrative procedures. The preparation stage resulted in several outputs, including training modules, implementation schedules, technical guidelines, and supporting facilities to ensure the effectiveness of the training process.

The training materials were developed in both digital and printed formats to accommodate participants with different levels of digital literacy. The main topics included an introduction to Google Workspace for Education, digital document management using Google Drive, collaborative editing through Google Docs and Sheets, digital data collection using Google Forms, and the development of digital administrative workflows (Ani et al., 2025; Obiso, 2025). This preparation ensured that the training activities were contextual and directly connected to the administrative needs of the institution.

Table 1. Results of Partner Needs Identification and Program Preparation

Identified Conditions	Problems Found	Program Response
Administrative documents were managed through manual systems	Difficulties in storing, accessing, and updating documents	Training on cloud-based document management using Google Drive
Google accounts were available but not used collaboratively	Limited utilization of Google Workspace features	Practical training on Docs, Sheets, Forms, and other collaborative tools
Digital administrative procedures were not available	Lack of standardized digital workflows	Development of digital administration guidelines
Digital literacy among educational staff was still limited	Technology adoption was not optimal	Training and continuous mentoring

The results of this stage became the foundation for implementing the next phase of the program, namely training and mentoring activities. The needs assessment confirmed that strengthening digital administrative governance requires an integrated approach combining technology utilization, human resource development, and institutional workflow improvement (George et al., 2024; Goebel et al., 2025). Therefore, Google Workspace for Education was positioned as a supporting instrument to improve administrative effectiveness rather than merely as a technological application introduced to participants.

2. Strengthening Digital Administrative Competence

The implementation stage represented the main intervention phase of the Community Service (PkM) program, focusing on strengthening the digital administrative competencies of teachers and educational staff through the optimization of Google Workspace for Education. This stage was designed based on the needs identified during the initial assessment, particularly the limited utilization of digital platforms for document management, collaboration, and administrative workflows. The

activities were conducted using a participatory mentoring approach that combined conceptual understanding, hands-on practice, simulation, and technical assistance.



Figure 2. Training Activities and Practical Assistance in Utilizing Google Workspace for Education

The training activities began with a digital literacy session aimed at developing participants' understanding of the importance of digital administrative governance in supporting madrasah management. In this session, participants were introduced to the role of digital platforms in improving efficiency, transparency, and collaboration in educational institutions. The facilitator emphasized that technology utilization should not only focus on mastering applications but also on developing responsible and organized administrative practices aligned with institutional values.

The next activity focused on practical training in utilizing Google Workspace for Education features. Participants were guided to directly practice the use of Google Drive, Google Docs, Google Sheets, Google Forms, and Google Classroom based on administrative needs (Faiz et al., 2023; Rodliyah et al., 2024). Through hands-on activities, participants learned how to create structured digital folders, manage institutional documents collaboratively, organize data using spreadsheets, and develop simple digital forms for information collection and evaluation. This practice-based approach enabled participants to understand the relationship between digital tools and their daily administrative responsibilities.

The training results showed that participants began to develop a better understanding of collaborative digital work systems. Previously, administrative documents were mostly managed individually through conventional files or separate storage systems; after the training, participants were introduced to cloud-based document management that allows easier access, sharing, and updating of institutional

data. This change indicates an improvement in participants' awareness regarding the importance of structured digital administration.

To strengthen the implementation of the acquired skills, the program continued with digital administrative simulation activities. Participants were guided to design simple workflows that reflected actual madrasah activities, including document organization, coordination systems, academic reporting, and digital data collection (Mundiri & Zahra, 2017). The simulation provided participants with opportunities to apply Google Workspace features in realistic administrative contexts rather than only understanding them theoretically.

The final activity involved mentoring in the preparation of digital administrative guidelines and operational procedures. Through coaching sessions, participants collaborated with the PkM team to develop initial drafts of digital workflow arrangements, including document management procedures, file organization systems, and guidelines for utilizing Google Workspace within institutional activities. This process was important because technology adoption requires not only technical skills but also institutional procedures that ensure consistent implementation.

Overall, the implementation stage demonstrated that Google Workspace for Education training combined with continuous mentoring contributed to improving the digital readiness of madrasah personnel (Yuliantari et al., 2025). The program did not merely introduce digital applications but encouraged changes in administrative practices from individual and manual processes toward more collaborative, organized, and technology-supported workflows (Brandenberger, Hasu & Nerland, 2024). These findings confirm that strengthening human resource capacity is a crucial factor in developing sustainable digital administrative governance in Islamic educational institutions.

3. Institutionalizing Digital Administrative Governance

The final stage of the Community Service (PkM) activity focused on evaluating program outcomes and strengthening the sustainability of digital administrative practices at MI Al Hanafiyah. This stage was conducted to assess the extent to which participants were able to understand and apply Google Workspace for Education in supporting administrative activities. Evaluation was not only directed at measuring participants' technical abilities but also at identifying changes in administrative practices and institutional readiness to continue implementing digital-based management systems.

The evaluation process was carried out through participant observation, competency assessments, feedback questionnaires, and discussions with the madrasah

management. Observations during the implementation showed that participants were actively involved in practicing digital document management, collaborative file processing, and the utilization of Google Workspace features. The evaluation focused on several indicators, including participants' understanding of digital administrative concepts, ability to manage documents using cloud-based storage, ability to collaborate through online platforms, and readiness to implement digital workflows independently.



Figure 3. Evaluation Process and Participant Feedback on Google Workspace for Education Implementation

The evaluation results indicated an improvement in participants' digital administrative competence after participating in the training and mentoring program. Participants who previously relied on conventional document management methods began to understand the advantages of cloud-based systems, particularly in terms of accessibility, collaboration, and data organization. The use of Google Workspace encouraged participants to develop more structured approaches to managing institutional documents and coordinating administrative tasks.

In addition to competency improvement, the evaluation process also identified several challenges in implementing digital administrative practices. Some participants still required additional assistance, particularly in adapting new digital workflows to their existing routines (Hidayat et al., 2021; Mar, 2024). Technical factors, such as internet stability and differences in digital literacy levels, also influenced the speed of technology adoption. These findings demonstrate that digital administrative strengthening requires continuous mentoring rather than a one-time training activity.

As a follow-up strategy, the PkM team and the madrasah developed an initial commitment to maintain the implementation of Google Workspace within institutional activities. The follow-up plan included continued utilization of digital document storage,

gradual development of administrative workflows, and internal knowledge sharing among educational personnel. This commitment became an important indicator that the program had moved beyond training activities toward the initial stage of institutional digital practice development.

Overall, the monitoring and evaluation results demonstrate that strengthening digital administrative governance requires integration between technological skills, institutional procedures, and continuous support. The Google Workspace for Education-based program contributed not only to improving individual competencies but also to encouraging organizational changes in administrative management. Therefore, the sustainability of this program depends on the madrasah's commitment to maintaining digital practices and developing further innovations according to institutional needs.

CONCLUSION

This Community Service (PkM) activity demonstrated that strengthening digital administrative governance through the optimization of Google Workspace for Education can improve the capacity of educational personnel in managing institutional administration. The program successfully addressed the main challenges faced by MI Al Hanafiyah, particularly the limited utilization of digital platforms for document management, data organization, and collaborative administrative processes. Through a series of training and mentoring activities, participants gained improved understanding and practical skills in utilizing Google Drive, Google Docs, Google Sheets, Google Forms, and other collaborative features to support more structured administrative workflows.

The impact of the activity was reflected not only in the improvement of participants' digital competencies but also in the emergence of institutional readiness to adopt digital administrative practices. The development of digital workflow guidelines, improved understanding of cloud-based document management, and increased awareness of collaborative technology utilization became important initial steps toward strengthening digital governance within the madrasah. These findings indicate that digitalization in Islamic educational institutions requires a balanced approach between technology utilization, human resource development, and institutional commitment.

For future implementation, several aspects need to be considered to ensure the sustainability and broader impact of similar programs. First, an initial assessment of participants' digital literacy levels should be conducted to design training materials that are appropriate to their competencies. Second, training activities should be implemented gradually with sufficient mentoring duration to allow participants to practice and internalize digital skills. Third, continuous assistance after training is needed to support the consistency of implementation and address technical challenges encountered in daily

practice. Finally, this program model can be adapted by other Islamic educational institutions with similar conditions through a participatory approach based on institutional needs and available resources.

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