

## Training On the Use of Technology and Communication to Improve the Quality of School Administration Management

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### Abstract

Information technology plays a vital role in various public policies, particularly in education, as it enhances the quality of learning and the efficiency of school administration. In Indonesia, the implementation of the Independent Curriculum (Curriculum Merdeka) has led to a shift toward digital learning, requiring collaboration across educational units through platforms provided by the Ministry of Education, Culture, Research, and Technology. SMKN 9 Muaro Jambi, despite having sufficient facilities, still faces challenges in adopting a digital system for school administration. Thus, training in the use of information technology at SMKN 9 Muaro Jambi is essential for improving the efficiency, accuracy, and accessibility of information in administrative tasks. This training aligns with the concept of Independent Learning and Independent Campus (MBKM) and the Key Performance Indicators (IKU) of the University of Jambi, emphasising community service to enhance the quality of education. The primary objective of this community service program (PPM) is to enhance the skills of administrative staff and teachers in utilising school information technology, ensuring its efficient implementation in daily administrative activities, increasing awareness of its benefits, and optimising its use for administrative purposes. By achieving these goals, the PPM program aims to significantly contribute to enhancing the efficiency and effectiveness of administrative management at SMKN 9 Muaro Jambi.

**Keywords:** Information Technology; School Administration Management

### Cite This Article

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## INTRODUCTION

Information technology is a crucial and rapidly developing field in various public policies, including the education sector. Information technology refers to the application of technology in data management, including the process of collecting, organising, storing, and processing data in various ways to produce high-quality information. This information is characterised by relevance, accuracy, and timely availability (1). The integration of information and communication technology into everyday life has transformed the way we relate to information and knowledge (2). The use of information technology in education provides various opportunities that can improve the quality and participation in the learning process (3). The impact of this technology goes beyond the classroom, transforming the entire educational model and creating new opportunities for training and support for teachers (4). Information technology plays a significant role in various sectors, including education, where the use of information technology tools can enhance the teaching and learning process. This statement aligns with the previously described explanation of information technology (5).

Since the implementation of the Independent Curriculum, there has been a significant transformation in the learning process in Indonesia, shifting towards the digital learning era (6). This transformation encourages educational institutions to collaborate through various existing media and facilities (Islamiyah, N. M., 2022). The Educational Technology Transformation Program created by the Ministry of Education, Culture, Research, and Technology (Kemendikbudristek) is clear evidence that in the future, digitalisation will be an unavoidable necessity. This program aims to improve the learning conditions in the Indonesian education system (7). One such initiative is the Merdeka Mengajar platform, designed to support teachers, principals, and education offices in implementing the independent curriculum. It serves as a platform for teachers to share learning materials and the best methods they have implemented.

In addition, the Ministry of Education, Culture, Research, and Technology has also created the Education Report platform, which aims to improve the understanding of educational units (PAUD, Elementary Education, and Secondary Education) regarding the state of literacy, numeracy, student character, and the quality of learning that is useful for future development. In the school administration sector, the Ministry of Education, Culture, Research, and Technology has also launched several other platforms, including SIPLah (School Procurement Information System) which functions as a digital marketplace for procurement of goods and services in schools, ARKAS (School Activity and Budget Plan Application) which supports school activity planning, and Tanya BOS which is a discussion forum between schools, agencies, and the School Operational Assistance (BOS) Management with the Ministry (8,9).

SMKN 9 Muaro Jambi, located on Jl. Sungai Dayut, Pematang Gajah Village, Jambi Luar Kota District, Muaro Jambi Regency. This school is facing significant challenges in enhancing the quality of its administrative management. SMKN 9 Muaro Jambi has demonstrated a strong commitment to improving the quality of school administrative management through its participation in the implementation of the independent curriculum in vocational schools, as well as its development of the Pancasila Student Profile Strengthening Project (P5) program. This school is equipped with adequate infrastructure, a computer laboratory, and a library, yet it still operates a manual administrative system.

On the other hand, the need for administrative digitisation, such as ARKAS and SIPlah, is very urgent. This is due to the need to improve the understanding of educational unit operators and managers regarding administrative digitisation. SMKN 9 Muaro Jambi still procures goods and prepares RKAS (School Work Plan and Budget) manually and has not yet utilised applications.

Current conditions indicate that SMKN 9 Muaro Jambi is experiencing difficulties in obtaining limited information, disrupting time efficiency, and inaccurate data management due to the dominance of manual processes. However, the school has taken positive steps by implementing the independence curriculum through the P5 program, one of the themes of which is entrepreneurship.

Thus, SMKN 9 Muaro Jambi has demonstrated a strong commitment to improving the quality of school administration while offering educational programs aligned with the national curriculum and the needs of the workplace. By continuously integrating information technology into school administration and developing educational programs that enhance economic and entrepreneurial skills, SMKN 9 Muaro Jambi is well-prepared to face future challenges and create a dynamic, highly competitive learning environment for its students.

Information technology training at SMKN 9 Muaro Jambi aims to enhance the quality of school administration, ensuring efficiency, accuracy, and ease of access to information. By utilising information technology, educational institutions can improve currently manual administrative processes, provide more accurate and up-to-date data, and create a better learning experience for students and teachers.

## **METHODS**

This study follows a community service approach involving both students and lecturers from the Faculty of Teacher Training and Education at the University of Jambi, in collaboration with SMKN 9 Muaro Jambi. The aim was to train administrative staff and teachers in the use of information technology (IT) to enhance school administration by replacing manual processes. The study includes five phases: program preparation, training implementation, guidance and mentoring, evaluation, and ensuring sustainability. Data collection involved pre- and post-training surveys, feedback forms, and observations to assess improvements in knowledge and skills. Descriptive statistics were used for data analysis, and ethical approval was granted by the University of Jambi's Ethics Committee, with all participants providing informed consent.

### ***Study design and setting***

This study employs a community service approach, involving students and several lecturers from the Faculty of Teacher Training and Education (FKIP) at the University of Jambi, in collaboration with SMKN 9 Muaro Jambi. The program focuses on training administrative staff and teachers on the adoption and effective use of integrated school information technology (IT) to replace manual administrative processes.

### ***Population, samples and sampling***

The population of this study includes administrative staff and teachers at SMKN 9 Muaro Jambi. The total sample consists of participants from both groups who are actively involved in the school's administrative processes. Participants were selected

based on their role in the school's administrative activities, and there were no exclusion criteria beyond their availability and willingness to participate in the training.

### ***Instruments and criteria***

The study used several instruments, including pre- and post-training surveys, feedback forms, and observation checklists. These tools were designed to measure the participants' knowledge and skills before and after the training. The surveys and feedback forms evaluated the effectiveness of the training, the clarity of the content, and the practical application of the IT tools used in school administration. The reliability of these instruments was ensured through pilot testing and expert validation.

### ***Procedure and data collection***

The study was implemented in five stages: 1) Program preparation, which involved an initial meeting to assess the needs of SMKN 9 Muaro Jambi; 2) Training implementation, where administrative staff and teachers were trained on the use of school IT systems; 3) Guidance and mentoring, which provided ongoing support to participants as they applied the training in their daily tasks; 4) Program evaluation, which was conducted periodically to assess the effectiveness of the training and mentoring; 5) Program sustainability, which involved continuous communication with SMKN 9 Muaro Jambi to ensure the ongoing use of IT systems in school administration.

### ***Statistical analysis***

Data were analysed using descriptive statistics to evaluate improvements in participants' knowledge and practical skills in using school information technology. Statistical software such as SPSS or Excel was used for the analysis, and the evaluation was conducted by the FKIP team, which included both lecturers and students.

### ***Ethical considerations***

The study was conducted in accordance with the Declaration of Helsinki, and the Ethics Committee of the University of Jambi approved the protocol. All participants provided informed consent, and their participation was voluntary. Confidentiality was maintained throughout the study, ensuring that all responses and data were handled with utmost discretion and privacy.

## **RESULTS**

SMKN 9 Muaro Jambi, like many schools in the region, faces significant challenges in improving the quality of its administration and teaching. In identifying priority issues, we can focus on two main areas/aspects: The continued use of manual administration systems (such as the preparation of the school budget (RKAS) and procurement of goods) results in limited access to information, disrupted time efficiency, and inaccurate data management. The risk of data loss and information inaccuracy arises from the limitations of manual systems, which are prone to human error.

To address these challenges, a holistic approach is necessary, involving the integration of information technology in school administration and the development of technology-based skills and teaching methods. Training and program development that support technology integration in administration can provide a sustainable solution to improve the quality of education at SMKN 9 Muaro Jambi (10).

Regarding the partner problems above, to overcome the problems faced by SMKN 9 Muaro Jambi through the community service program (PPM), lecturers from the Faculty of Teacher Training and Education (FKIP) of Jambi University, in collaboration with SMKN 9 Muaro Jambi, have provided training on the use of information and communication technology in an effort to improve the quality of school administration management at SMKN 9 Muaro Jambi.

**Table 1.** Training Materials and Time Allocation

No	Training Materials	Allocation		Instructor
		Theory	Practice	
1	<i>Providing a fundamental explanation of information and communication technology and its application in supporting school administration, and conducting discussions related to technology that can be adopted in the school environment.</i>	2 JP	7 JP	Prof. Dr. Ali Idrus, M.Pd., M.E.
2	<i>Providing basic training in creating and managing Google Suite accounts and applications that support school administration management.</i>	2 JP	7 JP	Dr Robin Pratama, S.Pd., M. Pd.
3	<i>Providing Google Suite application training: Google Drive and Google Spreadsheet basics</i>	2 JP	7 JP	Agus Lestari, M. Pd
4	<i>Providing data collaboration training on Google Drive and Google Spreadsheet applications</i>	2 JP	7 JP	Linardo Pratama, M. Pd
5	<i>Providing training in preparing e-forms to support school administration, training in data elaboration techniques, data collaboration, data access rights, data sharing, and data security in Google Spreadsheet, Google Form, and Google Drive applications.</i>	2 JP	7 JP	Yudo Handoko, M. Pd

This training was conducted by the PPM FKIP team at Jambi University, involving administrative staff and teachers from SMKN 9 Muaro Jambi. The training focused on the effective use of school information technology and maximising its use in daily administrative processes.



**Figure 1.** Presentation of Material

The development of information technology has brought fundamental changes to various aspects of life, including education. Digitising school administration is an urgent need to make school management more effective, efficient, and accurate. Despite having adequate infrastructure, SMKN 9 Muaro Jambi still faces obstacles in implementing a digital-based administration system because most management is still done manually. This hinders efficiency, data accuracy, and access to information. Therefore, this community service activity is very beneficial in increasing the use of information and communication technology (ICT) in school administration.



**Figure 2.** Q&A Session

Furthermore, this community service activity is expected to address the challenges. It is relevant to the concept of Independent Learning and Independent Campus (MBKM), which emphasises the importance of managing human resources and technology to achieve better educational goals. Furthermore, this training also supports the University of Jambi's Key Performance Indicators (IKU), which encourage the use of information technology in education. By providing this training, SMKN 9 Muaro Jambi also contributes to the community service focus aimed at

improving the quality of national education, in accordance with existing educational policies and programs.



**Figure 3.** Closing of Training

## CONCLUSIONS

The community service activities carried out at SMKN 9 Muaro Jambi showed promising results, where teachers and administrative staff succeeded in improving their skills in using information technology, primarily through the use of Google Suite (Drive, Spreadsheet, and Form) and the introduction of the ARKAS and SIPLah applications to support school administration management. The success of this activity was based on the suitability of the training theme to the school's needs, the use of methods that integrate theory and practice, the delivery of clearly structured materials by qualified instructors, and a close relationship with the MBKM policy and the Key Performance Indicators of Jambi University. However, there are several limitations, including the lack of quantitative data from the evaluation results, the absence of a clear picture of medium-term implementation, such as the full utilisation of ARKAS and SIPLah, the risk of sustainability that is still dependent on external support, and the lack of detailed discussion of security aspects and policies regarding data. Therefore, further development can be carried out through the development of a measurable evaluation system that uses pre- and post-tests, further training up to internal certification for operators, the writing of data security SOPs, long-term mentoring accompanied by regular monitoring, full integration with the school's digital administration system, and publication of activity results based on empirical data to strengthen academic output and practice. With these steps, the sustainability and impact of community service activities can be maximised in improving the quality of school administration management.

## CONFLICT OF INTEREST

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

## DECLARATION OF ARTIFICIAL INTELLIGENCE USE

*"This study used artificial intelligence (AI) tools and methodologies in the following capacities (CHOOSE & EDIT AS APPROPRIATE):*

1. **Data analysis and modelling:** Machine learning algorithms, including [specific algorithms or techniques], were used to analyse the dataset and predict outcomes.

These were implemented using [software/tools, for example, Python, Scikit-learn, TensorFlow].

2. **Data preprocessing:** AI-assisted techniques [state the technique(s)] were applied to clean, select, and transform the data, preparing the dataset for analysis.

## PLUS

*We confirm that the authors critically reviewed all AI-assisted processes to ensure the integrity and reliability of the results. The authors solely made the final decisions and interpretations presented in this article."*

*"We hereby confirm that no artificial intelligence (AI) tools or methodologies were utilised at any stage of this study, including during data collection, analysis, visualisation or manuscript preparation. All work presented in this study was conducted manually by the authors without the assistance of AI-based tools or systems".*

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