STUDENTS' SKILL ENHANCEMENT THROUGH DIGITAL ARCHIVE MANAGEMENT AT SMAK IMMANUEL BATAM

Pembinaan Peningkatan Keterampilan Siswa melalui Pengelolaan Kearsipan Digital di SMAK Immanuel Batam

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Abstract
The rapid advancement of digital technology has prompted schools to update not only their learning methods but also their administrative and organizational systems, including archive management. However, many school organizations still rely on manual archiving methods, which often lead to inefficiency, data loss, and limited access to information. This Community Service (PKM) activity was held at SMAK Immanuel Batam to enhance students' skills in digital archive management, digital law awareness, and the use of Google Sites as a practical archiving platform. The program took place over five sessions during January–February 2025 and involved members of the SMAK Immanuel Student Council aged 16–18 years. The approaches included lectures, guided discussions, hands-on practice, and evaluations conducted before, during, and after the activity. The results showed that participants were enthusiastic and actively engaged throughout the program. Students demonstrated better understanding of digital archiving concepts, legal and ethical issues related to digital information, and practical skills in using Google Sites for archive

management. Overall, the PKM activity helped improve students' digital skills, organizational communication, and ethical awareness, supporting the growth of responsible, digitally literate student organizations.

Keywords— Digital Archiving, Digital Law, Google Site, Community Service, Student Council

1. INTRODUCTION

The rapid development of digital technology has transformed all sectors of life, including education. In schools today, the challenge is no longer just improving teaching and learning but also modernizing administrative and organizational systems. Digital tools help schools manage information more efficiently, enable transparent data access, and support accountability in governance. Recent studies emphasize that digital competence is a critical skill for students and educators alike to support institutional performance in the digital age. (Nasution & Natas, 2024).

Archives are vital to educational institutions because they serve as repositories of academic, administrative, and historical records. (Dompak et al., 2022). Properly managed archives support accurate documentation, facilitate efficient decision-making, and preserve organizational memory. However, many schools still rely on manual archive systems, resulting in disorganized files, limited access, and an increased risk of loss or damage. Evidence from community service activities shows that most public and private schools face challenges with outdated archiving practices, emphasizing the need for digital solutions.(Citraningsih & Fauzi, 2023)

In response to this need, the Community Service Activity (PKM) at SMAK Immanuel Batam was established to provide a practical solution through student capacity building. The program "Fostering Student Skill Improvement Through Digital Archive Management" focused on teaching digital archiving principles, fundamental digital law, and ethical information practices to student council members. This approach aligns with community outreach models that transfer knowledge and technological skills from universities to school communities, boosting students' digital skills and organizational effectiveness. Similar service models have been successfully implemented in other educational settings to support digital transformation. (Yazid et al., 2025)

Google Sites was chosen as the primary platform due to its user-friendly design, collaborative features, and accessibility — ideal for environments with limited technological resources. Digital platforms such as Google Sites have been reported to enhance data management workflows in schools by enabling easier documentation, information structuring, and digital record-keeping. Research on digital transformation via Google Sites highlights its effectiveness for organizing school data, increasing operational efficiency, and simplifying access for administrators and students alike. (Aprianto et al., 2025).

In addition to technical skills, the PKM activity emphasized the importance of legal understanding in the digital realm and ethical behavior online. Digital archive management is closely linked to copyright issues, data privacy, and responsible use of information. Cultivating early awareness of digital law helps students avoid misuse of information and promotes responsible digital citizenship—a theme that appears increasingly in digital literacy initiatives at the school level. Similar community service projects have included digital legal awareness to ensure participants understand rights, obligations, and ethical standards in digital environments. (Rohiyatun et al., 2023) .

The PKM activity also enhanced communication and teamwork among OSIS members. Digital archive management demands collaboration, clear role division, and mutual coordination. Research on implementing digital systems in educational settings has shown that collaborative digital tasks help participants develop soft skills — including leadership, communication, and responsibility — that are crucial for organizational effectiveness and student empowerment in school environments. (Nasution & Natas, 2024).

Overall, the PKM program at SMAK Immanuel Batam demonstrates that digital archive management training is a practical and effective community service strategy. It not only enhances students' technical competence but also strengthens their ethical awareness and organizational capacity, preparing them to navigate the challenges of the information age. These outcomes align with findings from other digital archive initiatives where targeted training improves archive practices and contributes to better governance and data handling in educational environments. (Yazid et al., 2025)

2. METHODS

2.1 Stages of Activity

The coaching sessions took place on January 29, February 5, 12, 19, and 26, 2025, and were attended by members of the SMAK Immanuel Student Council (OSIS) aged 16–18 years in the SMAK Immanuel Computer Lab. This community service program has been held five times, involving all student council members to encourage broad participation and skill development. The methods used were designed to systematically address the identified challenges in digital archiving and to develop practical skills in students. The stages of this coaching are carried out as follows:

1) Coaching Delivery: Lectures and Hands-On Practice

The primary methodological approach involved interactive instruction delivered by the Service Team, consisting of both *theoretical lectures and guided hands-on practice*. Lectures provided a foundational understanding of digital archive principles, while practical sessions enabled students to apply what they learned directly using Google Sites and cloud services. Research on community service and digital skill coaching highlights that combining *theory with experiential exercises* significantly enhances participant engagement and knowledge retention, especially among adolescent learners. Members of the SMAK Immanuel Student Council followed all the materials that will be delivered in this coaching activity, namely:

1. Basic Knowledge of Digital Archiving at the Student Council of SMAK Immanuel
2. Knowledge of Digital Law at the Immanuel SMAK Student Council
3. Training on Digital Archives and Google Site at the Student Council of SMAK Immanuel

2) Ensuring Understanding, Interaction, and Real-World Application

The three materials above will be delivered by the presenters, namely:

1. Basic Knowledge of Digital Archives was delivered by Mr. Timbul Dompak, S.E., M.Si
2. Knowledge of Digital Law by Mr. Padrisan Jamba, S.H., M.H., CPM.
3. Training on archives and Google Sites was conducted by Mrs. Angel Purwanti, S.Sos., M.I.Kom

Coaching sessions are scheduled five times, as outlined in the schedule. The training was conducted simultaneously by the coaching team and the

participants. Beyond just delivering the content, the Team made sure all participants fully understood the material by offering opportunities for discussion, questions, and real-time application of digital tools. This approach aligns with best practices in digital skills coaching, which recommend interactive and reflective feedback as vital for effective learning outcomes.

Table 1. Activity Schedule

No	Meeting	Activity
1	1	a. Providing information on the importance of digital archives and giving examples of digital archives
2	2	a. Providing material on digital law and providing examples of digital law.aw
3	3	a. Providing material on the stages of digital archiving and the Google site. b. Provide examples of digital archives and Google Sites.es
4	4	a. Provide hands-on practice by giving members the opportunity to work directly with digital archives and Google Sites.
5	5	a. Provide hands-on practice. b. Giving members the chance to practice directly with Google Sites and archives.

2.2 Evaluation Procedures

Evaluation was conducted systematically to assess activity implementation and identify areas for future improvement. The evaluation framework included three stages: before, during, and after the coaching sessions.

a) Pre-Activity Evaluation

Before implementation, the proposing team assessed contextual conditions and readiness for the coaching activity. This included:

1. Observations of the service location and available facilities
2. Assessment of leadership support from SMAK Immanuel administrators
3. The student council's motivation and preparedness to participate

Pre-service evaluations help tailor coaching programs to participants' actual needs and capacities, ensuring greater relevance and effectiveness. Similar approaches are recommended in service and outreach programs to improve tailored intervention outcomes.

b) Evaluation During the Activity

During implementation, the team assessed:

1. Supporting facilities and infrastructure (e.g., internet access, devices)
2. Suitability of materials with the coaching methods
3. Participants' enthusiasm and engagement levels

Ongoing monitoring during activities aligns with formative evaluation practices, which are known to enhance program responsiveness and participant motivation.

c) Post-Activity Evaluation

After the five sessions, evaluators analyzed changes in participants' understanding and practical application of digital archiving and Google Sites. Outcomes were measured through:

1. Observations of students' archive organization practices
2. Informal feedback and self-reports on tool usage
3. Evidence of digital archive implementation in OSIS activities

This stage emphasized impact assessment, evaluating if participants could apply what they learned in real school settings. Post-activity monitoring is a widely

accepted method in community service frameworks to assess the effectiveness and sustainability of results.

2.3 Follow-Up and Sustainability

Although the coaching was organized into five meetings, it was recognized that this frequency might not be enough for lasting change. Therefore, the proposing team agreed to continue monitoring and follow-up activities, including:

1. Informal in-person meetings
2. Online communication and support
3. Additional coaching tailored to student needs

Ongoing mentoring and follow-up are vital in community programs to ensure sustained behavior change and reinforce skills — particularly in digital literacy and organization.

3. RESULTS AND DISCUSSION

3.1 Results

This community service project was carried out as part of a student leadership and capacity-building program to enhance communication skills and digital abilities among members of the SMAK Immanuel Student Council. The activity focused on Grade XI and XII students from the Science (IPA) and Social Studies (IPS) streams and was held entirely in classroom settings at SMAK Immanuel Batam. Community service initiatives that combine leadership development and digital skills training have proven effective at boosting student participation and organizational preparedness in school environments.

The five-day activity consisted of structured presentations and guided practice sessions delivered by the service team. Prior to implementation, an initial coordination and discussion session was held to align objectives, introduce the scope of activities, and explain the expected outcomes to participants. Initial orientation is considered an essential stage in community service activities, ensuring participant readiness and a shared understanding of program goals. Specifically, the activity aimed to:

1. Provide basic knowledge of digital archiving to student council members.
2. Enhance students' understanding of digital law;
3. Introduce the use of Google Sites as a digital platform.
4. Train students in practical digital archiving using Google Sites.

On the first day, the activity began with an introduction of the service team and an informal opening session to build rapport with participants. A presentation on Digital Archives was delivered by Mr. Timbul Dompak, S.E., M.Si., followed by a discussion session and group documentation. Introductory sessions play an important role in increasing participant engagement and motivation in community-based learning activities.

The second day focused on Digital Law, presented by Mr. Padrisan Jamba, S.H., M.H. The material was delivered orally with interactive support from the service team. Participants were then encouraged to select topics for discussion and practice. Although some students were initially hesitant, most showed curiosity and enthusiasm. Previous PKM studies note that discussion-based legal literacy activities are effective in stimulating critical thinking among students.

On the third day, Mrs. Angel Purwanti, S.Sos., M.I. Kom., presented material on Google Sites. Participants were guided to create their own websites tailored to their organizational needs. The students actively followed instructions and asked

questions during the session. Practical training on digital platforms has been shown to boost students' confidence and technological skills.

The fourth day emphasized hands-on digital archiving practice using Google Sites. Participants worked independently using laptops or computers while receiving feedback from facilitators and peers. This reflective practice enabled students to identify strengths and weaknesses in their digital archive organization. Hands-on learning is widely recognized as an effective method in skill-based community service programs.

The fifth day was the evaluation phase, during which facilitators provided feedback, and participants shared their impressions. Overall, students responded positively, noting that the activity improved their understanding of digital archiving, Digital Law, and Google Sites. Participant feedback serves as a key indicator of perceived usefulness and the learning impact of PKM activities.

3.2 Discussion

The community service activity took place on January 29, February 5, 12, 19, and 26, 2025, as planned. The delivery of materials across five sessions provided time for both conceptual learning and hands-on practice. Structured, multi-session community programs have been shown to enhance knowledge retention, digital skills development, and student engagement.

Participants from the XII IPA and IPS classes demonstrated high enthusiasm throughout the program, particularly during practical sessions. This aligns with research noting that *active engagement and opportunity for practice* in digital contexts significantly enhance students' confidence and learning outcomes.

Picture 1. Speakers with the Student Council of SMK Immanuel

As previously discussed, archives are the foundation of administrative memory in organizations. Without effective archive systems, a company risks losing historical records, institutional identity, and decision-making data. Proper archive management—adhering to regulations, standards, and ethical principles—enhances organizational efficiency, transparency, and service quality.

The Digital Law component provided students with insights into the legal frameworks governing the use of digital technology. Instead of focusing solely on technical skills, digital law education integrates legal awareness into digital literacy by teaching students about legal rights, responsibilities, and ethical online conduct (Afzal, 2024). Contemporary literature supports this, highlighting that digital literacy must encompass understanding the legal and ethical aspects of digital behavior to prevent misuse, privacy violations, and cyber risks. (Gallego-Arrufat et al., 2024)

Picture 2. Student Focus on Coaching

Google Sites was introduced as an accessible web platform for building digital archives. Its simplicity and collaborative features make it suitable for school-level documentation and organizational activities. (Wicaksono & Wijaya, 2023). Empirical studies show that *training with user-friendly digital platforms helps students apply digital tools more confidently*, reinforcing learning outcomes achieved in short-term digital literacy programs. (Wijaya et al., 2024).

Participant testimonials highlight positive learning experiences and the perceived value of the activity. Students mentioned that the program expanded their understanding of archive organization, digital law, and the use of Google Sites. They also expressed a desire for ongoing activities in the future—a response that reflects typical outcomes of service-based educational programs where participant-focused initiatives boost motivation and maintain interest in skill development. (Subaveerapandiyan & Sinha, 2022)

Picture 3. On the Discussion Session

This positive participant response supports the idea that student-centered digital literacy programs not only develop technical skills but also promote ethical and responsible digital citizenship, a key goal of modern educational policy in digital environments. (Gallego-Arrufat et al., 2024)

4. CONCLUSION

The Community Service (PKM) activities conducted at SMAK Immanuel Batam have successfully enhanced students' competencies in digital archive management, digital law awareness, and collaboration within student organizations. These outcomes align with findings from recent community service and educational studies, which emphasize that digital literacy programs at the

school level can effectively improve students' organizational readiness, administrative skills, and leadership capacity when implemented through structured training and practice. Using Google Sites in this program has proven to be an effective and accessible digital platform for improving students' technological skills. As a user-friendly and collaborative tool, Google Sites helps with documentation, organizing information, and coordinating online within school groups. Previous studies confirm that simple, cloud-based platforms greatly assist students in practicing digital skills in real-world situations while reducing technical barriers.

Besides technical skills, this PKM activity also helped improve ethical responsibility and legal awareness in the use of digital information. Through digital law materials, students learned about data protection, responsible communication, and ethical conduct online. Modern literature highlights that including digital ethics and legal awareness in digital literacy programs is crucial for promoting responsible digital citizenship among students. Through this training, students demonstrated greater ability to manage organizational archives efficiently while recognizing the importance of data security, accountability, and healthy digital communication in student organizations. These skills are increasingly necessary in modern educational settings, where administrative and organizational tasks are closely tied to digital systems. To promote sustainability and broader impact, it is recommended that future PKM programs incorporate advanced digital topics, such as basic cybersecurity awareness, cloud data management, and the creation of digital portfolios for the school. Long-term, progressive digital capacity-building efforts tend to yield more sustainable outcomes and improve students' mastery of skills.

5. SUGGESTION

The digital archiving training activity should be continued regularly to help students improve their skills and use them consistently within the student council organization. Ongoing and repeated training programs are recommended in community service literature because they reinforce skills, prevent knowledge loss, and support long-term behavioral change among students, especially in digital literacy programs. Schools are encouraged to actively involve teachers, coaches, and administrative staff in future digital archiving programs to develop an integrated and sustainable digital archive system. Collaboration among multiple stakeholders enhances institutional ownership and helps ensure that digital systems stay operational beyond community service activities. Integrated school-based digital management systems have been shown to boost organizational efficiency and accountability.

In addition, it is recommended that future activities include advanced training topics, such as data security awareness, cloud-based data management, and digital ethics. As schools increasingly rely on digital platforms, students must not only possess technical skills but also understand the importance of protecting personal data, maintaining information integrity, and behaving responsibly in digital environments. Research emphasizes that digital literacy programs must integrate ethical and security aspects to foster responsible digital citizenship. By providing ongoing, integrated, and ethically grounded digital archiving training, schools can foster a disciplined, transparent, and responsible digital culture. Such a culture supports modern information governance and prepares students to handle digital information responsibly in both educational and organizational settings.

6. COMPLIMENTARY

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