



Optimization of Digital Library Management in the Era of Educational Technology

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ABSTRACT

This study aims to examine the optimization of digital library management in supporting learning at Public Senior High School 6 Baubau, particularly in relation to improving access to learning resources, integrating information technology, and fostering collaboration among stakeholders. The research employs a qualitative approach with data collected through in-depth interviews, observation, and documentation involving grade X and XI teachers, grade X and XI students, and the school librarian. The findings indicate that the digital library significantly expands students' access to various learning resources such as e-books, electronic journals, and interactive learning media that support independent learning. Moreover, the application of information technology through online catalogs and app-based lending systems has enhanced the efficiency of library services. School management has provided strong support through the provision of digital infrastructure, system development, and training for teachers and librarians. Positive collaboration between teachers and librarians in developing curriculum-aligned digital learning materials further strengthens the integration of the library into the learning process. In conclusion, the digital library plays a crucial role in shaping a modern learning ecosystem that is inclusive, efficient, and adaptive to the development of educational technology, while also enhancing digital literacy and active student participation in the school environment.

Keywords: Digital library, Learning resources, School management, Educational technology

1. Introduction

The rapid development of information technology has driven transformation across various sectors, including education and information management. One of the most evident manifestations of this transformation is the emergence of digital libraries as both an alternative and a complement to conventional libraries (Selvaraj, 2021). Digital libraries offer broader, faster, and more efficient access to a wide range of information resources, unrestricted by time and space (Akcaoglu & Coşkun, 2024). However, to fully optimize these benefits, proper management is required, encompassing planning, organization, implementation, and evaluation of the digital library system (Ming, 2024).

The optimization of digital library management encompasses several crucial aspects, including digital collection management, technological infrastructure, librarian training, and system integration aligned with user needs (Jogezai et al., 2023). A digital library is not merely about digitizing collections; it is also about ensuring that information can be accessed, studied, and utilized easily and securely. Therefore, a strategic, user-centered approach is essential, along with the adoption of the latest technologies and policies that promote open access to information (Alfiani & Setiawan, 2022). Additionally, digital library management must consider sustainability and data security. In the context of educational institutions, digital libraries can serve as learning hubs that foster digital literacy

and student autonomy (Latte & Bankapur, 2023). With effective management, digital libraries not only function as repositories of information but also as collaborative, innovative, and inclusive spaces capable of addressing contemporary challenges and advancing the quality of education (Erixon & Thilenius, 2021).

Previous studies have consistently shown that optimizing digital library management plays a crucial role in supporting the quality of technology-based education. According to (Tafonao et al., 2023), the success of a digital library is determined by the integration of effective information management systems and high accessibility for users. A study by (Priyanka, 2024) highlights the importance of librarian training in mastering digital collection management software. Similarly, (Murumba, 2022) found that the availability of curriculum-relevant collections is a key factor influencing the effectiveness of digital library use in secondary schools. (Munifa, 2022) echoed this finding, emphasizing that teacher involvement in integrating digital library resources into classroom learning is directly correlated with improvements in students' digital literacy. In addition, the challenges of implementing digital libraries have also been a major focus of several studies. (Rohmadi et al., 2021) revealed that many schools in underdeveloped areas still lack the infrastructure necessary to support digital library systems. (Jafari et al., 2023) identified weak institutional policies related to digital security and copyright management as primary obstacles to digital collection development. (Goodyear, 2021) also noted that low interest in digital reading is largely due to the lack of promotion and education in digital literacy among students. Lastly, research by (AlMas et al., 2024) emphasized the need for a collaborative approach between librarians, teachers, and school management to create an effective and sustainable digital library ecosystem.

One of the main challenges in optimizing digital library management is the lack of librarians or managers with adequate digital competencies. Many libraries are still operated manually without a clear digital strategy. Furthermore, professional training in information system management, data security, and digital collection curation remains uneven across schools. As a result, existing digital library systems are often underutilized and fail to reach their full potential (Salam & Munawir, 2024). Although digital transformation in libraries has been initiated in various educational institutions, a significant gap still exists between urban and rural schools. Some schools are equipped with comprehensive digital libraries, fast internet connections, and rich digital collections, while others are still struggling to provide even basic technological infrastructure (Kudrina & Matveeva, 2021). This disparity creates an uneven distribution of access to information and learning resources that ideally should be equally available across the entire education system (Rosalianisa et al., 2023).

Digital libraries often lack collections that are relevant and contextualized to the implemented curriculum. Many available resources remain general in nature and fail to support students' specific learning needs. As a result, digital libraries are not positioned as primary references in the learning process. The lack of integration between digital materials and classroom instruction limits the active role of digital libraries in enhancing literacy and enriching subject content. The absence of optimal digital library management can negatively impact the quality of education, particularly in fostering student autonomy and digital literacy skills. Students who are not accustomed to accessing and utilizing digital resources are likely to fall behind in developing essential 21st-century competencies. On the other hand, teachers also miss out on flexible and interactive reference materials that could support the development of contextual and relevant teaching content.

Alongside the digitalization of information, new challenges have emerged concerning data security, copyright, and the ethical use of digital content. Many

educational institutions still lack adequate regulations or data protection systems for managing digital libraries. Issues such as user data breaches, plagiarism, and copyright violations have become critical concerns that must be addressed through clear and integrated digital management policies. The optimization of digital libraries also faces challenges related to reading culture and user behavior adaptation. Not all students and teachers are accustomed to reading in digital formats, making the transition from physical books to digital resources a process that requires appropriate pedagogical approaches. Education, socialization, and a gradual shift in mindset are necessary to change user perceptions and foster an appreciation for digital literacy. Without a collective awareness of the benefits of digital libraries, it will be difficult to fully harness the potential of this technology.

The purpose of this research is to identify, analyze, and propose strategies for optimizing digital library management at Senior High School 6 Baubau in addressing the challenges and opportunities presented by the era of educational technology. This topic is especially relevant because digital libraries are not only a reflection of technological progress in education but also play an essential role in improving information literacy, fostering student independence in learning, and supporting a curriculum that integrates digital resources. As education continues to transform, it is important to examine how prepared schools, particularly Senior High School 6 Baubau, are to fully utilize the potential of digital libraries so they can function as effective, inclusive, and sustainable centers of learning.

2. Methods

This research is a descriptive qualitative study with the aim of thoroughly describing and analyzing the process of digital library management at Senior High School 6 Baubau. This research approach was chosen because it allows for a comprehensive understanding of phenomena that occur naturally and within a specific context. Through this method, the researcher is able to explore the dynamics of digital library management, the challenges faced, and the strategies for optimization that can be applied within the secondary education environment. The design of the study uses a case study method, focusing specifically on one location, which is Senior High School 6 Baubau. This focus enables a deep understanding of the digital library management practices implemented in the school. Primary data is collected through in-depth interviews with the principal, librarian, teachers, and several students who use the digital library. Additional data is gathered through direct observation of digital library activities and documentation such as policies, reports, and operational records of the school library.

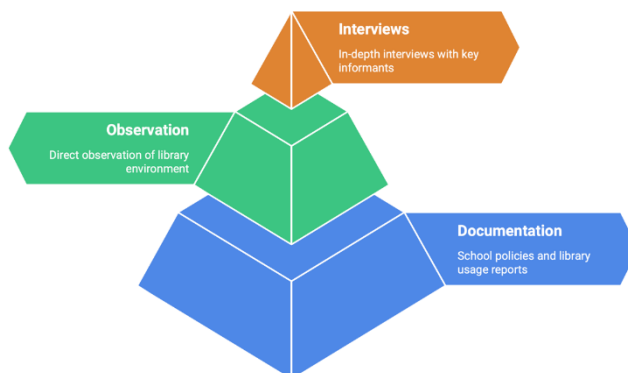


Figure 1. Data Collection Hierarchy

The data collection techniques in this study were conducted using three main methods: interviews, observation, and documentation. In-depth and semi-structured interviews were carried out with key informants such as the principal, librarian, teachers, and students to explore information related to the management of the digital library, the challenges encountered, and the level of its utilization. Direct observation was conducted within the digital library environment of **Senior High School 6 Baubau** to observe service activities, infrastructure conditions, and user interactions with the available system. Meanwhile, documentation was employed to gather supporting data such as school policies, library usage reports, librarian training records, and lists of available digital collections. These combined methods ensured more comprehensive data and allowed for validation through triangulation.

The data analysis in this study uses thematic analysis, which involves identifying, grouping, and interpreting patterns or themes that emerge from the qualitative data. The analysis process begins with transcribing interview results and recording observations, followed by a coding process to highlight important sections related to aspects of digital library management, such as planning, organizing, implementation, evaluation, and the challenges encountered. Once the data has been coded, it is classified into main themes and then analyzed descriptively to draw conclusions that reflect the actual conditions and potential strategies for optimizing digital library management at Senior High School 6 Baubau. The validity of the data is strengthened through triangulation techniques across different sources and methods.

3. Findings

3.1 Improving Access to Digital Learning Resources for Students

Digital libraries have made a significant contribution to enhancing students' access to a wider and more easily accessible range of learning resources. Through digital platforms, students can access e-books, electronic journals, instructional videos, and interactive materials anytime and anywhere, without being limited by the operating hours of a physical library. This greatly supports flexibility in the learning process, particularly in the context of self-directed learning and the personalization of materials based on each student's needs and learning pace. In addition, digital libraries enable the integration of information technology into students' digital literacy activities, allowing them not only to obtain subject materials but also to sharpen their skills in searching, evaluating, and effectively using information. With a variety of digital learning resources that are continuously updated and easy to access, digital libraries play a vital role in creating an inclusive and adaptive learning ecosystem that responds to advancements in educational technology:

Table 1. Teacher Interview

No	Teacher Identity		Interview Question	Summary of Answer
1	Grade Science Teacher	10	How do you perceive the role of the digital library in learning?	The digital library is very helpful for students to access materials quickly and broadly.
2	Grade Social Studies Teacher	10	What are the main challenges in using the digital library for students?	The main challenges are limited internet access and students' unfamiliarity with digital tools.

3	Grade Science Teacher	11	Are students actively using the digital library?	Most students are active, especially when they are assigned research-based tasks.
4	Grade Social Studies Teacher	11	How does the school support the use of the digital library?	The school provides facilities such as Wi-Fi access and training on using digital platforms.
5	Grade Guidance Counselor	11	In your opinion, what is the biggest benefit of the digital library?	It supports independent learning and improves students' digital literacy skills.

Table 2. Student Interview

No	Student Identity		Interview Question	Summary of Answer
1	Grade Science Student	10	How often do you access the digital library?	Usually two or three times a week, especially when there are assignments.
2	Grade Social Studies Student	10	What type of learning resource do you prefer in the digital library?	I like e-books and educational videos because they are easier to understand.
3	Grade Science Student	11	What challenges do you face when using the digital library?	I often experience slow internet and difficulty in finding the right materials.
4	Grade Social Studies Student	11	Does the digital library help you study independently at home?	Yes, it's very helpful because I can study anytime without going to school.
5	Grade Social Studies Student	11	Are you more interested in learning through digital media?	Yes, it's more engaging and flexible compared to printed books.

The two interview tables above present the perspectives of teachers and students regarding the use of digital libraries to enhance access to learning resources. From the teachers' point of view, the digital library is seen as an effective tool for expanding the range of teaching materials and encouraging student independence in learning, although challenges such as limited infrastructure and varying levels of digital literacy remain. On the other hand, students generally experience direct benefits from flexible access to e-books and interactive learning media, although some still face technical difficulties such as unstable internet connections and challenges in finding relevant materials. Overall, the interview data indicates that digital libraries hold great potential in supporting modern learning, provided they are supported with adequate infrastructure and proper guidance.

3.2 Integration of Information Technology in Library Services

The integration of information technology into library services has brought significant transformation to how students and teachers access information. The use of digital platforms such as online catalogs, app-based borrowing systems, and cloud storage for learning resources enables faster, more structured, and more accurate access to collections. With integrated search features, users no longer need to search manually but can simply enter keywords to find books, journals, or

learning media within seconds. This integration also enhances the efficiency of library management by librarians, as data on collections, borrowing activities, and usage statistics can be monitored in real time. Teachers can easily recommend digital learning resources to students through the system, while students can independently borrow or access materials directly from their own devices. In this way, information technology not only expands access to learning resources but also strengthens the culture of digital literacy and promotes collaboration among all members of the school community.

Table 3. Teacher Interview

No	Teacher Identity	Interview Question	Summary of Answer
1	Grade 10 Science Teacher	How do you view the impact of technology integration in library services?	Technology greatly helps speed up access and the search for learning resources for both students and teachers.
2	Grade 10 Social Studies Teacher	Do you use digital catalog systems to find references?	Yes, I often use the online catalog because it's more practical and faster than manual searching.
3	Grade 11 Science Teacher	How do students respond to the use of digital library systems?	Most students are enthusiastic, especially when using the borrowing app or reading e-books.
4	Grade 11 Social Studies Teacher	What challenges have you encountered in this technology integration?	Sometimes the system crashes or the internet is slow, and not all teachers are familiar with the system.
5	Grade 11 Guidance Counselor	In your opinion, is this technology effective in building a reading culture?	Very effective, because students become more interested in reading and exploring digital resources.

Table 4. Student Interview

No	Student Identity	Interview Question	Summary of Answer
1	Grade 10 Science Student	Have you ever used the online library catalog?	Yes, I've used the digital catalog to find books when doing group assignments.
2	Grade 10 Social Studies Student	What is your experience using the digital book borrowing app?	It's quite easy and fast. I can borrow books without going to the library in person.
3	Grade 11 Science Student	Do you prefer reading digital books or printed ones?	I prefer digital books because I can read them on my phone and search for keywords instantly.
4	Grade 11 Social Studies Student	What challenges do you face when using digital library services?	Sometimes the internet is slow and the interface can be a bit confusing at first.

5	Grade 11 Social Studies Student	Does technology make you more motivated to read and study?	Yes, because it's more practical and there are many interesting learning resources available.
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The two interview tables above illustrate the perspectives of teachers and students regarding the integration of information technology in library services. Teachers generally view digital systems such as online catalogs and borrowing applications as effective tools that streamline access to learning resources and support independent study. However, they also point out technical issues like unstable internet connections and a lack of familiarity among some staff as ongoing challenges. From the students' side, responses show a positive attitude toward digital library services, with many appreciating the convenience and flexibility of accessing materials through mobile devices. While some students still face difficulties in navigating the system or dealing with slow internet, the overall impression is that technology has increased their motivation to read and engage with diverse learning materials.

3.3 High Student Enthusiasm for Using the Digital Library

The high level of student enthusiasm for using the digital library reflects a positive shift in their learning behavior. Easy access through devices such as smartphones and laptops allows students to explore a wide range of learning resources without the limitations of time and place. Interactive features such as quick search tools, digital annotation, and multimedia content make the learning experience more engaging and efficient. This encourages students to actively seek out information, not only when completing assignments but also as part of their daily literacy activities. Moreover, the digital library provides students with the freedom to learn at their own pace and based on their individual interests. The flexibility in access time allows them to use the resources outside of school hours, whether at home or on the go. The availability of e-books, electronic journals, and instructional videos further enriches their understanding of specific topics. With increasing student engagement in utilizing these services, the digital library plays a vital role in shaping a learning culture that is independent, modern, and sustainable among students.

Table 5. Teacher Interview

No	Teacher Identity	Interview Question	Summary of Answer
1	Grade 10 Science Teacher	How do you see students' enthusiasm toward the digital library?	Students are very enthusiastic; they often ask questions and actively search for sources via digital platforms.
2	Grade 10 Social Studies Teacher	What do you think makes students interested in using the digital library?	The appealing interface and fast access make students more eager to learn through digital media.
3	Grade 11 Science Teacher	Does the digital library support the classroom learning process?	Absolutely. Students come to class more prepared because they've already read the material in advance.

4	Grade 11 Social Studies Teacher	What is the teacher's role in encouraging students to use the digital library?	Teachers should guide and assign tasks that require students to explore digital resources.
5	Grade 11 Guidance Counselor	Has the digital library influenced students' reading habits?	Yes, students read more frequently now—even outside class hours—because access is more flexible.

Table 6. Student Interview

No	Student Identity	Interview Question	Summary of Answer
1	Grade 10 Science Student	What makes you interested in using the digital library?	Because I can access it anytime through my phone; the interface is attractive and easy to understand.
2	Grade 10 Social Studies Student	How often do you use the digital library?	Almost every day, especially when there are assignments or upcoming exams.
3	Grade 11 Science Student	What is the main benefit you feel from using the digital library?	It helps me study independently and explore topics I'm genuinely interested in.
4	Grade 11 Social Studies Student	What type of materials do you usually search for in the digital library?	I usually look for e-books, social studies articles, and practice questions.
5	Grade 11 Social Studies Student	Do you feel more motivated to study with digital access like this?	Yes, because it's more practical, and I can study while relaxing at home without going to the library.

The two interview tables above highlight the growing enthusiasm among students in using digital libraries and the supportive views of teachers regarding this trend. Teachers observe that students are increasingly motivated to access digital resources due to the convenience, engaging interfaces, and flexibility offered by online platforms. They also acknowledge the role of the digital library in improving students' reading habits and classroom preparedness. On the students' side, responses indicate that they frequently use the digital library not only for assignments and exams but also for personal learning interests. The ability to access materials anytime and from any device makes the digital library an appealing and effective tool for fostering independent learning and building a modern reading culture.

3.4 School Management Support for Digital Transformation

School management's support for digital transformation is reflected in the strategic steps taken to strengthen infrastructure and supporting systems. The school provides not only essential facilities such as internet networks, computers, and Wi-Fi access but also develops a digital-based library information system. This facilitates more efficient processes for searching, borrowing, and managing collections. Such support forms a critical foundation for creating a learning environment that is responsive to technological advancements and expands access

to information resources for the entire school community. In addition to infrastructure development, the management encourages innovation and collaboration in the operation of the digital library. Teachers, librarians, and students are given the opportunity to contribute to content development and the creative use of technological features. The school also organizes regular training programs to improve digital literacy for both educators and students. With the school management's strong commitment to digital transformation, the library is no longer viewed merely as a physical space, but rather as a dynamic, inclusive, and technology-driven learning center that meets the needs of the modern era.

Table 7. Teacher Interview

No	Teacher Identity		Interview Question	Summary of Answer
1	Grade Science Teacher	10	How do you see school management support in the digital transformation process?	Very positive. The school provides internet access, computers, and an online library platform.
2	Grade Social Studies Teacher	10	What kind of support from the school do you feel the most?	The provision of Wi-Fi and digital training for teachers and students is the most noticeable support.
3	Grade Science Teacher	11	Has the digital transformation affected classroom teaching and learning?	Yes, students are more independent and teachers benefit from easily accessible references from the library.
4	Grade Social Studies Teacher	11	How does the school encourage innovation in the digital library?	The school welcomes new ideas and involves both teachers and students in developing digital content.
5	Grade Guidance Counselor	11	What challenges remain despite the management's support?	There are still limitations in available devices and not all teachers or students are familiar with digital systems.

Table 8. Student Interview

No	Student Identity		Interview Question	Summary of Answer
1	Grade Science Student	10	How do you feel about the school's support for the digital library?	The school now has better facilities, so accessing digital books has become easier.
2	Grade Social Studies Student	10	Do you feel helped by the digital transformation of the library?	Yes, I can search for references for assignments without having to go to the library physically.
3	Grade Science Student	11	Which digital facilities at school do you use the most?	Wi-Fi access and the online catalog, because they're very helpful when I need extra learning materials.
4	Grade Social	11	Has the school provided training or guidance in using digital services?	Yes, there was a short training by teachers and librarians on

	Studies Student		how to access and search for digital books.
5	Grade 11 Social Studies Student	What is your hope for the future development of the digital library?	I hope there will be more digital book collections and remote access from home, not just at school.

The two interview tables above reflect the active support of school management in promoting digital transformation, particularly in library services, as perceived by both teachers and students. Teachers acknowledge that the school has provided essential infrastructure such as internet access, digital training, and online catalog systems, which have enhanced teaching effectiveness and student independence. They also recognize the school's openness to innovation by involving educators and students in the development of digital content. On the other hand, students express appreciation for the improved access to learning resources, noting that they can now search for materials more easily and flexibly. With additional support through guidance and training, students feel more confident using digital tools, and they hope to see further improvements in the accessibility and diversity of digital library collections.

3.5 Positive Collaboration Between Librarians and Subject Teachers

Positive collaboration between librarians and subject teachers plays a vital role in strengthening the function of the digital library as a relevant and integrated learning resource. This synergy is evident in the development of digital teaching materials that are aligned with curriculum requirements and tailored to students' characteristics. Librarians serve not only as collection managers but also as partners in designing digital content that supports classroom instruction. Teachers are increasingly open to involving the library in learning activities, such as research-based assignments, digital literacy exercises, and student-led exploration of supplementary resources. This collaboration reinforces the role of the digital library as part of a dynamic and contextually grounded learning ecosystem. Through continuous communication and joint planning, teachers and librarians can ensure that available materials are not only up to date and diverse but also aligned with learning objectives. Such collaboration also contributes to the development of library services that are more responsive to the needs of both teachers and students, while fostering a learning culture that is active, collaborative, and technology-driven within the school environment.

Table 9. Teacher Interview

No	Teacher Identity		Interview Question	Summary of Answer
1	Grade 10 Science Teacher		Have you ever collaborated with the librarian in preparing teaching materials?	Yes, we often discuss and find digital references that align with the lesson topics.
2	Grade 10 Social Studies Teacher		What form of collaboration have you had with the librarian in teaching activities?	The librarian helps me provide digital reading materials for student project assignments.

3	Grade Science Teacher	11	Has this collaboration had an impact on the quality of classroom learning?	Definitely. The materials are more diverse and students are more enthusiastic in exploring digital sources.
4	Grade Social Studies Teacher	11	What challenges do you face in building collaboration with the librarian?	The main challenge is aligning schedules and ensuring materials meet curriculum standards.
5	Grade Guidance Counselor	11	In your opinion, how does the librarian support learning goals?	Librarians are very supportive by providing access to relevant and up-to-date educational content.

Table 10. Student Interview

No	Student Identity		Interview Question	Summary of Answer
1	Grade Science Student	10	Has your teacher ever given assignments using materials from the digital library?	Yes, we are often asked to find e-books or articles from the school's online library.
2	Grade Social Studies Student	10	Do you feel that learning materials from the digital library help your understanding?	Absolutely, because the explanations are more complete and easy to access.
3	Grade Science Student	11	How does the librarian support your learning process?	The librarian often recommends good learning resources that match the subjects we're studying.
4	Grade Social Studies Student	11	Have you ever discussed learning materials directly with the librarian?	Yes, when I had trouble finding a book, the librarian helped by providing a link or e-book file.
5	Grade Social Studies Student	11	In your opinion, does teacher-librarian collaboration affect your learning spirit?	Yes, because we have more material options and studying becomes more interesting.

The two interview tables above present insights from both teachers and students regarding the positive collaboration between librarians and subject teachers in supporting digital library integration. Teachers acknowledge that working together with librarians—especially in selecting and preparing curriculum-aligned digital materials—has enriched the variety and quality of instructional content. This collaboration also helps streamline project-based learning and encourages students to engage more actively with digital resources. From the students' perspective, they benefit directly from this synergy through easier access to relevant materials, librarian recommendations, and more engaging learning tasks. Overall, the mutual support between librarians and teachers plays a key role in shaping a dynamic, accessible, and technology-supported learning environment.

4. Discussions

The implementation of digital libraries has had a significant impact on improving students' access to learning resources. With the availability of e-books, electronic journals, and interactive media, students have greater freedom to explore a wide range of learning materials beyond traditional textbooks. This strongly supports independent learning and fosters a deeper sense of curiosity. In addition, students can choose when and where to access learning materials, making the learning process more flexible and personalized to their individual needs and preferences.

The integration of information technology into library services has further strengthened the effectiveness of a digitally based education system. Innovations such as online catalogs, digital borrowing systems, and the provision of multimedia content through library applications have made it easier for both teachers and students to search for and utilize library resources. This transformation has redefined the library from merely a place to store books into a modern and efficient information service center. The comprehensive use of technology also reduces administrative barriers and accelerates the circulation of information. From the user perspective, students have shown high enthusiasm for using the digital library. They feel more motivated to learn due to the engaging interface, easy navigation, and the ability to access materials from their personal devices. The availability of accurate and timely information helps students feel more confident when completing assignments and tackling academic challenges. This enthusiasm reflects a shift in learning patterns toward more active and independent approaches among students.

The success of digital library implementation is closely linked to the support provided by school management. The school has made concrete contributions by providing digital infrastructure such as internet access, computer equipment, and the development of library application systems. Beyond infrastructure, the school also promotes training and guidance to ensure that teachers, librarians, and students can fully optimize the use of technology. This commitment demonstrates that digital transformation is not merely a technical responsibility but an integral part of a long-term educational strategy.

Collaboration between librarians and subject teachers is a crucial factor in ensuring the quality of content available in the digital library. Through intensive communication and synergistic cooperation, they develop learning materials that align with curriculum requirements and student interests. Librarians play an active role in curating and recommending relevant learning resources, while teachers integrate these digital collections into the teaching and learning process. This collaboration creates a complementary system that strengthens student engagement in learning. Overall, these five findings demonstrate that digital libraries not only expand access and improve efficiency but also have the potential to transform the learning culture within schools. With the support of technology, strong school leadership, and active collaboration among all stakeholders, digital libraries can serve as a vital foundation for building a learning ecosystem that is adaptive, creative, and future-oriented. This transformation signals a new direction in education one that is more open, inclusive, and grounded in digital literacy.

5. Conclusion

Based on the research findings and discussion, it can be concluded that digital libraries make a significant contribution to improving the quality of learning in schools. Easy access to various digital learning resources, such as e-books and

electronic journals, has expanded the range of information available to students in an independent and flexible manner. Furthermore, the implementation of technology-based services, including online catalogues and digital borrowing applications, has accelerated the process of searching for and utilizing library collections. This development encourages a more self-directed, interactive learning pattern aligned with the digital era. The successful integration of digital libraries is strongly supported by various stakeholders, from school management that provides infrastructure and training, to collaboration between librarians and teachers in developing curriculum-relevant learning materials. Students' enthusiasm in using digital libraries also demonstrates that this approach successfully fosters reading interest and increases their engagement in the learning process. With strong synergy among all school components, the digital library serves as a crucial foundation for shaping an educational ecosystem that is innovative, inclusive, and future-oriented.

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