

OPAC: INNOVATION OF LIBRARY SERVICES IN THE DIGITAL ERA AT SMK NEGERI 1 SIDOARJO

Isna Fitria Agustina

Muhammadiyah University of Sidoarjo, Indonesia

Email: isnaagustina@umsida.ac.id

Eni Rustianingsih

Muhammadiyah University of Sidoarjo, Indonesia

Salsabilla Febrianti Efendi

Muhammadiyah University of Sidoarjo, Indonesia

Received: February 07, 2024; Accepted: February 21, 2024; Published: February 28, 2024;

Abstract: **Objective:** This study aims to explore the implementation of an Integrated Library System through the Online Public Access Catalog (OPAC) at SMK Negeri 1 Sidoarjo, with a specific focus on the SMALDIVA Library. The research seeks to evaluate how OPAC enhances information retrieval for students and identify challenges in its practical application. **Method:** A descriptive qualitative approach was employed, utilizing data collection techniques such as field observation, semi-structured interviews with library staff and students, and documentation analysis. The study also reviewed supporting institutional records related to library services and system usage. **Results:** The findings indicate that OPAC has significantly improved the ease and speed of information access for students. However, notable challenges include limited user understanding of OPAC functionality and a shortage of library personnel with professional training in library and information science. These issues have hindered the system's full potential. **Novelty:** This research provides one of the first focused assessments of OPAC implementation in a vocational high school setting in Sidoarjo. It highlights the need for systematic user training and professional development for library staff as critical components for optimizing digital library services in secondary education environments.

Keywords: Implementation; Integrated Library System; OPAC; Vocational School



This is an open-access article under the CC-BY 4.0 license

Introduction

Education has a crucial role in shaping the skills and abilities of individuals to enter the world of work, especially in this era of technological disruption [1]. Universities as providers of formal education, although they provide a theoretical and practical foundation, are often limited in the scale of their implementation. Therefore, job training activities, such as internships at related agencies or institutions, are essential for students to understand and overcome the challenges of the world of work directly [2]. Internship programs allow students to apply the knowledge and experience gained during their education in a real work environment, preparing them to become a competent and adaptive workforce [3].

Libraries in the digital age are transforming into dynamic information centers that go beyond physical collections. This transformation is driven by the community's need for fast, precise, and relevant access to information. One of the important innovations in library modernization is the implementation of an integrated system based on Online Public Access Catalog (OPAC). OPAC is the primary gateway for users to explore library resources online, enabling collection searches, availability checks, and physical location searches. The implementation of OPAC aims to improve the efficiency of information retrieval, expand the reach of library services, and support independent learning. The benefits include increasing user

satisfaction, optimizing the use of collections, and strengthening the role of libraries as knowledge centers. However, the implementation of OPAC also brings impacts such as the need for user training, system maintenance, and accurate data management (Azzahra & Ramadhani, 2020; Tasbih & Nur Farah Syahidah, 2024).

In Indonesia, library modernization through OPAC has become a national agenda, as stated in Law Number 43 of 2007 concerning Libraries [6]. Various libraries, from colleges to schools, are vying to adopt OPAC to improve services [7]. However, the implementation of OPAC in Indonesia does not always run smoothly. Research shows that there are still many users who are not familiar with OPAC, so they prefer to search for collections manually (Setiawan, 2020). In addition, the lack of socialization and training, inadequate infrastructure, and limited local content are obstacles in optimizing OPAC. In facing this challenge, the active role of the community is urgently needed. Library users need to proactively learn using OPAC, provide feedback to library managers, and participate in information literacy activities. The government and related parties also need to support the development of OPAC by providing infrastructure, training, and content relevant to the needs of the Indonesian people [8], [9].

Several studies have highlighted the phenomenon of OPAC implementation. Research by [10] shows that OPAC's intuitive and responsive interface design contributes significantly to user satisfaction. [6] menemukan bahwa integrasi OPAC dengan sistem manajemen perpustakaan (Sistem Sirkulasi) meningkatkan efisiensi layanan sirkulasi dan pengelolaan koleksi. Riset oleh [5] found that the integration of OPAC with library management systems (Circulation Systems) improves the efficiency of circulation services and collection management. Research by [11] found that OPAC promotions through social media and other online platforms are effective in reaching a wider range of users. The study [12] shows that the successful implementation of OPAC depends on staff training, periodic evaluations based on user feedback, and commitment and support from all relevant parties.

Ideally, OPAC should be an easy-to-use tool that is very helpful for users in finding the information they need. However, in reality, there are still many users who are reluctant to use OPAC for various reasons, such as a lack of understanding, a confusing interface, or irrelevant search results. This gap between theory and fact suggests that the implementation of OPAC is not just about installing software, but also involves behavioral and cultural changes among library users. This study is important to identify the factors that influence the acceptance and utilization of OPAC, as well as provide practical recommendations to improve the effectiveness of OPAC implementation in libraries. Previous research has shown that tailored training, effective promotions, user-friendly interface design, integration with online resources, and continuous evaluation are key to improving the perception of ease of use, awareness of benefits, user satisfaction, added value, and relevance of OPAC systems.

This study aims to analyze the implementation of an integrated library system through OPAC at SMK Negeri 1 Sidoarjo. The basic concepts used include implementation (the process of implementing policies), integrated library systems (combining library functions in one platform), Online Public Access Catalog (OPAC) as an online catalog, and technology acceptance as the level of technology adoption by individuals or groups.

Methods

This study adopts a qualitative descriptive approach to understand in depth the implementation of the integrated library system through the Online Public Access Catalog (OPAC) service at SMK Negeri 1 Sidoarjo, focusing on the exploration of phenomena, descriptions of experiences and perceptions, and interpretation of the meaning of the collected data [13]. This research was carried out at the SMALDIVA Library of SMK Negeri 1 Sidoarjo, collecting data from various sources. Primary data was obtained through direct observation of the OPAC implementation process and user interaction, in-depth interviews with the Head of the Library, staff, students, and teachers, as well as documentation of library profiles and OPAC usage data. In addition, secondary data is collected from relevant literature, including Law Number 43 of 2007

concerning Libraries. Data analysis is carried out qualitatively through data reduction, presentation of data in the form of narratives and tables, and drawing conclusions based on data interpretation

Results and Discussion

The implementation of an integrated library system through the Online Public Access Catalog (OPAC) service at SMK Negeri 1 Sidoarjo is an effort to modernize the library to improve access to information and services for students and teachers. This discussion will analyze the implementation of OPAC based on the theory of policy implementation put forward by George C. Edwards III, which includes communication factors, resources, disposition, and bureaucratic structure [14], [15]

Communication

According to Edwards III, effective communication in policy implementation includes the dimensions of transmission, clarity, and consistency. The implementation of OPAC at SMK Negeri 1 Sidoarjo has been socialized to students and teachers through various means, such as announcements, training sessions, and direct assistance from library staff. However, based on observations and interviews, some users are still not fully aware of the existence and benefits of OPAC. This indicates that the transmission of information has not optimally reached all target users. A user guide for OPAC has been provided, yet some students and teachers still face difficulties in using it. This suggests that the clarity of information regarding OPAC usage needs improvement, such as through more interactive and easily understandable training sessions. While the information provided about OPAC has been relatively consistent, it is crucial to ensure that all library staff share the same level of understanding about OPAC so they can deliver accurate and consistent information to users.

Resources

Edwards III (as cited in Widodo, 2010) states that resources include human resources, budget, equipment, and authority. The SMALDIVA library has competent staff in managing OPAC. However, based on internship reports, some library staff members do not have a background in library science, which affects the implementation of OPAC's information retrieval system. This highlights the need to enhance staff competencies through training and development programs. Ensuring a sufficient budget for the maintenance and development of OPAC is essential for its smooth operation and continuous improvement in line with technological advancements and user needs. The library is equipped with adequate computers and internet access to support OPAC operations. However, it is necessary to ensure that all computers in the library are connected to the internet and can access OPAC smoothly. The Head of the Library has the authority to make decisions regarding OPAC implementation and development. However, clear and well-coordinated policies with the school administration are needed to ensure the effective implementation of OPAC.

Disposition

Disposition refers to the attitude and commitment of policy implementers (in this case, library staff) and users (students and teachers) toward OPAC implementation. The library staff demonstrates a positive attitude and commitment to implementing OPAC. However, continuous efforts are needed to enhance their motivation and enthusiasm to provide optimal service to users. Regarding user attitudes, some students and teachers have welcomed OPAC implementation and found it beneficial for retrieving information. However, a portion of users remain unmotivated to use OPAC due to difficulties in operation or a lack of understanding of its benefits. Efforts should be made to increase user awareness and motivation through engaging in promotional and socialization activities.

Bureaucratic Structure

A clear and efficient bureaucratic structure can support the smooth implementation of policies. In the context of the implementation of OPAC at SMK Negeri 1 Sidoarjo, it is necessary to ensure that there is a clear division of duties and responsibilities between library staff in the management of OPAC. The procedure for using OPAC is easy for users to understand and follow. There is an effective feedback mechanism to accommodate feedback from users and make continuous system improvements.

Table 1. Analysis of OPAC Implementation at SMK Negeri 1 Sidoarjo

| Implementation Factors (Edwards III) | Dimension | Field Facts | Analysis | Recommendations |
|--------------------------------------|------------------|--|---|--|
| 1. Communication | Transmission | OPAC socialization has been carried out, but it has not yet reached all users. | Information transmission needs to be optimized so that all students and teachers know the existence and benefits of OPAC. | Increase the intensity of socialization through various media (posters, social media, school websites) and activities (training, workshops). |
| | Clarity | OPAC user guidelines are available, but some users still experience difficulties. | The clarity of information on how to use OPAC needs improvement. | Create more visual and user-friendly guidelines and provide more interactive and personalized training. |
| | Consistency | Information about OPAC is relatively consistent, but ensuring a shared understanding among staff is necessary. | A common understanding of OPAC among staff needs to be ensured to ensure accurate and consistent information. | Conduct internal training for library staff on OPAC and regular updates of information. |
| 2. Resources | Human Resources | Library staff are competent, but some do not have a background in library science. | The competency of library staff needs to be improved, especially for those without a library science background. | Provide training or further studies for staff who do not have a library science background. |
| | Budget Resources | The availability of funds needs to be ensured for OPAC maintenance. | Adequate funding will ensure the sustainability and development of OPAC. | Propose sufficient budget allocation for OPAC maintenance, development, and staff training. |

| Implementation Factors (Edwards III) | Dimension | Field Facts | Analysis | Recommendations |
|---|------------------------|--|---|---|
| | | and development. | | |
| | Equipment Resources | Computers and internet networks are adequate, but it must be ensured that all computers are connected and can access OPAC. | Seamless availability of OPAC access for all users needs to be ensured. | Ensure that all computers are connected to the internet and can access OPAC, as well as conduct regular maintenance on internet networks and computers. |
| | Authority Resources | The Head of the Library has authority, but clear policies are needed. | Clear and coordinated policies will support the effective implementation of OPAC. | Establish clear policies on the use and management of OPAC and coordinate with the school administration. |
| 3. Disposition | Library Staff Attitude | The library staff has a positive attitude, but their motivation needs improvement. | Staff motivation and enthusiasm should be consistently enhanced | Provide rewards or incentives for outstanding staff and create a conducive work environment. |
| | User Attitudes | Some users respond positively, while others are less motivated. | Users awareness and motivation need to be increased. | Organize engaging promotional and socialization activities, and offer rewards for active OPAC users. |
| 4. Bureaucratic Structure | Task Distribution | It is necessary to ensure a clear division of duties. | A clear division of tasks will facilitate the management of OPAC. | Create clear job descriptions for each library staff member involved in OPAC management. |
| | Usage Procedures | OPAC usage procedures should be easy to understand. | User-friendly procedures will encourage more users to utilize OPAC. | Simplify OPAC usage procedures and develop easy-to-follow guidelines. |
| | Feedback Mechanism | An effective feedback mechanism is needed | User feedback is essential for continuous system improvement. | Establish suggestion boxes, online surveys, or discussion forums to gather user input. |

Source: Primary Data, 2024

The table above illustrates that the implementation of OPAC at SMK Negeri 1 Sidoarjo highlights the complexity of public policy implementation, which is influenced by various factors. By considering the aspects of communication, resources, disposition, and bureaucratic structure, this study aligns with previous research indicating that the implementation of information systems in libraries often faces challenges such as inadequate socialization, lack of staff competence, user resistance, and complex procedures. The lack of effective socialization for users results in a low adoption rate of the system. Studies on user resistance to new technology in libraries have found that users are often reluctant to adopt new systems due to perceived difficulties or a lack of perceived benefits. In addition, the importance of staff competence in supporting digital library services, including the ability to assist users in using information systems is also emphasized. This study contributes to the field by providing a comprehensive analysis of OPAC implementation based on Edwards III's theory, offering deeper insights into the factors influencing successful implementation within the context of SMK Negeri 1 Sidoarjo.

This study contributes by providing a comprehensive analysis of OPAC implementation based on Edwards III's theory, offering a deeper understanding of the factors influencing successful implementation in the context of SMK Negeri 1 Sidoarjo. An intuitive and responsive OPAC interface significantly enhances user satisfaction, while integrating OPAC with the library management system (Circulation System) improves the efficiency of circulation services and collection management. Personalizing OPAC services, such as book recommendations based on user interests, can increase user engagement with the library. Additionally, promoting OPAC through social media and other online platforms proves effective in reaching a wider audience. The success of OPAC implementation depends on staff training, regular evaluations based on user feedback, and strong commitment and support from all relevant stakeholders.

Conclusion

Fundamental Finding: The implementation of the integrated library system through OPAC at SMK Negeri 1 Sidoarjo has improved students' ability to access library information efficiently. However, challenges remain in users' limited understanding of how to operate the system, as well as the shortage of library staff with formal training in library and information science. These issues often lead users to revert to manual search methods and hinder the full optimization of the OPAC system. **Implication:** To enhance the effectiveness of the OPAC system, regular user training programs should be implemented to build digital literacy and system familiarity. Additionally, improving the qualifications and competencies of library human resources through professional development is crucial. Developing a more intuitive, user-friendly OPAC interface may also support better user engagement and system utilization. **Limitation:** This study is limited to observations and interviews with students and library staff at SMK Negeri 1 Sidoarjo. It does not encompass broader institutional factors such as technological infrastructure, administrative support, or comparisons with other schools that may influence the success of OPAC implementation. **Future Research:** Future studies should examine the role of school leadership, budget allocation, and technology infrastructure in supporting integrated library systems. Comparative research across multiple schools or districts could provide deeper insights into best practices and scalable solutions for effective digital library management.

References

- [1] W. Radinal, "Pengembangan Kompetensi Tenaga Pendidik DI Era Disrupsi," *J. An-Nur*, vol. 1, no. 1, pp. 9–22, 2021.
- [2] S. T. Yong, N. G. Chemmangattuvalappil, and D. C. Y. Foo, "Students' perception of non-

placement work-integrated learning in chemical engineering: Work-related skills towards the post-pandemic future," *South African J. Chem. Eng.*, vol. 47, no. December 2023, pp. 322–332, 2024, doi: 10.1016/j.sajce.2023.12.008.

[3] A. Fauzan, M. Triyono, R. Prima Hardiyanta, R. Daryono, and S. Arifah, "The Effect of Internship and Work Motivation on Students' Work Readiness in Vocational Education: PLS-SEM Approach," *J. Innov. Educ. Cult. Res.*, vol. 4, pp. 26–34, Jan. 2023, doi: 10.46843/jiecr.v4i1.413.

[4] Tasbih and Nur Farah Syahidah, "Pemanfaatan Opac sebagai Media Temu Kembali Informasi di Perpustakaan Universitas Muhammadiyah Makassar," *Lit. Trends Libr. Dev.*, vol. 5, no. 2, pp. 181–203, 2024, doi: 10.24252/literatify.v5i2.48562.

[5] D. Azzahra and S. Ramadhani, "Pengembangan Aplikasi Online Public Access Catalog (Opac) Perpustakaan Berbasis Web Pada Stai Auliaurrasyiddin Tembilahan," *J. Teknol. Dan Sist. Inf. Bisnis*, vol. 2, no. 2, pp. 152–160, 2020, doi: 10.47233/jtekstis.v2i2.127.

[6] S. Anawati, "Peran Perpustakaan Dalam Membangun Citra Perpustakaan Di Era Teknologi Informasi," *J. Pustaka Ilm.*, vol. 2, p. 154, Jul. 2019, doi: 10.20961/jpi.v2i1.33178.

[7] A. A. Fikriya Luthfi and B. Ilmi, "Peran Sistem OPAC Sebagai Katalog Online dalam Efisiensi Penyediaan Informasi di Era Pandemi," *J. Pustaka Ilm.*, vol. 7, no. 2, p. 97, 2021, doi: 10.20961/jpi.v7i2.57190.

[8] A. A. Nugroho and N. A. Isnainy, "Penggunaan Aplikasi OPAC untuk Meningkatkan Kualitas Manajemen Pelayanan Perpustakaan," *JoIEM (Journal Islam. Educ. Manag.)*, vol. 1, no. 1, pp. 33–53, 2022, doi: 10.30762/joiem.v1i1.92.

[9] Nirwana, Anwar, and H. H. Arfan, "Pengaruh Penggunaan Online Public Access Catalogue (Opac) Terhadap Kepuasan Pemustaka Di Dinas Perpustakaan Dan Kearsipan Kabupaten Bulukumba," *J. Magister Manaj. Nobel Indonesia.*, vol. Volume 2, no. April, p. page 309-323, 2021, [Online]. Available: <https://e-jurnal.stienobel-indonesia.ac.id/index.php/JMMNI/index>

[10] D. Kristyanto, "Abstract Data Interpolation in Library OPAC: from the Perspective of Information Dissemination," *Khizanah al-Hikmah J. Ilmu Perpustakaan, Informasi, dan Kearsipan*, vol. 10, no. 1, pp. 25–35, 2022, doi: 10.24252/kah.v10i1a3.

[11] S. A. Rustandi and M. Sa'diyah, "Islamic Management: Jurnal Manajemen Pendidikan Islam Manajemen Mutu Sarana Perpustakaan Di Pondok Pesantren Darussalam Garut," *Islam. Manag. J. Manaj. Pendidik. Islam*, vol. 1, no. 1, pp. 285–296, 2023, doi: 10.30868/im.v4i02.4885.

[12] M. R. Ramadhan Rasyid and P. G. Kinantaka, "Evaluasi Kepuasan Mahasiswa Pengguna Open Public Access Catalog (Opac) Perpustakaan Modern Sulawesi Tenggara Dengan Metode End User Computing Satisfaction (Eucs)," *AnoaTIK J. Teknol. Inf. dan Komput.*, vol. 2, no. 1, pp. 1–5, 2024, doi: 10.33772/anoatik.v2i1.24.

[13] J. W. Creswell, *Research Design; Pendekatan Kualitatif, Kuantitatif, dan Mixed*, Ketiga. Yogyakarta: Pustaka Pelajar, 2010.

[14] J. Widodo, *Analisis Kebijakan Publik*. Malang: Bayumedia, 2010.

[15] G. C. Edward III, *Implementing Public Policy*. Washington DC: Congressional Quarterly Press, 1980.