

## DIGITAL LITERACY CAMPAIGN AND PUBLIC INFORMATION BEHAVIOR CHANGE: A CASE OF OPAC USE

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### Abstract

This study aims to evaluate the effectiveness of a digital literacy campaign based on video and booklet media in improving the public's understanding and skills in using the Online Public Access Catalog (OPAC) at the Malang City Library. The study addresses the gap between OPAC service availability and users' limited digital literacy, which hinders optimal utilization of library technologies. Data were collected from 136 respondents representing diverse demographic backgrounds. A mixed-method pre-test and post-test design was applied to measure changes in knowledge, attitudes, and OPAC use, complemented by thematic analysis of interviews. The results show a significant improvement in users' OPAC knowledge and their ability to conduct independent searches after the campaign. Confidence and perceived ease of use also increase, accompanied by a notable reduction in perceived technical barriers. Qualitative findings strengthen these results by confirming that video and booklet media help simplify OPAC usage and make users more prepared to adopt digital services. Overall, the campaign demonstrates effectiveness as a targeted intervention that supports behavioral change toward technology-based information seeking. These findings highlight the importance of continuous user education, strengthened digital literacy, and accessible guidance materials for sustaining the digital transformation of public library services..

**Keywords:** digital literacy, OPAC, public libraries, information campaigns, digital service transformation.

## INTRODUCTION

The development of information technology has changed the way people obtain and use information. Libraries, as repositories of information and educational centers for the community, are required to provide digital services that align with users' needs (Udem &

Ogungbeni, 2023). One important innovation in modern libraries is the implementation of the Online Public Access Catalog (OPAC) and digital lending applications to simplify collection search and information services. However, the utilization of these innovations remains suboptimal; a persistent gap exists between the availability of digital infrastructure and users' actual ability to use OPAC effectively, indicating that technological advancement has not been matched by adequate digital literacy support (Udem & Ogungbeni, 2023).

Digital literacy becomes the key to optimizing digital technology utilization. According to UNESCO (2025), digital literacy encompasses technical abilities and critical thinking in managing digital information. Prior studies demonstrate that digital literacy strongly determines users' adoption of digital library services (UNESCO, 2025). The study by Ikenwe and Udem shows, for instance, that students with high digital literacy are more active in utilizing online journals and scientific databases (Ikenwe & Udem, 2022). Nafisah (2022) finds that low literacy leads users to rely solely on physical collections (Nafisah, 2022). Together, these studies illustrate that technology provision alone is insufficient unless accompanied by literacy interventions that strengthen users' readiness.

In Indonesia, the digital literacy of public library users remains a challenge. Oyedokun et al. report that low literacy levels hinder the optimization of digital services, and inadequate educational programs limit public awareness of available facilities (Oyedokun, Ambali, ADEŠINA, & MEDİNAT, 2022). Karki et al. (2022) state that without adequate promotion and education, many users are not even aware of the existence and benefits of digital library services. Thus, libraries need to adopt proactive educational strategies to bridge this knowledge gap (Karki, El-Osta, & El Asmar, 2022). Digital literacy campaigns, which include structured educational activities, offer a promising approach. Previous studies highlight that such campaigns can significantly enhance understanding of digital library services (A. Knapp, Hersch, & Wijaya, 2023). Indeed, Idhalama et al. (2025) report that intensive digital literacy campaigns in educational settings successfully improve users' ability to access and use online information resources. Such campaigns function not only as promotion but also as effective educational media to change users' knowledge and attitudes toward digital library services (Idhalama, Makori, & Oredo, 2025).

In the context of the Malang City Library, innovations such as OPAC and online lending applications have been developed, yet their utilization has not reached optimal potential. No structured digital literacy program was available to support users in understanding these services. An initial survey shows that while approximately 80 percent of respondents know about OPAC, only half have ever used it, and 40 percent report experiencing difficulties. Most respondents express interest in participating in literacy programs, indicating a clear need for targeted user education. Information behavior theory posits that knowledge, attitude, and environmental support shape how individuals search for information (Giroth, Purnomo, Dotulong, Mokoginta, & Pusung, 2024). Behavior change communication strategies in digital literacy campaigns can therefore enhance information literacy, shift search habits, and empower communities in utilizing modern library services (Kesaulya & Permatasari, 2025). This context highlights the main research gap: although digital services exist, structured media-based interventions that examine their influence on information behavior in Indonesian public libraries remain understudied.

This study examines how a digital literacy campaign using video and booklet media influences changes in the information behavior of public library users, particularly regarding OPAC utilization at the Malang City Library. It analyzes how these media formats support shifts

in users' knowledge, attitudes, and search behavior, and explores which aspects of information behavior change and how the program supports community empowerment. Although studies on digital literacy and OPAC exist, research evaluating structured media-based interventions in public library settings remains limited. Therefore, this study offers empirical and methodological contributions by presenting an evaluated intervention model that can guide libraries in developing effective, sustainable, and user-oriented digital literacy programs.

## RESEARCH METHOD

This study used a mixed-method design with a pre-post intervention approach without a control group. Quantitatively, the study applied a one-group pre-test-post-test design, measuring conditions before and after the digital literacy campaign on the same group of respondents. The qualitative approach was conducted through in-depth interviews to explore users' perceptions and experiences in more detail. This quantitative-qualitative combination was chosen to make the analysis of the results more comprehensive, encompassing statistical data as well as contextual insights from the users' perspective.

The study was conducted at the Malang City Library. A total of 100 library users were selected purposively based on the criteria of being active members for at least six months and having prior experience or basic awareness of the library's digital services. The participants represented varied demographic backgrounds (ages 18–45, male and female; students, workers, housewives, educators), although the purposive sampling approach means the sample reflects active users and may not fully represent less-engaged community groups. To complement the survey data, ten participants were selected as qualitative informants to represent variations in age, OPAC familiarity, and library visiting frequency. This variation was intended to capture diverse obstacles and user experiences.

The digital literacy campaign was designed in the form of a socialization of OPAC usage using video and a booklet (guideline) media (Pandya & Chudasma, 2022). The short-duration video ( $\pm 5\text{--}7$  minutes) contained a tutorial on accessing OPAC, including search features, reading catalog information (title, shelf location, availability status), and making online reservations or borrowings. The video was created to be engaging and easy to follow with simple narration, visual screen captures of OPAC, and simulated search flows. Meanwhile, the booklet was prepared as a written guide that users could reread (Delita, Berutu, Sidauruk, Elfayetti, & Herdi, 2022). The booklet contained explanations about what OPAC is, its benefits, usage instructions, FAQs, and illustrations of the library's OPAC interface. The campaign was carried out through face-to-face sessions at the library, guided by librarians. In these sessions, participants watched the tutorial video together, received the booklet, and then took part in a live demonstration of OPAC usage with librarian guidance. Participants were also given the opportunity to ask questions and to conduct OPAC searches on-site (short practice) to strengthen their understanding. The campaign delivery strategy combined audiovisual media, printed materials, and hands-on experience to accommodate various learning styles of the audience.

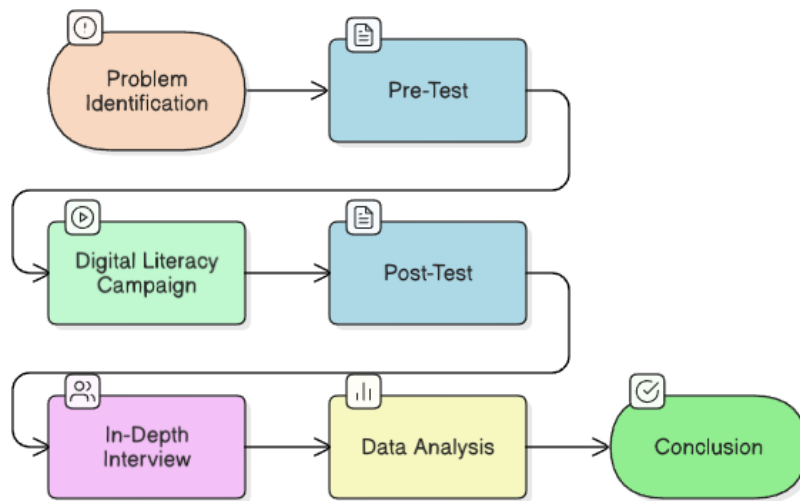


Figure 1: Flowchart of the digital literacy campaign research design at the Malang City Library

As shown in Figure 1, this study was conducted through a structured flow starting from problem identification, pre-test implementation, intervention in the form of a digital literacy campaign, post-test evaluation, in-depth interviews, and data analysis. With this framework, each stage complements the others and produces a comprehensive understanding of the campaign's effectiveness. After explaining the general flow, the following section elaborates on the instruments and data collection procedures in more detail

## RESULT AND DISCUSSION

### Quantitative Results: Changes in Perceptions and Utilization of OPAC

Table 1: Respondent Profile

CATEGORY	NUMBER (N=136)	PERCENTAGE (%)
<b>Gender</b>		
– Male	58	42.6
– Female	78	57.4
<b>Age</b>		
– < 20 years	25	18.4
– 21–30 years	64	47.1
– > 30 years	47	34.5
<b>Visit frequency</b>		
– Frequent ( $\geq 1x/\text{week}$ )	32	23.5
– Occasionally ( $1-2x/\text{month}$ )	71	52.2
– Rare ( $< 6x/\text{year}$ )	33	24.3
<b>Ever used an OPAC?</b>		
– Yes	49	36.0
– No	87	64.0

Table 1 presents the demographic characteristics of the study respondents, including gender, age range, profession, and frequency of library visits. This profile became a basis for understanding the diversity of respondents' backgrounds and their relation to the pre-test and post-test results. The survey results show a significant increase in users' knowledge, attitudes,

and information behavior after the digital literacy campaign. Before the intervention, awareness of the library's digital services was already relatively high: 80% of respondents knew that the Malang City Library has an OPAC, and 84% had heard about the online book lending application. Before the intervention, awareness of the library's digital services is actually relatively high: 80% of respondents know that the Malang City Library has an OPAC, and 84% have heard about the online book lending application. However, this knowledge is partial; for example, many know about the existence of OPAC but do not fully understand its features and how to access it. This is evident from the fact that only 47% of pre-test respondents have ever tried using OPAC, while more than half have not utilized it at all. After the campaign, the proportion of users who use OPAC increases drastically. A total of 75% of respondents state that they have tried using OPAC after the socialization, up from 47% at the initial condition. Users who understand how to access OPAC (both on library computers and online from outside) reach approximately 90% of respondents after the campaign, indicating an improvement in operational literacy. Similarly, the percentage of respondents who know the functions and benefits of OPAC rises to 85% (compared to approximately 80% previously). These increases indicate not only exposure to information but also meaningful behavioral adoption, suggesting that the intervention successfully moved users across early stages of digital-literacy development (from awareness to operational competence). This means that the majority of users now not only know the existence of OPAC but also understand its usefulness as an online catalog for searching collections.

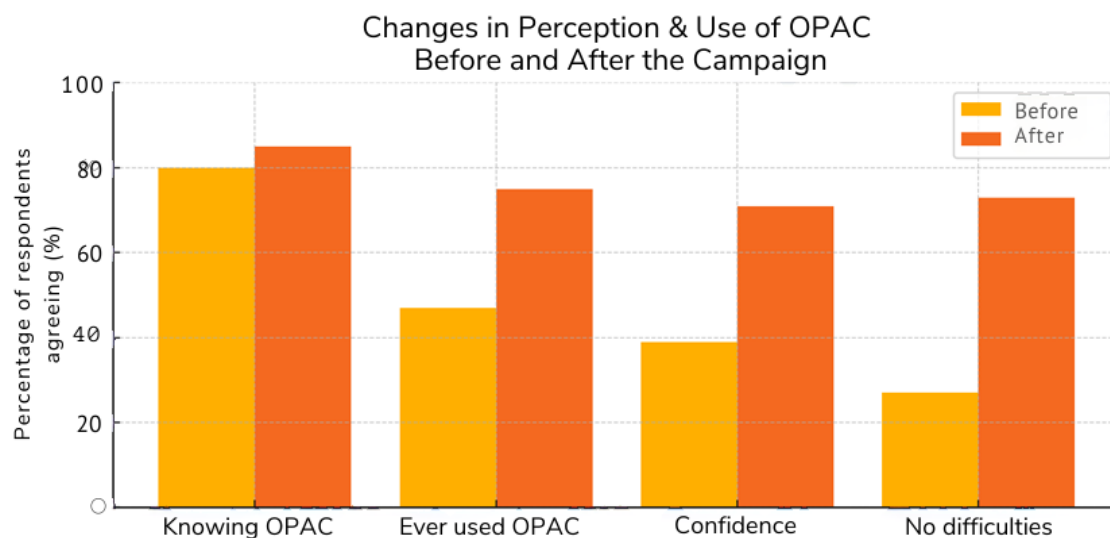


Chart 1: Comparison of the percentage of respondents who agree with several key statements before and after the digital literacy campaign. An increase is observed in aspects of knowledge about OPAC, usage experience, and confidence, along with a decrease in barriers/difficulties after the intervention.

Confidence in searching for information also improved. Before the intervention, only 39 percent felt confident using the internet for academic searching, while 42 percent stated they needed training. After the campaign, 71 percent reported confidence in using OPAC. This shift reflects an improvement in perceived self-efficacy, a key construct in behavioral-change models. The live demonstration and guided practice appear to play a central role in reducing psychological barriers. These findings are consistent with the study by (Durán, Almeida, Lopes, & Figueiredo-Braga, 2022), which shows that digital literacy significantly affects students'

information-seeking behavior. The increase in digital literacy through the campaign in Malang proves to change information-seeking behavior: users shift from traditional patterns (manually coming to the shelves) to utilizing the OPAC online.

One important indicator is the decrease in barriers and perceived difficulties. Before the intervention, 40% of respondents agreed that they experienced problems in using the library's digital services, while only about 27% explicitly stated that they did not experience difficulties (the rest were neutral). After the campaign, 73% of respondents said that they "no longer feel difficulties when searching for books in the library," indicating that the majority now find it easier or more convenient to use OPAC compared to before. This means that the campaign successfully addresses many of the users' subjective barriers. Statistical tests show that the change in the indicator of "experiencing difficulties" is highly significant ( $p$ -value < 0.001, based on a simple paired t-test on the related item score). To complement the significance test, a simplified effect size calculation (Cohen's  $d$ , based on the change in related item means) indicates a large effect, strengthening the claim that the reduction in perceived difficulty is substantial and practically meaningful. This finding is consistent with the report of Rinekso et al. (2021) the reduction of digital barriers appears to stem from improved literacy levels. Likewise, the increase in perceived usefulness and ease of use aligns with the Technology Acceptance Model (TAM), where these variables are central determinants of technology adoption (Akbar, 2024).

In general, the effectiveness of the digital literacy campaign is reflected in users' enthusiasm and positive attitudes after the activity. Before the campaign, 77% of respondents were willing to participate in a digital literacy program if it were held, indicating a high initial interest. After the campaign, this interest is not only confirmed but also develops in a more proactive direction: 90% of respondents state that the campaign makes them more interested in using library services. In fact, 85% state that they are willing to encourage others to use OPAC. In other words, users are no longer merely passive participants but transform into agents who are ready to disseminate the benefits of digital library services to others. From the perspective of empowerment, this is a positive indication that the campaign succeeds in empowering the user community, making them partners of the library in promoting information literacy (Quraishi, Ulusi, MUHID, Hakimi, & OLUSI, 2024).

Respondents with higher baseline familiarity with digital platforms (e.g., university students and frequent visitors) showed the strongest improvements. Users with minimal prior exposure (particularly older adults) also improved, though at a slower pace, indicating differentiated outcomes based on initial literacy levels. The findings also highlight a shift in information behavior. A total of 51% of pre-test respondents admit that they prefer searching for books by coming directly, and several respondents in the initial interviews mention the activity of "browsing the shelves randomly" as an enjoyable habit (particularly for users who consider library visits as recreation). However, after receiving digital literacy, preferences begin to change. Respondents start to use OPAC before or during their visits. They realize the efficiency of OPAC in quickly finding the location of books. For example, a student respondent who visits weekly admits that previously they only knew OPAC "to search for book titles." Still, after the campaign, they "understand the complete process" and feel confident to try OPAC first before browsing the shelves. The influence of the campaign on behavior is also reflected in the data, showing that 73.5% of respondents agree that they no longer experience difficulties in searching for books (thanks to OPAC), which means that the process of information searching becomes smoother in their daily routines.



An increase in the perceived benefits of digital services is also recorded. In the pre-test, only 46% of respondents agreed that “library digital services help access information more quickly.” This figure rises sharply in the post-test, where 87% of respondents agree that “digital services such as OPAC are important for today’s libraries.” Users now acknowledge the relevance and value of OPAC in the modern context. Thus, this digital literacy campaign not only improves usage skills but also changes users’ mindsets regarding the importance of integrating technology into library services. This is important because sustainable behavior change requires a shift in perceived usefulness and positive attitudes (Atika & Sayekti, 2023). From the perspective of the Technology Acceptance Model (TAM), for example, perceived ease of use and perceived usefulness are the main determinants of the intention to use technology (Puspanjali & Jumino, 2023). This campaign successfully improves both: OPAC is perceived as easier and clearer, and its usefulness in accelerating information access is acknowledged. As a result, interest and intention to use OPAC in the future become higher.

### Qualitative Results: User Perceptions and Changes in Information Behavior

Table 2 : Themes and Subthemes from Post-Campaign Interviews

MAIN THEME	SUBTHEME	REPRESENTATIVE QUOTATION (RESPONDENT)
<b>Improved understanding of opac</b>	Understanding the function of OPAC	“Now I know OPAC can check book availability.” (R5)
	Ability to search independently	“I used to always ask the librarian; now I can search by myself.” (R2)
<b>Confidence</b>	Not afraid to try	“I am more willing to explore the system after watching the video.” (R8)
	Feeling helped by the booklet	“The guidebook is easy to follow, especially the step pictures.” (R7)
<b>Perceived ease of use</b>	OPAC considered simple	“Not as complicated as I imagined, similar to searching on Google.” (R3)
	Technical difficulties still exist	“If the internet connection is slow, the results take a long time to appear.” (R9)
<b>Future expectations</b>	Need for regular socialization	“If there is further training, surely more people will understand.” (R6)
	OPAC feature development	“It would be great if it could be accessed via mobile with an application.” (R10)

Table 2 summarizes the results of thematic analysis from the post-campaign in-depth interviews. The main themes that emerge include improved understanding, confidence, perceived benefits, and user empowerment. Representative quotations are presented to strengthen the interpretation of the results. The findings from the in-depth interviews support and enrich the survey data above. In general, respondents describe positive experiences with the digital literacy campaign, as well as concrete changes in their information behavior. Several main themes that emerge include improved understanding and skills, increased confidence, perceived usefulness of OPAC, and suggestions for future improvements.

Before the campaign, many participants lacked understanding of OPAC. After the intervention, they reported clear comprehension of OPAC's functions and improved ability to search independently. Respondents consistently attributed these improvements to the clarity of the video tutorial, the structure of the booklet, and the librarian-guided demonstrations. Participants with more digital experience (e.g., university students) internalized the material more quickly, while older adults required more time and reassurance but still showed meaningful improvement. This variation reinforces the idea that digital-literacy development is non-linear and depends on users' initial position along the continuum of skills. Another example is a housewife (30 years old) who, in the interview, reveals that before the campaign, she "did not know OPAC" at all. After the campaign, she "understands the basic functions" of OPAC and can follow the material well. A similar experience is shared by various other groups of users, including teachers and high school students who were previously unfamiliar with OPAC. A teacher informant (45 years old) explains that he had actually heard about OPAC from a librarian, but "did not yet understand its features and how to use it." After participating in the campaign, he realizes that OPAC can be accessed from home and understands how to use it because the material is explained clearly and accompanied by direct examples. The statement "the material is clear, and the direct examples are helpful" from this teacher emphasizes the importance of the demonstration method in literacy campaigns. All respondents agree that the tutorial video and guide booklet are easy to follow. In fact, 88% of survey respondents also state that the campaign's video and booklet media are easy to understand. Thus, in terms of information delivery, the multimedia approach used is appropriate and effective in reaching various user profiles.

Many participants who were initially hesitant or felt "technologically illiterate" report an increase in confidence after receiving the training. A 19-year-old respondent admits that previously, he only knew OPAC superficially and was not very confident in using it. Still, now he "understands the complete process, [the material is] easy to understand, [and he is] confident to try" OPAC independently. Similarly, a school librarian (34 years old) who participated feels that his previous knowledge about OPAC has been refreshed: "the material helps refresh knowledge, the demo is clear," he says; thus, now he is more confident in using OPAC and even intends to teach it to his students at school. One of the oldest informants (a 55-year-old woman, interviewed in the preliminary study) initially states that she never dares to touch OPAC due to age factors and a lack of understanding of technology. She used to prefer searching for books manually because she felt more comfortable reading physical books. However, after being gradually introduced to OPAC (with simple language through the booklet), older users like her admit that they begin to dare to try. The perception that "age is a hindering factor" is successfully reduced through the personal approach of librarians during the campaign. This shows that digital literacy can be improved across age groups if communication methods are adjusted to needs; interpersonal, persuasive approaches complement video/booklet media in the case of older participants. This increase in confidence is very crucial because, as stated in Bandura's self-efficacy theory, belief in one's own ability encourages a person actually to perform an action. Now, users who previously feared making mistakes or were reluctant to ask questions are no longer hesitant to use OPAC; even if they encounter minor difficulties, they tend to try again or ask further.

After the campaign, users not only know how to use OPAC but also directly experience its benefits in supporting their information needs. Many respondents praise the OPAC features that are introduced. The bookshelf location feature is one of the most appreciated. Several



participants mentioned that knowing the shelf location through OPAC is “very useful and makes it easier” for them to find books in the library building. Previously, they had to walk around searching each shelf, but now they only need to check the OPAC results and go directly to the shown shelf. In addition, information on the availability status of books (whether the book is currently borrowed or available) is considered very helpful for decision-making. A lecturer respondent highlights that subject/theme searches in OPAC enable him to find academic literature more systematically, unlike in the past when he relied on the memory of the location of books on certain shelves. For users who frequently search for references, OPAC accelerates the process of topic exploration. Meanwhile, another respondent states that the author-based search feature facilitates those who often follow the works of certain writers to find all of that author’s collections in the library. In terms of speed, the majority of participants feel that searching through the OPAC is much faster compared to manually browsing the shelves. One student comments, “quick searching [via OPAC] is useful, [OPAC] is easy to use.” These aspects strengthen the perceived usefulness of OPAC in the eyes of users, which in turn motivates them to make it part of their daily information-seeking behavior. In other words, this digital literacy campaign successfully connects technological features with the real needs of users, allowing them to experience the value directly.

An indicator of community empowerment can be seen from the emergence of users’ willingness to share the knowledge they gain and actively participate in information literacy. Several respondents state that after understanding OPAC, they help friends or family in searching for books in the library. In the post-test survey, as previously mentioned, 85% are willing to encourage others to use OPAC. This is also reflected in the interviews: for example, the school librarian respondent mentioned earlier says that he is interested in “using OPAC again & the guide” as well as teaching it to his students in the school library. A 45-year-old teacher respondent also expresses interest in recommending OPAC to fellow teachers and students at his school, especially after knowing that OPAC can be accessed from home; thus, it is helpful in the context of distance learning. These aspects show that users are already empowered, from being initially passive to becoming agents of digital literacy. They are no longer entirely dependent on librarians to search for information, but can do it themselves and even help others.

This empowerment is the ideal goal of every community literacy program. Interestingly, user involvement is also evident in the provision of feedback and constructive suggestions for future development, indicating that they feel a sense of ownership of the services. In the interviews, each informant was asked for suggestions, and many valuable ideas emerged. For example, several participants requested the addition of longer hands-on practice sessions in the future, as they felt that a single demonstration was not sufficient for some people to become proficient. There are also suggestions for librarians to provide special Q&A sessions or consultation clinics after the campaign. In terms of media, some suggest that the video be made more detailed or longer to cover advanced features, and use simpler language in the written guide for general audiences. Technical input on the service is also conveyed, such as enlarging the font size in OPAC to be more user-friendly for older users, clarifying search filters (e.g., category, language, year of publication) which are still considered confusing, adding a book recommendation feature or book suggestion in OPAC, and integrating OPAC with e-book and electronic journal collections to make it more comprehensive. Two informants also asked about the possibility of providing a mobile app version of OPAC so that users can access it via mobile phones with a more concise interface. These responses indicate increased awareness and concern for digital library services, an indicator that users are becoming more engaged with the

library. Collaboration between librarians and users in designing relevant campaign materials, as mentioned by (Zevira & Zulaikha, 2024), proves to be important. By incorporating user feedback, libraries can refine future literacy programs and adjust digital services to be more user-friendly, ensuring the sustainability of digital transformation that is oriented toward the real needs of users.

The integration of both datasets demonstrates a coherent pattern: literacy intervention leads to improved knowledge, increased confidence, reduced barriers, greater perceived usefulness, and behavioral adoption. Qualitative responses illuminate the mechanisms behind quantitative changes, particularly the role of guided practice, accessible instructional media, and supportive librarian communication. Although the results indicate strong changes, the absence of a control group limits causal inference. The large effect indicated in key indicators supports the intervention's influence, but other external factors cannot be fully ruled out. Additionally, improvements were not uniform across demographic groups; baseline digital experience shaped the speed and depth of change. Overall, the findings reinforce that digital literacy campaigns can drive K-A-P progression (knowledge-attitude-practice), consistent with digital-literacy models and behavior-change communication theories. They also strengthen arguments in Abdussalam (2021) that digital literacy is critical for successful library digital-service adoption (Abdussalam, 2021).

## CONCLUSION

This study concludes that the digital literacy campaign strategy using tutorial videos and guide booklets is effective in improving the information behavior of users at the Malang City Library. After participating in the campaign, users demonstrate increased knowledge of OPAC, better operational skills, and more positive attitudes toward the library's digital services. OPAC utilization also increases substantially, with more users conducting independent searches compared to before the intervention. Users report experiencing the benefits of OPAC, including faster access, clearer shelf-location information, and easier identification of book availability, while perceived difficulties decline. In other words, the digital literacy campaign reduces barriers and enhances users' self-efficacy in navigating digital library technologies.

From an information-behavior perspective, the intervention contributes to a shift from traditional, shelf-browsing habits to technology-supported search practices. Communities that were previously passive or hesitant now become more proactive in fulfilling their information needs through digital tools. Indicators of community empowerment also emerge, as users begin to share their knowledge with peers, which strengthens the broader literacy ecosystem and positions users as collaborative partners in promoting digital library services.

However, this study has several limitations. The one-group pre-test-post-test design without a control group does not allow for strong causal claims, as unmeasured external factors may also influence behavior change. The research was conducted in a single public library with a sample consisting largely of active users; thus, the findings may not fully represent less engaged populations. The post-campaign evaluation was conducted shortly after the intervention, meaning that long-term behavioral sustainability cannot yet be established. Furthermore, OPAC utilization data rely on self-reported responses rather than system-generated usage logs. Given these considerations, interpretations regarding long-term behavioral change should remain cautious until follow-up assessments are conducted.

In conclusion, the findings affirm that digital literacy initiatives are essential for bridging the gap between technological innovation in libraries and the skills of their user communities. With appropriate literacy communication strategies, libraries can encourage more efficient, confident, and independent information behavior. Such empowerment efforts strengthen the role of libraries as facilitators of an information-literate society in the digital era and highlight the importance of sustained, user-centered literacy programs in supporting community capacity building.

## **SUGGESTION**

Based on these findings and limitations, several follow-up actions and recommendations are suggested. Libraries should integrate digital literacy programs as a routine agenda, for example, through regular training or information clinics for both new and existing users. The campaign content can be refined according to user feedback: providing more intensive practice sessions, advanced materials for more detailed OPAC features, and guidelines written in language that all groups can understand. The development of the OPAC interface and its infrastructure also needs to be carried out, for example, by creating a mobile version or application, improving the layout to be more user-friendly, and adding features such as book recommendations and more intuitive search filters, to enhance the user experience. From the perspective of future research, it is recommended to conduct long-term evaluations to examine the sustainability of this information behavior change, as well as to expand the scope of the study to other libraries or different community groups to generalize the findings. The use of control groups or quasi-experimental methods can also be considered to strengthen the causal evidence of the program

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