

# IMPLEMENTATION OF DIGITAL LITERACY PROGRAM AT THE LIBRARY AND ARCHIVES SERVICE OF EAST KALIMANTAN PROVINCE

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**Abstract.** The purpose of this study is to examine and analyze the implementation of the Digital Literacy Program at the Library and Archives Service of East Kalimantan Province, as well as to identify and analyze the supporting and inhibiting factors in its implementation. The research employs a qualitative approach with data collection techniques that include in-depth interviews, observation, and document study. The results of the study indicate that the implementation of the digital literacy program has been carried out effectively through various activities such as digital literacy training, internet network access provision, and digital content development. The main supporting factors for the program's success include local government support, the availability of competent human resources, and adequate infrastructure and facilities. However, there are still challenges, such as limited technological literacy among some community members and the need to enhance program sustainability. Overall, the implementation of the digital literacy program at the Library and Archives Service of East Kalimantan Province has made a significant contribution to improving the community's ability to access, understand, and utilize digital information intelligently and responsibly.

**Keywords:** Literacy, Digital, Library

## I. INTRODUCTION

Law of the Republic of Indonesia Number 43 of 2007 concerning Libraries, specifically Articles 5 and 6, emphasizes the importance of literacy, lifelong learning, and technology-based collection development. This is further elucidated in the Regulation of the Head of the National Library of the Republic of Indonesia No. 19 of 2017 regarding National Standards for Public Libraries, which explicitly mentions the significance of information and digital literacy programs that libraries must implement to enhance the community's ability to access and evaluate information [1], [2].

As public service institutions and literacy media, libraries play a strategic role in educating the public. As a medium for literacy, a library serves not only as a source of information and knowledge for everyone but also as a lifelong learning platform that supports the improvement of the community's educational quality. The International Federation of Library Associations states that in the field of education, libraries need to advocate for various planning programs and support for information access, the utilization of information and communication technology (ICT), universal literacy culture, and the implementation of lifelong learning [3]. The objective of advocacy is to increase the general capacity of libraries and library associations to address the challenges of the Sustainable Development Goals (SDGs) Agenda by 2030 [4].

As information centers, libraries provide access to various sources of knowledge, whether in the form of books, journals, or digital media relevant to the advancement of science and technology. Through well-organized collections, libraries can support the community's needs to develop their information literacy skills, which also serves as a foundation for acquiring new knowledge and broadening horizons.

Along with technological developments, digital literacy has also become a primary focus in library and archives policies. Libraries are tasked not only with providing access to physical books but also to adequate digital resources, such as e-books, electronic journals, and other digital materials. The government, through the Regulation of the Minister of Communication and Informatics, also encourages in-depth digital literacy to help the community utilize technology intelligently and wisely. Digital literacy in libraries assists the public in better understanding how the internet works, data security, and the use of digital platforms to search for valid and beneficial information [5].

The implementation of digital literacy at the Department of Library and Archives of East Kalimantan Province is integrated through regulations that encourage the use of technology to facilitate access to information. Digital libraries, digital archive services, and e-learning platforms are several examples of initiatives regulated to enhance public access to information resources. In addition, digital literacy

programs are tailored to the needs of the digital era, where the community needs to be equipped with the skills to assess the credibility of information online.

The Department of Library and Archives of East Kalimantan Province, as an agency managing public information, bears the responsibility to improve community literacy, particularly digital literacy. The digital literacy programs implemented aim to empower the community to access information intelligently, critically, and ethically through digital technology. However, the execution of these programs still faces several challenges, such as limited technological infrastructure, the capacity of human resources managing the programs, and low public awareness regarding the importance of digital literacy.

#### *A. Policy Concept*

According to Fredrich in Agustino (2017: 166), a policy is a series of actions or activities proposed by an individual, group, or government within a specific environment where there are constraints (difficulties) and possibilities (opportunities), aimed at overcoming these obstacles to achieve the intended goals [6].

A policy is a guideline or action plan created by the government, organizations, or individuals to achieve certain objectives. Policies are often implemented to address complex issues or to manage resources efficiently. The importance of a policy lies in its ability to shape the direction and goals within an entity. It provides a legal or normative foundation for actions and decisions taken by stakeholders. Thus, a policy serves not only as a guide but also as a tool to measure performance and success in reaching established targets.

#### *B. Policy Implementation*

Policy implementation is essentially the means by which a policy achieves its objectives, nothing more and nothing less. To implement public policy, there are two available steps: direct implementation through programs or through the formulation of derivative policies or regulations. Public policies in the form of laws or regional regulations are types of policies that require explanatory public policies, often termed as implementing regulations. Public policies that can be directly operationalized include Presidential Decrees, Presidential Instructions, Ministerial Decrees, Regional Head Decrees, and Head of Department Decrees [7].

#### *C. Policy Implementation Model*

In the study of public policy, implementation is a crucial stage that determines whether a policy can truly have an impact as expected. In the dynamics of governance and public service, policy is not merely a product of legislation or formal decisions. The real value of a policy lies in its implementation stage—how the vision and goals of the policy are realized in practice. Policy implementation models emerged as scientific and practical efforts to understand, explain, and guide the process of translating policies from top-to-bottom or even bottom-up.

The public policy implementation model from Edwards III in Kasmad (2018) is one of the most well-known

top-down approaches in the study of public administration. It simplifies the complexity of policy implementation into four main interacting variables that determine the success of policy execution. This model emphasizes that successful implementation does not depend on a single factor but rather on the simultaneous interaction between effective communication, adequate resources, positive implementer attitudes, and supportive bureaucratic structures [8].

#### *D. The Concept of Digital Literacy*

Digital literacy greatly supports the role of the library as a central source of information related to education and research in universities. Digital literacy is defined as the community's skill in indicating the possibility for individuals to search, select, and validate information found on the internet. As part of field experience regarding media literacy, it specifically involves the ability to critically evaluate information sources [9]. This skill is increasingly necessary in a society where information is becoming more abundant and knowledge is becoming increasingly uncontrollable.

Heitin (2016) explains that digital literacy does not only include the ability to use digital tools but also involves an understanding of how information is disseminated, as well as the ability to assess the accuracy and credibility of information found on the internet [10]. This expands the understanding that digital literacy is critical in nature and not solely technical.

Furthermore, Belshaw in Santoso et al. (2018) states that in developing digital literacy, there are eight essential elements of information developed: cultural, cognitive, constructive, communicative, self-confidence, creative, critical, and socially responsible [11]. Buckingham (2019) views digital literacy as a modern form of media literacy that combines skills in using digital technology with a deep understanding of digital culture, including social, ethical, and political aspects [12].

Meanwhile, Frau-Meigs et al. (2020) explain through a global competence approach that digital literacy is the capacity to access, understand, and produce digital content ethically and responsibly, which is vital for active participation in a digital society [13]. This approach also emphasizes the importance of digital literacy in democracy and social development.

#### *E. Principles of Digital Literacy Development*

The concept of digital literacy is essentially inseparable from two perspectives. First, computer literacy, which is an individual's technical ability to use computer devices. Second, information literacy, which is an individual's ability to find, use, package, evaluate, and disseminate digital information correctly. According to the GLN Team of the Ministry of Education and Culture (2017), there are four basic principles of digital literacy development: understanding, interdependence, social factors, and curation [14].

The GLN Team (2017) further explains two approach aspects that can be applied in digital literacy: conceptual and operational approaches. The conceptual approach focuses on cognitive and socio-emotional development aspects, while the operational approach focuses on the technical ability to use

media.

#### F. Libraries as Digital Literacy Media

Libraries as digital literacy media function as transmission media or communication channels that convey messages (digital information) to users or the community. As a transmitter, a library can be analogized as a medium. As stated by McLuhan (2011), "the medium is the message," which means that media play a role in shaping and controlling every human behavior in delivering messages to others [15]. Every content carried by a medium is highly diverse and can shape human social behavior. Referring to McLuhan's opinion, the library as a media institution plays a role in the success of digital literacy programs provided to the community. In the development of digital libraries, there is a change in the information service system, which initially used a conventional system and shifted to a digital system— assisted by computer program devices, namely hardware, software, brainware, and adequate computer networks to build a digital library [16].

## II. RESEARCH METHODS

The type of research used in this study is descriptive qualitative research. According to Sugiyono (2016:9), the descriptive qualitative method is a research method based on the philosophy of post-positivism, used to examine natural object conditions (as opposed to experiments) where the researcher serves as the key instrument. Data collection techniques are carried out through triangulation (combined), data analysis is inductive/qualitative, and qualitative research results emphasize meaning rather than generalization [17]. Descriptive qualitative research aims to describe, depict, explain, and answer in more detail the problems to be studied by investigating an individual, a group, or an event as thoroughly as possible.

The focus of this research is as follows:

1. Implementation of the Digital Literacy Program, which includes: a. Information Access b. Information Coverage c. Service Accuracy d. Accountability e. Program Suitability with Needs
2. Supporting and inhibiting factors of Digital Literacy at the Department of Library and Archives of East Kalimantan Province.

#### A. Data Collection Techniques

1. Observation Observation is a data collection instrument performed by conducting direct observations of the object being studied, intended to obtain primary and secondary data relevant to the research problem.
2. Interview Interviewing is a technique in data collection by extracting data directly from the source through questions in the form of an interview guide that has been prepared by the researcher beforehand.
3. Documentation Documentation is a method of collecting data based on documents and other written reports (secondary data) related to the research conducted by the author.

The data analysis technique used is qualitative data

analysis, performed interactively and continuously until completion, ensuring the data reaches a point of saturation. Data analysis follows the flow of data analysis components based on the opinion of Sugiyono (2017:167). The components of data analysis can be shown in the following figure:

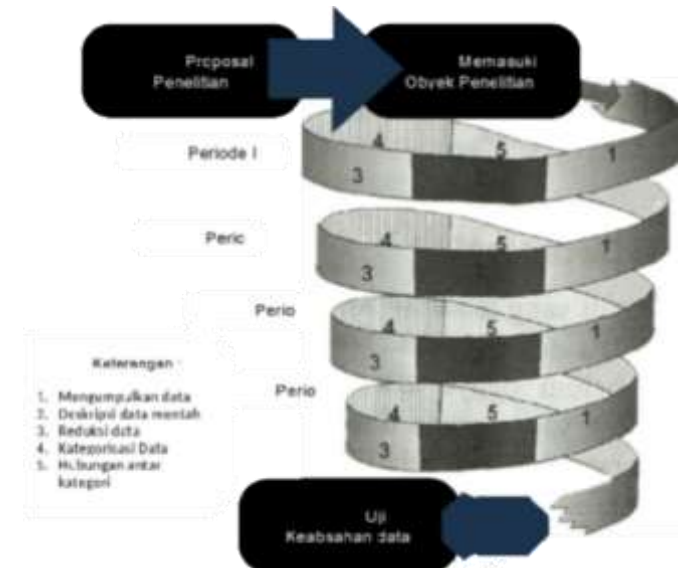


Figure. 1 Interactive Model of Data Analysis

## III. RESULTS & DISCUSSION

#### A. Implementation of the Digital Literacy Program at the Department of Library and Archives of East Kalimantan Province

The implementation of the digital literacy program at the Department of Library and Archives of East Kalimantan Province is one of the regional government's strategies to address the challenges of digital transformation. This program is driven by the community's need for fast, accurate, and technology-based information access. Digital literacy is considered essential as it not only enhances information access skills but also fosters critical thinking and the proficiency to use technology productively.

To obtain a clearer overview regarding this matter, it can be described according to the following research sub-foci:

##### a. Information Access

Information access is one of the basic rights of the community, playing a vital role in supporting human resource development. Open and easily accessible information allows every individual to learn, make decisions, and improve their quality of life. In the current era of globalization and digitalization, information access serves as the foundation connecting the community with knowledge, technology, and new opportunities in various fields.

Advancements in information and communication technology have brought significant changes to how humans access information. Whereas previously information could only be obtained through print media or face-to-face interactions, people can now access millions of knowledge sources using

only digital devices and an internet connection. This condition expands the reach of information while demanding new skills so that the community can utilize such information optimally.

This is consistent with the research results by Siregar (2020), which found that one of the primary obstacles in information access is the digital divide between urban and rural areas. Limitations in internet infrastructure, low device ownership, and minimal digital skills make it difficult for some people to utilize information that is actually widely available [19].

In this regard, the Department of Library and Archives of East Kalimantan Province holds a vital role in bridging the community's information needs, particularly for those not reached by mobile library services. Libraries function not only as providers of reading collections but also as literacy centers that support community skills in accessing, understanding, and utilizing information. The digital literacy program implemented by the library serves as a strategic solution to expand inclusive information access.

#### b. Information Coverage

The Department of Library and Archives of East Kalimantan Province is essentially an information center with a broad and diverse scope, providing not only printed book collections but also various types of information in digital, audiovisual, and archival forms. The information coverage provided by the library is designed to meet the needs of various community groups, including students, researchers, and the general public wishing to enhance their knowledge and skills.

The scope of information within libraries is increasingly expanding. While libraries previously focused more on academic literature collections, many now provide popular information, technology, culture, and practical information relevant to daily life. This aligns with the library's function as a lifelong learning center that supports every individual in fulfilling their information needs.

#### c. Service Accuracy

Service accuracy in a library is a fundamental aspect that determines the quality and credibility of the institution in the eyes of patrons. As information and knowledge centers, libraries are required to provide services that are fast, precise, and in accordance with user needs. Service accuracy encompasses not only timeliness in providing information but also precision in fulfilling literacy needs, reference access, and guidance in searching for information sources.

Service accuracy in a library heavily depends on the competence of librarians, the availability of collections, and the utilization of information technology. For instance, integrated Online Public Access Catalog (OPAC) systems allow patrons to find collections more quickly and accurately. With appropriate services, libraries can minimize obstacles in information searching, enabling users to experience the real benefits of the library as a means of lifelong learning.

Based on research results, service accuracy in libraries is one of the main factors influencing the quality of information services and patron satisfaction. Accurate service includes not only the temporal aspect but also the alignment of services with user needs. According to Tjiptono (2016), service quality can be viewed from five dimensions: reliability, responsiveness, assurance, empathy, and tangibles [20].

#### d. Accountability

In the context of information services, accountability is manifested through the library's ability to provide services that match patron needs and ensure their quality can be measured. This includes providing relevant collections, adequate digital service access, and regular evaluations of user satisfaction. Accountability within the context of services at the Department of Library and Archives of East Kalimantan Province is an important principle ensuring that every form of service, especially digital-based services, can be transparently accounted for to the public. Accountability means that every process, decision, and service result must be implemented according to standard operating procedures (SOP), applicable regulations, and values of public openness. By applying accountability, the Department ensures that the services provided truly meet community needs and can be justified both administratively and morally.

The application of accountability in libraries not only increases public trust but also strengthens the library's position as a professional and trusted institution. Through accountability, the library can demonstrate its commitment to supporting the development of literacy, science, and open information services. In this way, the library becomes not only an information center but also a model for good governance practices.

#### e. Program Suitability with Needs

Program suitability with needs in the implementation of digital literacy at the Department of Library and Archives of East Kalimantan Province is an important indicator in assessing the effectiveness and relevance of the activities conducted. A good digital literacy program must be designed based on a mapping of the community's real needs, both in terms of technological capability, information access, and digital reading interests. The Department recognizes that every community group has different levels of understanding and needs, so the program approach must be adjusted so that the benefits can be optimally felt by all layers of society.

The Department of Library and Archives of East Kalimantan Province has endeavored to run digital literacy in a targeted, adaptive, and community-benefit-oriented manner. Through an approach responsive to user needs, this program is not just a means of learning technology but also an important instrument in building a community in East Kalimantan that is digitally capable, productive, and ready to compete in the global information era.

This is in line with Sutarno (2018), who states that the library as an information service institution must always prioritize the "user-oriented" principle, where every program, service, and collection is adjusted to the needs of the user [21]. Thus, user needs analysis becomes the starting point in designing library programs.

This is further reinforced by research conducted by Mulyani (2020), which shows that libraries that develop programs based on patron needs have higher levels of user satisfaction compared to libraries that only rely on routine [22]. This proves that the relevance of the program to user needs not only improves service effectiveness but also strengthens the library's image as a responsive and innovative institution.

*B. Supporting and Inhibiting Factors of Digital Literacy at the Department of Library and Archives of East Kalimantan Province*

**Supporting Factors**

Digital literacy at the Department of Library and Archives of East Kalimantan Province is supported by several key factors:

1. **Strong Commitment from the Regional Government** The regional government's commitment to supporting digital literacy at the Department of Library and Archives of East Kalimantan Province reflects a serious intent to build a society that is adaptive to information technology developments. The Provincial Government of East Kalimantan recognizes that digital literacy is a vital foundation for enhancing the quality of human resources in the modern era.
2. **Availability of Competent Human Resources** The availability of competent human resources (HR) is a key factor in the successful implementation of digital literacy at the Department of Library and Archives of East Kalimantan Province. In this fast-paced era of digital transformation, the role of HR is not limited to managing collections and information services but also encompasses the ability to utilize information technology to improve the quality of public services.
3. **Attitudes of Librarians** The attitudes of librarians in supporting digital literacy at the Department of Library and Archives of East Kalimantan Province serve as an important indicator of the success of service transformation toward the digital age. Librarians act not only as managers of collections and information but also as driving forces in building public awareness and the community's ability to adapt to information technology developments.
4. **Work Culture and Information and Communication Technology Infrastructure** Work culture and information and communication technology (ICT) infrastructure play a highly significant role in supporting the implementation of digital literacy at the Department of Library and Archives of East Kalimantan Province. These two aspects complement each other: work culture determines how employees adapt to digital changes, while ICT infrastructure provides the facilities and infrastructure that enable technology-based services. In the context of digital literacy, the success of service transformation within the department depends not only on the availability of devices and internet networks but also on the mindset, work attitudes, and habits of employees in utilizing technology productively and sustainably.

**Inhibiting Factors**

The inhibiting factors of digital literacy at the Department of Library and Archives of East Kalimantan Province include:

1. **Unstable Internet Connection** One of the primary inhibiting factors in the implementation of digital literacy at the Department of Library and Archives of East Kalimantan Province is the unstable and uneven condition of the internet network. Internet connectivity

is a vital element in supporting digital-based service transformation, ranging from data management and e-library access to digital literacy training activities for the community. When the internet network frequently experiences disruptions or low access speeds, the digital-based public service process becomes hindered, directly impacting the effectiveness and quality of service.

2. **Budgetary Constraints** Another inhibiting factor in the implementation of digital literacy at the Department of Library and Archives of East Kalimantan Province is budgetary constraints. Digital literacy requires substantial financial resource support to build technological infrastructure, develop digital systems, provide hardware and software, and conduct training for human resources. When fund allocations are insufficient, various digitalization programs and technology-based literacy activities cannot run optimally. Consequently, the digital transformation process expected to improve public service quality becomes hampered and tends to proceed only gradually.
3. **Digital Security and Ethics** In the era of technology-based public service transformation, issues of information security and data usage ethics are crucial aspects to consider. There are challenges in ensuring that all digital activities carried out by both employees and service users follow correct cybersecurity principles and media ethics. Unpreparedness in managing these aspects potentially poses risks of data breaches, information misuse, or the dissemination of content that does not align with healthy digital literacy values.

**Community Culture and Attitudes Toward Digital Change** One of the inhibiting factors in the implementation of digital literacy at the Department of Library and Archives of East Kalimantan Province is the culture and attitudes of the community toward digital change. The transformation toward the digital era requires not only the readiness of infrastructure and human resources but also a change in the mindset and habits of the community in interacting with information.

**I. CONCLUSION**

The implementation of digital literacy at the Department of Library and Archives of East Kalimantan Province is a strategic step toward transforming public services into an inclusive, modern, and competitive digital era through activities such as training, e-library development, and librarian competency strengthening. Information access has become a primary aspect, providing the public with fast, efficient, and flexible access to various resources, while broad information coverage plays a strategic role in expanding knowledge reach. However, service accuracy still faces challenges like unstable internet networks and suboptimal search systems, and accountability is hindered by limited human resources specialized in digital governance and low public participation in providing feedback. Ultimately, the alignment of digital literacy programs with community needs, supported by

regional government policies and stakeholder collaboration, remains the key to creating effective and sustainable services. The supporting and inhibiting factors for digital literacy implementation at the Department of Library and Archives of East Kalimantan Province can be categorized into several key aspects. The supporting factors include strong commitment and support from the regional government through policy and funding, the presence of competent and adaptive human resources, the positive attitudes of librarians toward literacy, and a supportive work culture alongside adequate ICT infrastructure. Conversely, the inhibiting factors consist of unstable internet connectivity that directly impacts service quality, budgetary constraints for technological infrastructure development, issues regarding security and digital data ethics, and the cultural challenge of community attitudes toward digital change, which requires a social approach for long-term adaptation.

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