



Library Existence and Digital Science Literacy as An Effort to Increase Community's Reading Interest (In A Gender Perspective)

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Abstract: Digital libraries and scientific literacy as a source of knowledge to preserve human civilization and libraries as public institutions that acts as service providers and information providers. The development of science and technology in the current era has ushered in the process of obtaining scientific information very easily which accompanies humans freely without being selective in obtaining information only through smartphones, computers, the web and other social media. This study was carried out in a library and the samples were visitors and people around the library who used male and female classifications. The data that has been collected will be analyzed using two forms of analysis, namely quantitative and qualitative. The findings of this study are that there are differences in tendencies in choosing reading sources or sources of scientific information between men and women. Women are more dominant in using digital scientific literacy via smartphones and via the internet, while men prefer to visit the library to read and search for scientific literacy. The existence of libraries in the digital era still contributes to increasing people's reading interest even though people's reading interest is still in the low category.

Keywords: libraries, digital scientific literacy, gender, community reading interest

Introduction

The existence of libraries in the midst of society is very necessary in order to increase and increase public awareness of reading to gain knowledge in order to make the nation's life more intelligent. This has been stated in the preamble to the 1945 Constitution (Torano, 2021). Although until 2013 there were only 24,745 libraries in villages and sub-districts in Indonesia. This is not balanced with the number of villages and sub-districts in Indonesia (Irsan et al., 2021). Even though since 2007 the government has regulated it in Law No. 43 of 2007 which was then strengthened by government regulation No. 24 of 2014 concerning libraries (UU No. 43, 2007).

Library is a non-departmental and non-commercial institution that provides services that brighten people's lives and motivate them to innovate (Wójcik, 2019)

(Abidin & Najemiat, 2020) (Lundh & Dolatkhah, 2016)(Prasetyawan, 2019). It is a public space that is a provider of knowledge, an agent for development and cultural explanation (Audunson, Aabø, Blomgren, Evjen, et al., 2019) as well as an institution that supports democracy and public discourse (Audunson, Aabø, Blomgren, Hobohm, et al., 2019). Library is considered an important institution since the beginning of human civilization. It is considered as an institution that can preserve and disseminate culture (Ahammad, 2019). However, library development experiences various problems such as lack of budget, lack of government seriousness towards developing library existence (Kumar et al., 2017), so that the state target for the existence of libraries has not been achieved.

The library is a public forum that is an information center that provides services and facilitates public interests (Rafi et al., 2021) (Bakhtiyar & Fahriyah,

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2021)(Siddiqua et al., 2021). Libraries as community information centers in promoting cultural cohesion, public and social services (Dowdell & Liew, 2019). Apart from as a source of information, it also aims to promote reading and provide reading resources for the community (Samsuddin et al., 2020)(Parekh & Mandalia, 2017) Reading materials that become public literacy in libraries are magazines and internet sites containing information (Sorrell & Brown, 2018).

The library is an information center that can be accessed by the public, both in schools, public/special libraries, and so on (Bakhtiyar & Fahriyah, 2021) (Hartel, 2020), the library as a place for community literacy resources to gain understanding that can be used as a reference in processing good thought patterns and is needed for making the right decisions in determining the future (Barr-Walker, 2016) (Luthfiyah, 2016). Literacy is something that is very urgent for every individual to have which can lead the individual in the process of maturing thinking. Individuals who do not have literacy cannot be expected to develop the nation and state (Barr-Walker, 2016) (Clark & Teravainen-Goff, 2020). Public literacy can be used as information needed in the future for various needs in the workplace and business (Kingori et al., 2016). Libraries are an important place that is really needed by the community in order to develop the quality of life which can be used as literacy needed in developing the future individually/society as well as the future of the nation and state.

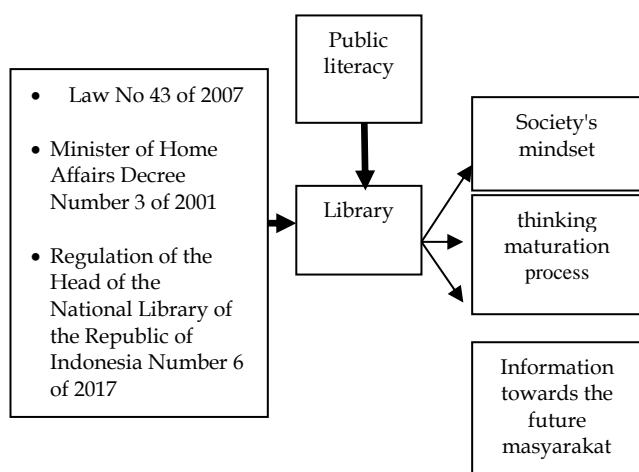


Figure 1. Purpose of the Library

The library is a forum that provides reference services to the shadow education community (Park & Kao, 2018)(Nedungadi et al., 2018). However, currently community reading interest is still relatively low, this is because; time, there are other more important tasks, library access is still very limited (Samsuddin et al., 2020)(Irwan et al., 2021), based on the research results (Ruddah et al., 2023) it is stated that the cause of the lack

of people reading and visiting libraries was the government's lack of attention to libraries and the lack of library facilities. Thus, the most appropriate solution in dealing with the problem of people's interest in reading is improving library services, such as mobile library services, and providing libraries in community areas (Wei & Yang, 2017).

The current digital era is a solution to the problems faced by society, as well as being a potential medium and having a big impact on library services and operations (Owens & Padilla, 2021) (Rifaudeen, 2015)(Johnson et al., 2014). However, nowadays people tend to choose digital systems rather than visiting libraries (Kelly & Bielby, 2016). The development of science and technology in the 4.0 era has seen many library users switch to digital-based information sources, which has caused libraries to lose their role as providers of scientific information (Simović, 2018). The development of digital science and technology is a challenge faced by scientists and libraries who have not switched to digital systems (Anyaoku et al., 2019). However, now many libraries have been successful in disseminating modern Web standards in the form of a semantic Web using technology-based data (Raza et al., 2019).

The most important factor for people in obtaining information or literacy is the habit of reading (Ejikeme & Okpala, 2017). Reading sources that people can get nowadays are libraries and (digital) technology which aims to lead people to a better future (Taylor et al., 2018). Developing and distributing libraries more closely to the community is one form of management in increasing people's interest in reading. Despite this, Indonesian society still has relatively low levels of library use, this is due to time and location difficulties in accessing libraries (Kristyanto, 2019) the research results of Clark & Teravainen-Goff, (2020) said that since 2016-2018 interest in reading has decreased; even though in that year reading media was very easy to access, especially digital literacy. This is a challenge for the government in developing interest in reading.

Developing people's interest in reading is a public virtue which is a public service ethic carried out by the government (Asamoah & Yeboah-Assiamah, 2019). Increasing people's interest in reading aims to change people's thinking patterns, especially in the current information era (Irianto & Febrianti, 2017)(Mondal, 2022). The existence of libraries in various corners of the city is good management in encouraging people to gain knowledge (Dowdell & Liew, 2019). Providing library services is one way to fulfill the information needs of the community (Markwei & Rasmussen, 2015)

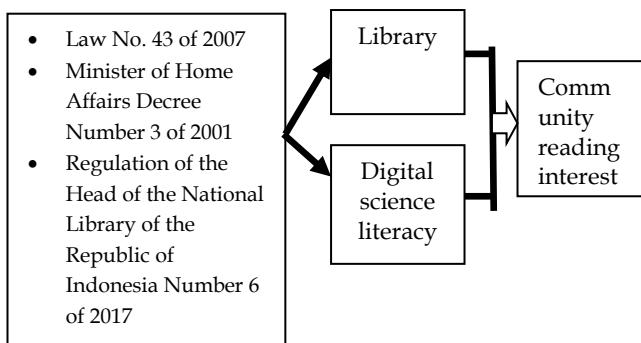


Figure 2. Management of developing community reading interest

The concept of gender cannot be separated from public institutions such as library institutions because gender is a social system practice that is organized to create an equal interaction between men and women (Gupta, 2017). When talking about gender, the dominant person being discussed is women, even though gender is the social sex between men and women. Gender injustice in public is that women are most dominantly disadvantaged when compared to men (Shola et al., 2016)(Pandey & Kumar, 2019).

Libraries and people's interest in reading are two variables that have been studied by many researchers, such as the study carried out by (Mehta & Wang, 2020) with the title COVID-19 and digital library services – a case study of a university's library,(Raza et al., 2019) with the title Application of linked data technologies in digital libraries: a review of literature. It's just that no one has specifically studied libraries in the digital era in a gender perspective. Therefore, this research aims to measure the existence of libraries in the digital era in increasing women's and men's interest in reading. The problem and aim of this study is how description of the existence of libraries in the digital era as a form of effort to increase people's reading interest in a gender perspective.

Method

Research design

This study uses a mix method design, namely qualitative and quantitative, with primary data obtained from library visitors and the public. With a survey and interview approach carried out in the city of Makassar, South Sulawesi province (Chan et al., 2016).

Data collection

To explore the existence of libraries in the digital era, this study will use in-depth interview techniques for qualitative data, while primary data for quantitative

data was collected using questionnaire distribution techniques and observations as well as documents related to this study. Researchers visited library visitors and the public as well as library managers in the city of Makassar and gave questionnaires and direct interviews related to the existence of libraries and digital science literacy.(Essa Adhabi1, 2017) Data collection techniques in this study used interviews and questionnaire instruments in the form of a Likert scale (always=5, often=4, unsure=3, rarely=2, and never=1)(Beglar & Nemoto, 2014) (Ivanov et al., 2018),(Taherdoost, 2019).

Research procedures

1. Problem Identification
2. Research Problem
3. Research Data Collection
4. Data Processing and Analysis
5. Data Presentation
6. Conclusion Making
7. Research Results Reporting

Data Analysis

This study uses two analysis techniques namely qualitative and quantitative techniques. For qualitative data, verbal transcript will be arranged by analyzing textual technique (w. Paul Vogt, 2015).

Result and Discussion

Description of visits by women and men to the library

Nowadays the concept of gender equality has influenced every public space, including interest in visiting libraries (Gupta, 2017) This is because interest is influenced by internal factors and external factors. When women and men are forced to be equal in public, the victims are women. Based on studies, it is said that women are the dominant gender at high risk of stress, fatigue and mental health disorders (Carli, 2020)

Women have limited time to visit the library. Based on the social culture at the research location, it shows that women are busy with domestic work such as caring for children and other household work. So women visit the library less intensively than men. This is in accordance with the study conducted by (Odusanya et al., 2018) who say that women do not have much time outside the public because women are busy with work that takes up time to care for children and other household chores.

Rahmawati, one of the visitors to the South Sulawesi Province regional library, said that: I don't go to the library too intensely... because there are several factors that make us as women not able to be as intense as men, one of the factors is busy working at home, sometimes when we come We haven't had time to visit for months because we are sick, tired, we prefer shopping

than reading, the information we need in the library is already available on Google, just by opening our smartphone we can get various information (interview, on January 23 2023)

According to Maria Endri, one of the students in the city of Makassar, said that during the 4 years I was a student at one of the universities in Makassar, I very rarely visited the library, even if I visited the library I only looked for references for assignments from campus, there were several reasons why. makes me lazy about going to the library, namely the distance between the library and my boarding house is very far, 4 years, later there will be assignments that are pressed for lessons, there is nothing interesting in the library that makes us visit other than reading, apart from that, I very rarely go to the library because it is all on my smartphone things we can look for to fulfill our task needs, for example we often visit the TikTok application because on TikTok we get a lot of interesting information, such as entertainment, education and other information. (interview, on January 23, 2023)

Likewise, Iis Saputri Utoyo said that we never know the position of libraries other than on campus. Apart from that, I am too lazy to look for information about libraries because I am still too lazy to read books, even if I go to the library on campus I only look for references for assignments. Moreover, nowadays we don't bother going to the library because we can get various information via smartphone. Moreover, we as women are very busy, what I mean by busyness is. When I get home from campus I have to prepare lunch and dinner plus other activities. When I have assignments from campus, I just visit the coffee shop, open my laptop, then look for the references we need. Apart from that, looking for references for assignments via smartphone or laptop will not be boring because we will get various needs such as entertainment, music, films and so on. If we never get it in the library, we just read books. (interview, on January 23, 2023)

Based on the results of the research above, it can be understood that there are many factors that differentiate the intensity of visits by women and men, namely:

Table 1. Inhibiting factors in visiting libraries in the digital age are based on gender

Gender	Inhibiting factors in visiting libraries in the digital era
Male	<ul style="list-style-type: none"> • Lazy to read books in the library • Our interest in reading is still very low, we prefer playing games • Lack of references that are relevant to the world of men • We prefer playing dismorpone games rather than going to the library • It is better to bring a laptop to Warkop for work assignments because WiFi is free • The conditions for borrowing books require a fee, they should be free • Lazy to read • There is nothing interesting in the library • Accessibility is very poor • The library is far away • Library open hours are very limited • It is very easy to obtain information via smartphones and laptops • Busy with household work • There are none and I'm too lazy to find out where the library is • Limited time for us to go out at night while we only have time at night because we are at college
Female	<ul style="list-style-type: none"> • Lazy to read • There is nothing interesting in the library • Accessibility is very poor • The library is far away • Library open hours are very limited • It is very easy to obtain information via smartphones and laptops • Busy with household work • There are none and I'm too lazy to find out where the library is • Limited time for us to go out at night while we only have time at night because we are at college

Men and women have different factors that hinder them from visiting the library, but they have similarities, including the factor of being lazy to read, the library not having attractive powers such as entertainment when bored of reading, long distances to access the library. As we all know, reading is very important in human life in order to improve human welfare.(Pitoyo, 2020) Reading activities are activities that lead to improvements in human cognitive abilities that can absorb knowledge, evaluate, understand and analyze all aspects of life (Metsapelto, RL, et,all., 2017).

The following is a comparison of the frequency of library visits based on gender

Table 2. Descriptive Frequency of visits to the library based on gender

Gender	Frequency of visits to the library		
	May 2023	April 2023	March 2023
Male	103	104	132
Female	281	323	290
TOTAL	384	427	422

From the data presentation in the table above, it shows that library visitors based on gender show that female visitors visit the library more intensively compared to male visitors (Ruddah et al., 2023). The results of the research show that the reason why visitors

and the public are lazy about visiting libraries is that digital science literacy is more dominant:

Table 3. The factor is the lack of intensity of library visitors

Reasons	Solutions
The library is not interesting	Optimizing library ornaments as attractive as possible
The library is relatively far away	increasing library accessibility
Many of the references are outdated	The involvement of academics in increasing interest in reading by polarizing curriculum integration
Lack of government attention to library development	increasing stakeholder involvement in the library

The picture above shows that library visitors are dominated by women and relatively few.



Figure 3. Library Visitors

People's tendency to choose libraries or digital science literacy as sources of information

Digital scientific literacy becomes an instrument that connects people and contributes to all aspects of life and also encourages library professionalism in disseminating knowledge.(Rafi et al., 2019) Libraries and digital literacy are two things that provide scientific information to the public that can be used to solve problems faced by society.(Ng, 2015) Technological developments in the digital era such as today, known as industry 4.0, provide conveniences for humans which can be a challenge for users of services that are not yet digitally based.(Strange & Zucchella, 2017; Rana & Sharma, 2019) As in this case, it is a library that only relies on physical books. So people are more likely to use smart phones or the internet to search for information. This is as expressed by Nuraeni who said that:

I never go to the library to read, if there is something I want to know, such as cooking recipes, I always search on my smartphone because nowadays, it is very easy to get the information we need via smartphone. (interview, on February 23, 2023)

In the same vein, Amiruddin (a resident close to the South Sulawesi regional library) said that: I never go to the library to look for information

when there is something I need, so I open the YouTube and Google. (interview, on February 23, 2023)

Another thing expressed by Rudi Al Imran said that, I once went to the library looking for references that I needed, but when I was asked to go to the library with digital science literacy, I tended to choose digital science literacy because it is very flexible, it can be done through smartphone or internet at warkop rather than the library because it is far and boring. (interview, on February 24, 2023)

Both men and women are more likely to use smartphones to search for digital science literacy than to visit the library with ideas:

- Boring Library
- Library accessibility is inadequate/far from the community
- The library does not have attraction
- Using the internet is easier and more flexible
- Looking for digital references makes learning more effective
- The use of smartphones makes learning more interactive and participatory
- Many of the covers/covers of books in the library are worn out so they are not interesting to read

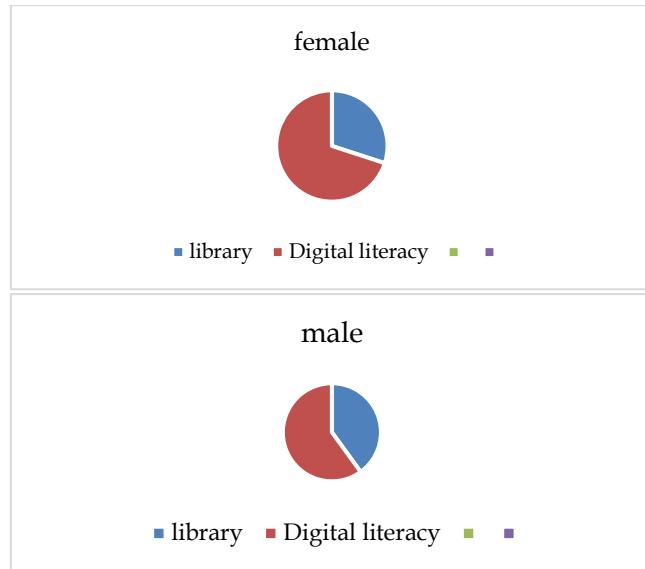


Figure 4. People's tendency to choose libraries with Digital Science Literacy based on gender

The graph above shows that women and men have the same tendency to choose digital literacy rather than visiting the library just to look for references in doing assignments or just looking for information. Although this similarity is not significant because the percentage of women who are more likely to use digital science

literacy than to visit the library is higher, the percentage of women who have digital literacy is 70%, while men are around 60%. This is in accordance with the research results (Martínez-Alcalá et al., 2018) shows that women are more dominant in using smart phones compared to men. (Nedungadi et al., 2018; Nikou et al., 2022)

Description of society's reading interest based on gender

Interest in reading is very important, because reading can lead to the process of maturing thinking. Reading is a process of community communication in obtaining information. (Gudinavičius & Šuminas, 2018) However, Indonesian people's interest in reading is generally in the low category. This is as expressed by one of the students with the initial "N" who said

.. I very rarely read books, unless it's a novel I really like, usually I only finish reading the novel in 2-3 days... but when it comes to reference books I very rarely read it... (interview, on February 23 2023)

The following is an overview of activities carried out apart from reading when visiting the library and digital science literacy.

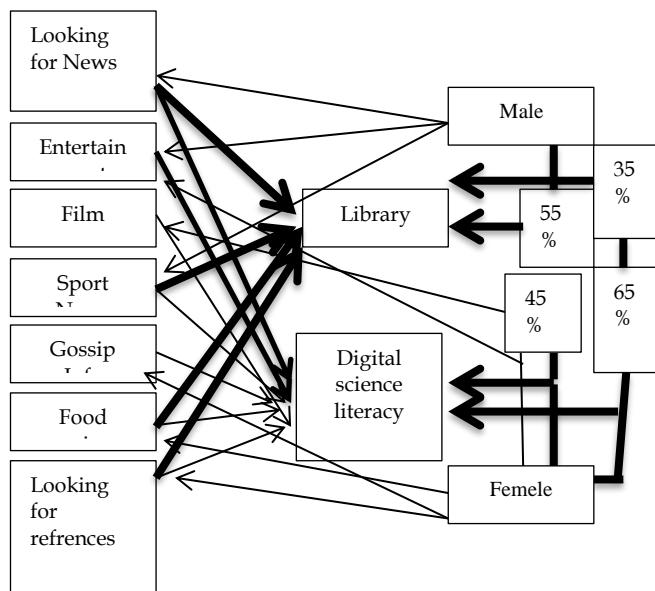


Figure 5. overview of activities carried out apart from reading when visiting the library and digital science literacy

The table chart above illustrates other activities for men and women when visiting the library and digital science literacy. Shows that women predominantly carry out activities looking for references, cooking recipes and gossip information and 65% of women use digital science literacy while men predominantly search for entertainment news and films and 55% use the library. This illustrates that reading and other activities are often carried out using technological devices or digital scientific literacy and using paper or print media is decreasing.

Reading pleasure

Women are more likely to read fiction than men (Mikkonen & Vakkari, 2016) This is in accordance with research results showing that men tend to read news and non-fiction, while women predominantly read fiction. Although it is well known that the Indonesian people have relatively low enjoyment of reading. The research results show that 75% of women prefer reading fiction such as novels, 25% prefer reading non-fiction. Meanwhile, 15% of men like reading fiction and 85% like reading non-fiction such as news, football news and other references.

Discussion

Digital scientific literacy emerged around the mid-1990s which shifted reading techniques and writing techniques. (Feerrar, 2019) The digital era is an era that ushers in and accompanies human activities which have their own challenges regarding the existence of libraries which only provide physical classic books. In this digital era, men and women have almost no room for difference in the public sector, including when visiting libraries. However, it must be acknowledged that women prefer to reduce their intensity in public spaces such as libraries which provide scientific information services which are essentially dominated by men. (Read et al., 2020) Libraries are non-governmental institutions that provide scientific information services. Libraries also have a major contribution to improving human quality which leads to the process of community prosperity.

However, the existence of libraries in the current concept of the digital era faces challenges in the aspect of public interest in visiting the library. If this non-governmental institution does not improve its existence as an information service provider, it is very likely that the library will be abandoned by visitors. In this digital era, book publishers are experiencing many challenges, including many book titles being published online, making it easier for people to access these books. (Gudinavičius & Šuminas, 2018)

Conclusion

Nowadays, people tend to choose digital science literacy rather than libraries which only provide non-digital literacy in obtaining information. Libraries are non-governmental institutions that provide information services to people who face challenges in the current digital era. Reading and other activities are often carried out using technological devices or digital science literacy and the use of paper or print media is decreasing.

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Author Contributions

Conceptualization, SY.; methodology, SY, JU, FT.; validation, SY, BH, and JU; formal analysis, SY, BH, and JU.; investigation, SY, JU, FU and BH, resources, SY, JU, FU and BH; data curation SY, JU and FU.; writing – original draft preparation, SY, JU, FU and BH.; writing – review and editing, SY, JU, FU and BH visualization, and SY, JU, FU and BH. All authors have read and agreed to the published version of the manuscript.

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Conflicts of Interest

The authors declare that there is no conflict of interest regarding the publication of this paper.

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