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ABSTRACTS

This research aims to analyze digital library optimization to support the development of agile libraries. The development of agile libraries through the optimization of digital libraries is seen from the perception of convenience, perceived benefits, and acceptance of digital libraries by the user community. This research uses a qualitative approach. Data collection is done by purposive sampling technique. Triangulation is used to analyze data. The results show that the optimization of digital libraries for the development of agile library services is measured by ease of use in terms of systems that are easy to learn, easy to master, clear and easy to reach, flexible, and easy to use. Furthermore, flexible factors are the only aspect that needs to be improved. To improve agile library services through the optimization of digital libraries in terms of perceived benefits in terms of ease of information search, useful in finding information, increasing effectiveness, increasing productivity, and developing work performance. Then from the perception of usefulness as a whole is quite good because the existence of this digital library provides positive value for the development of agile library services.

Keywords: optimization, digital library, service, agile

Introduction

The COVID-19 pandemic outbreak requires people to do activities by maintaining a social or physical distance. Many people and students who are not technology literate are suddenly forced to adapt to technology (Ifijeh & Yusuf, 2020). They are faced with many life problems ranging from studying, working, and reading activities as well as reaping various problems since the arrival of the pandemic (Buchholz & Moorman, 2020). Therefore, people must be familiar with the digital world to maintain their existence during a pandemic. The most effective way to access information online is through a digital library since it offers a lot of information that can be accessed anytime and from anywhere as long as they are connected to the internet network (Mahmudovna, 2020).

Digital libraries in Indonesia are starting to develop along with the development of information and communication technology. Since the 90s, internet access has become part of the development of information and communication technology (Irmayati, 2014). The emergence of digital libraries has brought various attempts to define it, depending on the way of looking at it. For example, according to Lesk (2012) in viewing digital libraries in general, they are simply an organized collection of digital information. Hoshi (2003) defines a digital library as a managed collection of information, with associated services, where information is stored in a digital format and can be accessed through a network whose collection is provided by utilizing an information network.

This digital library is identical to digital collections such as e-books, e-journals, e-resources, institutional repositories that can be accessed without having to come to the library directly but through a web portal provided through hardware such as computers, laptops, or cellphones (Hyman et al., 2014). The digital library itself has many advantages, such as long-distance services, easy access, cheap, abundant digital collections, complete answers, and a global network (Li et al., 2019). Besides, it acts as a source and media for disseminating knowledge, as storage, as treatment, as a promotional medium for the work of the academic community, and preventing duplication and plagiarism (Moorthy et al., 2019).

Libraries currently play an important role in providing information to equate educational progress with advances in technology and communication (Oyelude, 2020). It is undeniable that the development of technology today is very rapid and rapid; thus, libraries must keep up with these advances in order to retain their users (Marshall et al., 1999). Various types of information can be obtained and accessed for free without limitation of time and place. Therefore, one of the library strategies to improve agile services is to optimize digital libraries (Alzahrani et al., 2019).

Literature Review

The concept of digital libraries is now increasingly associated with organizations accessing referrals to web-based resources on the internet, rather than the resources themselves (Mehta &Wang, 2020). Digital libraries like this are usually in the form of sites on the internet, do not have a physical location visited by the wearers (Bashir et al., 2019). An organization can be said to be a digital library when it provides a single point access to a series of resources spread autonomously (Nwoha, 2016).

Technology Acceptance Model is an adaptation of Theory Of Reasoned which has been specifically adapted to the user's information system acceptance model (Ajibade, 2018). This technology acceptance model is intended to predict user

acceptance of the use of the technology, which is because the perception of the user will have an influence on the interest in using it (Adeoye & Olanrewaju, 2019). TAM has the first two sides or commonly called beliefs consisting of perceived of usefullness and perceived easy of use and the second side consists of attitude, behavior intention to use and usage behavior (Ezeah et al., 2019). Technology Acceptance Model describes the relationship between beliefs and attitudes, user goals (Shabir, 2021).

Agile methods often refer to software development methodologies and practices used in the software industry but elements and principles of agile methods have been used also for operational development in various organizations. In general, an agile service development process means an additional work process that promotes the importance of customer satisfaction, collaboration, communication, teamwork, good quality, and planned follow-up practices (Niemi-Grundström, 2014). Agile approach is perfect for innovation development and creative teams for rapid and appropriate service development. However, its acceptance depends on the culture of the organization and the nature of its application (Chang, 2010). Organizational agility has become a must for companies around the world, who want to be competitive and add value in today's changing and complex business environment. To develop organizational agility levels that are suited to a volatile environment, executives need to emphasize three areas: strategic agility, operational agility, and leadership agility (Joiner, 2019). Judging from previous research, there is no research that specifically explains the performance of agile library services in developing libraries based on social inclusion.

Methods

This study employed a qualitative approach. The qualitative approach was aimed to investigate the condition of the digital library of the State University of Malang, Indonesia. It was also aimed to get an accurate and sufficient description of the digital library to describe and interpret the current phenomena that occur in the field. Data in this study were obtained through interviews with users in terms of ease, usability, and acceptance aspects. The data sources were obtained from informants and documents. The data collection process was carried out using the active participant method that allows the researcher to collect data by involving directly in the object. The data collection techniques used in this study were observation, interviews, and documentation study (Miles et al., 2014). The data source in this study is information obtained based on information about the use of digital libraries at the State University of Malang as an agile library development strategy in terms of perceived ease, usability, and acceptance of

digital libraries regarding digital libraries. The primary data source was the nine library user communities.

Results And Discussion

Strategies to Increase Reading Interest in terms of Reader Perceptions of the Ease of Digital Libraries

a) Facilitating Users to Learn

In terms of design, library users felt that the old library webpages are less attractive in terms of color and appearance, but the menu arrangement eases the searching so that it is easy to learn. Indeed, it is in accordance with what was stated by one of the Library staff at the State University of Malang that the old web page could no longer be updated due to the limited memory and its last update was in 2017. The content is quite a lot and informative because there are several menus, namely the home menu, contacts, campus links, e-books, e-clipping, e-journals, online e-books, academics, libraries, local content collections, OPAC and online chat features with librarians. However, sometimes users still stop by the website to find the references they need. The webpage was deliberately not closed by the Malang State University Library because there are already many tags on the Google page. Thus, if someone enters the keyword for the State University of Malang's digital library, the link from the page still appears as a suggestion.

As a replacement, the State University Library of Malang has created a new web portal listed at lib.um.ac.id. Unlike the old web appearance, on this website, the design looks more attractive, complete, and new menus in it. The display also includes a slide of photos of the State University of Malang Library so that it can attract the attention of visitors. This is also in accordance with the concept of layout of the page (Daly et al., 2018), that design or layout of a website page should consider the aesthetics and functionality to be very attractive, well structured, chooses the right font, combines the right colors so that visitors focus more on the desired information and do not damage the eye, and adding animated images on website pages that change at a certain period will attract visitors to visit again.

A web portal is said to be important because a library usually has various kinds of information that it wants to display in an integrated place. According to Suwarno (2010), in a web portal, there are four basic services, namely information discovery (retrieval system), list and access to all digital collections of the library, library administration (clock open, library map, location, borrowing, membership and so on), and online help

(references, help desk, information literacy). In its implementation, the lib.um.ac.id page already has a retrieval system in the form of opac (opac.library.um.ac.id). The local content collection, which contains a collection of theses, final projects, theses, and dissertations, is located at page mulok.library.um.ac.id. Meanwhile, the collection of magazines, journals, and newspapers, the search engine library.um.ac.id/majalah. Furthermore, the access of registration and all digital collections is also available on the main page of the portal. Besides, there are various links to online journals subscribed to by the Malang State University Library. In terms of library administration, it is also available in the About Library menu, which contains video profiles, history of library UPTs, library services, organizational structure and personnel, vision and mission, rules of procedure, and service hours. Meanwhile, online help (help desk) is also available on the old web page to this newest website. This online help service is called the Live Chat feature, which aims to make it easier for library users who encounter problems in finding information and cannot come directly to the library.

There are many new and more varied menus on the library page, but there are several menus that have not been filled in, such as the library service menu, which has a library hall borrowing sub-menu, training in the use of e-journals and e-books, publishing non-commercial books and literacy services that have not contained any information. Additionally, the sub menu for quick referral services, lockers, and training lead back to the home page. Meanwhile, there are several unnecessary sub-menus, such as the locker sub-menu found in the Service Menu. Lockers should be included in library facilities. In addition, the F.A.Q menu does not contain any content. F.A.Q usually includes questions submitted by users and admin answers to these questions. It is an easy way to get directions if you encounter difficulties, such as the website has a Frequently Asked Question page that explains how to use the website and common questions that users face (Asari, 2021).

Therefore, the State University of Malang's digital library web portal gives easy learning access from its interface and content. Besides that, various kinds of new menus are more diverse. However, some menus are still not entirely good, such as library hall borrowing sub-menu, training in the use of e-journals and e-books, publishing non-commercial books, and literacy services that have not contained any information. The display will return to the main page in the sub menu for quick referral services, lockers, and training when clicked. In addition, there is also an inconsistency between the locker sub-menus that are entered in the Library Service menu. The locker sub-menu should be placed in library facilities. Because lockers are facilities provided by the library, but library services. It is also necessary to fill in the F.A.Q menu so that users get instructions if they encounter difficulties.

b) Facilitating Users to be Skillful

The digital library webpage should also facilitate users to be proficient. If the user accesses the digital library web for the first time, there should be no obstacles to finding information. In using the digital library, users easily use the tools found on the web, so it doesn't take long to understand the parts on the web, which will make it easier to find the information needed. However, an issue is found in this digital library's appearance. The digital library's appearance accessed from a computer is different from the appearance on a device. Website page compatibility provides the same appearance and is in accordance with its function where many mobile devices have sprung up on the market so that users access websites on mobile devices that vary according to their own (Markland et al., 2017). It can be concluded that users have no problems related to the interface display and contents on the State University of Malang's digital library web portal when accessed through a web display on a P.C. / computer. Constraints are found in the interface display of the digital library web portal accessed via a device. The mobile display is different from the display when accessed using a P.C. Features that are on the right-wing and left of the digital library web portal, such as the online journal link feature subscribed by the Malang State University Library, appears at the bottom of the mobile version page since the section page contains many articles. Thus, if users want to access the subscribed online journal link, they have to scroll the screen display down to the bottom. Ideally, the technology used should be easy to use (Rahayu, 2015). There are no obstacles related to the State University of Malang's digital library page because the web interface is already user friendly. The website is said to be user-friendly if users can easily find and use the functions and features found on the website (Markland et al., 2017).

The problem is only found on the display on the device, and other users encounter problems because the server is sometimes slow and even down. This condition is also confirmed by Pendit (2007) that each system often has different performance, and the network that connects the various systems is not necessarily reliable and results in the university library portals appearing slow. In addition, the load time of the page (Sheikh, 2017), which is the full open speed of a website page, also affects the quality of the website because the website design should consider this element. The page's load time can be optimized by choosing to use a small image, using cache on website pages, and so forth. Website pages that are loaded for a very long time will affect user satisfaction when visiting a website. Indeed, digital libraries are not always perfect, that is, if the computer system fails or the computer network associated with the digital library server is slow. However, when compared to standard libraries,

information stored in digital libraries more frequently be used by users whenever they need it (Hoshi, 2003).

Apart from the server-side, users have problems accessing this digital library, such as the unequal availability of thesis collections at the faculty and central libraries. Also, access to digital collections that can only be used in the Malang State University Library carries difficulties for users. However, these constraints do not affect users' skills when using the digital library website of the State University of Malang.

c) Clear and Understandable Aspects

The digital library page of the State University of Malang is categorized as clear and understandable. This means if the features contained on the page are in accordance with their function. The State University of Malang's digital library web portal contents are clear, and users can understand their functions without any manual or tutorial on the digital library web page. One of them is the live chat feature, which functions clearly and can be easily understood. The feature is located at the bottom right of the lib.um.ac.id web page; even though the web screen is shifted downwards, the tools remain at the bottom next to the right of the web page so that users can see that it is a live chat feature. In addition, after the tool is opened, there is a description in the chat column in the form of "Hey, we are online and ready to interact with you now. Please ask questions related to U.M. Library Service", then this feature is clear and its function can be understood as a service to ask librarians online questions. However, this feature can only be used during Malang State University Library service hours, but users can also use it by filling in their name and email when this feature is offline. Later, the Malang State University Library staff will reply via email.

In addition, with the link feature to subscribed online journals, which is illustrated by the pictorial tools of the online journal provider, users can also directly understand that these tools are a link feature to online journal providers subscribed by Malang State University (Asari, 2020). The last feature is a search feature that allows users to search for information from the State University of Malang's digital library website. For example, when looking for specific information, such as when I searched for information about the library cafe and its events, the search results contained information about it. This feature is located at the top right of the website lib.um.ac.id, and if we point the cursor at it, it will say "to search type and hit enter." So we only need to enter keywords into the search field and click enter to go to the search results. Jim (2004) states that clear and understandable features allow the easy use of existing features such as the search feature, which can be used even without specific criteria or keywords.

d) Flexibility

Digital libraries are supposed to be flexible, which means that users can use digital libraries that are not limited by time and space. Library users of the State University of Malang usually access their collections online and offline. Considering that the digital library of Malang State University itself has a policy not to serve their digital collection online, but can be accessed in full text by coming directly to the library. If the user comes directly to the library, he gets a limit for photocopying and asks the staff in charge of periodic services on the 1st floor for the e-books. If for online access, user can only access the library OPAC which is usually only to find book descriptions, and on local content collection in the form of a thesis, final project, thesis and dissertation which can be accessed on the page mulok.library.um.ac.id but only displays the title, author and abstract information. For full-text access, users must come directly to the reference section of the library to use physical collections as well as their digital collections. The digital collection can be accessed from the provided computer, but the user cannot copy the soft file because the computers have been designed in terms of software and hardware. So if the user wants to copy the local content collection, the user can copy it in the form of a physical collection with an unlimited number of pages.

The digital collection policy at the Malang State University Library itself is made by local library staff. The digital collection at the Malang State University Library does not provide the full text online, so users need to visit the library directly. According to Pendit (2009), access to the University Digital Library is usually done through an authentication process within intellectual property rights. Arrangements for access to local works, such as theses, dissertations, and research results, can be completely under the university's control through the library. Thus, the State University of Malang's digital library made this policy to protect Intellectual Property Rights, which are a collection of special rights owned by certain parties to exploit their intellectual work and prevent other parties from exploiting them without permission (Makarim in Pendit, 2007).

It can be concluded that the digital library of the State University of Malang is not as flexible as expected digital libraries. The digital library should be capable of speeding up access so that the information needed can be immediately owned and utilized by users and can be accessed anywhere, anytime as long as there is a computer connected to the network (Asari, 2021).

e) Easy to Use

The digital library eases users in doing tasks or information searches. It can be concluded that the digital library of the State University of Malang has easy access, for example, in the local content collection in the form of a thesis collection. Thus, users do

not have to bother to find the physical collection but simply use the computers provided at the reference service on the 3rd floor of the Malang State University Library. In addition to local content collections, convenience is also obtained for online journal collections because users do not need to register personally, but only need to come to the library and use the internet network of the State University of Malang, then visitors can directly use the online journal. Apart from that, the library also provides an easy search because OPAC can be accessed anywhere, anytime, not limited to space and time.

Readers' Perceptions of Perceived Usefulness

Perceived usefulness is the degree to which an individual believes that using the system will contribute to achieving specific goals. Perceived usefulness is defined as the extent to which a person believes that using technology will improve job performance. The benefits of information technology can be seen from the trust of information technology users in deciding the acceptance of information technology, with one belief that these users make a positive contribution to their users (Asongu & Odhiambo, 2019).

a) Easy-to-find resources

In the process of searching for information, digital libraries should be able to facilitate easier finding information process. The convenience felt by the informants was that the existence of a digital library at the State University of Malang library provided easy access. Indeed, the State University of Malang's library web portal can be accessed anywhere and anytime without knowing the time. For example, if users want to get information about the desired book reference, they can access the OPAC and obtain a list starting from the book title, author, year, book number, and book location. They can also find references for research by accessing the U.M. Institutional Repository, but there is only the title, the researcher's name, the number, and the abstract listed. If they want to access in full text, users are required to come directly to the library, as well as the ebook collection located in the e-book garden on the 1st floor. Besides, with this digital library, users can also find references for theses because of its extensive collections in digital form. Because of its easy use, it is enough to enter the desired subject keywords, then the results of the search will be found references to titles that match the desired subject. This collection of online journals subscribed to by the State University of Malang Library also eases the finding information process because users only need to come to the library and access it using the State University of Malang's Wifi network.

It can be concluded that the digital library of the State University of Malang makes searching for information easier. It can be proven by the library web portal that can be accessed anywhere and anytime with no limited space and time. Like when a visitor wants to know the book collection in the State University of Malang library, they can access the online catalog via opac.library.um.ac.id. The search results are listed from the title, author, year, book number, and physical location of the book. So that users do not need to come to the library if they only want to know the collection of books in the library. Besides, the ease of searching for information is also felt when using local content collections in the form of theses. With the availability of these computers, users don't have to bother looking for their physical collections. Users only need to enter keywords in the search engine on the computer, then later, the search results in various titles, and if the title is clicked, they will be able to access the full text. Furthermore, convenience is also felt in online journal collections because users only need to come to the library and use the internet network at the State University of Malang, and they can immediately use the online journal. Therefore, this digital library has made finding information more comfortable, and if users want a full-text digital collection that can be accessed online, they do not need to come to the library directly. Finally, with this digital library, users find that information searches are easy due to the presence of several filters provided, such as in the local content collection, which contains filters from the desired department, and based on the subject, title, and author criteria so that the search results are more Specific.

b) Useful Resources

In addition, the digital library is expected to be useful in information search. Digital libraries should generate benefits for users, such as getting new information. It turns out that this benefit is also felt by users, such as getting a reference for a thesis on a local content digital collection, which is accessed using the digital collection using a computer found in the reference service. This is also in accordance with Lee & Kim (2010) that library service users can come directly to the library using an available computer or by bringing a laptop, or opening files remotely using the internet network. With this digital collection, users can sort the desired subject quickly by sorting on the search page found on the page mulok.library.um.ac.id by sorting using collections from which majors, the criteria are based on the title, subject, author or free. Then the generated information is more specific. Francisco-Revilla et al. (2001) states that the concept of digital libraries is now increasingly being associated with organizations accessing references to web-based resources on the Internet, and not the resources themselves. Digital libraries like this are usually in the form of sites on the Internet that do not require their users' physical location. Greenstein & Thorin (2002) agrees with this conclusion, and according to him that currently digital libraries are no longer measured based on the number and character of collections that are physically owned, but rather based on the broad coverage of the information network formed by the services they provide. This is also proven by the State University of Malang's digital library, which is very useful because it offers broader and more diverse information. Besides, the online journal collection subscribed by the State University of Malang library has many subjects, and their coverage is comprehensive and international equivalent.

This digital library also brings benefits, such as with this digital library, users can find it easier to use their digital collections because they get references from local content collections in the form of theses. In accessing that collection, they can sort the documents according to the keywords they want. Besides, users can also look for a number of the desired book so that when they come to the library, they already know the shelf of the desired book's physical collection. This also applies when using online local content searches on the collections, namely on the mulok.library.um.ac.id page. Users can see the desired title reference online and do not need to come to the library directly. If the user feels it is suitable with reference to the thesis's title, they can go directly to the library. And finally, users get the benefit, namely in the form of information in the form of online journals, because online journals contain references to journals that are diverse and have comprehensive coverage.

Lastly, this digital library also helps users who want to use the same collection at the same time. Unlike the physical group, which is only available for a few copies, this digital collection has an unlimited number depending on how many computers are provided. So this collection can be used simultaneously in accordance with the benefits of digital libraries conveyed by Hoshi (2003) if this is an extraordinary advantage compared to printed collections that require enormous sacrifices both time and even cost for money to come to where the collection is stored.

c) Improving Effectiveness

This digital library is also more effective. The intended effect is that digital libraries can provide information faster. For example, when using a digital collection in the form of a thesis on a computer provided in the reference service, the user can simultaneously access several thesis titles. Consequently, it greatly accelerates the search for the desired information; in contrast to using a physical collection, the user must search for the book one by one and open the page one by one. If it is a digital collection, we can use ctrl + F (find) to find the desired subject in a thesis title. With fast searching results, it can be said that it is more effective so as to increase the efficiency of the work supported or the task being done. The digital library of the State University of Malang also provides information quickly, this also supports the theory of the benefits of

digital libraries according to Andi Asari (2019), namely getting new information quickly. In addition, its effectiveness is also found in local content collections because it can use the filters available in the search menu to narrow search results and get more specific results. This online OPAC can also help users who only need the title of the book.

Therefore, with this digital library, users can increase their work effectivity because of access speed. With this digital collection, users can get thesis references quickly because they only need to enter keywords and use filters according to their needs within the computer's thesis search engine in the reference service. By using this computer, users can see different titles at the same time. In contrast, with the physical collection, the user must search the document one by one, then open one sheet by sheet. So with this digital collection, users gains effective process so that they can increase the efficiency of the work being done.

d) Adding Productivity

Digital libraries should also be able to increase productivity. In other words, with this digital library, users will be more productive in carrying out tasks since they can easily obtain their needed information. Digital library users can get new information from both local content collections (for theses, final projects, theses, and dissertations) and online journals subscribed to by the State University of Malang library. Thus, the State University of Malang's digital library can increase productivity because they get the information they need.

With this digital library, users will be more productive in completing their work or research. This is proven by the user who uses a digital copy as a reference for his thesis. In addition, journal collections also help in completing research conducted by users because the journals are internationally acknowledged and published by well-known and excellent publishers in broad and various scope.

e) Improving Performance

The accessible information offered by digital libraries improves users' performance. The digital library of the State University of Malang becomes a facilitator or a bridge between information seekers and knowledge to develop their working performance. For instance, the online journals subscribed by the State University of Malang library offers easy access to the users because it only requires an internet network of the State University of Malang. With this easy access, users can also save costs because they do not need to register personally and pay monthly fees in subscribing to these international journals. This is also in accordance with Lee (2002) statement in Pendit (2007) that the development of e-journals, in the end, requires

libraries to subscribe to journals costing them a lot of money. Most of the digital resources are on the Internet; if a library provides access to sites, then the librarian's responsibility also involves checking and notifying users of every site's update. The digital library of Malang State University always updates its digital collection every time a new web portal appears. The updates are then located at lib.um.ac.id, and usually, the most updated digital collections are lecturers' articles. Also, if users only want to access local content collections, they can access them online sorted from the title, author, and abstract. However, for full-text access, they can directly use computers provided by reference services. Therefore, the U.M. digital library can develop job performance. This is also in accordance with the benefits of digital libraries expressed by Suwarno (2010), which is making it easier to access information from various sources.

The digital library can develop jobs because it has a role as a facilitator between users who need information and information providers. For example, when users need journal references, they can use journal collections that have been subscribed to by the library. Its easy access only requires users to come to the library and access it using the internet network at the State University of Malang. In addition, users also do not need to spend more money to subscribe to journal collections from these international publishers. Users also benefit in terms of costs. The digital library of the State University of Malang is also a provider of information for students who are completing their thesis. Access to the local content collection is easy. If users only want to know the title and abstract, they can go to mulok.library.um.ac.id page.

Readers' Acceptance of Digital Libraries

The acceptance of this digital library can be identified from the behavioral intention and actual aspects.

a) Behavioral intention

Behavioral intention is a behavioral tendency to use technology (Davis, 1998). The level of a person's technology used can be predicted from the user's attention to technology (Asari, 2019). Someone carries out a behavior if they have the desire or interest to do so. The behavioral interest is analyzed based on users' intention or motivation to use digital libraries. The obtained data confirm that users' intention to use this digital library is because of the urge to need the information to complete their work. Users, especially students of the State University of Malang, have the intention to use the digital collection of the State University of Malang because they are members of the Malang State University Library, so they have to use it with the access given. It is

different for users from different universities; they have to register as members to use the Malang State University Library collection.

Users are also motivated to use this digital library because of other people who suggest them to use this digital library. However, they do not put the digital library of Malang State University as their main source. They only use it when they find information that suits their needs. This is due to the fact that the Malang State University library provides no complete information.

b) Actual Usage

Behavior is the actual activities carried out by someone to use technology (Rahayu, 2015). In the context of the use of information technology systems, behavior means the actual use of technology-based on frequency and duration. In other words, the behavior was measured from the amount of time spent to interact with technology and the frequency.

Users use this digital library based on their information needs. Investigated from the frequency, users use it only when they have an assignment or need information that supports their task. Meanwhile, the duration varies because it is viewed from the online or offline access perspective. Online access is only limited to the title and abstract if users access local content collections. However, if users want printed books, they can only see the call number if they access the digital library. Thus, online access usually only takes about 10 minutes less. However, if users access offline by coming directly to the library, then they spend a longer time, even hours, because the information provided is varied and extensive and in full text.

Conclusion

Research findings show that the development of agile libraries through optimizing digital libraries is very good in terms of perceived ease of use in terms of being easy to learn, easy to become proficient, clear and easy to understand, and easy to use systems. However, the flexibility aspect must be improved. In this flexible aspect, digital libraries cannot provide full text online due to the limitations of the Malang State University Library policy. In addition, some of the menus in the digital library of the State University of Malang do not have contents. In addition, the appearance of the digital library website is not the same when accessed from a cellphone. Finally, there are obstacles in accessing the digital library of the State University of Malang, such as servers that are slow and sometimes down, making it difficult to access remotely.

The development of agile libraries through optimization of digital digital libraries is also assessed from the aspect of perceived use. Those aspects include making information search easier, useful in finding information, enhancing effectiveness, increasing productivity, and developing job performance. The digital library attains an excellent score in the overall perception of usefulness. It happens because the digital library provides positive values in the form of easy information search and useful in finding information. As a result, this digital library can improve agile library services. In addition, it can also increase the effectiveness of library service performance because it provides information more quickly. Thus, users can obtain the desired information more quickly and easily.

The development of agile libraries through optimization of digital digital libraries is also assessed from the aspect of acceptance of digital libraries measured from aspects of behavioral intentions and actual use. Students' intention to use this digital library comes from the urge to get information to complete their work and advice from others. Students use this digital library based on their information needs. Their frequency of use shows that they only access it when they have an assignment or need information that supports their task or research. At the same time, the duration varies because it is viewed from the online and offline access perspective.

Based on the results of this study, there are several strategies in developing agile libraries through optimizing digital libraries. Library managers need to review policies related to digital library access because they must be flexible and can be accessed anytime and anywhere. In addition, digital libraries must be a means for students to support distance learning during the pandemic so that flexible access to digital libraries can increase the agility of library services.

Authors' Note

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References

- Adeoye, A. A., & Olanrewaju, A. O. (2019). Use of technology acceptance model (TAM) to evaluate library electronic information resources use by undergraduate students of Lead City University, Ibadan, Nigeria. *Library Philosophy and Practice*, 1-24.
- Ajibade, P. (2018). Technology acceptance model limitations and criticisms: Exploring the practical applications and use in technology-related studies, mixed-method, and qualitative researches. *Library Philosophy and Practice*.
- Alzahrani, A. I., Mahmud, I., Ramayah, T., Alfarraj, O., & Alalwan, N. (2019). Modelling digital library success using the DeLone and McLean information

- system success model. *Journal of Librarianship and Information Science*, *51*(2), 291-306. https://doi.org/10.1177/0961000617726123
- Asari, A., Kurniawan, T., & Ansor, S. (2019, August). Readiness of Libraries in Applying Information and Communication Technology in the Industrial Revolution Era 4.0. In *Annual International Conference of Business and Public Administration (AICoBPA 2018). Atlantis Press.*
- Asari, A., Widyartono, D., Shah, N. A. K., & Dharma, B. A. (2020). The Effect of Knowledge Management Integration on E-Learning System toward Lecturers' Performance at University Institutions. *DESIDOC Journal of Library & Information Technology*, *40*(6), 334-338.
- Asari, A., Zakaria, I. A., Prasetyawan, A., Safii, M., Kurniawan, T., Rahmania, L. A., & Fajar, C. (2021). Reading culture development with optimizing digital library services during the pandemic. In *Community Empowerment through Research, Innovation and Open Access* (pp. 99-102). Routledge.
- Asongu, S. A., & Odhiambo, N. M. (2019). Basic formal education quality, information technology, and inclusive human development in sub-Saharan Africa. *Sustainable Development*, *27*(3), 419-428. https://doi.org/10.1002/sd.1914
- Bashir, B., Nasreen, N., & Loan, F. A. (2019). National digital library of India: an overview. *Library Philosophy and Practice*, 1-10.
- Buchholz, B. A., DeHart, J., & Moorman, G. (2020). Digital Citizenship During a Global Pandemic: Moving Beyond Digital Literacy. *Journal of Adolescent & Adult Literacy*, *64*(1), 11-17. https://doi.org/10.1002/jaal.1076
- Crane, G., Bamman, D., Cerrato, L., Jones, A., Mimno, D., Packel, A., ... & Weaver, G. (2006, September). Beyond digital incunabula: Modeling the next generation of digital libraries. In *International Conference on Theory and Practice of Digital Libraries* (pp. 353-366). Springer, Berlin, Heidelberg. https://doi.org/10.1007/11863878_30
- Daly, T. P., Makeev, E., Cheng, A., Budzinski, J., & Roy, S. (2018). *U.S. Patent No. 10,061,860*. Washington, DC: U.S. Patent and Trademark Office.
- Ezeah, G. H., Okwumba, O. E., Celestine, G. V., & Joseph, W. (2019). Human-Machine Communication and the Burden of Reaching Internal Publics: Does Technology Acceptance Model Play a Role?. *Library Philosophy and Practice*, 1-15.
- Francisco-Revilla, L., Shipman, F., Furuta, R., Karadkar, U., & Arora, A. (2001, January). Managing change on the web. In *Proceedings of the 1st ACM/IEEE-CS joint conference on Digital libraries* (pp. 67-76).
- Greenstein, D., & Thorin, S. E. (2002). *The Digital Library: A Biography. Strategies and Tools for the Digital Library.* Digital Library Federation, Council on Library and Information Resources, 1755 Massachusetts Ave., NW, Suite 500, Washington, DC 20036.
- Hogg, J., Hogg Jim R., 2004. System and method for remote website content management and administration. U.S. Patent Application 10/654,697.
- Hoshi, T. P. (2003). Digital library use: Social practice in design and evaluation.

 Mit Press
- Hyman, J. A., Moser, M. T., & Segala, L. N. (2014). Electronic reading and digital library technologies: understanding learner expectation and usage intent for mobile learning. *Educational Technology Research and Development*, 62(1), 35-52. DOI 10.1007/s11423-013-9330-5

- Ifijeh, G., & Yusuf, F. (2020). Covid–19 pandemic and the future of Nigeria's university system: The quest for libraries' relevance. *The Journal of Academic Librarianship*, *46*(6), 102226. https://doi.org/10.1016/j.acalib.2020.102226
- IFLA. 2010. IFLA/UNESCO Manifesto For Digital Libraries(Online), (http://www.ifla.org), accessed on 19 March 2019.
- Irmayati. 2014. Pemanfaatan Perpustakan Digital oleh Dosen di Pusat Layanan Pustaka Universitas Terbuka(Online), (https://www.perpusnas.go.id), accessed on 20 March 2019.
- Lee, J. Y., Kim, H., & Kim, P. J. (2010). Domain analysis with text mining: Analysis of digital library research trends using profiling methods. *Journal of Information Science*, *36*(2), 144-161.
- Lesk, M. (2012). A personal history of digital libraries. *Library Hi Tech*, *30*(4), 592-603. https://doi.org/10.1108/07378831211285077
- Li, S., Jiao, F., Zhang, Y., & Xu, X. (2019). Problems and changes in digital libraries in the age of big data from the perspective of user services. *The Journal of Academic Librarianship*, *45*(1), 22-30. https://doi.org/10.1016/j.acalib.2018.11.012
- Mahmudovna, M. D. (2020). READING AND INTERNET NETWORKS DURING PANDEMIC. *International scientific review*, (LXXII).
- Markland, M. J., Rempel, H. G., & Bridges, L. (2017). Mobile Website Use and Advanced Researchers: Understanding Library Users at a University Marine Sciences Branch Campus. *Information Technology and Libraries*, *36*(4), 7-23. http://orcid.org/0000-0002-8834-614X
- Marshall, C. C., Price, M. N., Golovchinsky, G., & Schilit, B. N. (1999, August). Introducing a digital library reading appliance into a reading group. In *Proceedings of the fourth ACM conference on Digital libraries* (pp. 77-84).
- Mehta, D., & Wang, X. (2020). COVID-19 and digital library services—a case study of a university library. *Digital library perspectives*.
- Miles, M. B., Huberman, A. M., & Saldana, J. (2014). Qualitative data analysis: A methods sourcebook.
- Moorthy, K., Chun T'ing, L., Ming, K. S., Ping, C. C., Ping, L. Y., Joe, L. Q., & Jie, W. Y. (2019). Behavioral intention to adopt digital library by the undergraduates. *International Information & Library Review*, *51*(2), 128-144. https://doi.org/10.1080/10572317.2018.1463049
- Nwoha, C. M. (2016). USERS'PERCEPTION OF THE FACILITIES, RESOURCES AND SERVICES OF THE MTN DIGITAL LIBRARY AT THE UNIVERSITY OF NIGERIA, NSUKKA. *Library Philosophy and Practice*, 1.
- Oyelude, A. A. (2020). Libraries, librarians, archives, museums and the COVID-19 pandemic. *Library Hi Tech News*. DOI 10.1108/LHTN-05-2020-0049
- Pendit, Putu Laxman. 2007. Perpustakaan Digital: Perpspektif Perpustakaan Perguruan Tinggi Indonesia. Jakarta: Sagung Seto.
- Pendit, Putu Laxman. 2009. Perpustakaan Digital: Kesinambungan & Dinamika. Jakarta: Sagung Seto.
- Rafiq, M., Asim, A., Khan, M. T., & Arif, M. (2019). The Effects of Social Media on Reading Habits. *Pakistan Journal of Information Management and Libraries*, 21, 46-65.
- Rahayu, Ayu Puji. 2015. Implementasi Technology Acceptance Model dalam Mengukur Penerimaan Operator PTKIS terhadap Educational Management

- Information System (Online), (www.academia.edu), diaksespadatanggal 27Maret 2019.
- Shabir, G. (2021). Technology Acceptance Model and Academic Performance of Postgraduate Students: The Moderating Role of Academic Self-Effifficacy. *Library Philosophy and Practice*, 1A-22.
- Sheikh, A. (2017). Evaluating the usability of COMSATS Institute of Information Technology library website: A case study. *The Electronic Library*. https://doi.org/10.1108/EL-08-2015-0149
- Suwarno, W. (2010). Ilmu perpustakaan & kode etik pustakawan.