ISSN : 2541-4429 (Online) 2580-3417 (Print) Available Online in http://journal2.um.ac.id/index.php/jmsp/



Development of Digitalization of the "MP Digilib" Library System for Improvement of Academic Services

Aditya Chandra Setiawan; Mohammad Syahidul Haq; Amrozi Khamidi; Adinda Rahma Putri; Dewi Laras Iswahyuni

PDepartment of Educational Management, Faculty of Education, State University of Surabaya Jl. Lidah Wetan, 60123, Surabaya, Indonesia E-mail: adityasetiawan@unesa.ac.id

Article received : July 2021; revised : August 2021 ; accepted : August 2021

DOI: 10.17977/um025v6i12021p1

Abstract: This study aims to describe the condition of the 'Taman Baca' service of the Department of Education Management before and during the covid-19 pandemic; designing online 'Taman Baca' access service that is the application "MP DigiLib" according to the needs of students, lecturers, educational personnel and the community; and know the level of student satisfaction with academic services. The method used in the development of the 'Taman Baca' service is to use the Waterfall Model, which is to apply 2 stages of 5 stages, among others Analysis and Design to design digital library applications. The result obtained is the realization of the digitization of the library by using the SLiMS platform in the localhost version and there are two page views available, namely pages for visitors and pages for the manager of "MP DigiLib"; and the improvement of student satisfaction with academic services that have been digitized.

Keywords: Increased; Services; Digitization; Library Systems

the Covid-19 pandemic has been going on for a year and it is not clear when it will end. Covid-19 is a contagious disease. Most people infected with COVID-19 will experience mild to moderate symptoms of respiratory illness and recover without requiring special treatment (WHO, 2020). This condition certainly affects all aspects of life, including the field of education. As an educational service provider, of course, educational services will also undergo a transformation during this pandemic. One of them is the transformation of educational services towards digitalization.

The Department of Education Management, Faculty of Education, State University of Surabaya was also affected by this pandemic. As a result, academic and laboratory services, whether we like it or not, have to transform, one of which is the Taman Baca service. Because during the Covid-19 pandemic, the majority of students had difficulty accessing specific learning resources in Education Management. Usually, when they meet face to face they can directly access the Taman Baca belonging to the Department of Education Management, Faculty of Education, State University of Surabaya. After the implementation of School From Home and Work From Home, of course, library accessibility at Taman Baca is difficult, and there tend to be no visits. On the other hand, there are many inputs and complaints from students regarding the difficult access to Taman Baca during this pandemic. The complaint was submitted in a joint mediation activity between the department heads, lecturers, students, and student organizations of the Department of Education Management, Faculty of Education, State University of Education management, Faculty of Education, State University of Education, State University of Education, State University of Surabaya. The complaints in the "Departmental Dialogue" activity regarding the Reading Gardens are the lack of complete libraries related to education management science, infrastructure facilities are deemed inadequate and comfortable for students, the

location of the Reading Gardens does not support the ideal calm and silence of the library and there is no online access to the Reading Gardens. This is a challenge for the department to respond quickly, namely by providing alternative academic and laboratory services.

On the other hand, based on the Student Satisfaction Index (IKM) carried out by the Quality Assurance Unit (UPM) of the Education Management Department in the Even Semester 2019/2020 to Odd Semester 2020/2021 it decreased, in detail obtaining the following results:

 Table 1. Student Satisfaction Index of Education Management Department, Faculty of Education, State

 University of Surabaya

		Average Score	
No	Aspects	Even	Odd
		2019/2020	2020/2021
1	Reliability (Reliability of Lecturers and Academic Staff)	3,3 (-)	3,0 (↓)
2	Responsiveness	3,2 (-)	2,9 (↓)
3	Assurance (Treatment of Students)	3,2 (-)	2,9 (↓)
4	Empathy (Understanding of Lecturers and Academic Staff to Student Interests)	3,3 (-)	3,0 (↓)
5	Tangibles (Education facility)	2,9 (-)	2,8 (↓)
	Score	83,63	75,85
	Predicate	Very Good	Good

Source: (Department of Education Management, Faculty of Education, State University of Surabaya, 2021)

Based on IKM data conducted by the Department of Education Management, it can be seen that there has been a decrease in student satisfaction in all aspects, this happened during the Covid-19 pandemic. The lowest value is in the tangibles aspect (educational facilities) which is the main focus in improving educational facilities services every year. One of the educational facilities owned by the Department of Education Management is the library of the department/study program or commonly called the Reading Garden. The service continues to run even in the midst of a pandemic and the policy of restricting access to campus, of course this will affect the number of visitors to the Reading Park which is decreasing. This further proves that there are obstacles in terms of the accessibility of Taman Baca users during the pandemic.

Ideally, the library will continue to provide excellent service even in the midst of a pandemic, which is felt to still be able to provide services to students and users of the Reading Gardens, Department of Education Management, Faculty of Education, State University of Surabaya. The purpose of this study specifically emphasizes improving services for students, namely the online quality of Taman Baca services in the Department of Educational Management, Faculty of Education, State University of Surabaya. While the importance of this research to be carried out immediately is because there are many needs and demands of consumers (students) for the quality of Taman Baca services at the Department of Education, State University of Surabaya, in particular access to information on library repositories owned by the department and the online circulation process.

The state of the art in this study, namely digital libraries that have emerged in the information age, represents an inevitable trend for library development. Digital libraries contain a large number of digital information sources across multiple media. It can provide readers with diverse information services using digital and network technologies (Zhou, 2005). In line with this statement, the library has a great responsibility for the improvement, development of interest and love of reading. This is motivated by the role and function of the library as a center for the development of reading interest (Februariyanti & Zuliarso, 2012).

On the other hand, access to digital libraries is indispensable for students to complete their research work. With limited access to digital libraries, students cannot fulfill their information needs from the internet and other university libraries. The quantity as well as the quality of their research work is affected due to the limitation of digital resources (Arif & Kanwal, 2013). Not only as a library repository, the digital library that has been built does not only function as a provider of information, but also a container that is able to accommodate the work of local writers (Prayitno & Safitri, 2015). In addition, digital libraries require good cooperation between institutions that have collections that can be shared. Most of our libraries face a dilemma about the importance of digitization as demand and costs are high. An alternative solution to these problems is collaboration between libraries and resources sharing which in certain terms can save the budget and maximize the utilization of information resources. By sharing resources, it is hoped that the quality of library services will be better to meet the needs of users (Rodliyah, 2012).

Other research results state that there are several components that need to be prepared, such as human resources and time management. Several attempts have been and will be made to address these concerns in order to avoid failure to build digital libraries. The idea of outsourcing should be considered. The addition of experts from outside the library as part of the team is needed to further strengthen the development of digital libraries. The author suggests that library staff continue to increase knowledge about digital libraries, to overcome emerging technical barriers (Irkhamiyati, 2017). A good library is a library that implements the concept of E-CRM. Customer Relationship Management (CRM) is a strategy to obtain, consolidate, analyze data, and then use it to interact with customers (library users: students, students, teachers, lecturers, and the community), thereby creating a comprehensive view of customers and better relationship with customers (Afrina & Ibrahim, 2013). Meanwhile, in measuring the satisfaction and loyalty of users or library visitors, it is necessary to consider the convenience of visiting, library collections, accessibility and factors of the facilities owned by the library (Bae & Cha, 2015). There are several factors that need to be considered in designing a digital library, namely the ability of human resources for digital library managers or laboratory assistants to provide excellent service virtually.

Constraints faced in the process of digital library services, factors that become obstacles in the use of digital libraries, such as internet network problems, incomplete digital collections, eye fatigue, lack of socialization, and lack of knowledge of users to solve problems that arise when accessing information (Fatmawati, 2017). Digital libraries make it easier for users to access library materials, because various collections are already available in digital form. However, at any time the role of books cannot be replaced by digital media. The rapid development of the library does not forget the main function of the library, namely the library as a place of reference for information. No single library in the world is able to collect and store all published printed library materials under one roof. Library collaboration is still needed so that all library materials in the library collection can be used optimally in a cross-sectoral manner (Suprivanto, 2015). In addition, digital libraries are directed at improving the service process to customers with good quality and speed, as well as increasing the effectiveness and efficiency of library management, so that later it can facilitate the teaching and learning process (Dana, Samosir, & Widiyasa, 2008). On the other hand, accessibility and ownership factors of material and interior design facilities, reading space and user comfort factors of location and space, reliability and factors of staff active attitude and diversity, hours of operation and promotion factors of programs and services have a significant influence on library satisfaction and use. by the population (Noh & Chang, 2020). It can be adopted and transformed in the form of automation and virtual through digital libraries.

The implementation of digital libraries so far has been carried out by several institutions. The results of an exploratory study on digital library services, namely behavioral intentions are strongly influenced by system quality, information quality, and digital library service quality using the Delone and McLean's Information System model (Alzahrani, et.al, 2019). One strategy in providing library services, especially in reference to research results for students, is by maximizing the role of technology in automated library classification, academic libraries require the development of digital library prototypes with research support service features (Maryati, et al, 2020). In line with exploratory studies and library service strategies, studies in Nigeria also mention that system quality, service quality and digital library (2017). It can be concluded that the implementation of a digital library is said to be prime if it meets three quality aspects, namely system quality, information quality, information quality, and digital library service quality.

Based on the state of the art above, it can be seen that it is important to transform conventional libraries into digital ones in order to answer the needs of consumers (students). The latest context in the Department of Educational Management, Faculty of Education, State University of Surabaya, is a digital library that is simple and easily accessible to users and managers by highlighting the quantity of educational management scientific references. The purpose of this study is to describe the condition of the Reading Park service, Department of Education Management, Faculty of Education, State University of Surabaya, before and during the covid-19 pandemic; designing an online Reading Garden access service "MP DigiLib" according to the needs of students, lecturers, education staff and the community; and knowing the level of student satisfaction with academic services.

METHODS

This study uses a development method, namely a development formulation to improve Taman Baca services through digitizing the library system in the Department of Educational Management, Faculty of Education, State University of Surabaya in the form of a digital library "MP DigiLib". There is a process known as the Systems Development Life Cycle (SDLC), which can make the process simpler and more flexible, one of the additional aligned models is the Waterfall Model (Kramer, 2018). The use of this model is often used in developing software programs in various fields, such as in the military field in developing military defense system software by combining the Waterfall model with ISO/IEC/IEEE 29148:2018 (Jardim, et.al, 2020). In addition, specifically the model is also applied to the education sector, namely in pesantren education to build and develop a software application report process about students' academic and religious abilities (Rahayu, Susanto, & Suwarjono, 2020). Therefore, this model is considered suitable for developing digital libraries because it is flexible and simple. The development methodology framework in this study uses the Waterfall Model from Winston Walker Royce, which has 5 stages (Analysis, Design, Implementation, Testing, Maintenance), as follows:

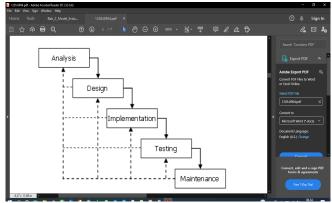


Figure 1. Waterfall Model by Winston Walker Royce (Bassil, 2012)

This study uses 2 (two) stages of the 5 (five) stages of the Waterfall Model above, namely Analysis and Design, because according to the purpose of this research, namely service improvement through a description of condition analysis and initial design of the "MPDigiLib" application in an effort to digitization of libraries in the Department of Educational Management. Based on the Waterfall Model stage chart above, it can be seen in detail the process, outputs, and achievement indicators as follows: Analysis (Analysis): in this analysis stage there are 2 (two) requirements, namely functional and non-functional in improving the Taman Baca service in the Department of Educational Management, Faculty of Education, State University of Surabaya. Functional requirements are use cases that describe the user's interaction with the software, including requirements such as purpose, scope, perspective, functionality, software attributes, user characteristics, function specifications, interface requirements, and database requirements that are imposed on the design and operation of software rather than on a specific behavior. This includes properties such as reliability, scalability, testability, availability, sustainability, performance, and quality standards.

Design: the design stage in improving Taman Baca services at the Department of Educational Management, Faculty of Education, State University of Surabaya, namely the planning and problem solving process for software solutions. This has implications for software developers and designers to define plans for solutions that include algorithm design, software architecture design, database conceptual schema and logical diagram design, concept design, graphical user interface design, and data structure definition. In this research, SLiMS (Senayan Library Management System) will be used.

RESULTS AND DISCUSSION

Results

Stage of Analysis (Analysis)

Based on the results of field analysis and content (data) owned by Taman Baca, Department of Education Management, Faculty of Education, State University of Surabaya, the condition of the Taman Baca field is currently in a state of disrepair due to the pandemic, so physically the room needs maintenance and cleaning. Meanwhile, in terms of the conditions of users of Taman Baca, based on the results of a joint evaluation between lecturers, education staff and students of the Department of Educational Management, Faculty of Education, State University of Surabaya at the "Departmental Dialogue and Discussion with the Department of Educational Management, Faculty of Educational Management, Faculty of Educational Management, Faculty of Educational Management, Faculty of Education Surabaya State University, there are many inputs from discussion participants to create a special Digital Library for the Department of Education Management, Faculty of Education, State University of Surabaya. This is expected to help students and other users easily find the expected library and minimize crowds in borrowing libraries at Taman Baca.

The results of the content analysis (data) obtained are in the form of rules and bibliography owned by Taman Baca, Department of Education Management, Faculty of Education, State University of Surabaya. The following are the differences in conditions before and during the pandemic at the Reading Gardens, Department of Educational Management, Faculty of Education, State University of Surabaya: Table 2. Analysis of the Condition of Taman Baca' Bafore and During the Pandemic

No	Aspect	Conditions Before the Pandemic	Conditions During a Pandemic
1	Taman Baca visit	10 students/day (average)	0 students/day (average)
2	Reference Circulation	4 references/day (average)	0 references/day (average)
3	Number of Titles	489 titles	489 titles
4	Number of Copies	735 copies	735 copies
5	Room Administrator	There is a picket by the management (the administrator is present)	There is no picket by the management (the administrator is present)
6	Condition of Facilities and Infrastructure	Air circulation is maintained (AC is on) and the arrangement is done periodically (1 week)	Air circulation is not maintained (AC is off), so that it damages the physical library and there is no regular arrangement

Table 2. Analysis of the Condition of 'Taman Baca' Before and During the	Pandemic
--	----------

While the library data owned by Taman Baca, Department of Educational Management, Faculty of Education, State University of Surabaya, amounted to 735 copies of 489 book titles, the majority of scientific literature in the field of Education Management and the rest varied (novels, magazines and newspapers) and other fields.

Stage of Design

At the design stage of a digital library application, the Department of Education Management FIP Unesa utilizes the SLiMS (Senayan Library Management System) platform, which is a web application developed by a team from the Information and Public Relations Center of the Ministry of National Education of the Republic of Indonesia. It was built using PHP, MySQL database, and Git version control. The initial design results are still in the localhost version (http://localhost/mpdigilib/) with the Bulian 9 version of the SLiMS application, assisted by other supporting applications such as XAMMP which is an open source web server application that can operate cross-platform (Windows, Linux). and MacOS). XAMMP is in the process of designing this application to run a web server and database on a localhost computer, so when you have an online website, XAMPP can help create an offline version of the website. The following is the initial appearance of the localhost version of the "MPDigiLib" design:

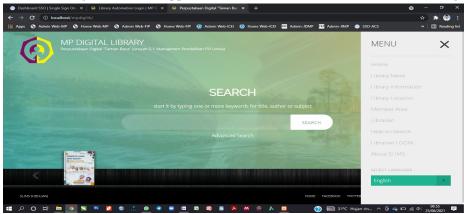


Figure 2. Home and Menu Display

In the "Menu" of the 'MP DigiLib' application there are several features, including: (1) Home: displays the MP Digilib homepage; (2) Library News: displays the latest news related to Taman Baca; (3) Library Information: displays the latest information related to Taman Baca; (4) Library Location: displaying information regarding the location of Taman Baca through digital maps and written addresses; (5) Member Area: displays a dialog box to login/login as a member of Taman Baca, there is a Member ID and Password; (6) Librarian: displays the data of the laboratory assistant or the management of the Reading Gardens; (7) Help On Search: displays instructions for using the "search" feature on the MP DigiLib Homepage; (8) Librarian Login: displays a dialog box to login/log in as a Laboratory Assistant or Reading Garden Manager, there is a Username and Password; (9) About SLiMS: displays a description of the MP DigiLib platform; and (10) Language: displays language features that can be selected by visitors, there are 14 languages and one of them is Indonesian. Meanwhile, here is the admin home page display (Laboran or Reading Garden Managernent Department of Education Management Faculty of Education, State University of Surabaya):

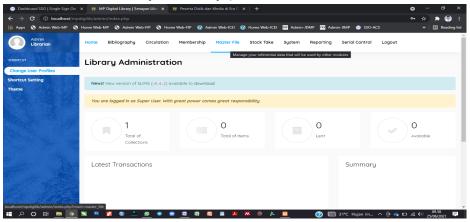


Figure 3. Admin Homepage Preview

In the admin homepage, there are several features, including: (1) Home: MP DigiLib admin homepage which displays a graph of library circulation and number of libraries; (2) Bibliography: displays a detailed list of libraries owned by MP Digilib, so that Laboratory Assistants can add new libraries through the "Add New Bibliography" feature; (3) Circulation: displays the circulation of borrowed and returned libraries using the Taman Baca membership ID; (4) Membership: displays a list of Taman Baca members; (5) Master Data: displays library and non-library classification codes in the MP DigiLib application; (6) Stock Take: displays the backup feature of the library database contained in the MP DigiLib application; (7) System: displays application settings and descriptions as well as conditions that can be set automatically; (8) Reporting: displays reporting features within a certain period related to circulation and processes that have been carried out in the MP DigiLib application; (9) Serial Control: displays the serial number monitoring feature from library and non-library; and (10) LogOut: displays the service for logging out as admin of the MP DigiLib application system. Based on the results of the design of the two contents above, the MP DigiLib application can be said to be ready to input library and non-library data owned by Taman Baca, Department of Education Management, Faculty of Education, State University of Surabaya.

Improving Reading Garden Services through Digitizing the Library System

The results of the analysis and design of the digital library have been realized in the "MPDigiLib" application in the localhost version and have been tested on each batch of 134 students, including the 2017 class of 0 students; Class of 2018 a total of 4 students; The 2019 batch is 54 students and the 2020 batch is 76 students. Application trials based on incidental sampling were carried out in conjunction with joint evaluation activities of the Department of Educational Management, Faculty of Education, State University of Surabaya on academic services every semester. The results of the evaluation through the instruments distributed by considering 5 aspects that are assessed according to the provisions of the study program accreditation, are as follows:

		Average score		
No	Aspect	Even	Odd	Even
		2019/2020	2020/2021	2020/2021
1	Reliability	3,3 (-)	3,0 (↓)	3,1 (↑)
2	Responsiveness	3,2 (-)	2,9 (↓)	3,0 (↑)
3	Assurance	3,2 (-)	2,9 (↓)	3,0 (↑)
4	Empathy	3,3 (-)	3,0 (↓)	3,0 (-)
5	Tangibles	2,9 (-)	2,8 (↓)	3,1 (↑)
	IKM Score	83,63	75,85	78,83
	Predicate	Very good	good	good

Source: (Department of Education Management, Faculty of Education, State University of Surabaya, 2021)

Table 3 shows that there are fluctuating values in 3 (three) semesters during the pandemic. In the 2019/2020 Even Semester, a score of 83.63 was obtained in the "Very Good" academic service category; there was a drastic decline in the 2020/2021 Odd Semester, which was to get a score of 75.85 in the "Good" academic service category due to government policies related to face-to-face restrictions that were switched to online (online) modes. While in the Even Semester 2020/2021 it scored 78.83 in the category of "Good" academic services, the increase in value was inseparable from the efforts of the Department of Educational Management, Faculty of Education, State University of Surabaya, which tried to transform all its academic services to digital (online).

Discussion

Analysis Stage

Based on the results of the field analysis and the content (data) it has, Taman Baca, Department of Educational Management, Faculty of Education, State University of Surabaya, has fulfilled the functional and non-functional requirements according to the Waterfall Model in Phase 1, namely Analysis. The field conditions gave many inputs to the Department of Education Management, FIP Unesa, to design a Digital Library to be one of the main solutions in providing quality services to Taman Baca users. This is in accordance with several research results which state that libraries have a great responsibility for improving, developing interests and hobbies in reading. This is motivated by the role and function of the library as a center for the development of E-CRM. Customer Relationship Management (CRM) is a strategy to obtain, consolidate, analyze data, and then use it to interact with customers (library users: students, students, teachers, lecturers, and the community), thereby creating a comprehensive view of customers and better relationship with customers (Afrina & Ibrahim, 2013).

Digital libraries are directed at improving the service process to customers with good quality and speed, as well as increasing the effectiveness and efficiency of library management, so that later it can facilitate the teaching and learning process (Dana et al., 2008). Therefore, based on an analysis of conditions before and during the pandemic, there was a drastic decrease in visitors and a challenge for the Department of Education Management FIP Unesa in providing library services for the academic community in the midst of a pandemic. On the other hand, the importance of digital libraries in this pandemic and industrial revolution era is a real demand for the importance of library digitization, especially in the Department of Educational Management, Faculty of Education, State University of Surabaya. Regarding the provision of digital library services, of course, it will be directly proportional to the satisfaction of users of Taman Baca, Department of Educational Management, Faculty of Education, State University of Surabaya, which will later make it easier to access libraries without having to visit Reading Parks directly, on the other hand reducing crowds and the emergence of crowds in the library. pandemic period.

Stage of Design

Based on the results of the initial design above, the "MPDigiLib" application already has a file house for libraries owned by the Department of Educational Management, Faculty of Education, State University of Surabaya totaling 735 copies of 489 book titles. With this initial design, it will be easier to input the library, because the features in the "MPDigiLib" application are available with complete rubrics for the bibliography of each existing library. In addition, the appearance of the application is simpler and easier to understand by potential users of the application. The ease of access and the attractiveness of the application will certainly increase the reading interest of users of the "MPDigiLib" application, this is also revealed in the research which states that not only as a library repository, the digital library that has been built does not only function as an information provider, but also a container that can accommodate the author's work. local (Prayitno & Safitri, 2015).

Meanwhile, in measuring the satisfaction and loyalty of users or library visitors, it is necessary to consider the convenience of visiting, library collections, accessibility and factors of the facilities owned by the library (Bae & Cha, 2015). In addition, digital libraries are directed at improving the service process to customers with good quality and speed, as well as increasing the effectiveness and efficiency of library management, so that later it can facilitate the teaching and learning process (Dana et al., 2008). On the other hand, accessibility and ownership factors of material and interior design facilities, reading space and user comfort factors of location and space, reliability and factors of active staff attitude and diversity, hours of operation and promotional factors of programs and services have a significant influence on satisfaction and use of public libraries. by residents (Noh & Chang, 2020). It can be concluded that in this design stage it will determine the quality of the digital library services that will be provided to users, because through the design of two page views for visitors and application

managers, it will be relevant to aspects of convenience, accessibility, completeness of the library and an attractive appearance of the application. increase reading interest and user satisfaction when using the "MPDigiLib" application.

Improving Taman Baca Services through Digitizing the Library System

Based on Table 3, it can be seen that there is a fluctuating value in the assessment of student satisfaction with academic services in the Department of Educational Management, Faculty of Education, State University of Surabaya during the pandemic. As for the pandemic period and the implementation of School From Home and Work From Home starting in the Even Semester 2019/2020, so that student satisfaction data is used in the Even Semester 2019/2020; Odd Semester 2020/2021; and Even Semester 2020/2021. However, from this fluctuating value, there are several aspects that have increased in the Even Semester 2020/2021, namely aspects of reliability, responsiveness, assurance and tangibles. It can be said that, in these four aspects, students felt a significant improvement when they received academic services. One of them is the tangibles aspect (educational facilities) which also measures the satisfaction of library facilities, Department of Educational Management, Faculty of Education, State University of Surabaya.

With the existence of a library digitalization system that is designed to have a significant impact and it can be said that there is an increase in academic services from the tangibles aspect (educational facilities). This is in accordance with the results of research which states that, in measuring the satisfaction and loyalty of users or library visitors, it is necessary to consider the convenience of visiting, library collections, accessibility and factors of the facilities owned by the library (Bae & Cha, 2015). Meanwhile, the accessibility and ownership factors of material and interior design facilities, reading space and user comfort factors for the location and space, reliability and active staff attitudes and diversity, hours of operation and promotion of programs and services have a significant influence on the satisfaction and use of public libraries by population (Noh & Chang, 2020). Studies in Nigeria also state that system quality, service quality and digital library information quality will affect satisfaction of the Department of Educational Management, Faculty of Education, State University of Surabaya has increased in 4 (four) aspects measured, one of which is the tangibles aspect (educational facilities) in which there is a digital library service (online) so that academic services continue to run even though even in a pandemic.

CONCLUSIONS AND SUGGESTIONS

Conclusion

Based on the results of the research and discussions that have been carried out, it is concluded that: (1) the condition of the Reading Park service, Department of Education Management, Faculty of Education, State University of Surabaya, before and during the Covid-19 pandemic, experienced a decrease in visitors, even during the pandemic there were no service visitors at all. Reading Gardens due to the implementation of Work From Home (WFH) and School From Home (SFH); (2) the design process has followed 2 stages of the 5 stages of the Waterfall Model from Winston Walker Royce, namely Analysis and Design, in the form of an initial display of "MP DigiLib" starting from the menu to the information content in the application by adjusting library and non-library data owned by Taman Read the Department of Education Management, Faculty of Education, State University of Surabaya; and (3) there is an increase in student satisfaction with academic services in the Department of Educational Management, Faculty of Surabaya, especially in the tangibles aspect (educational facilities) where there are library services that have been digitized.

Suggestion

The suggestions in this study include (1) for the Head and Head of the Laboratory of Education Management Department, Faculty of Education, State University of Surabaya, should provide socialization regarding access to online reading park services for students, lecturers, education staff and the public; (2) Lecturers should be able to take advantage of the online services of Taman Baca Department of Education Management, Faculty of Education, State University of Surabaya for selfdevelopment purposes, assisting in providing references related to research and community service; (3) For students, they should always use and maintain access to online services for Reading Gardens Department of Education Management Faculty of Education, State University of Surabaya for selfdevelopment purposes, assisting in providing references related to learning/lectures, research and community service by students; (4) For Other Researchers, they should develop or create digital library services, especially in the study of Library Management and Digitization at the Elementary and Secondary education levels based on the needs and conditions of the times so that the quality of educational services in educational institutions is getting better.

REFERENCES

- Afrina, M., & Ibrahim, A. (2013). Rancang Bangun Electronic Costumer Relationship Management (E-CRM) Sebagai Sistem Informasi Dalam Peningkatan Layanan Perpustakaan Digital Fakultas Ilmu Komputer Unsri. Jurnal Sistem Informasi (JSI), 5(2), 629–644.
- 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
- Arif, M., & Kanwal, S. (2013). Acceptance of Digital Library among Female Students and Effects of Limited Access of Digital Library on Their Performance in Research Work: A case of International Islamic University. *International Information & Library Review*, 41(3), 122–128. https://doi.org/10.1080/10572317.2009.1076 2806
- Bae, K.-J., & Cha, S.-J. (2015). Analysis of The Factors Affecting The Quality of Service in Public Libraries in Korea. Journal of Librarianship and Information Science, 47(3), 173–186. https://doi.org/10.1177/0961000614532483
- Bassil, Y. (2012). A Simulation Model for the Waterfall Software Development Life Cycle. *International Journal* of Engineering & Technology (IJET), 2(5), 1–7.
- Dana, T., Samosir, H., & Widiyasa, I. (2008). Pengembangan Digital Library Perpustakaan Universitas Atmajaya Yogyakarta. Seminar Nasional Informatika 2008 (SemnasIF 2008), 260–263. Yogyakarta: UPN "Veteran" Yogyakarta.
- Fatmawati, E. (2017). Pemanfaatan Aplikasi Perpustakaan Digital iJateng Melalui Smartphone. *Profetik Jurnal Komunikasi*, 10(2), 46–56.
- Februariyanti, H., & Zuliarso, E. (2012). Rancang Bangun Sistem Perpustakaan untuk Jurnal Elektronik. *Dinamik*, *17*(2), 124–132. Retrieved from https://www.unisbank.ac.id/ojs/index.php/fti1/article/view/1659
- Irkhamiyati, I. (2017). Evaluasi Persiapan Perpustakaan Stikes 'Aisyiyah Yogyakarta Dalam Membangun Perpustakaan Digital. *Berkala Ilmu Perpustakaan Dan Informasi*, 13(1), 37. https://doi.org/10.22146/ bip.26086
- Jardim, R. R. J., Santos, M., Neto, E., da Silva, E., & de Barros, F. (2020). Integration of The Waterfall Model with ISO/IEC/IEEE 29148:2018 for The Development of Military Defense System. *IEEE Latin America Transactions*, 18(12), 2096–2103. https://doi.org/10.1109/TLA.2020.9400437
- Jurusan Manajemen Pendidikan FIP Unesa. (2021). Indeks Kepuasan Mahasiswa Terhadap Layanan Akademik. Retrieved from http://mp.fip.unesa.ac.id/page/info-grafis
- Kramer, M. (2018). Best Practices in Systems Development Lifecycle: An Analyses Based on the Waterfall Model. *Review of Business & Finance Studies*, 9(1), 77–84.
- Maryati, I., Purwandari, B., Santoso, H., & Budi, I. (2020). Implementation Strategies for Adopting Digital Library Research Support Services in Academic Libraries in Indonesia. 2020 International Conference on Informatics, Multimedia, Cyber and Information System (ICIMCIS), 188–194. https://doi.org/10.1109/ ICIMCIS51567.2020.9354327
- Noh, Y., & Chang, R. (2020). A Study on The Factors of Public Library Use by Residents. *Journal of Librarianship* and Information Science, 52(4), 1110–1125. https://doi.org/10.1177/0961000620903772
- Prayitno, A., & Safitri, Y. (2015). Pemanfaatan Sistem Informasi Perpustakaan Digital Berbasis Website Untuk Para Penulis. *IJSE Indonesian Journal on Software Engineering*, *1*(1), 1–10.

- Rahayu, T. K., Susanto, & Suwarjono. (2020). Application Report Process Of Islamic School Based On Pesantren Boarding Using Waterfall Model. *Journal of Physics: Conference Series*, 1569, 022025. https://doi. org/10.1088/1742-6596/1569/2/022025
- Rodliyah, U. (2012). Perpustakaan Digital dan Prospeknya Menuju Resource Sharing. Visi Pustaka, 14(1), 39-47.
- Supriyanto, W. (2015). Pengembangan Sistem Layanan Perpustakaan Digital. *Libraria Jurnal Ilmu Perpustakaan Dan Informasi*, 4(1), 1–12.
- Umukoro, I. O., & Tiamiyu, M. A. (2017). Determinants of E-Library Services' Use Among University Students: A Study of John Harris Library, University of Benin, Nigeria. *Journal of Librarianship and Information Science*, 49(4), 438–453. https://doi.org/10.1177/0961000616653176
- WHO. (2020). Coronavirus. Retrieved from World Health Organizatiom website: https://www.who.int/health-topics/coronavirus#tab=tab_1
- Zhou, Q. (2005). The Development of Digital Libraries in China and The Shaping of Digital Librarians. *The Electronic Library*, 23(4), 433-441. https://doi.org/10.1108/02640470510611490