Journal of Technology and Computer (JOTECHCOM)
Vol. 1, No. 4, November 2024, pp. 45~49
ISSN: 3048-0477 (Media Online)

Implementation Of The Unified Approach Method In Design Of A Website Based School Information System SMK PAB 5 Klambir Lima School

Siti Farida[1], M. Furqon Siregar [2], Fahmi Ruziq[3]
[123] University of Battuta
[123] Faculty of Technology, Battuta University , Medan, Indonesia
[1] faridasiti307@gmail.com, [2] muhammad.furqon.srg@gmail.com, [3] fahmiruziq89@gmail.com

Article Info

Article history:

Received November 06, 2024
Revised November 07, 2024
Accepted November 07, 2024

Keywords:

Smartphone
Website
Intuitive and Dynamic

ABSTRACT

In the era of the times, all activities are done semi-online. In a sense, all activities can be done in 1 hand by utilizing technology (smartphone). Similarly, in presenting or explaining a product to the public, the delivery of information is not optimal if done with a paper presentation. It was found that the lack of maximum delivery of information to the public on products, or agencies that want to be introduced to the wider community. that you want to introduce to the wider community. This solution can be done by apply the technology of a website that is published to online media, mass media and other media. mass media and other media. It is hoped that with today's technology, the public can see whenever the information is disseminated. Information in the category of institutional profiles, new student admissions, and activities that are intuitive and dynamic. intuitive and dynamic.

Corresponding Author:

Siti Farida
University of Battuta
Email: faridasiti307@gmail.com

1. INTRODUCTION

In the era of rapid development of science and technology, especially information is now very fast spreading around the world. In line with this, the problems we face are also increasingly complex, namely in everyday life. in the daily field. With this fact, we are required to solve problems that exist by utilizing technological sophistication and speed, accuracy and accuracy in providing information so that in carrying out our work we will get optimal results. carrying out our work will get optimal results. One of them is the use of computer technology. Large data if done manually manually requires the labor of more than one person, then with computer equipment the data can be handled by just one person, and also with computer equipment. computer equipment, the data can be handled by just one person, and also with the use of a computer, it will be faster to complete. with the use of computers it will be faster to complete. With the ease of facilities provided by the computer will make it easier to making and delivering information to people in need. The information obtained from the internet also varies depending on the information needed by the user. information that the user needs. One of the information that we can information that we can obtain is the number of educational sites ranging from the general level (MI/MTs/MA) to the academic campus level. (MI/MTs/MA) to the academic campus level. [1]

SMK PAB 5 Klambir Lima still uses Brochures and Banners to promote the school, and announcements are also still posted on the mading. Therefore, with the development of this technological

advancement, SMK PAB 5 Klambir Lima needs to promote itself through an online-based systematic website on the internet. With a website, people can easily access and know everything about SMK PAB 5 Klambir Lima quickly without requiring a lot of time. The role of this website is also inseparable from the use of equipment that can overcome weaknesses that rely on human labor. Information about the school that information about schools that can be accessed by everyone through the internet gives the author an idea to create a school website that can provide information for its visitors. [2]

2. METHOD

This research utilizes both qualitative and quantitative approaches. The qualitative approach is used to analyze system requirements and design system architecture, while the quantitative approach will be used for system functionality testing. [3]

The method used by the author in analyzing the local computer network at SMK PAB 5 Klambir Lima is:

a. Observation (observation): Observation is direct observation. Observations were made by observing the existing infrastructure at SMK PAB 5 Klambir Lima. [4]

b. Discussion and Interview: Conduct discussions and interviews directly with network administrators, teachers regarding matters related to the object under review. [5]

c. Literature Study: To obtain theoretical data, namely by reading literature that is relevant to the observations made by the author. The author looks for references through books, journals related to the problems that the author raises. According to Thomas J. Kakiay (2004), in his book entitled Introduction to Simulation Systems, there are steps required, namely: [6]

A. Formulate the problem, determining what the actual problem will be. B. Define the System, checking and recording the unity or form (entity) of the problem. C. Using or not using simulation. D. Formulation Modeling, namely determining the formulation to be used. E. Data Retrieval, which describes the data collected in statistical form to create a simulation program. F. Program Writing, reviewing and paying attention to the computer language used in the simulation. G. Verification, is a step to find out whether the program is correct and in accordance with the desired simulation. H. Model Validation, is a step to monitor or check whether the model that has been programmed is original, appropriate and correct. I. *Experiment Design*, conducting experiments to get the accuracy of the simulation. J. Tactical Planning, used to plan the procedure for conducting experiments to facilitate their implementation. K.Experiment Implementation, is the implementation of the experiment that has been designed.L. Model Use, is a step to answer the question of whether the model that has been designed can provide correct and adequate results as expected.M. Documentation, is a step that states that the simulation model has been accepted and as expected. [7]

3. RESULTS AND DISCUSSION

This application is designed by implementing simple protection in the form of authentication with a password, although the scope of application users is very simple. This aims to minimize the possibility of other people who are not entitled to use this application carelessly, only admins can use this application. When the user first accesses this application, the system will always check in the session, whether the user has authenticated or not. If the user has not authenticated, the system will display the login form as shown below.

After the user has authenticated and authorized by the system, the page will be directed to the dashboard menu as shown below [8]

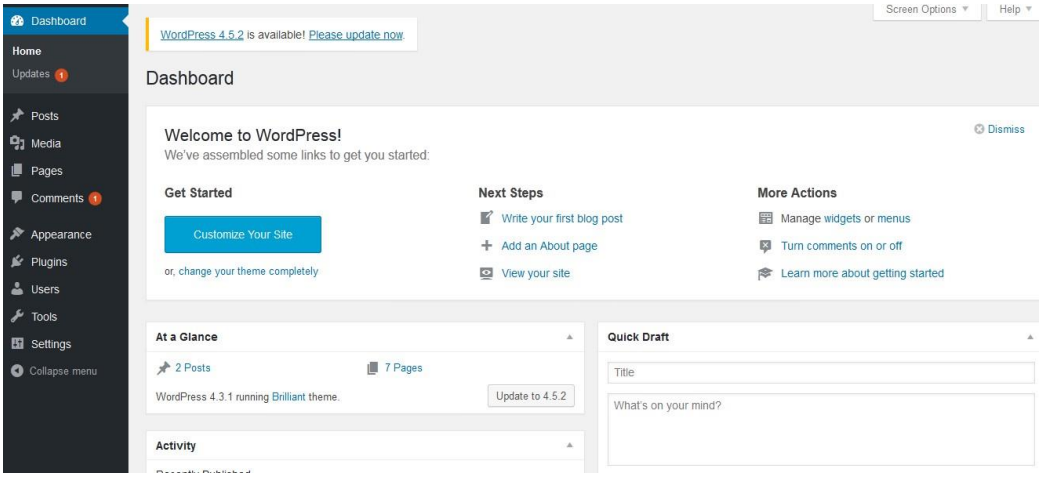

Figure 1. Dashboard view

Dashboard functions to edit the website program in your wordpress so that it appears more efficient and attractive may be seen to website visitors there. The website and database have been uploaded so that they can be accessed *online* using a media *browser* with the *url* address *:* https://smkspab5.sch.id/_, it will appear as follows: [9]

Figure 2. Home menu

The Activities menu on this web-based school information system is designed to provide information related to various upcoming, ongoing, or completed school activities. The main purpose of this menu is to enable students, teachers and parents to obtain information on school activities in a transparent and timely manner. The following are the main elements of the *Activity Menu* display: [10]

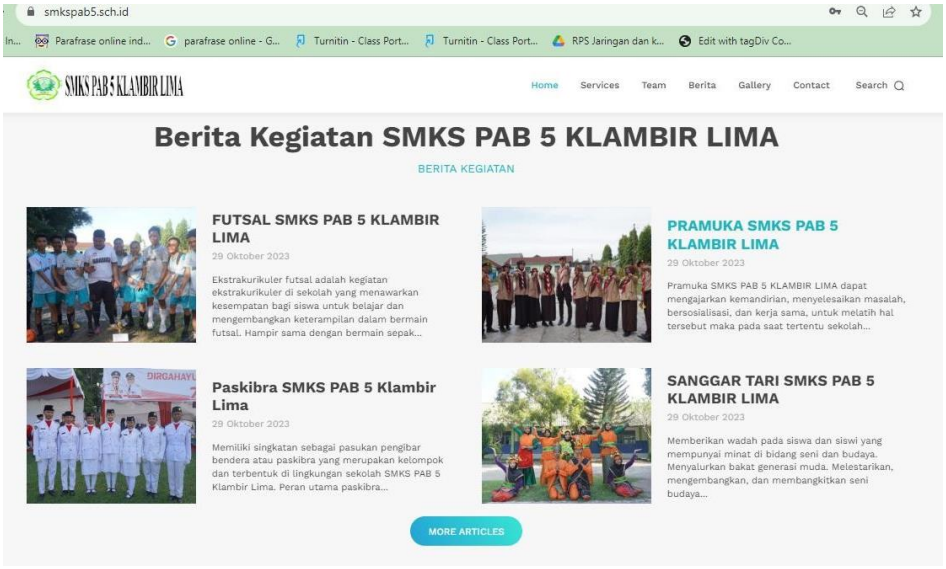

Figure 3. Activity Menu Display

Header and Menu Title: At the top, there is a header that displays the title “School Activities”. This title helps users to immediately understand that this page contains information related to various activities or events organized by SMK PAB 5 Klambir Lima. Activity List Display: Activities are displayed in the form of a vertical list or grid with each activity given a brief explanation. Each activity is equipped with a relevant *thumbnail* or image, activity title, implementation date, and activity location. This helps users easily search for relevant activities. Detailed Activity Description: For each selected or clicked activity, more information will appear, such as a full description of the activity, its purpose, participants involved, and the time of implementation. This detail page provides in-depth information for users to get a clear picture of the activity.

Categories and Filters: The Activities menu comes with category or filter options, such as “Academic Activities,” “Extracurricular,” “Competition,” and “Seminar.” Users can select a specific category to see the types of activities they are interested in, making navigation easier.

The facilities menu on this web-based school information system is designed to display information related to the various facilities available at SMK PAB 5 Klambir Lima. The purpose of this menu is so that students, parents, and prospective students can find out and understand the learning support facilities provided by the school. The following are the main elements contained in the *Facility Menu* display:

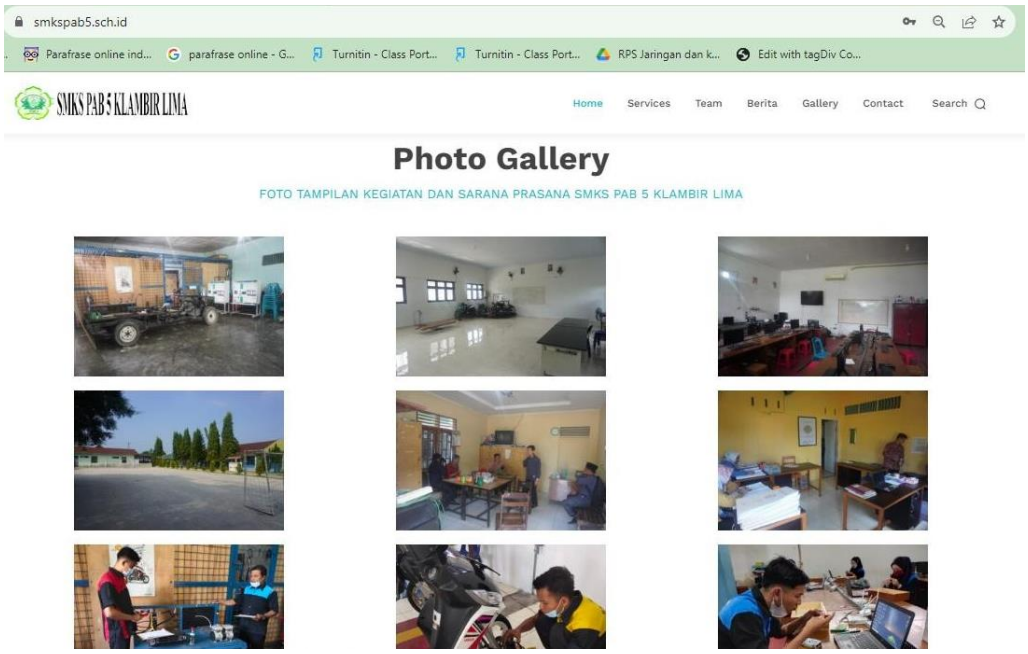

Figure 4. Facility menu display

Important Info is a feature on a web-based information system designed to display the latest announcements or information that is important to all school members, including students, teachers and parents. This feature is designed so that all parties can find out the latest information quickly and accurately.

By WA is a feature that allows users to communicate directly with the school through WhatsApp. This feature aims to increase interaction between the school and users, especially in asking for additional information or getting further assistance. The following are the main elements of the Important Info and *By WA* views:

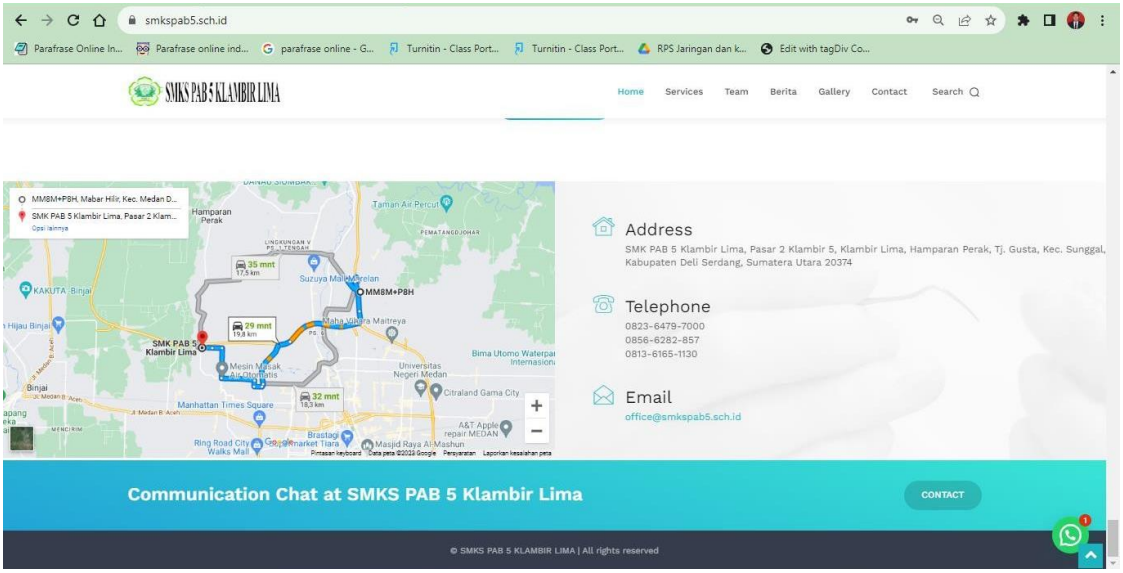

Figure 5. Important Info and By WA

4. CONCLUSION

This research successfully implemented the Unified Approach Method in the design and development of a website-based school information system at SMK PAB 5 Klambir Lima. The Unified Approach method applied, with stages including requirements analysis, system design, and implementation, is able to produce a system that meets the needs of schools in managing data and information in a structured and efficient manner.

With this website-based information system, various administrative processes, delivery of important information, and access to academic data can be done more quickly and transparently. The main features, such as the Activities Menu, Facilities Menu, Important Info, and By WA, support the communication needs between schools, students, and parents, and facilitate the dissemination of real-time information.

The test results show that the system has a user-friendly interface, responsive, and can be accessed well through desktop and mobile devices. This shows that the application of the Unified Approach in developing a web-based school information system is not only effective in design and implementation, but can also improve the efficiency and quality of school services as a whole.

REFERENCES

[1] D. D. S. Fatimah and I. M. Faizal, "Rancang Bangun Sistem Informasi Wedding Organizer Berbasis Web Menggunakan Metode Unified Approach," *Jurnal Algoritma*, vol. 18, no. 1, pp. 254–265, Nov. 2021, doi: 10.33364/ALGORITMA/V.18-1.841.

[2] D. D. S. Fatimah, Y. Paryatin, and N. Nurhasanah, "Rancang Bangun Sistem Informasi Pelayanan Administrasi Surat Desa Berbasis Web Menggunakan Metode Unified Approach," *Jurnal Algoritma*, vol. 18, no. 2, pp. 376–384, Jan. 2021, doi: 10.33364/ALGORITMA/V.18-2.842.

[3] E. Widianto and D. Kurniadi, "Rancang Bangun Sistem Informasi Manajemen Keuangan RT/RW Berbasis Web," *Jurnal Algoritma*, vol. 18, no. 1, pp. 246–253, Nov. 2021, doi: 10.33364/ALGORITMA/V.18-1.838.

[4] L. Wang, "Design and implementation of J2EE-based statement feature recognition in English teaching system optimization," *Systems and Soft Computing*, vol. 6, p. 200162, Dec. 2024, doi: 10.1016/J.SASC.2024.200162.

[5] D. Lv, Z. Xu, J. Zhang, Y. Wang, and F. Dong, "Imbalanced node classification with Graph Neural Networks: A unified approach leveraging homophily and label information," *Appl Soft Comput*, vol. 149, p. 110985, Dec. 2023, doi: 10.1016/J.ASOC.2023.110985.

[6] C. Itodo and M. Ozer, "Multivocal literature review on zero-trust security implementation," *Comput Secur*, vol. 141, p. 103827, Jun. 2024, doi: 10.1016/J.COSE.2024.103827.

[7] J. P. Rarugal and N. L. D. Sermona, "Development and Evaluation of Remote Learning Management System using Intranet Network for Hinterland Schools," *Procedia Comput Sci*, vol. 234, pp. 1633–1641, Jan. 2024, doi: 10.1016/J.PROCS.2024.03.167.

[8] S. Setiaji and R. Sastra, "Implementasi Diagram UML (Unified Modelling Language) Pada Perancangan Sistem Informasi Penggajian," *Jurnal Teknik Komputer*, vol. 7, no. 1, pp. 106–111, Feb. 2021, doi: 10.31294/JTK.V7I1.9773.

[9] E. Nirmala, "Rancang Bangun Sistem Informasi Karyawan Berbasis Web Di Pt Mustikarama Citraperdana Dengan Metode Rational Unified Process (RUP)," *Journal of Research and Publication Innovation* , vol. 2, no. 2, pp. 1539–1547, May 2024, Accessed: Nov. 06, 2024. [Online]. Available: https://jurnal.portalpublikasi.id/index.php/JORAPI/article/view/809

[10] A. Biahdilah and Y. Septiana, "Rancang Bangun Aplikasi Rekam Medis Berbasis Web," *Jurnal Algoritma*, vol. 17, no. 2, pp. 361–367, Feb. 2020, doi: 10.33364/ALGORITMA/V.17-2.361.