

Improvement of Education Services and Financial Records in Islamic Boarding Schools Using Android Applications

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ABSTRACT: *This study aims to analyze the needs, development and implementation of the use of android applications in improving educational services and financial records in Islamic boarding schools. The case study was conducted at the Al Istiqomah Islamic Boarding School, Jombang. System development using the prototyping method to ensure that the application is made in accordance with the needs of potential users before being implemented. The results of the study show that the development of the Android application can improve the education services of the boarding school for students who cannot attend directly at the boarding school and as well as online financial recording can increase financial transparency for administrators both who live in the boarding school and those who do not live in the boarding school.*

Keywords: *educational services, finance, Islamic boarding schools, android.*

1. INTRODUCTION

Islamic boarding schools as Islamic educational institutions have an important role in producing a generation with noble character. However, challenges in administrative and financial management are often obstacles. The al istiqomah Islamic boarding school is located in the middle of a residential area and is one of the sources of religious studies. Both by local residents and immigrant students. Since its inception, the al istiqomah Islamic boarding school has grown quite rapidly. This is evident from the number of students who continue to increase every year. Where currently hundreds of students. They come from various regions, ranging from Jombang, to outside Java. Many students go to the Islamic boarding school directly, there are also students who are not in the boarding school, this is usually because they have a family or have worked outside the area but still have the desire to learn from the kiai at the Islamic boarding school. Some Islamic boarding school administrators also do not live in the boarding school. They carry out their duties by coordinating with each other through WhatsApp messages to arrange recital activities and monitoring financial records of Islamic boarding schools, especially for recording pondok income from account transfers.

The number of administrators in the boarding school, students who are not in the boarding school, there is often a miscommunication between the boarding school administrators both regarding the schedule of reciting the boarding school and financial records. The use of technology, especially Android applications, can be a solution to improve distance learning services, and transparency in the management of Islamic boarding schools.

2. METHOD

2.1 Data Collection

This method can be in the form of interviews, observations, or document analysis to collect preliminary data about the information system needed.

2.2 Application Development Methods

Application development using the prototyping method involves an iterative approach in which a prototype or initial version of an application is built, evaluated, improved, and expanded over and over again. The goal is to better understand and describe the needs of users, as well as ensure that the final application meets the actual expectations and needs (Mubarok et al., 2015). Here are the steps in app development using the prototype method:

1. **Needs Determination:** Identify the needs and goals of the application by engaging users, stakeholders, and the development team. Understand the functional and non-functional requirements that the app must meet.
2. **Prototype Design:** Initial prototyping that reflects the concept and key features desired in the application. This design doesn't have to be perfect, but it should be enough to give an idea of how the app will work.
3. **Prototype Development:** Start developing prototypes based on the initial design. Focus on the key features and the most important elements. It may involve programming, user interface creation, and basic functionality.
4. **Prototype Testing:** Test prototypes that have been built by involving users and stakeholders. Evaluate the prototype to identify strengths and weaknesses. Get feedback on functionality, design, and whether user needs have been met.
5. **Revisions and Improvements:** Based on the feedback from testing, make improvements and changes to the prototype. Add new features or improve existing ones according to user feedback.
6. **Iteration:** Repeat steps 3 through 5 several times, resulting in additional iterations of the prototype. Each iteration should be a better version and closer to the final vision of the application.
7. **Launch and Maintenance:** After successful testing, launch the app to users or production environments. Keep an eye on and update the app as needed as time goes by.

The advantages of the prototyping method include the ability to adapt to changing needs, reduce the risk of mismatch between expectations and the final result, and involve users throughout the development process. However, there are also some challenges such as requiring more time and resources in the initial phase, as well as requiring effective communication with users and development teams.

3. RESULTS AND DISCUSSION

3.1 Application Development

This research uses the basis of prototype model development. The following is the flow of analysis and application development of the Al Istiqomah Islamic Boarding School.

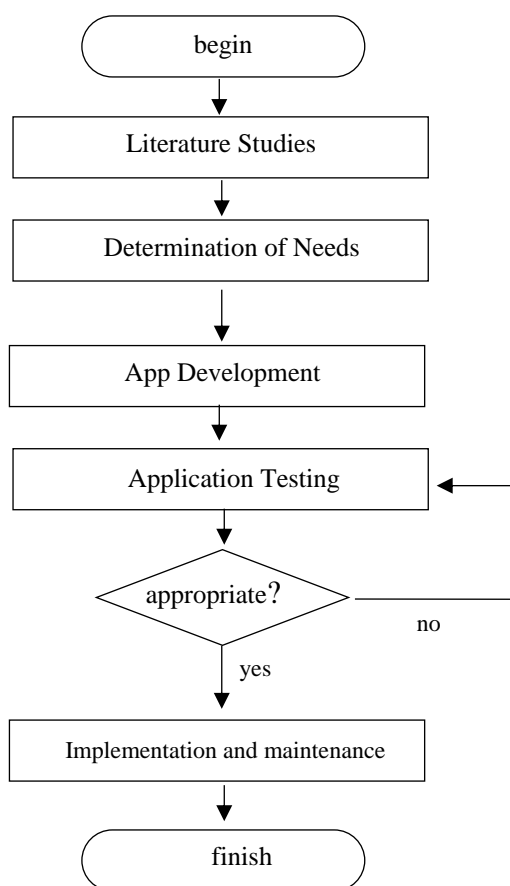


Figure 1. Application development flowchart

From figure 1 it shows that the development of the Al Istiqomah Islamic Boarding School application begins with a literature study, the literature study is used to find journals that contain similar applications developed in schools and Islamic boarding schools to be adopted for their advantages, so that it is expected to increase the value of the benefits of the application to be made. The literature study stage also determines what layout and support system will be created, so that it can be used comfortably by potential users.

The next step is to determine the needs or facilities that will be embedded in the application, this determination of needs is carried out by an interview process with kiai, administrators and students. This is done so that the application developed can adjust to the needs of potential users. To facilitate understanding to potential users about the application that will be created, the application design is made using an image template with a description of each form and button. Based on the results of the needs analysis, the application made has the following facilities:

- a. Registration of students from outside the cottage
- b. Registration of administrators (by admin)
- c. Dawuh Kyai (message from Kyai)
- d. E-learning (distance learning, zoom link, youtube, pdf file file)
- e. Ceremony (gallery of cottage activities)

- f. Student forum (question and answer or discussion by students)
- g. Donation
- h. List of activities (annual, monthly, weekly, incidental)
- i. Social Media and Admin Contact.

The 3rd step is application development, android applications are developed with the java programming language, on the server side using PHP for API creation and MySQL as the database. Android studio IDE development to make app development easier. Server setup is also done at this stage to ensure that the functions of the application can run smoothly.

Application testing is carried out after *the coding* is done, testing the prototype with users and stakeholders. This test is carried out to get feedback on the design, functionality, and adequacy of features. The test consists of each menu, form, button function and information system security created. This test is also carried out to get an evaluation of the feedback from the test. Improvements to the prototype are made based on the feedback received.

After several times of testing and improving the application, the next step is socialization and implementation to the parties who will use this application. After being implemented in the work environment, performance monitoring and user feedback are carried out. Maintenance is carried out by looking at data integrity, *server health*, and *logs*. Regular maintenance is carried out to ensure that the system runs smoothly as expected.

3.3 Application Interface

The following is the display of the Al Istiqomah Islamic Boarding School application that has been made.

1. Dashboard page and Dawuh Kyai menu



Figure 2. Dashboard



Figure 3. Menu Dawuh Kyai

The dashboard is shown in figure 2 with the main menu of Dawuh Kyai, E-learning, ceremony and forum. Donation menu, cottage events, weekly events, monthly and annual events. User profile menu as well as financial report menu that is only available to administrators. For Dawuh Kyai (picture 3) can only be filled by kyai or administrators by writing pearls from kyai, on this menu students can give comments.

2. E-learning menus and forums



Figure 4. Fill in the e-learning menu



Figure 5. Menu Forum

Figure 4 shows the content of e-learning, e-learning is filled in by the boarding school management who is in charge of conducting live recitation from inside the boarding school which is broadcast live via zoom meeting or youtube. E-learning can also be done by uploading pdf if there are study materials in the form of files.

The Forum menu (picture 5) is used by students to discuss daily problems encountered. Kiai, administrators and other students can also give responses according to the topics discussed.

3. Donation Menu and Financial Reports



Figure 6. Fill in the donation menu (transfer confirmation)



Figure 7. Financial statements (manager)

The donation menu displays a list of pondok accounts, people who have donated can confirm to the management about the funds that have been donated. While figure 7 contains the financial statements of the cottage, the special financial statements are viewed and input by the management of the cottage. Reports can be in the form of income (cooperative income, donation reports, government assistance, etc.) or cottage expenses such as the purchase of groceries, construction, etc. Financial statements can be downloaded in excel format on the download menu on the top right.

4. Event Menu



Figure 8. Annual Events



Figure 9. Weekly Events

The event menu (Figure 8 and Figure 9) shows a list of activities at the Al Istiqomah Islamic Boarding School. The event was inputted by the management of the cottage. Some events are held offline and online.



Figure 10 of the user profile menu

In the profile menu (figure 10), users can change their address, phone number or password. Especially for administrators, they can see the list of application users and add new administrators and new students who will use this application.

3.4 System Implementation

Before the system is used, the application is first tested by prospective users, prospective users receive training in using the application online. Q&A about the functions of the application according to *the request*. After the training, the system is ready to be applied to the Al-Istiqomah Islamic Boarding School.

During the use of the system, system monitoring and maintenance are carried out by the developer to ensure that the application runs as expected. In monitoring during the use of the system, the system can run well and there are not many problems. Distance education can be carried out well, students can find out the schedules of cottage activities, conduct questions and answers directly, only the problem of network connection is difficult for students who live far from urban areas such as from the islands of Sumatra and Papua.

For the recording of financial statements to be done properly, the management can monitor income and expenses directly without the need to wait for written reports from other administrators.

4. CONCLUSION

The application development results show that the Android application development was successful. The Islamic boarding school Android application can improve Islamic boarding school education services for students who cannot be present directly at the boarding school and the recording and monitoring of Islamic boarding school finances can be done quickly and in real time. Management can make incoming and outgoing reports for administrators both those who live in the cottage and those who do not live in the cottage.

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