The Development of Administrative System Based Microsoft Access 2016 (SIAMAR PONTREN) in Islamic Boarding Schoolat Malang City

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Abstract

This development and research aim to produce applications for archiving storage of incoming and outgoing mail. The name of the application is SIAMAR PONTREN. The research was conducted at Al-Ishlahiyah Islamic Boarding School, Malang City. The type of research method used is Research and Development. This research uses quantitative and qualitative data. Quantitative data were obtained from the results of media validation questionnaires and user trials. Qualitative data were obtained from suggestions and comments provided by media expert validators and users. The results of the evaluation of quantitative trials that have been managed show that 83% of the products are feasible to be tested. And 95% of the quantitative results show that the product is effective.

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Malang Şehrindeki İslami Yatılı Okulunda Yönetim Sistemine Dayalı Microsoft Access 2016'nın (SIAMAR PONTREN) Geliştirilmesi

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Öz

Bu geliştirme ve araştırma, gelen ve giden postaların depolanması için arşivleme uygulamaları üretmeyi amaçlamaktadır. Uygulamanın adı SIAMAR PONTREN'dir. Araştırma, Malang Şehri, Al-Ishlahiyah İslami Yatılı Okulu'nda yapıldı. Kullanılan araştırma yöntemi türü Araştırma ve Geliştirmedir. Bu araştırma, nicel ve nitel verileri kullanır. Nicel veriler, ortam doğrulama anketlerinin ve kullanıcı denemelerinin sonuçlarından elde edildi. Nitel veriler, medya uzmanı doğrulayıcılar ve kullanıcılar tarafından sağlanan öneri ve yorumlardan elde edilmiştir. Yönetilen kantitatif denemelerin değerlendirmesinin sonuçları, ürünlerin% 83'ünün test edilmek için uygun olduğunu göstermektedir. Kantitatif sonuçların% 95'i ise ürünün etkili olduğunu gösteriyor.

INTRODUCTION

Islamic boarding schools are one place that cannot be separated from intellectual social discourse in Indonesia. Islamic boarding schools are Islamic educational institutions that lead to national education (Amri et al., 2017). The existence of Islamic boarding schools that have been scattered in various parts of the country is a form of the process of developing the education system in Indonesia (Budiyanto & Machali, 2014). Islamic boarding schools today do not only discuss religion, but also encourage students to take part in the development and progress of the world (Wekke & Hamid, 2013). As a national educational institution that has contributed more than one year, Islamic boarding schools have been known to have distinctiveness and authenticity (indigenous) in the education system (Majid, 1997).

Based on the 2020 EMIS database, the number of Islamic boarding schools in Indonesia currently was around 30,143 boarding schools along with the number of santri 4,462,251 (EMIS data, 2020) consisting of resident and non-resident santri. The total students mentioned above do not include students who have finished their studies or are called alumni. Seeing a large number of Islamic boarding schools in Indonesia, Islamic boarding schools certainly have an extraordinary influence on the development of the education system in Indonesia. Therefore, it is not surprising that Indonesia is referred to as the home of the largest Islamic education system in the world where this can be seen from thousands of Islamic boarding schools or madrassas that exclusively serve educational needs (Islam Asadullah, MN, & Maliki. (2018). Indonesia also including regional belts stretching from North and West Africa to South and Southeast Asia, including countries such as Egypt, Nigeria, Pakistan, Afghanistan, and Bangladesh, where the madrasa education system is developing ((Anzar, 2003); (Atran et al., 2008); (Asadullah, 2018); (Coulson, 2004); (Zaman, 2007); (Van Bruinessen, 2008); (Izama, 2014)).

However, back in its long and traditional history, the average system used in Islamic boarding schools still uses a lot of manual systems, both in organizational systems, teaching systems, learning systems, and administrative systems. With the development of the current era, it can be seen that boarding schools have begun to implement systems that are modern and equal in world civilization. This is caused by the development of science and technology (science and technology) so that it demands both government and private organizations to utilize these developments in the implementation of the work of an organization (Battaglia et al., 2017).

The current industrial revolution 4.0, of course, a pesantren is faced with enormous challenges. Islamic boarding schools must be able to keep up with the demands of the rapidly growing era. As the boarding school travels today, it can be seen that the output of the boarding school can play a role in the government and society. As a partner of the government and also has a role in society, the pesantren needs to develop and change as a form of adaptation to the modern world. This shows the life of pesantren is no longer considered static and stagnant. The dynamics of boarding school life have been proven by the involvement of active participation in giving roles to the community and many other aspects of life that accompany it (Wirawan, 2019).

Indeed, the development of science and technology (science and technology) can provide support for each agency to compete to improve the system used (Giannopoulou et al., 2019). But not all agencies can meet the competition. One of them is that the system found in Islamic boarding schools still uses a lot of manual systems including the administration system. This can be proven in the system in the Salafiyah Putri Al-Ishlahiyah Islamic Boarding School in Malang, especially in the administration system of storing incoming and outgoing mail. By

running a manual system, there are often several obstacles. Not finding the archive when needed again, it is one example that often occurs. Resulting in a lack of effective performance. Meanwhile, the success of archive management will appear to be successful if an archive can be recovered along with information related to the archive (Engelman, 2019); (Barthelemy et al., 2018).

Based on the influence of Islamic boarding schools on the development of national education and the importance of records for an organization as well as the various impacts of archiving problems that may arise from conventional filing systems, the electronic filing system for an Islamic boarding school becomes important and interesting to study for application in an organization including in boarding school (Fenton, 2006). Azmi & Aziz (2015) said in their research that improving the quality and use of electronic administration must be sustainable and must be supported by the government. Letkowski (2014) mentioned in his research, using Microsoft Access-based applications has an influence on the system, namely, further improving the quality of the system structure and making it easier for users to understand it. Dozeman et al. (2015) also stated in their research, using Microsoft Access as a system for collecting data and archives in recertifying doctors, sending faxes, etc. can increase 75% of the time efficiency in the process. Churiyah & Wulandari (2020) reported in the results of international conference proceedings that using Microsoft Access in the village administration system that could improve the effectiveness of performance. Therefore, researchers need to conduct research and development in Islamic boarding schools by using the Microsoft Access program. So, this article aims to produce an administrative system for storing incoming and outgoing mails based on Microsoft Access 2016 to improve and facilitate the storage of records in the Salafiyah Putri Al-Ishlahiyah Islamic Boarding School in Malang. The product that has been produced is a product that has been tested for eligibility by a validator and tested for effectiveness by the user.

RESEARCH METHODS

Figure 1. Application Development process

This type of research is a Research and Development method which consists of eight steps, namely (1) Preliminary Research and Information Collection, this initial step aims to obtain data on potentials and problems that exist, in the object of research. The method for obtaining data is by interviewing Secretary I and Secretary II as product users, observing and documenting studies at the Salafiyah Putri Al-Ishlahiyah Islamic Boarding School Office (2) Planning after the researcher obtains data on potentials and problems, the researcher carries out

planning that is designing system that can support the running of the existing administration system in the boarding school (3) Product Design, administration system for storing incoming and outgoing mail is designed using Microsoft Access 2016 (4) Design Validation, this step was carried out by the validator of the media expert. The results of this design validation are used as a basis and reference for revising the product design. (5) Design Revision, from the results of the validation that has been done, it can be known weaknesses and weaknesses of the product, so that researchers can find out information on the parts that need to be revised through the results of the questionnaire used. has been filled by media experts. (6) Usage Trial, this stage is conducted on two users, namely Secretary I and Secretary II. (7) Product Revision, product revision refers to the questionnaire, comments, and suggestions that have been given by the user or secretary at the product trial stage (8) Final Product, in this research and development the final product produced is an application in the form of an administration system for incoming mail storage and outgoing mail using Microsoft Access 2016, then the application is named SIAMAR PONTREN. The outputs of research and development are in addition to the SIAMAR application and guidebooks, there are HKI, along with international published journals.

RESEARCH RESULTS AND DISCUSSION

SIAMAR PONTREN Application (Administration System for Entering and Exiting Letters for Islamic Boarding Schools)

The administration system that was produced was an administration system for storing incoming and outgoing letters, named SIAMAR PONTREN. The application was designed using Microsoft Access 2016 software and the application simply runs offline, which does not require an internet connection. SIAMAR PONTREN application has several menus namely, (1) Login Menu, i.e. when the application was opened, a login menu will appear and in welcome screen to fill in the id user along with the password.

Figure 2. SIAMAR PONTREN Application Login Menu

When the id user and password were correct it will enter the next window, namely (2) Home Menu, in the home menu there are several buttons, including the button (a) Add Outgoing Mail Archives, when archiving incoming mail, then enter the menu add mail archive enter the menu the format of incoming letters or what has been called the disposition sheet, namely Number, Letter Number, From / To, Sender's Address, Letter Date, Date Received, Subject, Information, Archive, and Archive. After all, the letter formats are filled in and the proof of the letter in the form of photos or scanners is inputted, click the button next to the

format, Add Archive, then Save Archive and if there is an error then click Delete Archive. (b) Add Incoming Mail Archives, when you want to add an archive of outgoing documents, then click the button to add outgoing mail archives as well as add inbox of incoming mails, where dispositions or formats for outgoing letters will appear, including Number, Letter Number, From, Address Address, Date of Letter, Date Received, Subject, Description, Archives, and Archive. After all, the letter formats are filled in and the proof of the letter in the form of photos or scanners was inputted, click the button next to the format there are buttons Add Archive, Save Archive and Delete Archive (c) Incoming Letter Recap, which contains all the special recapitulations for incoming letters which are automatically filled when the disposition sheet was filled in and proof of letter was inputted. (d) Outgoing Letter Recap, the same as the incoming letter recap which contains all the special recapitulations for outgoing letters that are automatically filled when the disposition sheet was filled in and the letter was inputted. The home menu can be seen in the Figure below:

Figure 3. SIAMAR PONTREN's Home Menu Application

Based on the results of the validation, it can be concluded that there are several advantages of the administration system for storing incoming and outgoing mails, namely, a change from a manual system to a computerized system so that it can expedite the performance process and produce an effective and efficient system (Fenwick & Brownstone, 2002). In the SIAMAR application, there is already a format and identity menu, both incoming and outgoing letters (Fenwick & Brownstone, 2002). The sequence number will be filled in automatically (Habiburrahman, 2016) when the data is inputted. Also, the SIAMAR application can provide solutions to problems that exist in the previous system, namely the presence of an evidence input feature (Kallberg, 2012). The system was run offline (Rifauddin, 2016).

Besides having advantages, of course, a product in the SIAMAR PONTREN application having disadvantages, including a system that only accommodates incoming and outgoing mail storage. If the archive has been saved and added then when the data is deleted the number entered in the agenda book cannot be changed. This means that when the data entry letter archive number 9 was deleted then when filling out the next data is number 10.

As a result, from testing the use of the product, the secretary agreed if the application of SIAMAR PONTREN was applied at the Salafiyah Putri Al-Ishlahiyah Islamic Boarding School office for managing the storage of incoming and outgoing mail archives, because the SIAMAR

PONTREN application was considered more effective than storing archives and recovering records manually.

Feasibility and Effectiveness Test Results

Based on the results of the validation done by media experts, the administration system for storing incoming and outgoing mails based on Microsoft Access 2016 (SIAMAR PONTREN) was declared "Feasible" to be tested by users.

Table 1. Qualitative Data on the Results of the Media Validation Questionnaire

Indicator	Ideal Score (xi)	Obtained Score (x)
The attractiveness of the first appearance of the application	5	3
The attractiveness of the application content display	5	4
The attractiveness of the application icon used	5	3
Appropriate font / letter combinations in the application	5	5
Matching color combinations in the application	5	3
The accuracy of the menu settings in the application	5	5
Completeness of menus in the application	5	4
Inter-relationship between the menu	5	4
Ease of accessing the menu presented on the application	5	5
Ease of data entry	5	5
Ease of editing if there are errors when entering data	5	5
Ease of storing outgoing or incoming mail by using the application	5	4
Ease in overcoming the problems of previous outgoing and incoming mail storage systems	5	4
Data security in the application	5	4
The accuracy of the data in the application	5	4
Total	75	62

(Source: Results of the Media Expert Validator Questionnaire, 2019)

$$\begin{aligned}
 \text{Percentage} &= \frac{\sum x}{\sum xi} \times 100 \% \\
 &= 75/63 \times 100 \% \\
 &= 83\%
 \end{aligned}$$

Table 2. Qualitative Data Results Suggestions and Comments on the Media Expert Questionnaire

No	Validator Name	Comments and Suggestions
1.	Andi Basuki, S.Pd., M.Pd.	1. Display home color need changing, do not use dark colors. Use bright colors 2. The icon must match the function of the icon 3. Between background colors and text, change to contrast so that become clearer

(Source: Results of the Media Expert Validator Questionnaire, 2019)

The results of the calculation of quantitative and qualitative data assessments conducted by the media expert validator of SIAMAR PONTREN using Microsoft Access 2016 amounted to 83%. The results of the quantitative assessment stated that SIAMAR PONTREN application products were "Feasible". Thus it can be concluded that the product was worth testing out to users or secretaries.

Table 3. Results for Filling Product Trial Questionnaire

Indicator	Ideal Score (xi)	Achievement Score I (x)	Achievement Score II (x)
I am interested in the administration system application developed	5	5	5
I am interested in the first appearance of the administration system for storing out going and incoming mail	5	3	4
I am easy to study menus Which is presented in the application	5	5	5
I can easily understand the language/terms used in the application	5	5	5
I can easily enterout going mail data using the application	5	5	5
I can easily enterin coming mail data using the application	5	5	5
I can easily edit data if there are errors when entering data using the application	5	3	3
File storage as anarchive using this applicationis easy to do	5	5	5
I was greatly helped by the system for storing out going and incoming mails	5	5	5
The data contained in this applicationis stored better and safer	5	5	5
This application fits the current needs	5	5	5
This application is under the archiving system that applies to Islamic boarding schools	5	5	5
This application is very use ful formail storage activities in Islamic boarding schools	5	5	5
Correspondence activities using thi sapplication are more efficientan deffective than using the previous method	5	5	5
This application can provide a good solution for archiving letters from a previously manual system	5	4	5
Score	75	70	72
Total Score	150	142	

(Source: User Validator Questionnaire Results, 2019)

$$\begin{aligned}\text{Percentage} &= \frac{\sum x}{\sum x_i} \times 100 \% \\ &= 142/150 \times 100 \% \\ &= 95\%\end{aligned}$$

Table 4. Qualitative Data Results Suggestions and Comments on User Questionnaire

No	Validator Name	Comments and Suggestions
1.	Jaza Al-Aufa	1. The initial appearance of the application should be more attractive 2. Added log out and editing tools
2.	Viana Rahmawati	1. Display home was medium maybeen larged 2. The "Return to Main Menu" button is replaced by "Home" for the effective use of sentences.

(Source: Results of the Media Expert Validator Questionnaire, 2019)

CONCLUSIONS

This research and development resulted in an administration system for storing incoming and outgoing mails based on Microsoft Access 2016. Furthermore, the product was named SIAMAR PONTREN. The administration system for storing incoming and outgoing mail or SIAMAR PONTREN based on Microsoft Access 2016 was an application compiled using the Microsoft Access 2016 program specifically used for the administration of archiving incoming and outgoing mail. The SIAMAR PONTREN application was run without using an internet connection. In SIAMAR PONTREN application, there are several menus namely, (1) Login Menu, (2) Home Menu, in the home menu there are several buttons, including buttons (a) Add Outgoing Mail Archives, (b) Add Archives Inbox, (c) Incoming Letter Recap, (d) Outgoing Letter Recap. Based on the results of the validation of media experts and application users, SIAMAR PONTREN was feasible and effective to be applied in Islamic boarding schools or other institutions. This system has several menus that support records management electronically. Besides, based on the results of product trials on the secretariat of the Salafiyah Putri Al-Ishlahiyah Islamic Boarding School, it was considered effective to implement because this system was considered to be able to improve the performance results of the secretaries. Storage was faster and also safer. Likewise, with the discovery of the archive again, very fast to do.

Remembering the very large role and influence of Islamic boarding schools on the development of education in Indonesia, similar research is also very important to do. So that, regular research in Islamic boarding schools can improve the quality of Islamic boarding schools and also the output from Islamic boarding schools can compete and take part in the progress of education in the country and the world.

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