

DEVELOPING WEBSITE-BASED SCHOOL FINANCIAL ADMINISTRATIVE MANAGEMENT SYSTEM DURING COVID-19 PANDEMIC

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ABSTRACT

The development of technology and information these has gone rapidly and significantly. This development offers abundant benefits for human being to complete their responsibilities and tasks. In the current 21st century, the development will continue to progress and it seems unstoppable until several years ahead. This research and development aims at producing a website-based school financial administrative system. The system developed was validated by a media expert and was trialed to the users. In addition, it also examined the effectiveness of website-based school financial administrative system to support the tasks of school staffs in managing school financial matter during current Covid-19 pandemic. This research employed a research and development model suggested by Borg and Gall which was modified into seven stages as follows: (1) Initial observation and collecting information; (2) planning stage; (3) initial development of system; (4) validation and product trial; (5) revising; (6) field trial; (7) finalizing product. The data were collected through questionnaire to school principal, school treasurer, and parents. The data obtained were analyzed by calculating the average score and it were categorized based on the validity degree. The results of validation and field trial confirm that the system developed is feasible and proper to be used by school to support the management of school financial administration during Covid-19 pandemic. This was able to facilitate school financial services during the Covid-19 pandemic where the PSBB (Large-Scale Social Restriction) policy was being implemented. In addition, this research and development also supports government policies in efforts to digitize administrative and financial services in school.

Keywords: Covid-19 pandemic, educational administration, school financial administration, Website.

INTRODUCTION

At present, the advancement of technology and information science is increasingly growing. The goal of this development is to make it easier for humans to perform their responsibilities and needs. In an organization, both in the context of education, governance, and the private companies, the very rapid advancement of technology and backed by sufficient human capital enables certain activities operate effectively and efficiently (Casco & Montealegre, 2016; Gupta, 2006). In the 21st century, it is believed that technology and information development will continue to evolve exponentially and that the saturation point will not be noticeable until the next few decades (Darmawan & Permana, 2014; Doherty, 2016). One of the latest technological advancements involves the advancement of information technology for data processing. Currently, according to what is needed and necessary, a type of information and data can be generated and can be used to develop it. The achievement or failure of technology and knowledge production really relies on human capital within it (Tohidi, 2011; Winarno, 2014).

The development and use of information technology, particularly in the use of computer technology, is also a matter of concern for education field, especially for schools. Various school programs can be integrated into a system which uses a computer and a website-based school payment information system is one of these programs. Some educational institutions nowadays attempt to advance the use of computer to help complete the work. This is because computers are regarded as a tool for data management that produces reliable, quick, and precise information that assist an organization to make or follow-up a decision (Aina, Hu, & Mohammed, 2016).

In the context of education, administrative data management is highly necessary. administrative data related to education in a school includes personnel administrative data, curriculum administrative data, facilities and infrastructure administrative data, and last but not least, financial/budgeting administrative data related to administration of education. Education budgeting administration is defined as the entire phase of activities scheduled for continuous management of the operating costs of school/education (Gunawan, 1996; Suwena, 2014). Financial administration management in the school is administered by school's administrative affairs.

In the context of school, an example financial administration management service undertook is managing the payment of educational development contribution, the payment of non-compulsory school contribution, the payment of school donation and any other payment related to educational service (Gunawan, 1996). However, in fact, only a small number of educational institution could manage its financial and budgeting administration and most of the institution failed to manage. It is due to the limited support related to system infrastructure such as internet network and the availability of advance technology (for instance computers and any supporting devices). Not to mention, a human resource is also a primary factor why some institution failed to manage their budgeting. An individual's understanding about technology is one of the reasons. In addition, an awareness from the responsible staffs to manage the data related to school financial and budgeting plays a vital role.

To overcome the above-mentioned problems related to budgeting and financial management, thus it is important to develop an electronic system for managing financial and budgeting administrative data. Furthermore, during recent Covid-19 pandemic which threatens all people and the activities in the school must be limited, the entire administration management, including financial administration management, is better to be electronically administered. It is important to build an online system to prevent a crowd since Covid-19 is rapidly spreading (Chavez, Long, Koefman, & Liang, 2020).

The Covid-19 pandemic has encouraged public services including schools to be carried out electronically. Increasing internet access by the public (De', Pandey, & Pal, 2020; Nguyen et al., 2020), including the school community during the Covid-19 pandemic also needs to be reviewed as part of the opportunity to find solutions for financial administration services during the Covid-19 pandemic.

Erinawati (2013) explains that the existence of a website-based school payment information system can maximize the work of school officers thus the information delivery can be handled effectively and efficiently. It also aims to change conventional or manual financial administration management to electronic or computer-based financial administration management. The success of web-based financial administration management is also supported by a large number of studies suggesting that web-based financial administration management can facilitate payment transactions between students and payment officers. For example, research by Syahbana (2017) where the results of the research show that a website-based financial administration management system speed up the payment process easily and accurately. In addition, the research by Ashari (2014) also shows that the website-based payment system improves the management of computerized student payments. Goodell (2020) in his research on the financial situation during the Covid-19 pandemic also reports the importance of implementing electronic financial services in the future.

The purpose of this research and development is to produce a website-based school financial management system. To validate its feasibility, it involved an expert validation and field trials on Junior High School Islam Sabilurrosyad Malang City, East Java, Indonesia. In addition, the objective of this research is to test the effectiveness of a website-based financial administration management system as a tool to facilitate financial administration during the Covid-19 pandemic.

METHOD

This research and development used a model developed by Borg & Gall (1983) which has been modified by the researchers because this research we encountered several limitations such as time and research subjects. Similar research and development with the same method has also been carried out by Putri & Wardoyo (2018). The following figure illustrates the seven steps modified research stages.

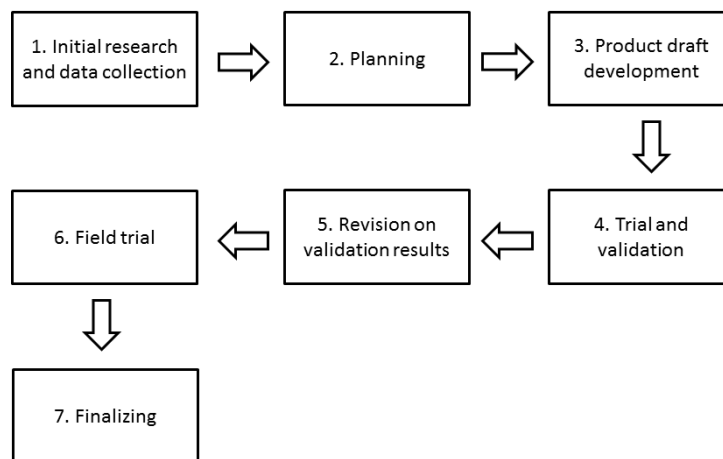


Figure 1. Research and Development Stages

The financial administration website that the researchers developed in this study was the Laravel Framework software and was tested on research subjects, specifically school officers (school treasurers and school principals), as well as students' parents. This software is commonly used in developing electronic financial systems, as also done by He (2015) and Rahmanda, Tristiyanto, & Prabowo (2018).The data in this study were quantitative data obtained from the results of questionnaires by media experts and users as well as qualitative data in the form of comments, suggestions and notes from media experts and users. Both of these data were obtained from research instruments in the form of interviews and questionnaires. The data analysis technique used was descriptive statistics, where the data obtained were processed into percentage quantitative data. Furthermore, the data were described into a qualitative sentence.

RESULTS AND DISCUSSION

This research and development aims to produce a feasible website-based school financial administration management system which was validated by expert validation and field trials to Junior High School Islam Sabilurrosyad Malang City, East Java, Indonesia. This research also aims at testing the effectiveness of a website-based financial administration management system as a tool to facilitate financial administration during the Covid-19 pandemic. The results of this research and development are in the form of a website-based system which was developed by using the Laravel Framework software that is able to be operated by using an internet connection to develop a school administration system, particularly in financial administration management activities in the schools. The system developed was called Siakalah (School Financial System).

Erinawati (2013) and Wijayanto, Riyantomo, & Budiyanto (2018) state that a website-based school payment information system is able to maximize the work of school officers, thus the information delivery can be handled effectively and efficiently. Based on this statement, the use of the website is considered appropriate for developing a school financial administration management system, especially in managing the finances that is obtained by the schools because there are several features that allows to solve existing problems. Through the use of a website-based system, financial administration management for schools can be done promptly and precisely (Susanto, Hamdani, & Tari, 2020).

There are several menus provided on the Siakalah website including the dashboard, student management, user management, academic and class management, subject, routine class, accountant, office management, management, and school year. This system can be used if it is connected to the internet. These menus make it easier for users to handle financial administration online, and also enables school officials to have digital literacy skills in the modern era, as required in any human resource in organizations/agencies (Silva & Lima, 2017). The following figure illustrates the display of the Siakalah website.

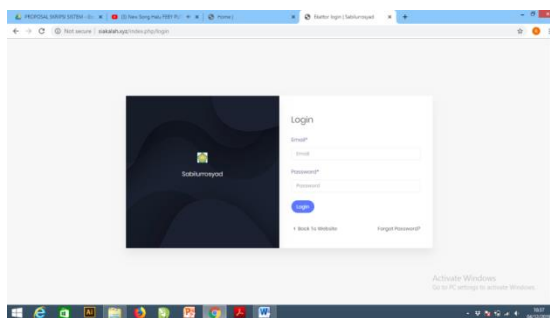


Figure 2. Login Page of Siakalah

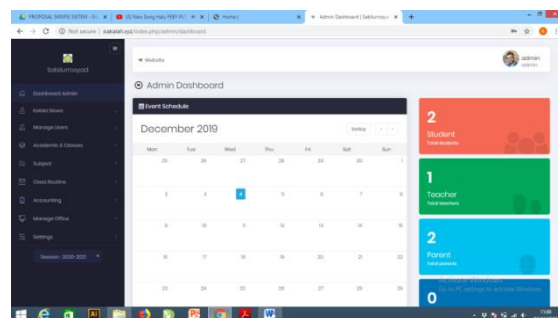


Figure 3. Dashboard Admin Page of Siakalah

Figure 2 shows that the user is asked to enter a "username" and "password" in order to access the main menu in Siakalah. There are three levels of users of this system, specifically admin, students, and parents. These menus are more complete when compared to previous studies conducted by Rifiani, Widodo, Kardoyo, & Haryono (2016) and Susanto et al. (2020). After entering the username and password, there is an option to login which functions to enter the main menu in the system. Whereas in Figure 3, there is a display of data such as managing student data, managing users, academic & classes, subjects, class routines, accounting, managing offices, and settings as needed by schools. In addition, there are three actions, specifically "Action" to take action on the data that has been entered; "Edit" to edit required data; and "Delete" to remove data that is no longer required. At the top, there is also an "Add" button which is used to add data according to school needs.

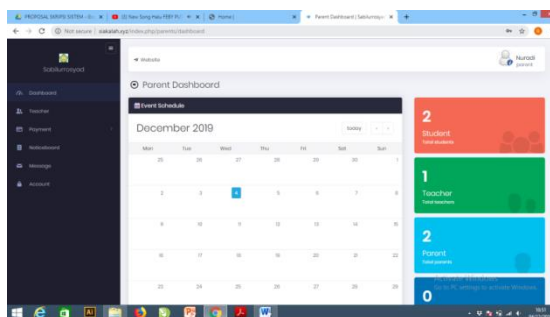


Figure 4. Parent's Dashboard Display on Siakalah

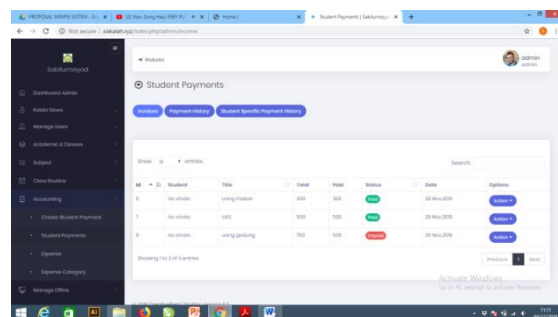


Figure 5. Student's Payment Display

Figure 4 shows a user menu which consists of Teacher, Payment, Notification, Message, and User Account. Each menu which show an information such as account status, payment information and so on could be directly communicated to the admin. Whereas in Figure 5, the accounting menu, there is a display of transaction data consisting of invoices, payment history, and student specific payment history. In the invoice menu, it consists of the student's name, payment type, nominal payment, payment status, date of payment sent, and option which allows to change the student's payment status.

In detail, Siakalah contains several menus within the parent's account, specifically: (1) the teacher menu to provide information to parents about subject teachers of students as an additional information that is useful if the payment process has not been followed up by the school treasurer; (2) the payment menu to find out payment information, payment history, and the status of payments made by parents of students; (3) the announcement menu to find out the information provided by the school to the parents of students (4); message menu to make payment transactions indirectly with this menu; it enables the parents of students to chat with the administrator to share information on payments made and through this menu parents can upload the proof of payment; and (5) the account menu to process, edit information or parent accounts. Referring to research conducted by Bhengu & Newane (2014), the procurement of this menu aims at enhancing the financial literacy of both students and teachers.

The process of searching for payment data and to see data on payments made by parents using Siakalah starts from logging into the admin account. After that, the users select the accountant menu, in which there are four sub menus that have a function for each menu. In order to find out payment data and search for incoming payment data, the users should access the student bill sub menu which contains three information related to the payment process made by parents: (1) the payment type menu which contains information on student identity, student name, type of payment made, the amount of payment, payment status and date of payment; (2) payment history which contains information on the entire payment process made by the parents; (3) student payment

specifications to find out payment information in one class and the payment specifications for one student. There are several options for managing the data: (1) action to take an action or manage the data contained therein; (2) invoice view to find out information on payments made and there is a printing menu that can be used to print proof of payment directly if it is connected to a printer; (3) edit to change data that is already in the system; and (4) delete to remove some unnecessary data.

The development of Siakalah system was validated by a media expert and it is presented in the following Table 1.

Table 1. The Results of Media Expert Validation

Indicator	X
Accessibility (7 item)	4,57
Presentation (6 item)	4,50
Data Security (2 item)	5,00
Total ($\sum x$)	69
Average (\bar{x}) = ($\sum x / \sum$ indicator)	4.6
Percentage ($\%xi \times 100\%$)	92%
Conclusion	Very Good

Based on Table 1 above, it can be concluded that the total number of responses obtained a value of 67 from the ideal number of 75. When the percentage was calculated, the result was 92 percent. Thus, the result obtained confirms that the system is in the criteria of "Very Good". Furthermore, it affirms that the school financial administration management system is valid and can be implemented in schools. During the Covid-19 pandemic situation, it is important to avoid a human crowd, considering that the Covid-19 virus is considered easy to spread from one human to another (Chavez et al., 2020). Through this research and development, it also contributes to the Indonesian government for efforts to digitize financial services carried out in schools. Another contribution is to assist the East Java Provincial government in reducing the number of Covid-19 spreading through the transmission of public services (in schools), which was previously conventional towards electronic services.

The results of product development trials are presented in the following Table 2.

Table 2. The Results of Questionnaire Distribution to Administrator on Product Trial

Indicator	X				
	SS	S	CS	TS	STS
Attractiveness (3 items)	3	2	1	-	-
Accessibility (9 items)	7	10	1	-	-
Usefulness (4 items)	7	1	-	-	-
Score	17	13	2	-	-
Total ($\sum x$) = Value (x) x Scorew	85	52	6	-	-
Average (\bar{x}) = ($\sum x / \sum$ indicator/ \sum respondent)	4.34				
Percentage ($\%xi \times 100\%$)	89.375%				
Conclusion	Strongly Agree				

Based on Table 2, it can be concluded that the response "Strongly Agree" obtained a value of 85, the response "Agree" obtained a value of 52 and the response "Sufficient" obtained a value of 6 from the ideal value of 160. While the response "Disagree" and "Strongly Disagree" obtained a value 0 (nobody chose the option). When the percentage was calculated, the result obtained is 89,375 percent. To conclude, the calculation is classified as "Strongly Agree". It further means that users, specifically the principal and treasurer, agree that the website-based school financial management system is suitable to be implemented in schools, especially during the current Covid-19 pandemic situation.

While the results of other product trial data acquisition can be seen in Table 3 below.

Table 3. The Results of Questionnaire Distribution to Parents on Product Trial

Indicator	X				
	SS	S	CS	TS	STS
Attractiveness (3 items)	2	1	-	-	-
Accessibility (7 items)	7	-	-	-	-
Usefulness (2 items)	2	-	-	-	-
Total ($\sum x$) = value (x) x Score	55	4	-	-	-
Average (\bar{x}) = ($\sum x / \sum$ indicator/ \sum responden)	4.41				
Percentage ($\%xi \times 100\%$)	98.3%				
Conclusion	Strongly Agree				

Based on Table 3 it is concluded that the response "Strongly Agree" obtained a value of 55, the response "Agree" obtained a value of 4 from the ideal value of 160. While the response "Sufficient", "Disagree" and "Strongly Disagree" obtained a value of 0 (nobody chose the option). When the percentage was calculated, the result is 98.3 percent. To conclude, the calculation is classified as "Strongly Agree". It further means that users, specifically the parents and students, agree that the website-based school financial management system is suitable to be implemented in schools, especially during the current Covid-19 pandemic situation. Parents feel that through the Siakalah system developed by the researchers the administration process is facilitated well. This is because they do not have to worry about whether or not their children have actually paid for their school fee. In addition, the parents of students at Junior High School Islam Sabilurrosyad Malang digital literacy because they live in an urban environment

known to be close to technology. In addition, most students' parents at Junior High School Islam Sabilurrosyad Malang have acquired sufficient digital literacy since they are living in an urban area which is close to technology advancement (Kim, Claus, Rank, & Xiao, 2009).

This research has had a significant impact on the Indonesian government's efforts to digitize administrative services carried out in urban schools. During the Covid-19 pandemic, most educational institution in Indonesia are not ready for the digitalized instructional technology (Churiyah, Sholikhah, Filianti, & Sakdiyyah, 2020), as well as its administration management process.

Through the development of Siakalah system, it supports the management of school administration process, particularly which related to financial and budgeting. In addition, students and parents consider that the presence of the developed system could provide them an equal and balanced information related to financial and payment. The school administration staffs also could manage and control the school financial efficiently, transparently, and effectively. The teachers could also contribute by giving the students a financial management education.

CONCLUSION

This research and development produced a web-based system for managing and controlling school financial administrative in Junior High School Islam Sabilurrosyad Malang. The developed system is called Siakalah. The web-based system developed in this study was validated by a media expert and was trialed to the prospective users, specifically, school principal, school treasurer, and students' parents at Junior High School Islam Sabilurrosyad Malang. Based on the results of validation from the media expert on the developed system, it obtained 92 percent. In addition, based on the results of field trials, it obtained an average number of 89.73 from school stakeholders (school principal and treasurer) trials and it obtained 98.3 percent from parents as prospective users. Thus, it obtained an average score of 90 percent. This result confirm that the system developed is feasible and can be used by the school during current Covid-19 pandemic to avoid a human crowd in school. It is suggested for the future researchers to extend this research by taking into account a wider subject of research to comprehensively validate the benefit of the system.

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