

DELPHI-BASED MICROSOFT ACCESS PROGRAM: A FEASIBLE SOLUTION FOR OFFICE CORRESPONDENCE ADMINISTRATION DURING COVID-19

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ABSTRACT

The effectiveness and efficiency of obtaining information in an organization these days is strongly influenced by the development and advancement of technology which is rapidly advancing. The development of computer technology has a positive effect on organizational activities, particularly in the administration affair of an institution such as the archiving and correspondence matter. The purpose of this research and development is to produce a correspondence administration system in the administration affair using Delphi-based Microsoft Access during the Covid-19 pandemic and as a tool to facilitate the process of handling correspondence and archiving. The research and development method used was Research and Development (R&D) with a descriptive quantitative data analysis technique. The results of research and development show that the correspondence administration system has been successfully developed and has been used in the COVID-19 pandemic situation where school administration activities are carrying out primarily in the virtual. Based on the results obtained, it further confirms that the administrative activities in schools run more effectively and efficiently through a computerized system which allows the staffs to administer document and letter handling remotely.

Keywords: Administration System, Correspondence, COVID-19, Microsoft Access

INTRODUCTION

The need for information is an important basis for an organization. The rapid development of computer technology has a major impact on the provision of information and has a positive effect on the activities of an organization, particularly in the service sector (Danziger & Andersen, 2002). This also has an impact on the archiving management of an organization which affects the effectiveness of the archiving system that is carried out (Cox, 2007). Currently, computers are widely used in various institutions both public and private because they are considered immensely worthwhile in completing a job. Along with the rapid advancement of technology, practically every activity in an organization is computerized, including archiving and correspondence handling. This is a form of evaluation of the existence of archiving and correspondence activities which have only been carried out using paper and traditional or conventional storage which require a long time (Doorn & Tjalsma, 2007; Kohl et al., 2013). Therefore, it is necessary to develop an information technology system that can facilitate activities in archiving management and correspondence. In general, correspondence activities are only carried out traditionally by using an agenda book for numbering incoming and outgoing letters and a disposition sheet for forwarding letters.

In the 2020 nowadays, a global Covid-19 pandemic occurs. This encourages the implementation of various activities to be carried out virtually, including administrative correspondence activities in an agency or organization (Weible et al., 2020). In addition, it is feared that the characteristics of the Covid-19 virus is very easy to spread through droplets and this can occur through the transfer of physical letters from one hand to another (Jayaweera, Perera, Gunawardana, & Manatunge, 2020). Thus, conventional correspondence management is feared that it could trigger the spread of the virus more easily. Accordingly, it requires a solution for handling correspondence including archiving activities without having to interact much with physical letters.

Vocational High School Mojoagung in Jombang Regency is one of the advanced vocational schools. However, based on interviews and observations carried out by the researchers in the administration section, correspondence handling and management were still using traditional methods as well as the process of archiving was still administered manually. The use of computers in the administration affair of Vocational High School Mojoagung is still rarely used because the employees are not trained and do not understand about technology. In addition, a proper system to handle and manage correspondence administration is not yet available. Therefore, the development of a computerized administrative system for handling correspondence activities is required. Administrative activities will be managed faster and easier if you use a computer. The reason computers are considered very helpful in completing work is because computer functions as a data management tool capable of producing information accurately and clearly (Sivarajah, Kamal, Irani, & Weerakkody, 2017). Therefore, the development of a correspondence administration system is required, particularly by employing computer program. The correspondence activity itself includes document procurement, document handling, and document archiving.

In general conditions, the program used to process correspondence activities is Microsoft Word. Apart from Microsoft Word, several computer applications/programs have been developed by previous research to facilitate correspondence activities. The development was carried out to change correspondence activities that were previously carried out manually (without computers) to become computer-based management system. For example, the SIMARDI (Dynamic Archives Management Information System) application developed by the 3H Softcom team (Yuliati & Krismayani, 2018). This application works offline and contains menus for active archive storage, inactive archives and dynamic archives. Although this application has been widely used in archive and government offices, it has a weakness, specifically the absence of a menu for documenting letters and retrieving letters.

Based on the SIMARDI application, it can be seen that the use of a correspondence administration system is very effective. However, this application requires further development to make it more effective to use. The development of a correspondence program can be performed by utilizing Microsoft Access Software that can be used to design, create and manage various types of data with large capacities (Winarno & Isnaini, 2019). Vocational High School Mojoagung is one of the schools that has not used a computer-based correspondence administration system. Even though a computer is available in the administration affair office, in its implementation, correspondence activities are still administered manually by using notes in the agenda book. Likewise, in documenting dispositions, documentation was done manually. Therefore, it takes a long time to process incoming and outgoing letter. Meanwhile, the function of the computer itself is a tool for storing, processing, calculating, and for reporting data (Chamanlal, 2014).

Based on the explanation above, it is apparent that a system for handling and managing correspondence activities that is easy-to-access by the school staffs is required to be developed. The existence of easy-to-access correspondence management system greatly affect the performance and effectiveness of school staffs in the administration department, particularly during the current Covid-19 pandemic. In addition, Fler (2018) in his research, reveals the importance of conducting research in an effort to digitize administrative services in the current era. The purpose of this research is to develop a computerized administrative system for correspondence activities in Vocational High School Mojoagung by creating application using Delphi-based Microsoft Access.

METHOD

This research was a development model research. This research aims at developing a product of computerized administrative system for correspondence activities in school administration affair. This research employed Research and Development (R&D) approaches to produce a computer software which was according to Sugiyono that included ten modified stages, specifically 1) identifying potency and problems, 2) performing data collection, 3) making product design, 4) carrying out product validation, 5) carrying out product design revision, 6) carrying out product testing, 7) carrying out second product revision, 8) carrying out field trial, 9) carrying out third product revision, and 10) finalizing the product. The data collection instrument used was a media expert validator questionnaire and user trials. The data analysis technique used a statistical calculation by determining the average score which was categorized according to pre-determined levels of validity.

RESULTS & DISCUSSION

The purpose of this research and development is to produce a software product in the form of a correspondence administration system that will be used on the research subject, that is Vocational High School Mojoagung in Jombang Regency, East Java Province, Indonesia. Through the research and development stages that have been used, the result of this research and development was a software system by using Delphi-based Microsoft Access that can be run offline. Delphi is a Windows-based application development tool released by Borland International (Setyorini & Churiyah, 2016). This software is very popular among application developers because it is easy to learn and can be used to handle a number of necessities, from math applications, games, to databases. In database handling, Delphi provides facilities that allow programming to interact with databases such as dBase, Paradox, Oracle, MySQL and Access.

The system developed by this researcher was used to help the administrative process of correspondence to be more effective in the administration of organizations and management. The application developed is called SASTU (Letter Administration System). There are several menus in the application, including the menu for documenting incoming and outgoing letter, indexing and numbering, documenting dispositions, archiving letters and retrieving for the archived letters.

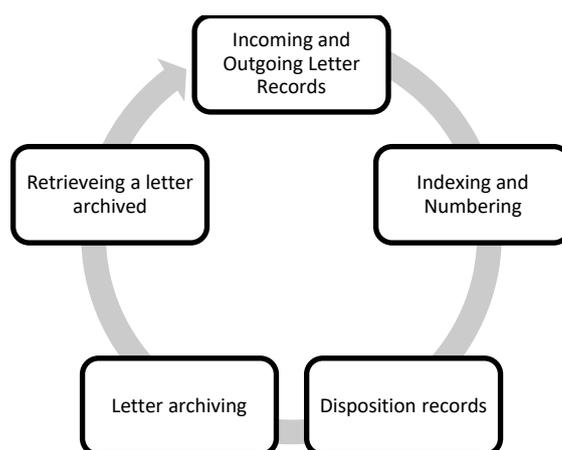


Figure 1. The menus contained in the SASTU software

The following is a detailed explanation of each existing menu: (1) The menu for documenting incoming and outgoing letter, in this section, school staffs in the Administration can document incoming and outgoing letter. This kind of activity which is usually carried out manually by using an agenda book is transmitted to a digital basis through the SASTU software that the researcher developed. This makes it easier for school staffs to carry out administrative activities more efficiently and at once. In addition, the factor of data input errors in the agenda book can also be avoided. In particular, Administrative school staffs can choose which letters are incoming and which are outgoing thus during the search process it can be easier to access. Through this development, it can support the Indonesian government's efforts to digitize administrative services, particularly in schools; (2) Indexation or letter numbering menu, this section of the menu allows the Administrative section school staffs to carry out activities to index letters or assign numbers to letters. This menu is functioned to make it easier to give identity to letters. Therefore, the process of searching or retrieving the letters can be done more easily and it takes shorter time. In addition, this also makes it easier for activities to archive incoming and outgoing letter. Theoretically, there are five documentation management systems, specifically: a) alphabetical system; b) chronological system; c) the subject system; d) number system; and e) the regional system (Sattar, 2018). In this developed software, the researcher chose to use a number system because it was considered more detailed in presenting the information provided and was very suitable for use in educational institutions such as Vocational High School Mojoagung; (3) The menu for documenting dispositions plays as one of the most important features in the process of correspondence management system. This activity includes documenting summary letters to be given to the school principal. This really needs to be done computerized (Suryani & Afifah, 2018), because in addition to being faster, the information presented at the disposition by administrative school staffs can be more easily understood by the school principal. In addition, when the disposition is lost, a record of the disposition remains available in the database in the developed software; (4) The menu for archiving the letters, this software developed also facilitates administrative school staffs in archiving incoming and outgoing letter. The school staffs can input the letter archiving menu and fill in the required information regarding the detailed contents of the letter. This is a very efficient process because it reduces the volume of records within an organization or institution. In addition, physical damage to letters that will be archived can still be maintained or saved through the existing database in the SASTU software; and (5) searching menu for the required letter. The process of retrieving the letters that have been archived in an educational institution is frequently conducted. Through this menu in the SASTU software, it is undemanding for school staffs to retrieve the letters they need. They do not need to take a very long time in retrieving for the required document. The staffs need to simply type in the keywords in the search field and letter database, both incoming and outgoing letter can be done automatically and promptly. This certainly makes it uncomplicated for school staffs, particularly in the current situation of the Covid-19 pandemic where this kind of activity with holding documents must be avoided because it is feared to be one of the hotbeds for the unexpected spread of Covid-19.

The developed Microsoft Access program for correspondence administrative system in the school offers the school staffs easier correspondence activities, including an uncomplicated documentation of incoming and outgoing letters, automatic indexing of outgoing letter, prompt and automatic documentation of dispositions, as well as an uncomplicated process to retrieve the required documents. The correspondence administration system developed in this study has been validated by the media expert validator and has been tested to the users. Based on the results of the media expert's validation on the developed system, the results were 89 percent. Furthermore, based on the results of users testing, it obtained 90 percent. The results mean that in general this research and development activity was successfully carried out. Various menus in the developed software product can make it easier for administrative school staffs at Vocational High School Mojoagung to manage and handle letters document. Oded & Su (2010) state that the administrative service digitization effort was able to increase the transparency of service procedures and satisfaction of administrative staffs and the parties served. During this covid-19 pandemic situation, school staffs are also facilitated through the existence of SASTU software because the process of managing correspondence can be done virtually. Therefore, this system also supports the implementation of Work From Home (WFH) which is currently being promoted by the government of East Java Province, Indonesia to reduce the rate of spread of the covid-19 virus.

The existence of online learning activities also has an impact on administrative activities needed by students and teachers which must also be done virtually and can be supported through the existence of SASTU software. Students and teachers can communicate via WhatsApp short messages and e-letter with school staffs at school and during the Work From Home schedule. This greatly minimizes physical crowds and activities that invite large crowds of people. This system is relatively easy to use since it was developed by using Microsoft Access which most of the school staffs are familiar with Microsoft Access. In addition, at the beginning there is also an introduction menu or information about the software being developed. Thus, it the school staffs will not be confused how to use and access the program. The results of this research practically support the research of Sukrianto (2018), Fitria & Widowati (2017) and Setiawan (2017) who also developed a software for school administration using a Delphi program. However, some previous research and development did not cover the whole element of correspondence activities including document archiving. Thus, this present research fills the the gap.

When the school staffs carrying out a correspondence of school letter by using SASTU software, they also could print the documents required immediately. This allows the school staffs to complete all the administrative activities in single approach and system promptly. In addition, these results confirm that that the development of the system in this research has achieved the intended purpose and goal; to provide an efficient and effective process of correspondence activities. These results support the research by Winarno & Isnaini (2019), Rusdiansyah (2018) and Syafitri & Indrasari (2018) reporting that an administrative system for an institution or organization could create an effective and efficient process of work. Indeed, this will further impact the performance of administrative process in the office since administration affairs is one of the core business in the office (Wilson, 2010).

In addition to provide a numerous of benefits, the product developed also has some limitations. These limitations will further open an opportunity for the future research to develop a more ideal system or program which is beneficial for the related party, particularly to those who are dealing with administrative work such as administration staffs. This program was developed only for meeting and fulfilling the needs of Vocational High School Mojoagung. Therefore, the developed program may not be incompatible to other educational institutions or organizations. To fulfill the needs other institutions, the future researchers must take into what the intended institution needs before developing a similar program. In addition, the future researcher could develop the program

by directly integrating the program to the email of the staffs and any related parties in the institution to completely support a virtual letter correspondence.

Through SASTU that was developed in this research, administrative management activities at SMKN Mojolangu can be administered virtually thus it greatly avoid physical meeting activities. This strongly supports the policy of the East Java Government to carry out physical distancing and avoid crowds during the covid-19 pandemic situation. There are multiple effects obtained through this development activity, starting from supporting efforts to digitize administrative services in schools, avoiding crowd activities in the Covid-19 pandemic situation, to accelerating administrative services in an efficient manner. Schools, students and parents as well as the government benefit from this research and development activity.

CONCLUSION

The research and development had succeeded in producing a correspondence administration system in the Administration affairs at Vocational High School Mojoagung in Jombang Regency, East Java Province, Indonesia by using Delphi-based Microsoft Access program. The correspondence administration system developed in this study has been validated by the media expert validator and tested to the prospective user. Based on the the assessment of the results of these trials, it can be concluded that the developed Delphi-based Microsoft Access program for the administration affair of Vocational High School Mojoagung is feasible to use and access. During the product implementation stage, it also shows that the administrative school staffs in the Administration affair of Vocational High School Mojoagung are very helpful in carrying out e-office activities which are currently very important and urgent to do, particularly when the Covid-19 pandemic is currently occurring. Furthermore, further development processes can be carried out with more complex quantitative data sources in order to obtain more accurate data which does not only on the school administration system but also on the other school aspects such library to offer an undemanding process to all related parties.

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