Implementation of Digital Archives for Teachers and Administrators at SMK Negeri 16 Jakarta

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ABSTRACT

The purpose of this community service is training and workshop to guide and assist teachers, employees and students in introducing and understanding and implementing digital archive management with Windows Explorer, Microsoft Office Excel, Microsoft Office Word, and PHP MYSQL. The resulting output is a digital archive book that will be useful in guiding teachers and as one of the teaching materials in carrying out education and teaching in vocational high schools. The methodology used in the implementation of this community service activity is action research activities consisting of Planning, Preparation, Implementation (actions), Observation and Evaluation and Reflection. The conclusion of community service is the implementation of community service activities through guidance and assistance with the results of increased knowledge about digital archives, skills in managing digital archives, expertise in using digital information technology and being able to apply digital archives management and support for the course of an organization.

INTRODUCTION

Situation Analysis

Technology development currently cannot be denied, it continues to spread to all aspects of life, including in the aspects of learning and office activities. Of course, this can not be avoided by educators in vocational schools as one of the competency-based education. The development of this information technology directly affects the management of records, where archives are no longer merely tangible material such as papers, scripts, videos, images and conventional forms of archives, but have been transformed into virtual archives, such as information inform *digital - soft the file.* As a form of responsiveness to the development of this information technology, an important role in the system transition and archive management model continues to be improved, both in terms of its human being as a manager and application or storage aids as well as the filing system itself.

Director of Human Resources and Organizations (SDMO) ITS, Sri Gunani Pratiwi said that the management of archives today can no longer be compared to the management of archives in the past. The era of industrial revolution 4.0 is very influential in the world of archives, especially technological developments. "In addition to good management, in the current era data must also be accessed quickly so that organizational performance can be carried out effectively and efficiently," he said (ITSMS, 2018). This is in line with the opinion of the ITS Statistics Department Professor,

where he said that wealth is not only in the form of material such as money or gold but also data, with good data management, then the data will be very valuable. Data growth becomes very fast, the form or format of data is very diverse and the amount is very large and increasingly complex which we commonly refer to as *Big Data.*

The development of technology and information is encouraging teachers in schools to be able to develop themselves to teach archives today. The situation of the teachers at SMK Negeri 16, currently requires refreshment of knowledge in the field of archives, especially digital archives, which is new to them.

At State Vocational School 16 still found archival management using a manual system. The files that exist as paper-based archives are collected in one folder and arranged into an ordner or box file, digital-based learning archives or what is usually called has not yet been seen digital archives. Therefore, the teachers are very enthusiastic to get digital archive training.

The implementation of the exam activities in vocational schools is commonly known as the Competency Test for Competency (UKK) where the exam is in the form of office practice tests with 10 test subjects and one of them is archiving. In SMK 16, the facilities provided and used by students in the implementation of the UKK archives are agenda books, archive books, letters as archives, disposition sheets, guides, and

snelhecter maps. This shows the lack of digi-talization in the implementation of the archiving UKK.

Therefore an understanding of the importance of digital(*digital archives*), is currently very much needed by teachers as new teaching material in the face of the 4.0 revolution era.

Problem Formulation

Based on the situation analysis above, the formulation of the problem in this activity is how to improve teachers' understanding of digital archives and how teachers have information related to the right application for archiving and have the ability to apply it.

Objectives of The Activities

Objectives of community service are:

1. Participants understand the theory and application of digital records in an organization
2. Participants can understand what applications will be used in managing digital records
3. Participants can prepare the skills needed in managing digital records
4. Participants can apply digital archive management is well.

Benefits of Activities

Through community service activities are expected:

1. Training participants have an understanding of digital archives

2. Training participants can make preparations when they want to archive in the form of digital archives
3. Training participants can apply good digital archive management
4. Training participants can have the skills needed to manage digital archives.

THEORETICAL REVIEW

Understanding Digital

Archives Digital archives are records that were created and used in electronic form (Putranto, 2017). Digital archives can come from printed archives that are converted to digital or archives that are "born" in digital form. According to (Muhidin, Winata, & Santoso, 2016) digital archives are data (archives) that can be stored and transmitted in intermittent forms, or in the form of binary codes that can be opened, created or deleted with computational tools that can read or processing data in binary form so that archives can be used or utilized.

Benefits of Digital Archives

The benefits of archive management in a database, among others (Rifauddin, 2016):

a. Investment savings in the form of paper, printing ink (printers and photocopies).
    So many archives require a lot of paper and printing ink. But when it has been digitized, it reduces the need for paper and printing ink. Certainly, becomes more efficient, than manual archives.

MATERIALS AND METHODS

The method used in this activity is in the form of training and workshops. The training begins with the first presentation of theories relating to digital archives and then practices directly about the management and application of digital archives.

The implementation of this community service activity follows the implementation of action research activities consisting of Planning, Preparation, Implementation (action), Observation and Evaluation and Reflection.

a. Planning

In the planning, the PKM team coordinated with several parties related to the organization of activities. Coordination is carried out to LPPM Jakarta State University, SMK Negeri 16 as partners and fellow PKM team members. Preparation of service programs based on the analysis of the situation, the analysis of the teacher, the type of digital archival system *(digital archives),* the number of students and teachers of the Department of Administrative Office Automation Governance (OTKP), shape and BK infrastructure facilities and IT development.

b. Implementation (Actions)

In the implementation, as for the activities carried out in it are:

1. The formation of teachers who teach in the field of digital archives.
2. Training on the introduction of digital archives.
3. The control and linkage knowledge and skills, especially the field of digital archives.
4. Mastery of archival practices and improved linkages knowledge and skills of digital archival system.
5. The linkages between the knowledge and skills of the SMK program with the desired career development direction.
6. Demonstrating the use of ICT in archives, especially digital archives.
7. Assistance.

With the formation of teachers who teach in the field of archives to then be given training on the introduction of digital archives. Through this training, teachers are expected to master and link the knowledge and skills in the field of archives, especially digital archives. So that it can be used or associated with vocational program skills with the desired career development direction.

Then there was a demonstration of the use of ICT in managing digital archives with the assistance of the PKM team. Through the demonstration, participants followed each of the steps presented to provide a direct picture of managing digital records and giving a deeper understanding by experiencing directly the management of digital files. As can see in Figure 1.

c. Observation and Evaluation Observation

Activities are carried out directly by the implementing team. Observations by the work of participants to the training of the digital archive *(digital archives)* were good and the use of ICT in the management of archives. The evaluation process is carried out to find out the shortcomings and obstacles in the implementation of community service activities.

d. Reflection

Reflections are carried out jointly between the team and participants. This is done to find out the entire process of implementing activities. Science and Technology Transfer conducted by the team at each stage received by partners is done through the process of listening, knowing, trying, evaluating, accepting, believing and implementing, namely:

1. Interviews with teachers who are willing to be assisted in the form of providing digital archive training to be more effective and efficient.

2. Lecture and face-to-face

3. Introduction to the concept of managing digital archives through the presentation of papers and cases *up-to-date*.

4. Hold discussions to be able to

Figure 1.
Demonstration of Digital Archive Management.

produce feedback on digital archives with chronological evidence and constraints.

5. Digital information technology application training with the aim of all archiving facilities can be done well and neatly organized.

The information contained in the electronic archive can be easily changed, deleted and modified as needed (Hanriarseto, 2013). Besides, the age or physical endurance of electronic records is very limited, the more frequently used electronic files, the faster they are damaged. The physical maintenance of electronic records also requires good storage methods. Besides there are some difficulties in managing electronic records, some advantages can be obtained from managing electronic records, which include: saving space, large storage capacity, access to information faster, saving human resources and minimizing data destruction.

RESULTS AND DISCUSSION

Community service activities were carried out at SMK Negeri 16 Jakarta. PKM is one of the ways to be able to take advantage of technological developments where through the development of these technologies can be used for various jobs, one of which is in the management of records. This is in line with the obstacles faced by SMK Negeri 16 Jakarta in managing archives.

Based on the results of previous interviews and surveys, mentioned below are the results of problems faced by partners, among others:

1. Teachers do not understand *digital archives*.

2. The teacher lacks information about digital archives (*digital archives*).

3. Teachers are still confused about how to choose the right application to manage digital archives *(digital archives)*.

4. Teachers do not yet have a picture of the characteristics, requirements, abilities, and skills needed in managing digital files (*digital archives*) as one of the supporting archival learning in the Industrial Revolution era 4.0 .

With the problems faced by these partners, the PKM team provided training to get to know and be able to operate several applications that could be used. Some applications that can be used and how to use digital archives are started from digital archives with *Windows Explorer, Microsoft Office Excel, Microsoft Office Access* and *PHP MYSQL* as follows.

a. **Grouping Letters Using Windows Explorer**

Windows Explorer is one of the facilities found in a Windows-based operating system. Function to organize files through the use of folders. Explorer gives users the freedom to group files based on certain criteria. In the letter structuring an application, for example,

you can create several folders according to the subject of the letter.

The process of making a Folder:

1) Open Windows Explorer

2) Determine the location of the storage folder, for example in Local Disk D or E

3) Right Click on the Right Panel of Windows Explorer

4) Select New Choose

5) Folder (As can see in Figure 2)

6) Type the Subject of Folder (As can see in Figure 3)

7) New Folder ready to use (As can see in Figure 4)

b. Create Letter Agenda With Microsoft Office Excel

Microsoft Office Excel can process data in numeric or numeric form. The calculation process becomes faster and more accurate. Besides these capabilities, this program can make data manipulation, data analysis, and grouping easier. The availability of facilities *hyperlink* that is more perfect compared to *Microsoft Office Word.*

In the field of archives, *Microsoft Excel* can be used in making Incoming and Outgoing Letters Agenda Book Also Disposition Sheets. By using a facili-
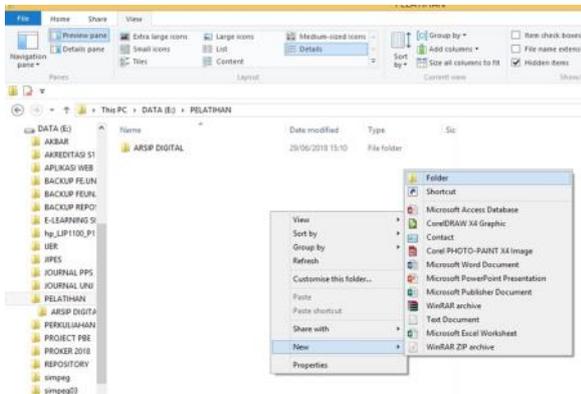
Figure 2.
Display Creating a New Folder.
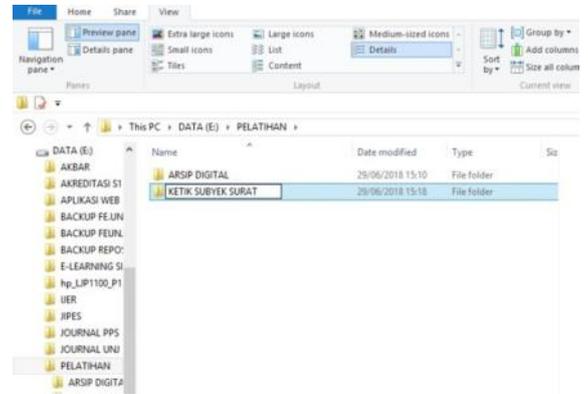
Figure 3.
Display Subject of New Folder.
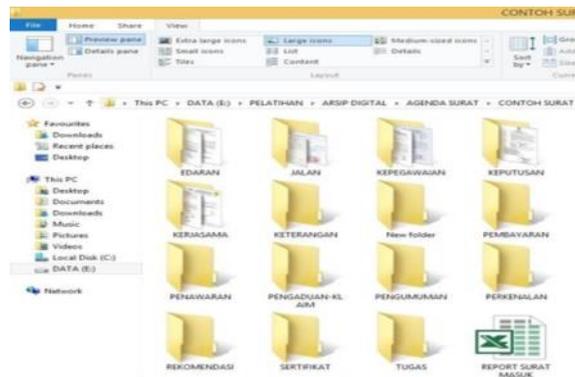
Figure 4.
Display Changing The Folder Name.

ty hyperlink, it will be easy to find documents or letter files that have been scheduled.

Example of a Letter Agenda created using Microsoft Excel can be seen in Figure 5. The blue text in the SHORT CONTENT column has been linked to the document or letter file, so that when clicked the letter in question will appear. The process of connecting using the facility hyperlink.

The following are the steps to link a letter file with the letter agenda created.

1) Text Block or just Right Click on the Cell that you want to link to.

For example Cell E2 with the text "Primary JPT Open Selection ..."

2) Select insert - Hyperlink (As can see in Figure 6)

3) Search file. Specifying Folders and Files

4) Click File

5) OK

6) Usually, the text will turn blue and underlined (As can see in Figure 7)
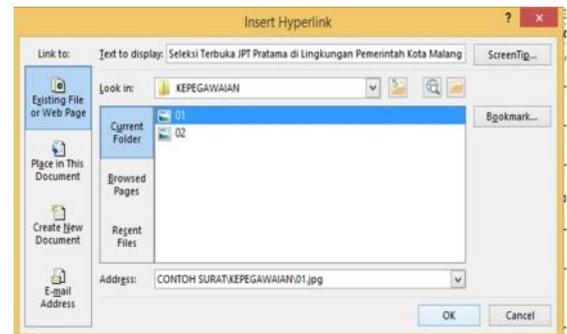
7) Click the text and the letter file will open.

Figure 5.
Letter Agenda created using Microsoft Excel.

Figure 6.
Display the file or figure to link.

Figure 7.
Display cell after right-clicking.

The data that has been created can be reprocessed to create disposition sheets using the facility *mail marge* found in *Microsoft Word*.

1. Disposition Sheet Design

   Disposition sheet design can use the table facilities found in Microsoft Word. Appearance and features tailored to the needs of each agency. An example can be seen in Figure 8.

2. Combining Letter Data with Disposition Sheets

1) Select Menu Mailing. As can see in Figure 9.
2) Press Menu Select Recipients
3) Select Use an Existing List. As can see in Figure 10.

Next, you will be asked to search for the incoming mail data file that was created with Microsoft Excel. Then navigate to the file storage location. In this case, the file is stored on Local Disk D: Digital Archive Training Folder with

Figure 8.
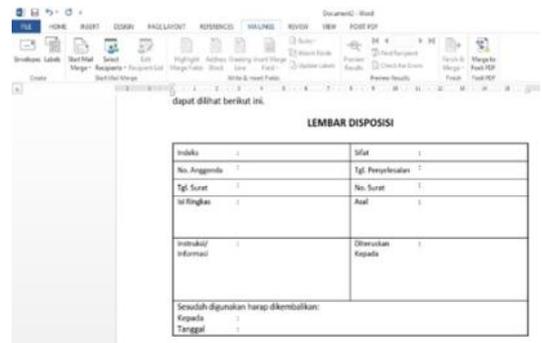**Disposition Sheet.**
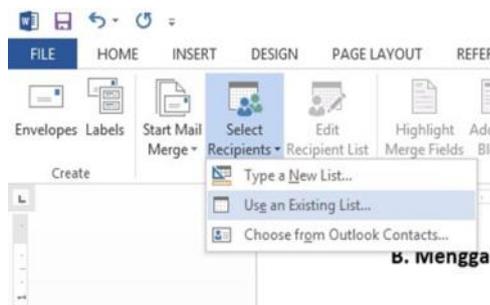

Figure 9.
Displayed mailing.

Figure 10.
Displayed Mailing Menu
(Select Recipients).

the file name Agenda Letter. An example can be seen in Figure 11.

After the file is found, then click OK. As can see in Figure 12.

There are (3) three Sheets in the file because what is needed is the data in the Inbox Agenda sheets, then the Inbox Agenda Sheets are chosen, then click OK. As can see in Figure 13.

Insert Merge Field at the mailing menu, as can see in Figure 14.

These fields will be included in the disposition sheet format that was designed earlier. Next, place the mouse pointer next to the file where you want to insert the incoming mail data.

An example when I want to insert data No. Agenda can be seen in Figure 15.

Place the pointer to the right of the No. text. Agenda, then click the Insert Merge Field button, then select and
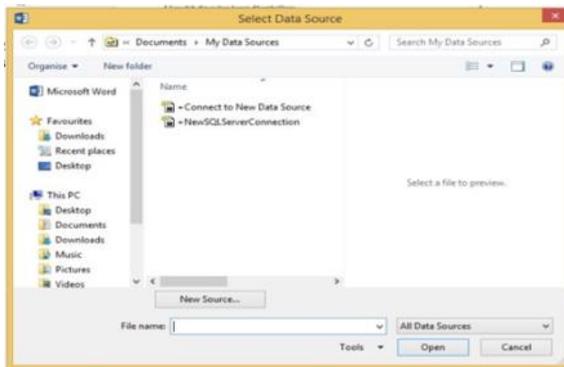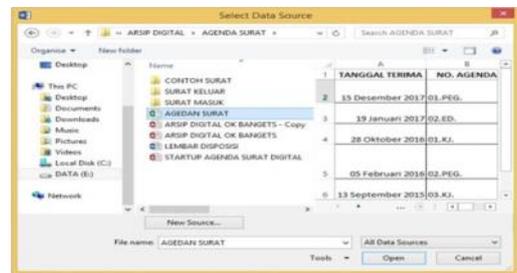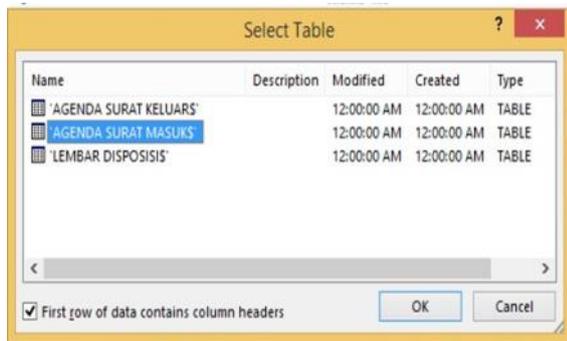

Figure 11.
Searching File.

Figure 12.
File Found.
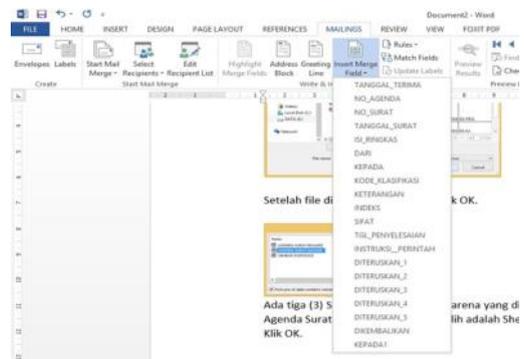

Figure 13.
Display Sheets.

Figure 14.
Display the menu mailings.

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click NO_AGENDA. The results are as shown in Figure 16.

To see the results, press the button **Preview Results** and right arrow, or enter the record number. As can see in Figure 17.

And this is the final display of disposition sheet. As can see in Figure 18.

c. **Creating a Letter Agenda With Microsoft Office Access**

Microsoft Office Access is intended to build an applications *database.* Users must have more capabilities besides the ability to use *Word, Excel and Power-Point office applications*. Among them is the ability to understand the characteristics *database*, relationships between data, and simple programming languages. An example can be seen in Figure 19.

The main page display The Digital Mail Organizer Application is a development of the letter agenda application that was previously created using
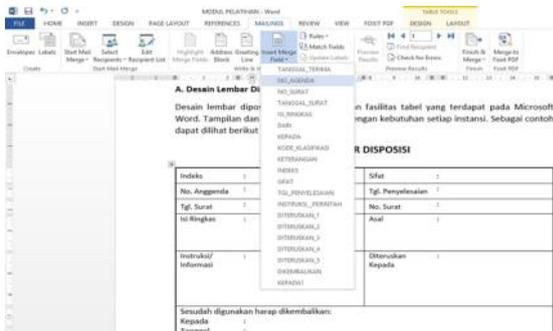
Figure 15.
Display Mailings Menu.
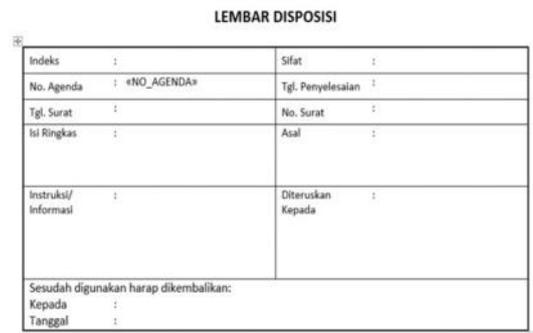
Figure 16.
Disposition Sheet.

Figure 17.
Display Preview Result.

Figure 18.
Display of Disposition
Sheet Results.

Microsoft Office Excel. Then developed using Microsoft Access. Here are some features on the mail agenda using *Microsoft Access*. As can see in Figure 20.

d. PHP and MYSQL—based Letter Agenda Application

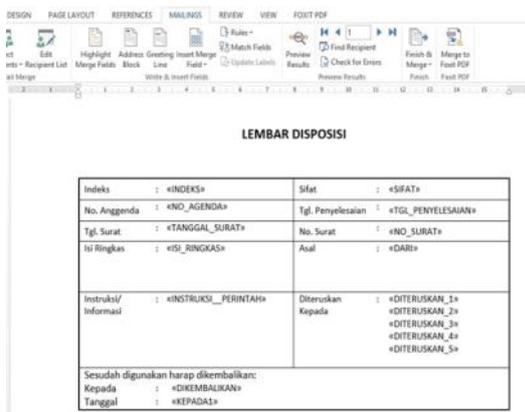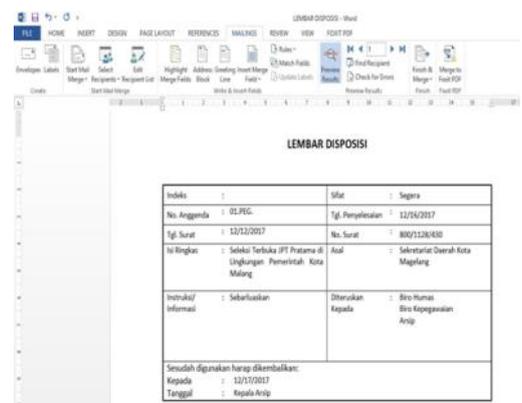The creation of a letter agenda application can be done online or website-based. This can be built using PHP and MYSQL. Next is the website-based mail agenda application. An example can be seen in Figure 21.

Community service activities are supported by several factors in it so that they can run well, where the school and teachers pro-

vide support in terms of providing a place of activity. Then the openness of the school and the teacher in the cooperation of the implementation of activities can help the smooth running of activities.

Community service activities are also supported by communication and coordination with the school and teachers. Communication and coordination are carried out to prepare activities by exchanging information related to the things needed in the implementation of these activities.

The availability of places is a supporting factor in carrying out this activity. Given the availability of places is one of the main supporting factors in the implementation of

Figure 19.
Display Main Page.

Figure 20.
Main Menu Display.

this activity. Then the conditions of the place that supports the availability of light and adequate electricity can meet the needs in the course of activities.

Community service activities are also supported by the enthusiasm of the participants in the activities consisting of 16 Jakarta State Vocational School teachers during the activity. So that the training material that has been prepared can be conveyed properly. As can see in Figure 22.

CONCLUSIONS AND RECOMMENDATIONS

The conclusion of community service is the implementation of community service activities with training and workshop through guidance and assistance with the results of increased knowledge about digital archives,

skills in managing digital archives, expertise in using digital information technology and being able to apply digital archives management and support for the course of an organization.

This activity starts with the initial presentation stage regarding materials related to digital archives. Then proceed with the practice of directly managing digital archives. The implementation of digital archives is very useful in archiving, both in archival management learning and in archival activities at the school itself. Teachers and administrators gain new experience and are greatly helped in completing records management. To be able to implement the digital archive, it is necessary to have the readiness and technological support to facilitate the ICT-based digital archive activities.

Figure 21.
Display of The Digital Letter
Agenda Home Page.

Figure 22.
PKM Team Together with
Training Participants

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