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Evaluation of the Utilization of Electronic Filing System as Information Retrieval Medium at the Records Centre Unit of the Ministry of Environment and Forestry, Indonesia

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Abstract

The Electronic Filing System is a form of concrete application of information technology in archival institutions. This system is used to facilitate and speed up the work of archivists. In practice, this system needs to be evaluated. This study aims to evaluate the utilization of the Electronic Filing System as an information retrieval information medium at the Records Center Unit of the Ministry of Environment and Forestry and to provide solutions on how to overcome various existing obstacles. This type of research is descriptive with a quantitative approach. Sampling using a non-probability technique with saturated sampling. The sample used was 31 respondents or the entire population. Data analysis uses a Likert scale, and the calculation uses an interval scale. Evaluation of the utilization of this Electronic Filing System uses the effectiveness standard of Ron Weber in his book entitled "Evaluating Control and Audit", with a focus on evaluating system quality variables. The results showed that the level of effectiveness of the Electronic Filing System in information retrieval was relatively high. It can be seen from the results of eight indicators on the evaluating system quality variable studied. The results are as follows: Response time indicator is very high (3.54), turnaround time is very high (3.58), system reliability/stability is high (3.25), ease of interaction with the system is very high (3.3), functional usability provided by the system is very high (3.51), ease of learning is very high (3.35), quality of documentation and assistance facilities is very high (3.36), and level of integration with other systems is relatively low (2.35). All these indicators obtained an average score of 3.27, which was included in the reasonably high category. Only indicators of the level of integration with other systems need to be developed further in the future. The results of this study are beneficial for the records centre unit in evaluating the Electronic Filing System according to the standards and guidelines for the effectiveness of an information retrieval system so that it is more optimal in facilitating staff work and providing services to users.

Keywords: Evaluation, Records Management, Electronic Filing System, Evaluating system quality, Records Centre Unit of the Ministry of Environment and Forestry.

A. INTRODUCTION

The development of information technology has changed the pattern and way of doing activities of an institution or organization, and one example is the management of records. Information technology is beneficial for institutions in retrieving the required documents (Chowdhury, 2010). The technology used in records processing and information retrieval medium is called an Electronic Filing System.

The primary function of records retrieval is to provide quick access to the required information intended for the right people and control the retrieval of records from storage

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files to create an efficient and orderly procedure for entering and exiting the records. Existing activities in an institution can be more effective and efficient if the documents are appropriately managed (Jamaludin, Kamal, & Yunus, 2020).

There is generally a records unit in an institution, where this unit is a place to carry out administrative activities and manage archives. One of the state institutions with good records management is the Central Records Unit at the Ministry of Environment and Forestry, Indonesia (Pejabat Pengelola Informasi dan Dokumentasi (PPID), 2019b).

This records unit has received an award from the National Archives of the Republic of Indonesia for records management which is considered very good and won the National Records Center Unit in August 2019. The implementation of e-records in this ministry began in 2013. Records management refers to the Ministerial Regulation Number P.44 of 2016 concerning Guidelines for Archives of the Ministry of Environment and Forestry. Although it has received an award from the National Archives, this records unit has never been evaluated according to existing standards. This unit does not yet have standards or guidelines in evaluating its records system (Pejabat Pengelola Informasi dan Dokumentasi (PPID), 2019a).

Claudia and Yunita Budi R.S reviewed a similar study in 2019 titled "The Effectiveness of the Human Resource Information System (HRIS) Electronic Filing System: A Study at PT Konimex Solo". The Electronic Filing System helps store documents in the form of soft files. For an Electronic Filing System to be effective and efficient, it is necessary to pay attention to several aspects, namely speed, convenience, efficiency, and security. In this study, the researchers want to see how effective the Electronic Filing System is applied to PT Konimex Solo, especially in the Human Resources Department. The researchers used descriptive qualitative research. The informants in this study were the head of recruitment administration, recruitment administration staff, HRD administration staff, and personnel division staff. The results showed that the Human Resources Department of PT Konimex Solo effectively used the HRIS Electronic Filing System (Trivena & Silintowe, 2019).

The following research is a study that has been studied by Dhefi Nur N. S and Nani Sutarni in 2017 with the title "Implementation of the Electronic Filing System as a Determinant of Employee Work Productivity". This study aims to analyze the effect of implementing an Electronic Filing System on employee productivity. The research uses descriptive and verification methods. The data collection technique uses a rating scale model questionnaire with a score between 1 to 5. The respondents are 50 employees of the Cimahi City Education Office. The data analysis technique used simple regression. The results showed that the application of the Electronic Filing System had a significant effect on employee productivity. Thus, employee work productivity can be increased by improving the Electronic Filing System (S & Sutarni, 2017).

This research has similarities with the two studies on Electronic Filing Systems that focus on evaluation. The difference and novelty in this study are that the Electronic Filing System studied uses the effectiveness standard of Ron Weber as written in his book, Information Systems Control and Audit (Weber, 1999). The author wants to take a different point of view from research on electronic filing by clarifying the indicators of the variable evaluating system quality. There are eight indicators in these variables: response time, completion time, system reliability/stability, ease of interaction with the system, usability of the functions provided, ease of learning, quality of documentation and assistance facilities, and level of integration with other systems.

Based on the fact that the records centre unit has never been evaluated according to standards, the writers is interested in assessing the filing system at the Ministry of Environment and Forestry with the standard for evaluating system quality. This evaluation standard can be used as a guide in assessing the Electronic Filing System in the future.

This paper aims to provide information for archivists regarding the effectiveness of using the Electronic Filing System as a means of information retrieval. The extent of the archivist's commitment when using the system in providing quality records for the

institution's benefit. This paper was conducted to determine the performance of an Electronic Filing System and the effectiveness of an information retrieval system. In addition, it is also to find out what obstacles are experienced in the information retrieval process and how to solve these problems.

Measuring whether the system is running effectively and efficiently is necessary to see how far the system can find fast and relevant records from all managed records. Evaluation needs to be done to see the system's ability to retrieve information.

Based on the background of the problem above, the writer formulates two issues in this paper, namely:

1. How effective is the utilization of the Electronic Filing System as a means of retrieving information at the records centre unit of the Ministry of Environment and Forestry?
2. How can the records centre unit of the Ministry of Environment and Forestry overcome obstacles in the information retrieval process?

B. LITERATURE REVIEW

The following is a theoretical study related to Electronic Filing Systems:

1. Definition and Types of Archives

In its glossary, the Society of American Archivist (SAA) defines archives as documents or document storage places and the institutions responsible for managing documents or organizing archiving programs (Franks, 2021).

The definition of archives from the Encyclopedia Britannica archives is a natural accumulation of an institution, maintained and maintained its existence, especially for the benefit of processing unit references (Mirmani, 2013).

Archives are recordings of activities or events in various forms and media in accordance with the development of information and communication technology made and accepted by the Ministry of Environment and Forestry in the implementation of community, nation, and state life (Peraturan Menteri Lingkungan Hidup Dan Kehutanan Republik Indonesia Tentang Pedoman Tata Kearsipan Kementerian Lingkungan Hidup Dan Kehutanan, 2016).

Based on Law no. 7 of 1971 concerning Basic Provisions for Archives, article 1, archives are texts made and accepted by state institutions and government agencies in any form, both in single and in groups, in the context of carrying out government activities (Rustam, 2014).

Thus, it can be concluded that the archive is the result of a collection of activities carried out by an organization or individual. Therefore, all organizations must keep and maintain records and business functions to meet their business needs or legal requirements. From this perspective, archives have the primary purpose of creating archives: to provide evidence for the organization's functioning and accountability of a legal entity or person.

Based on the Law of the Republic of Indonesia Number 43 of 2009 concerning Archives Chapter I General Provisions Article 1 Points 3 to 7 are explained regarding several types of archives, namely (Republik Indonesia, 2009):

- a. Dynamic archives are used directly in archive creation activities and are stored for a certain period.

Dynamic archives consist of 3 types, namely:

- 1) An active archive is an archive with a high frequency of use and an archive that is still continuously used by the processing unit of an organization/institution. For example, Attendance list or absent employees.
- 2) An inactive archive is an archive whose frequency of use has decreased, and its management is carried out by a central unit within an organization/institution. Example: Reports

- 3) A vital archive is an archive whose existence is an essential requirement for the operational continuity of the archive creator, cannot be updated, and cannot be replaced if it is damaged or lost. Example: Diplomas and Land and Building Certificates.
- b. Static archives are archives produced by archive creators because they have historical value, have exhausted their retention, and provide permanent information that has been verified either directly or indirectly by the National Archives of the Republic of Indonesia or archival institutions. For example, Decree.
- c. Preserved archives are state archives relating to the existence and survival of the nation and state, which must be maintained for their integrity, security, and safety. For example, Indonesian heritage flags and other historical items.
- d. General archives are archives that are not included in the category of preserved archives. For instance, identity cards (Ria, 2017).

2. Electronic Filing System

According to the regulation of the head of the National Archives of the Republic of Indonesia Number 20 of 2011 concerning Guidelines for Authentication of Electronic Archives, electronic archives are archives created (created or received and stored) in electronic format (Arsip Nasional Republik Indonesia, 2011).

The term related to electronic filing is 'information system', a collection of hardware, software, equipment, policies and procedures, and humans that store, process, and provide access to information (Webb, 2004).

Thus, not all information systems are Electronic Filing Systems because not all information systems manage electronic records. An information system can be an Electronic Filing System if it meets archival requirements or standards (Mirmani, 2013).

According to Wallece, the archival system fulfills operational interests based on the principle that only the correct information will be used by the right people and for the proper purposes at the right time at the lowest possible cost. All of that is through a series of subsystems in archive management that work together to achieve the goal of keeping records organized into units of information that are ready for use (Bendriyanti & Zulita, 2012).

The records system must be able to cover all subsystems in records management. Records management is defined as the implementation of management functions to manage the entire archive life cycle. The archive life cycle includes creation, distribution, use, active archive storage, archive transfer, inactive archive storage, destruction, and permanent archive storage (Fritz, 2021).

The implementation of electronic archives is contained in a dynamic process in carrying out archival activities to monitor and manage matters relating to the archive system (Irawan & Simargolang, 2018; Mkadmi, 2021).

3. Information Retrieval System Effectiveness

An information retrieval system is a set of tools that connect potential users with a collection or collection of information contained in an information institution. The benefit of the system is to display the desired information and filter out unwanted information. The goal is pragmatic, namely to save the time needed to meet information needs (Ibrahim, 2014; Peters, Braschler, & Clough, 2012).

Lancaster (1979) said that the information retrieval system consists of document subsystems, indexing, vocabulary, search, user interface, and matching subsystem.

In general, the components of an information retrieval system consist of users, documents, and matching engines. An indexing language represents each document. These two forms of representation are brought together in an information retrieval system to retrieve relevant documents from a database containing a collection of

documents. The process of getting this together is called a search strategy (Lancaster, 1979).

Information retrieval systems are designed to retrieve documents or information needed by user groups. An information retrieval system aims to collect and organize information in one or several fields of knowledge to be presented to users who need it as quickly as possible (Russell-Rose, Chamberlain, & Azzopardi, 2018).

Technically, the purpose of the information retrieval system is to match the terms formulated in the form of a query with the index terms in the document. With this matching, relevant documents will be retrieved. Retrieval of relevant documents from the collection storage system is expected to meet the information needs of users. The fulfillment of user needs is a measure of an information retrieval system (Khalifi, Cherif, Qadi, & Ghanou, 2019).

The success of a system can be known by testing its effectiveness. Effectiveness is the ability to choose goals by utilizing the proper facilities and infrastructure to achieve goals. In using the effectiveness of information retrieval, parameters must be used to evaluate it so that the results provided by the system are in accordance with user requests. Evaluation is done to explain how a system operates and functions at a certain level of efficiency.

In the information effectiveness model, Ron Waber's theory (1999), the measure used in evaluating Electronic Filing Systems is the Evaluating System Quality. The effectiveness model from Ron Waber is due to the more complex variables and the selection of one point of effectiveness to measure the quality performance of the Electronic Filing System. Its use aims to see whether the Electronic Filing System that the Ministry of Environment and Forestry has used is working well or not by evaluating the system.

The final result of this point will determine the performance of the Electronic Filing System and anticipate a decrease in the quality of the system in the future (Putri, Bayu Erfianto, & Tri Brotoharsono, 2011).

The background of evaluating system quality is the presence of hardware and software characteristics that can affect users in terms of usability and ease of use of the system. The effectiveness of the electronic archive information system can be seen from:

Table 1. Evaluating System Quality

Indicator	Definition and Concept
a) Response Time	The response is response/reaction, answer (Cambridge University Press, 2021b). Response time is the speed of a system in responding to commands inputted by the user to support its work (Weber, 1999)
b) Turnaround Time	Settlement is a process, method, and action, completing various meanings such as settlement and solving (Badan Pengembangan dan Pembinaan Bahasa, 2016b). Completion time is the number of waiting periods to get to memory. The time interval required to complete a process is called "turnaround time" (Wibowo, 2016). Turnaround time (batch system) is the speed of a system that the user feels when processing data in systematic data grouping (Weber, 1999).
c) Reliability/ stability of the system	Reliable is trustworthy (Cambridge University Press, 2021a). A reliable records can be trusted and has authority. Reliability/stability of the system is the level of stability and reliability possessed by the system where the stability and reliability can be felt directly by the user. (Weber, 1999).

d) Ease of interaction with the system	Ease of interaction with the system is related to the comfort of system operation and procedures for use. This evaluation is used to determine the reassurance provided by users' information systems in operation (Weber, 1999).
e) The usefulness of the functionality provided by the system	The benefit of the functionality provided by the system is concerned with the usability of each function. This evaluation is carried out to find out how vital the usability of the functions provided by the system from the user's point of view is. Is the system able to help users in completing their work or not? (Weber, 1999).
f) Ease of learning	Ease of learning is that users feel easy understanding how to operate the system and how the system works. If the system is easy to learn, then the system is quality (Weber, 1999).
g) Quality of documentation and help facilities	Many computer system documents are written in low quality, so difficult to understand, out of date, and incomplete. Document quality is as important as software quality. To obtain quality documentation requires a commitment to document design, standards, and quality assurance processes. The quality of documents and assistance facilities is called quality if users feel that the system has adequate documentation. It is easy to obtain documents with the help of sufficient facilities on the system (Weber, 1999).
h) The extent of integration with another system	The integration allows for connections between subsystems so that data from one system can routinely traverse to / be retrieved by one or more other systems (Kemendagri, 2019). Integration is the merging of different activities, programs, or hardware components into a single functional unit (Badan Pengembangan dan Pembinaan Bahasa, 2016a). A system can be of high quality if it has flexibility, which can be integrated with other systems (Weber, 1999).

C. METHODOLOGY

The type of research used in this research is descriptive research with a quantitative approach. Descriptive research is research conducted to determine the value of independent variables, either one or more variables, without comparing or connecting one variable to another (Creswell, 2017; Sugiyono, 2009). The descriptive type with a quantitative approach was chosen because this study intends to measure the effectiveness of using the Electronic Filing System as a means of retrieval without hypothesis testing.

This research was conducted at the Records Center Unit of the Ministry of Environment and Forestry. The population in this study were all archivists who used the Electronic Filing System application, with 31 people. The sample in this study was taken using a non-probability technique with a saturated sampling technique.

The Electronic Filing System in this central records unit can only be accessed offline for security and privacy reasons. This is a display of the electronic archive system developed by the Central Archives Unit of the Ministry of Environment and Forestry.

Picture 1. Electronic Filing System Interface



The data collection technique used in this research is through primary data sources and secondary data sources. Preliminary data were obtained through distributing questionnaires and conducting observations. Meanwhile, secondary data includes literature studies through literature sources, including books, articles, journals, internet websites, and documentation.

Descriptive statistical analysis is used to analyze data by describing the data that has been collected as it is without making generalizations to the results of the study, including through graph tables, diagrams, percentages, frequencies, and calculations of the mean, median, and mode (Muhidin & Abdurrahman, 2007).

Data analysis uses a Likert scale, and the calculation uses an interval scale. The data obtained from the respondents' questionnaires will be presented in frequency distribution tables, which are described narratively by systematically describing the measurement results of the variables studied. After that, analyze the data by assessing and critiquing it using theoretical concepts and assumptions.

Descriptive data analysis was carried out on each variable systematically. This descriptive study seeks to systematically describe the effectiveness of archivists' Electronic Filing System in the records centre unit.

The validity test shows the extent to which a measuring instrument can measure what it wants to measure (Siregar, 2013). The validity test of the questionnaire was distributed to 31 respondents who became the sample to know whether each statement item was valid or not. If the value of $r\text{-count} > r\text{-table}$, then the statement is declared valid, and vice versa. This validity test uses Pearson Correlation. If the Pearson Correlation value obtained has a value below 0.05, it means that it is valid.

Test the validity of the instrument using a statistical data processing program, namely IBM SPSS V22. The validity test results show that all statement items in the questionnaire have valid criteria based on R (Calculate) greater than R (Table). The value of R (Calculate) using the person correlation coefficient formula has been compared with R (table) with a sample of 31 respondents, 0.355.

Table 2. Validity Test Results

Statement Item Number	R Count	R Table	Interpretation
1	0,457	0,355	Valid
2	0,460	0,355	Valid
3	0,516	0,355	Valid
4	0,673	0,355	Valid
5	0,672	0,355	Valid

6	0,713	0,355	Valid
7	0,596	0,355	Valid
8	0,748	0,355	Valid
9	0,608	0,355	Valid
10	0,674	0,355	Valid
11	0,570	0,355	Valid
12	0,732	0,355	Valid
13	0,647	0,355	Valid
14	0,635	0,355	Valid
15	0,597	0,355	Valid
16	0,611	0,355	Valid
17	0,469	0,355	Valid
18	0,483	0,355	Valid
19	0,408	0,355	Valid
20	0,370	0,355	Valid
21	0,505	0,355	Valid
22	0,572	0,355	Valid
23	0,645	0,355	Valid
24	0,636	0,355	Valid
25	0,476	0,355	Valid
26	0,429	0,355	Valid
27	0,364	0,355	Valid
28	0,463	0,355	Valid
29	0,476	0,355	Valid
30	0,589	0,355	Valid

The next stage is the reliability test of the research instrument. The instrument is reliable if it has consistency even though it is measured more than twice with the same measuring instrument on the same symptoms (Siregar, 2017). The reliability test of this research instrument uses Cronbach's alpha technique.

The valid statement items are then tested for reliability with the IBM SPSS V22 program, and the instrument is declared reliable if the reliability coefficient is > 0.6 (Siregar, 2017).

Table 3. Reliability Test Results

Results Cronbach's alpha	N of Items	Information
0,748	31	High Reliable

The results of the reliability test obtained a score of 0.748 with a description of High Reliable. Because the value is more significant than 0.6, it can be concluded that the statement items are highly reliable or acceptable.

To categorize the average respondents' answers, class intervals are used, which are sought by using the following formula:

$$\begin{aligned}
 \text{interval value} &= \frac{\text{maximum value} - \text{minimum value}}{\text{number of scale}} \\
 &= \frac{4 - 1}{4} \\
 &= 0,75
 \end{aligned}$$

Numbers 1 to 4 are taken from the Likert scale. Four means strongly agree, three means agree, two means disagree, and one means strongly disagree. Based on the 0.75 class interval, the average category of respondents' answers is obtained as follows:

Table 4. Category Average Respondents' Answers

Category	Range
Very low	1,00 – 1,75
Low	1,76 – 2,51
High	2,52 – 3,27
Very High	3,28 – 4,00

D. RESULT AND DISCUSSION

1. Effective use of the Electronic Filing System as a means of information retrieval

a. The first indicator, **Response Time**

Response time is when a user sends the desired request through an Electronic Filing System application. The application will perform the necessary server directory operations to find the requested information. The time required to respond to this request is known as response time (Permadi, 2012). The results of the response time indicator obtained an average score of **3.54 (Very high)**.

Table 5. Response Time Indicator Results

Number	Statement	Score
Response Time		
1	By using an Electronic Filing System, users can search for information quickly.	3,58
2	By using an archival system, users can find the information they need quickly	3,67
3	It does not take long to connect to the archive system.	3,38
Amount		10,63
Average Score		10,63 : 3 = 3,54 (Very high)

The highest statements are found in items number one and two; users can search for information and find the information needed quickly. The faster the system responds to user requests, the higher the quality of the system. Delone's research shows that the higher the quality of the resulting system, the more user satisfaction will increase. Then an evaluation of the system is also needed to provide an overview of whether existing system performance is in accordance with what is needed and according to the purpose (William H. Delone & Ephraim R. McLean, 2003).

Evaluation of response time here refers to the speed of searching and retrieving information in Electronic Filing Systems. It is one of the media that is continuously perfected by the archiving unit. The archive system is sufficient to meet the criteria for a good response time quality because the system can respond to user requests in less than one minute.

b. The second indicator, **Turnaround Time**

Turnaround Time is the time interval between a program ready to run some system processes until the process ends (Iskandar, 2010). The results of the completion time indicator obtained an average score of **3.58 (Very High)**. The highest scores are in the second and third statements; using the archive system makes it easier for respondents to search for the desired information and find information quickly.

Table 6. Result of Turnaround Time Indicator

Number	Statement	Score
Turnaround Time		
1	By using an Electronic Filing System, the information that users want can be found easily.	3,58
2	By using the system, it is easier for users to search for the desired information.	3,61
3	Information in the archive system can be found quickly.	3,61
4	By using an Electronic Filing System, the desired information can be found in a short time.	3,54
Amount		14,34
Average Score		14,34 : 4 = 3,58 (Very high)

The Electronic Filing System is more efficient in the information retrieval process than the manual process, which takes a long time. The time between searches using the archive system is approximately 5-15 minutes, while the manual process can take 4-5 hours to search for an archive file. According to the theory, the completion time is the number of waiting periods to get to memory. The time interval required to complete a process is called the completion time (Wibowo, 2016).

Evaluation of completion time measures how quickly and efficiently it takes to display information (Keshgegian & Bull, 1992). The Electronic Filing System has met the criteria for a good system quality because the turnaround time when searching and getting the information is fast.

c. The third indicator, **System Reliability/Stability**

Reliability is a measure of how much the archive can be trusted. In comparison, stability measures the repetition of a test over time, which gives the same result every time it is used, within specified limits, on a system (Straker, 2010). The indicator obtained an average score of **3.25 (High)**.

Table 7. System reliability (stability) indicator results

Number	Statement	Score
System Reliability (Stability)		
1	When using the Electronic Filing System, users do not experience any difficulties or disturbances.	3,16
2	Electronic Filing Systems can provide reliable/trustworthy information.	3,35
Amount		6,51
Average Score		6,51 : 2 = 3,25 (High)

From these two statements, the reliability or stability of the Electronic Filing System is relatively high.

As explained in theory, reliability is demonstrated in the procedure when records are created and at the same time gives confidence to the user. The stability or reliability of a system also depends on the system used, especially in the creation process and the individual and the maker (Rustam, 2014).

The stability of the Electronic Filing System in response to the existing process is a form of measuring the quality of a good system. The measurement of the

system's level of reliability/stability, which is already high enough, shows that users already feel that the Electronic Filing System can run stably in its use.

d. The fourth indicator, **Ease of Interaction with the System**

Ease of interaction with the system is the key to human interaction with computers, which makes the system easy to operate (Weber, 1999). The indicator obtained an average score of **3.3 (Very High)**.

Table 8. Result of Ease of Interaction with the System

Number	Statement	Score
Ease of Interaction with the System		
1	In the use of Electronic Filing Systems, users have no difficulty in retrieving information.	3,41
2	In using the archive system, users feel that they are in accordance with what they want.	2,87
3	Users can operate the filing system easily.	3,41
4	The filing system is easily accessible from any computer.	3,35
5	The filing system has an easily recognizable display layout.	3,35
6	In a short time, users can be proficient, proficient, and nimble in using the system.	3,41
Amount		19,8
Average Score		19,8 : 6 = 3,3 (Very High)

The three statements that get the highest score are that the user has no difficulty retrieving information can operate the system efficiently. The user can be proficient, proficient, and agile in using the system in a short time. The three indicators obtained an average score of 3.41 (Very High). It shows that system applications make it easier for them to find information, do not find it challenging to learn how to use it, and quickly interact with the system to make their work easier.

Ease of interaction with the system is the key to human interaction with computers which are closely related to making the system easy to operate or easy to use procedures (Weber, 1999). The user's perception of the ease with which he interacts with the system can be defined as a measure of the degree to which a person believes that the computer can be easily understood and used (Davis, 2020).

e. The fifth indicator, **Usability of the Functions Provided**

The usability of the functions provided by the system is a collection of menus and features on the system that can assist users in completing their tasks (Weber, 1999). The indicator obtained an average score of **3.51 (Very High)**.

Table 9. The results of the usability indicator of the functions provided

Number	Statement	Score
Usability of the Functions Provided by System		
1	Users can interact easily using the Electronic Filing System in retrieving information.	3,70
2	Users always use the help features found in the system to retrieve information.	3,48
3	The Electronic Filing System is continually updated in order to run more efficiently in retrieving information.	3,35

Amount	10,53
Average Score	10,53 : 3 = 3,51 (Very High)

These three statements show that the usability of the functions provided by the system is outstanding.

Davis defines functional usability as one of the levels at which a person believes that using the system can improve their performance at work. In addition, it is also a form of belief that using a particular system does not require hard work (Davis, 2020). Although the effort according to each person is different. However, in general, users must easily apply the system without expending effort that is considered burdensome to avoid rejection from using the developed system. Thus, if a person believes that technology is applicable, then he will use it.

f. The sixth indicator, **Ease of Learning**

Ease of learning is the user's response to how to learn and operate the system. The system can be of high quality if the user has considered that the system's operation is easy (Weber, 1999). The indicator obtained an average score of **3.35 (Very High)**.

Table 10. Results of Ease of Learning Indicators

Number	Statement	Score
Ease of Learning		
1	Users can quickly learn to use the Electronic Filing System.	3,41
2	The system has a design that is easy to understand and facilitates information retrieval.	3,29
Amount		6,7
Average Score		6,7 : 2 = 3,35 (Very High)

Both statements show that the Electronic Filing System provides convenience in learning. Ease of knowledge can also be interpreted as ease of use because the easier a system is to use, the more valuable the system will be (Davis, 2020).

In using a system that is easy to learn, users do not find it challenging to learn. They can quickly interact with the system. The ease of learning information technology system will create a feeling that the system is easy to use and efficient and will make sense of comfort when working with the system.

g. Seventh indicator, **Quality of Documentation and Assistance Facilities**

The quality of documentation and assistance facilities is an assessment of the quality of documentation and the support features in the system. This evaluation assesses if the user feels that the system has adequate documentation quality with the available facilities (Weber, 1999). The indicator obtained an average score of **3.36 (Very High)**.

Table 11. Results Indicators Quality of Documentation and Assistance Facilities

Number	Statement	Score
Quality of Documentation and Assistance Facilities		
1	The Electronic Filing System provides support facilities in the form of documents or information of good quality.	3,35

2	The system is constantly updated its appearance design to make it easier for users to use it.	3,25
3	The system displays information related to the information the user is looking for.	3,22
4	The information presented in the system is clear enough to understand.	3,51
5	The information that users get by using the system is very accurate or in accordance with the user's information needs.	3,51
Amount		16,84
Average Score		16,84 : 5 = 3,36 (Very High)

The quality of documentation and assistance facilities is measured through five statement items: the quality of documentation and assistance facilities in the system. The system can provide documents or information that users want with good quality, obtaining an average score of 3.35 (very high). The system always updates its display design to make it easier for users to use it, receiving an average score of 3.25 (high). In its appearance, the system displays information related to the information sought to obtain an average score of 3.22 (high). The information presented in the system is clear enough to be understood. The information obtained is very accurate or in accordance with the information needs getting the same average score of 3.51 (very high).

Archival documentation activities are in the form of the archive digitization process and archive metadata. It corresponds to a well-documented administrative context and metadata describing how the information was recorded. Good documentation has characteristics, namely based on facts, accurate data, completeness, organization, and easy to read (Muryani, Pertiwiwati, & Setiawan, 2020).

For electronic archives, archival documentation activities are in digitizing and writing metadata. Metadata includes all the information necessary to enable the archive to be understood and used. For example, system documentation is required when electronic filing is migrated to a new platform (Rustam, 2014).

h. The eighth indicator, **the Degree of Integration with Other Systems**

The level of integration with other systems is an interconnected system between devices so that data from one system can be passed or taken by one or more systems (Kemendagri, 2019). The indicator obtained an average score of 2.98 (High).

Table 12. Result Indicator Level of integration with other systems

Number	Statement	Score
the Degree of Integration with Other Systems		
1	The Electronic Filing System can be integrated with other systems inside and outside the ministry's central archival unit for information retrieval.	1,80
2	The system can be accessed using any device (mobile phone/computer).	2,80
Amount		4,70
Average Score		4,60 : 2 = 2,30 (Low)

Evaluation of the level of integration with other systems can be measured through two statement items. The first item statement, the Electronic Filing System can be integrated with other systems, has an average score of 1.80 (low). Statement item 2, the

system can be accessed using any device (mobile phone/computer), has an average score of 2.80 (high). As for statement 5, the system has the authority so that only certain users who can access the information available on the system as a whole get an average score of 3.51 (very high).

The concept of system integration is a system concept that is interconnected with one another in accordance with specific goals. In this study, the electronic archive system has not been integrated with other systems. However, it can be integrated because it has a Representational State Transfer Application Programming Interface (Rest API). This software allows media to be integrated and enables data exchange between two connected applications (Herlian, 2015).

The electronic archive system can be integrated with other systems. However, it has not yet been realized because it is still waiting for a ministerial regulation governing digitization, so it is still a project in the future.

Moreover, from the overall recapitulation results, the eight indicators obtained an average total score of 3.33 (Very High). The gain is categorized as High based on the provisions of the class interval limit, which is on an interval scale of 2.52 – 3.27 (High). From the overall data analysis results, if the score is calculated as a percentage value of agreeing and strongly agree, it will get a score of 90.96%, meaning that the level of effectiveness of the Electronic Filing System in information retrieval is very high. The reason for the effective use of the system can be seen from the study results because the system is considered to be fast in retrieving archives that are in accordance with what the user needs. In addition, archivists also feel that using the system makes their work much more quickly than manual processes, which take longer. Manual search also requires high accuracy to find out the location of the archive until the archive is found it can be used.

Information technology officers also recognize that using the system saves time and will be faster because it is connected to the internet network. Almost all evaluations conducted by researchers on using the system as a means of information retrieval at the Ministry of Environment and Forestry obtained high scores and have been running quite well.

2. Obstacles in the process of information retrieval

The electronic archive system has never experienced a problem that the archive is not found in retrieving information. Although no archive feature is being borrowed on the system, an indicator sign indicates that the archive is being borrowed on the storage rack. From the study results, there were no cases of lost archives due to borrowing, but only late in returning them. If the borrowed archive has not been replaced but the borrowing period has been completed, the archivist is obliged to charge the borrower to return the borrowed archive.

Another obstacle is not finding the old archive on the new system. The archive is still stored in the 2013 version of the Electronic Filing System application and has not been moved to the new 2017 version. Programming capabilities so that old files stored in the 2013 version of the system can be moved to the 2017 version by creating a new menu and adjusting the form to be moved automatically. Moving old files to a new application will be more effective for the information retrieval process because the search process is only from one system, so it does not take long to open other applications.

E. CONCLUSION

The use of the Electronic Filing System as a means of retrieving information at the Central Archives Unit of the Ministry of Environment and Forestry viewed based on the Evaluating System Quality variables, namely response time, completion time, system reliability (stability), ease of interaction with the system, usability of functions provided by the system, ease of learning, quality of documentation and assistance facilities, and level of integration with other systems.

Based on the formulation of the problem and the study results, it was concluded that almost all archivists in the Central Records Unit of the Ministry of Environment and Forestry felt that the use of the Electronic Filing System had been effective in their work environment. It can be seen from the number of indicators that have a very high category. Moreover, of the eight indicators with low scores, only integration indicators with other systems have an average score of 2.48 (Low). It indicates that the score is low, which means that the Electronic Filing System has not been integrated with other systems in the work units. It causes the need for processing by sending archives manually to move active files in the work unit to inactive records in the records centre.

In the future, the Central Records Unit of the Ministry of Environment and Forestry needs to develop its system by integrating the Electronic Filing System (inactive dynamic) with other systems, such as integrating with the active dynamic filing system and also the static archive system. Because so far, the three systems are still separate from each other.

The results of this study are beneficial for the central records unit in evaluating the Electronic Filing System in accordance with the standards and guidelines for effectiveness, in this case using the standard evaluating system quality from Ron Weber. This evaluation aims to provide the best performance of the Electronic Filing System, analyze the various weaknesses in each assessment indicator and become a guide to improve it. The ultimate goal is to provide the best service in providing services to users.

Further research suggests using other standard effectiveness models, such as the Technology Acceptance Model (TAM), End-User Computing Satisfaction (EUCS), or other standard models (Azwar, Surandari, & Djohar, 2020; Sari, Suprayogi, & Azwar, 2021). Research can also use other approaches, such as regression testing, to find the effect of an Electronic Filing System model with internal or external variables.

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