



Paper Records to Digital Archives: Challenges and Best Practices for Efficient File Digitization

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Abstract— The study examined the practices the agency adopts during its transition to digitized files, as well as the challenges encountered throughout the process. It explores the multifaceted journey of file digitization, understanding the current practice and addressing the obstacles and impedes the seamless conversion of physical documents into digital formats. All respondents are directly related on the subject matter who have experienced digitizing documents first hand from the beginning of conversion until the ongoing process as of the current period. Key challenges include technical issues on hardware and software, data migration issues, lack of tools, loss of tangibility, integration with existing systems, quality of scanned copies, and fast turnover within organizations. While highly practiced processes include assessment and planning, choosing the right tool for both software and hardware, and document retention. The research also tried to connect whether these factors are related on the current challenges. By examining case studies and leveraging expert insights, this paper aims to provide a comprehensive framework for organizations looking to implement efficient file digitization strategies while maximizing the benefits of digital archiving. The result of this study will serve as a basis for developing an effective intervention strategy to address and improve the digitalizing of files. The research is conducted to serve as a basis in creating strategies for effective file digitization.

Keywords— challenges, digital archiving, documents, efficient, file digitization, practices, transformation.

INTRODUCTION

Technological advancements affect aspects of life, one which is the field of archives, namely digitizing archives, and digitizing is done to create archives documents in digital form with the aim that the work carried out can be effective and efficient. Digitization and digital preservation are rapidly becoming the standard forms of preservation for libraries, archives, and other cultural heritage institutions, yet there is still much confusion as to what they mean and how they are meant to be used (Perry, 2014). In the digital age, the transition from paper records to digital archives presents both significant opportunities and formidable challenges for organizations seeking to enhance efficiency and accessibility. Advancement in technology is one ground for businesses and agencies to adapt and align with the fast-changing culture of the modern time. Adapting with the current trend brings benefits and advantages to one's organization but it also comes with great responsibility. Observing the significance of archives as centers of memory and sources of information, institutions developed practices to ensure the preservation, organization, and accessibility of valuable information for future references.

It requires much effort, resources and knowledge to achieve a comprehensive and effective digital archiving system. The whole process includes several important parts such as scanning, indexing, quality checking and

archiving and backup of electronic documentary information (Zhang et al., 2014). According to Malaperdas (2014), the most important thing it provides is that through digitization, the object or information is available to such a wide range of audiences. No need to visit the archive storage to pull out paper-based documents since it can be already accessed through the computer. Many publishers have digitized their journal back files to ensure that an archive of all their electronic journal content is available to their customers, and to take advantage of the funding available in some institutions to purchase back files (Howells et al., 2009). By maximizing the availability of data online, many organizations use techniques to gain from it by using codes or cookies when accessing online information. With this, it can prove that digital archiving is more convenient than that of traditional. It is more efficient when it comes to document management, especially for voluminous transactions, because an organization can store, retrieve, and organize documents more effectively.

According to Archive Corporation on its records management statistics, the staggering volume of paper documents, the cost of managing paper-based processes, and the increasing demand for mobile accessibility underscore the importance of transitioning to digital solutions. They added that in the US alone, has over 4 trillion paper documents, and that number is growing by 22% every year and document challenges result in a productivity loss of 21.3%. Furthermore, knowledge workers spend about 2.5 hours per day searching for information on those papers. It was also stated that 72% of companies use a combination of paper-based and digital processes. As it was stated by Sheridan according to Public Technology (2017), the work to digitize records has been taking place for about 15 years, and although millions of documents are now available digitally, only between 5% and 6% of The National Archives' records have already been digitized. Nguyen (2024) stated in his research titled "Digital Archiving - From demand to ArchiveNex solution" that Vietnam has experienced significant advancements in information and communications technology and that the explosion of digital data has posed considerable challenges for state agencies and businesses in terms of information archiving and management. He added that traditional paper archiving methods are no longer adequate due to limitations in space, cost, and efficiency. Moreover, it was stated that digital archiving offers many benefits, it also presents significant challenges and identifying and addressing these challenges is essential for optimizing the use of digital archiving systems.

In the Philippines, one agency with the longest digital archiving system is the PSA. According to the PSA website, as the central authority for statistics of the Philippine government, the PSA houses a large volume of data and information from the conduct of periodic censuses. In recognition of the need to provide more timely and comprehensive information to the public on the various statistical activities and outputs of the PSA, the PSA has forged a partnership with Partnership in Statistics for Development in the 21st Century (PARIS21) to build, maintain and update the PSA Data Archive. Moreover, the PSA Data Archive serves as the systematic repository of the data collection, generation of statistics of the PSA. It aims to document, disseminate and preserve the dataset and information on the procedures undertaken and materials used in the conduct of PSA statistical activities, and promote rational use and appropriate interpretation of the statistics generated by the PSA. Without data archiving, PSA would struggle to locate documents for printing.

The study conducted by Corpuz (2020) titled "Archiving and Digitizing of Customer Records of Golden Rural Bank of the Philippines, Inc." states that important principles involved in the digitization process, includes planning and



workflow processes. He added that digitization is the most important strategy for preserving and sustaining the cultural and intellectual heritage resources that keep it alive, intact and accessible. It is also the key to bringing about the transformation along with transparency and competitiveness in modern economies.

With regards to the transformation of paper-based records of the finance division of DSWD, within the span of almost 2 years of digital archiving, many challenges have been met by the digitization team and users. Despite these challenges, the division pushed through with the conversion in order to ease access to the historical files of the agency and to solve problems regarding the space that the papers consume. Through strategic planning, some problems were resolved and digitization was enhanced, however, new challenges arose that required attention. As a result, the researcher envisions to help address the identified problem by conducting this study. This research aims to provide valuable insights and practical recommendations that can contribute to the advancement of the field and promote more effective practices.

The study explores the multifaceted journey of file digitization, understanding the current practice and addressing the obstacles and impedes the seamless conversion of physical documents into digital formats. Key challenges include issues of data integrity, technological limitations, and resistance to change within organizations. To navigate these hurdles effectively, this study identifies practices that can streamline the digitization process, ensuring that valuable information is preserved, serviceable and made readily accessible. By examining case studies and leveraging expert insights, this paper aims to provide a comprehensive framework for organizations looking to implement efficient file digitization strategies while maximizing the benefits of digital archiving.

Significance of the Study

The result of this study will serve as a basis for developing an effective intervention strategy to address and improve the digitalizing of files. The research is conducted to explore the current challenges and practices associated with the conversion of historical data to digital and serve as a basis in creating strategies for effective file digitization.

Record Keepers. With proper training and involvement, the team can create effective digital archiving. An organization with systematic archiving offers significant benefits that enhance the efficiency, accessibility, and security of an organization's information. Use of physical storage will be reduced since the record officer can manage documents on the desktop. The employee productivity will improve because the time spent managing and searching for documents are reduced.

Accounting Staff. Accounting staff are the first users of the digital files and at the same time the keeper of records. Proper handling and storing of digital files ease access to them when reviewing past transactions. Digitization also helps lessen physical storage of records.

Users. A systematic archiving will be valuable to users since it enhances their ability to access records, manage and utilize information, and have efficient workflows. These efficiencies can lead to a faster project completion and improve task management.



Organization. Organization will be more efficient, productive, and have long-term success. Effective archiving incorporates enhanced data security, cost saving by minimizing the need for physical storage, streamline disaster recovery and enhanced collaboration within the organization.

Moreover, this study will understand the current process, help in identifying challenges and promote practices that the finance division of DSWD and other organizations can adapt with regards to efficient record management.

Statement of the Problem

The study aims to evaluate and understand the practices for transitioning from paper-based to digital archives and to identify the challenges encountered in the process.

Importantly, it aimed to address the following questions:

- What practices are implemented in digitizing records?
- What challenges are encountered in digitizing records?
- What is the relationship between the current practice and the issues that arise?

METHODOLOGY

Research Design

The study used a quantitative method. This method involves structured methodologies that enable researchers to quantify variables and analyze relationships between them using statistical methods. According to Traci Williams (2021), quantitative research produces objective data that can be clearly communicated through statistics and numbers. He added that the data is primarily used to find patterns and averages, make predictions, test causal relationships, and generalize results to wider populations. The researcher identified the current procedures of the target respondents on the transformation to digital files and determined the issues that arise, their relationship and classified what variables cause these setbacks. Additionally, provided recommendations that can help enhance and refine the current practice. Gathering of data was through questionnaires and the target participants are the employees of the finance division of DSWD. As stated by Derek Jansen and Kerry Warren (2020), quantitative data analysis simply means analyzing data that is numbered-based or data that can be easily converted into numbers without losing any meaning. They added that it is also used to assess relationships between variables, and to test hypotheses in a scientifically rigorous way. This applies when it comes to understanding the relationship between the current practices and challenges.

Local and Population of the Study

The respondents of this study were the staff of the finance division of the Department of Social Welfare and Development (DSWD), specifically the 19 staff members of the liquidation unit under the accounting section. With the small number of respondents, census sampling or a full population survey had been conducted. The study focused on the past and current practices and factors that affected the digitization process of documents, as well as the challenges or problems that arose. Hence, the data collection had been conducted in the finance division of DSWD.



Data Gathering Tools

The researcher used a self-administered questionnaire for the convenience of the respondents and the researcher itself since it was cost-effective and allowed respondents to answer with ease. The area of the questions asked was based on observation, experience, and various literatures and studies connected with the digitization of files. The researcher used a structured questionnaire that consisted of pre-determined questions because it was easy for immediate statistical analysis. Structured questionnaires were used because this type of questionnaire was useful for gathering quantitative data. Philip Cleave (2023) stated in his journal titled "Structured or Semi-Structured Questionnaire?" that when it came to structured questionnaires, it was relatively simple and quick to complete and quantify. He added that the quantitative nature of this questionnaire meant it was possible to make assumptions based on the data it generated, which could be used to support decision making.

Reliability and Validity of the Instrument

To ensure the reliability of the questionnaire, it was distributed to staff who were directly engaged in digitizing documents. Also, to evaluate validity, content validity was established by consulting with two subject matter experts who reviewed the questionnaire items to confirm their relevance. Additionally, items on the questionnaire were adjusted based on other studies and critiques from experts.

Data Gathering Procedures

Upon the approval of the research title, the researcher sought permission from the agency through the Chief of the Financial Management Division and PDPS to conduct the study. An approval was given to confirm their willingness to participate in the study, and the requirements asked by the agency were submitted to them. Once approved, the head of office of the target participants was informed, and the researcher then asked the target respondents to answer the questionnaire through online distribution. Any clarifications were directed to the researcher, and the researcher then answered the questions. Upon submission of the answers, the researcher digested the data and translated it based on the research. Afterwards, the researcher continued the process until a conclusion was reached and a recommendation was available.

Treatment of Data

The treatment of data in this study involved descriptive statistics to capture, analyze, and interpret participants' experiences and perspectives. Descriptive statistics were concerned with gathering, classifying, and presenting data, as well as collecting values to describe group characteristics of the given data. The primary data source consisted of questionnaires, which were transcribed and anonymized to protect the identities of participants. Observations and feedback were also taken to capture non-verbal cues. These multiple forms of data allowed for a rich, in-depth understanding of the participants' experiences. Comparative analysis was used to analyze the gathered data. According to Appinio Research (2023), comparative analysis is a systematic approach used to evaluate and compare two or more entities, variables, or options to identify similarities, differences, and patterns. They added that it involved assessing the strengths, weaknesses, opportunities, and threats associated with each entity or option to make informed decisions. The statistical tools used were the frequency count, mean, and ranking.

Ethical Considerations

The ethical principles guiding this research prioritized the well-being, autonomy, and dignity of all participants. The study emphasized the voluntary nature of participation, ensuring that individuals had the right to choose whether to participate or not without consequences. The participants made their decisions freely and without external pressures. Additionally, confidentiality was rigorously upheld, with efforts to anonymize data whenever possible to safeguard participants' privacy. Following these ethical guidelines not only maintained integrity and respect but also enhanced the credibility and validity of the research findings.

RESULTS AND DISCUSSION

Challenges and Practices in Digitizing Records

As organizations transition from paper-based to digital records, they encounter both opportunities and obstacles. It aims to improve efficiency, accessibility, and long-term preservation of records in an increasingly technology-driven world. As this transition continues to evolve, there are many factors to consider in ensuring a successful implementation. How do you see digital record management shaping the future of organizations, and what key aspects do you think should be prioritized in this shift?

The Department of Social Welfare and Development implement different practices in its transforming paper-based records to digitized files. Among these practices, some are highly practiced and some are moderately practiced while few are slightly practiced. The agency also faces multiple challenges and some are often encountered, most are sometimes encountered and few are rarely encountered. The study revealed significant trends in file digitization practices and the challenges faced by organizations. These results are categorized into two key areas: current practices and recurring challenges.

Practices in File Digitization

Practices on Digitization of Files

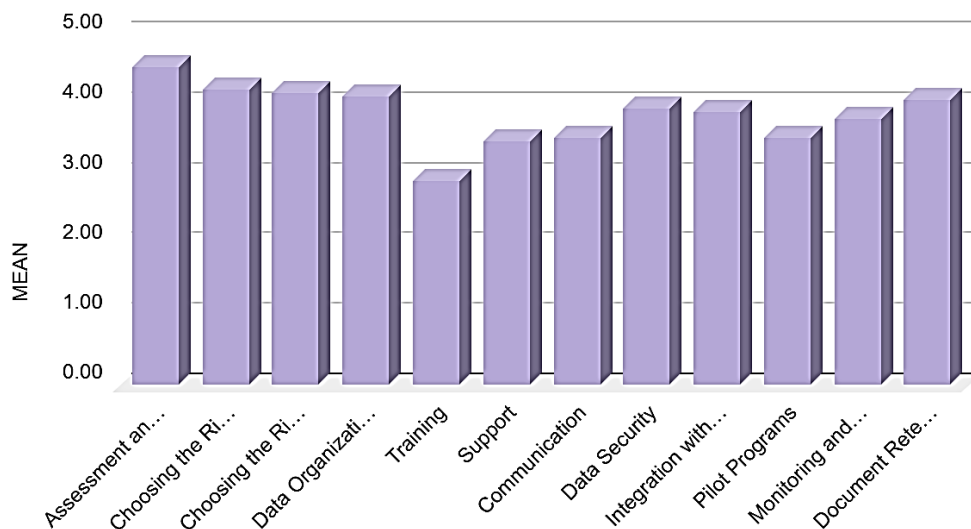


Figure 1. Practices on Digitization of Files



The analysis revealed that assessment and planning have the highest mean of 4.53 followed by choosing the right tool (hardware) 4.21, choosing the right tool (software) 4.16, data organization and indexing 4.11, document retention policies 4.05, data security 3.95, integration with existing system 3.89, monitoring and evaluation 3.79, communication and pilot programs both with 3.53 mean, support 3.47, and lastly is training with a mean of 2.89.

Base on the information, it indicates that DSWD places strong emphasis on thoroughly assessing and planning the digitization process before implementation. A thorough planning is crucial as it ensures that the digitization goals align with organizational needs. One of the reasons why most of the challenges are occasionally encountered is because it is formed as the foundation for an efficient digitization project. According to Alyce Scott (2018), a well-developed project plan, that takes into consideration all the factors and problems of the digitization project, will be the most important document to create. She added that because of resource limitations, it is very important for digital imaging projects to be carefully defined up front to at least minimize failure. Even Cem Dilmegani (2024) stated in the study entitled "8 Digitization Best Practices" that it is important to have a clear plan for the digitization project in order to establish a clear workflow and to ensure that all steps are completed in an organized and consistent manner.

Choosing the right tools on both software and hardware is also highly practiced by the DSWD. This indicates a high level of importance placed on the selection of suitable software and hardware. Software tools play a significant role in ensuring data organization, retrieval, and security. A well-chosen software solution can streamline workflows and enhance overall productivity, similarly when it comes to hardware tools. The proper hardware is critical for processing large volumes of files efficiently and ensuring the long-term sustainability of the digitization process. According to Manuel Aguirre (2024), it is necessary to choose a scanner that fits the needs of the organization same through with the right computer and hard drive for the storage of back up files. This suggests that the agency has made considerable efforts in selecting appropriate hardware and software that supports their digitization initiatives. On the question asked by LinkedIn which is "What are the most effective ways to digitize physical records?", one way is choosing the right equipment and software. It was stated in the published document that basic equipment and software that are compatible is important for efficient file digitization.

The data organization and indexing practice data reflects the importance the agency places on organizing digitized files in an accessible and systematic manner. Proper data indexing is vital to ensure easy retrieval of files and improve the overall usability of the digital database.

This practice appears to be reasonably effective, though some room for improvement remains and this was proved by the collected data showing that retrieval of files has 2.95 mean. This means that data organization and indexing of DSWD is still efficient. As per article by SecureScan (2024) entitled "Document Indexing: What is Indexing and Why is It Important?", properly tagging and categorizing the documents transforms what would be a scattered mess of digital files into a well-organized, text-searchable archive of information that allows quick and efficient retrieval of documents. To add by the European Business Review (n.d.), proper organization of digitized documents is crucial for easy access and retrieval and a well-structured digital filing system enhances productivity and reduces the time spent searching for documents.



Moreover, on the details collected, one of the highly practiced procedures is the document retention policy, indicating that DSWD has established policies for how digitized documents should be stored and managed over time. These policies help ensure compliance with regulations and assist in maintaining an organized archive for future access. According to Joan Honig (2024), DRP or document retention policy outlines the procedures that employees must follow to correctly manage both electronic and hard copy documents and data to span the document lifecycle from creation to archiving and proper disposal. It was added that DRPs help employees understand how applying these rules safeguards confidential information and protects data privacy. Meanwhile, support provided by the agency indicates a moderate level of attention to ongoing technical and administrative support. While support is an essential component of any digitization process, the relatively lower score suggests that further improvements could be made to ensure continued assistance for staff during and after the implementation phase.

Communication from top to bottom management including level 1 staff is moderately practiced by the agency, suggesting that while communication within the digitization process is somewhat effective, there may be room for enhancing the clarity and frequency of communication across different stakeholders. Clear and open communication is vital for aligning all participants' efforts toward a common goal. Clear communication about digitization goals and processes helps in aligning teams, ensuring that all stakeholders are on the same page and understand their roles in the project (DocCapture 2023). Additionally, the data security practice is almost highly practiced by the agency, reflecting that data protection is a priority within the digitization framework. However, there is a slight indication that improvements could be made in terms of ensuring a more robust security framework, especially as sensitive data is involved. Strengthening cybersecurity measures is critical for safeguarding against data breaches. It was stated in the European Business Review (n.d.) that implementing robust security measures is essential to safeguarding digital files. In addition, encryption tools and access controls ensure that sensitive information remains protected. The Integration with Existing Systems is one of the practices that the agency ensures, showing that efforts have been made to integrate the digitized files with DSWD's current systems.

Effective integration is crucial for ensuring that new systems do not operate in isolation but in line with the existing framework for continuous work flow. Also, pilot programs have been moderately to highly practiced, which suggests that pilot programs are being employed, though perhaps not to their full potential. Pilot programs are important for testing and fine-tuning digitization processes before full-scale implementation. They help identify potential issues and ensure that the system works effectively in practice.

Monitoring and evaluation are moderately implemented, indicating that DSWD is implementing some level of ongoing assessment and review of the digitization efforts. Continuous monitoring and evaluation are essential for tracking progress, identifying bottlenecks, and making necessary adjustments. The data shows that the agency recognizes the importance of this practice, but there is still room for improvement in terms of its systematic application. Continuous monitoring ensures data accuracy and integrity and it also includes periodic audits to verify that digital archives are complete and compliant with legal and organizational requirements (IBML, n.d.).

However, training on the new digital tools and systems had the lowest mean score which indicates that it is slightly practiced. This indicates that there may be significant gaps in training efforts for personnel involved in the digitization process. Comprehensive training is essential for ensuring that staff members are proficient in using the newly implemented systems and tools. It is crucial for maximizing the potential of digitization and reducing errors or inefficiencies. Employee training is a critical component of successful document digitization equipment, software usage, and best practices to ensure quality and efficiency (DocCapture, 2023). Moreover, training on the use of document management systems and metadata tagging not only improves efficiency but also reduces errors during the digitization process (European Business Review, n.d.)

Challenges Encountered

Challenges Encountered in Digitization of Files

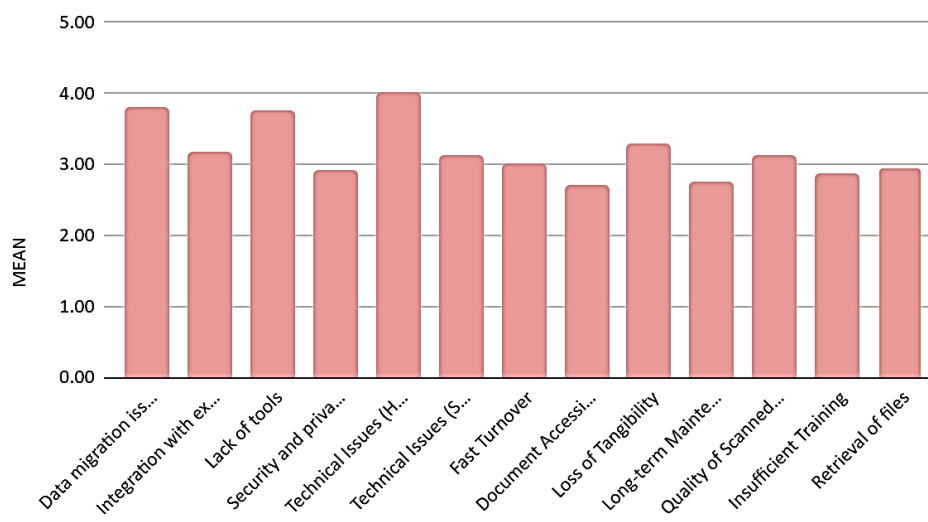


Figure 2. Challenges Encountered in Digitization of Files

Based on the study, the challenges encountered in digitizing documents with highest mean is technical issues on hardware (4) followed by data migration issues (3.79), lack of tools (3.74), loss of tangibility (3.26), integration with existing systems (3.16), technical issues on software (3.11), quality of scanned copies (3.11), fast turnover (3), retrieval of files (3), security and privacy concerns (2.89) insufficient training (2.84), long-term maintenance (2.74), and document accessibility (2.68).

For efficient and effective file digitization, we need to be aware of the challenges that are encountered in digitizing documents. The data shows that hardware-related problems were a significant challenge. This could include issues like malfunctioning scanners, insufficient storage, or outdated computers that can delay workflow and digitization process (European Business Review, n.d.). Hardware is fundamental to the digitization process, and when it is unreliable, it can slow down the entire operation. The score suggests that hardware failures or limitations were a considerable obstacle in the digitization efforts. The management of assets for digital processes presents new challenges to the archive and library community in terms of using and managing complex hardware and software (Fabunmi et al., 2006). Data migration issues also is one of the most encountered problems, indicating that



transferring data from one storage to another digital systems has been one of the most challenging aspects of the digitization process for DSWD. Data migration often involves complex tasks such as renaming files upon scanning, saving back-up files, and minimizing data loss during transfer. This suggests that the agency faced difficulties in ensuring that all data was accurately and efficiently migrated to the digital format and copied as is on the back-up. The challenge of integration with existing systems has sometimes encountered, which indicates that DSWD encountered moderate difficulties in aligning the new digitized system with existing one. Integration issues can arise when new software or hardware doesn't seamlessly connect with the previous systems, leading to workflow disruptions, data loss, data inconsistencies or inefficiencies and stress to employees.

Moreover, the lack of tools, loss of tangibility, integration with existing systems, technical issues on software, quality of scanned copies, and fast turnover are also sometimes encountered. Suggesting that the agency encountered a significant challenge in acquiring or utilizing the appropriate tools for digitization. This could include hardware, software, or even skilled personnel. Without the right resources, the digitization process can become slow and inefficient. This implies that tool shortages or inadequate technology were barriers to achieving successful digitization. Furthermore, software-related problems were a moderate challenge. These could include software bugs, system crashes, or incompatibility issues. While this score is lower than hardware issues, it still reflects the fact that software challenges were an obstacle to achieving smooth digitization processes. Software issues can often cause delays or require additional troubleshooting to resolve. Also, loss of tangibility can arise from the shift from physical to digital files, which can make it harder for staff to feel a connection with the documents or to handle them in the traditional way. While digital systems offer many advantages, some users may experience difficulty adjusting to the loss of the physical format, especially when they are used to handling hard copies. The challenge of quality of scanned copies shows that there were moderate concerns about the quality of the digitized files. Low-quality scans could make it difficult to read or interpret files, reducing the value of the digitization effort. Additionally, data on the fast turnover or changing of personnel indicates that high turnover or staff changes were a moderate challenge. This could affect continuity in the digitization efforts, as new staff members need to be trained, and projects may experience delays due to changes in the team. High turnover can disrupt workflows, reduce efficiency, and result in a lack of consistency in the digitization process.

In addition, retrieval of files, insufficient training, security and privacy concerns, long-term maintenance, and document accessibility are rarely encountered. This indicates that these issues, while important, were not as pressing as other challenges. However, this still represents a concern, especially considering the sensitive nature of the data handled by the agency. Security and privacy concerns data suggests that while security is recognized as a challenge, it may not have been as acute or widespread as other issues. On the other hand, information on the accessibility of documents suggests that accessibility to digitized documents was less of a challenge but still a concern. This could involve issues like difficulty in requesting files, slow access times, or lack of authority of the primary users to utilize the file. This is in line with the difficulty in searching or locating files within the digital system, which is often tied to the efficiency of data indexing, metadata, and user interface design. A score just below 3 suggests that while this issue is not a major concern, there may still be room for improvement in the file retrieval process. Furthermore, the maintenance of the digitized file, though a concern, is also not a major challenge at



present. This includes preserving the quality and quantity of the digitized files over time. The relatively low score suggests that the agency has not yet faced significant issues with long-term upkeep, though this could become a more prominent challenge as time progresses. When it comes to training, it may not be as significant as the others but proper training is essential for ensuring that employees are fully equipped to handle new systems and technologies. Organizations who face difficulties in training employees to handle advanced digitization technologies, can lead to inefficiencies and errors in the digitization process (DocCapture, 2023).

SUMMARY

The study revealed a significant correlation between the practices as shown in figure 1 and the challenges encountered as shown in figure 2. Wherein despite choosing the right tools is a major success factor, the most significant challenges involve hardware and software issues. This suggests that even with good preparation, technical difficulties remain a major hurdle. Moreover, integration with existing systems and data security were rated as important factors for success, yet both appear as challenges, indicating that ensuring smooth system compatibility remains difficult. While data security is also considered an important factor, concerns still exist regarding privacy, security, and accessibility of digitized documents. Same through with the monitoring and evaluation of the process which is also an important factor, concerns remain about document quality and loss of physical copies, suggesting a need for improved scanning and verification processes. Meanwhile, training received the lowest mean as a success factor and was a notable challenge which is also the weak link, reinforcing the inadequate training is a persistent problem that affects digitization efficiency. The low rating for training both as a success factor and as a challenge indicates a gap in workforce preparedness. Though support given by the agency is high, skill development might have been overlooked. Overall, the results highlight that while proper planning and tool selection are essential for successful digitization, technical difficulties, integration issues, and insufficient training still present major obstacles to effective implementation.

CONCLUSIONS AND RECOMMENDATIONS

The results of this assessment demonstrate that the Department of Social Welfare and Development has implemented several key practices in the digitization of files, with a particular focus on proper planning, tool selection, and document management. However, there are notable areas that require attention, particularly in terms of training, support, and communication. Addressing these gaps will be crucial for ensuring the long-term success of the agency's digitization initiatives, improving efficiency, and optimizing the use of technology within the organization. Further emphasis on employee training and providing consistent technical support will likely enhance the overall performance of the digitization process and its outcomes.

Additionally, enhancement in choosing the right tool by testing the hardware and/ or software before purchasing could help reduce the problems encountered regarding the tools needed. It is also concluded that despite the process being practiced and support given, it is recommended to enhance and improve on the areas that are not much given attention to because every process has effect for efficient and effective file digitization. Moreover, it can reduce the challenges being encountered or it may solve the issues and concerns that arises.



The results also highlight several key challenges that the agency faced during the digitization of files. The most pressing challenges are data migration issues and hardware-related technical issues, both of which scored high, indicating substantial barriers in moving from paper to digital formats. Other challenges, such as integration with existing systems and lack of tools, also ranked as significant concerns. There are also areas where the agency encountered moderate challenges, such as software issues, fast turnover, and document accessibility. On the other hand, security concerns, long-term maintenance, and retrieval of files were seen as less pressing but still noteworthy. Addressing these challenges will be critical for improving the digitization process. Solutions may include improving data migration strategies, upgrading hardware and software, providing more training for staff, and enhancing document management systems to ensure better accessibility and file retrieval. It is also suggested that the agency ensure that scanned documents met the necessary standards for clarity and legibility. Additionally, improvement in the accessibility could enhance overall effectiveness of the digitization process. Also addressing the recurring challenges could enhance the efficiency and sustainability of digital record management.

Moreover, it is suggested that further study will be conducted to know more and understand the process in digitization of documents. The title "Strategies for Effective File Digitization" can be considered.

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