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Implementation of Manual Records Management System: Basis for Proposed Web-based Records Management System

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Abstract — Digital use is a key component that plays a critical role in helping certain organizations. Furthermore, academic services are able to additionally strengthen the chance of achieving a high-quality higher education. The Digital Record Management System is essential for institutional effectiveness and decision-making. This research identifies a critical gap in the current academic data infrastructure, emphasizing the need for a unified, technology-based system. The primary objective is to explore the technical feasibility by implementing a web-based records management. Sustainable development for digitalization aims to ensure that as digital technologies advance and are employed in organization industries, they support long-term economic growth, social equality, and environmental protection. The researcher used the descriptive survey method to identify and address the issues by the office of academic affairs of Urdaneta City University. The findings indicate that respondents were effectively able to provide appropriate records-related services to key stakeholders, including students, teaching and non-teaching staff, and various administrative departments but the adoption of digital technologies plays a crucial role in resolving these problems, leading to more efficient, accurate, and accessible recordkeeping and also the potential of centralized systems to streamline administrative processes, improve data accuracy, and support data-driven planning and policy development. It is encouraged to conduct a technical feasibility study to explore implementing a centralized, technology-based academic information management system.

Keywords — Readiness; HUMSS Students; Ex-post-Facto; Performance; Career Goal; Potential Challenges

I. Introduction

In the digital age, effective information and document management is essential for institutional efficiency, particularly within academic environments. A Digital Records Management System (DRMS) offers a transformative solution for managing academic records by

digitizing storage, retrieval, and access processes (Brown & Williams, 2023). This shift from traditional, paper-based methods reduces administrative burdens, improves operational efficiency, and enhances decision-making capabilities across educational institutions (Zhu et al., 2018; Wambugu & Ochieng, 2019).

Recent literature emphasizes the DRMS's critical role in supporting academic services and institutional objectives. Sarah, Sugiarto, and Ahmad (2023) highlight its contribution to student achievement and competency-based learning. Similarly, Nasrullah et al. (2022) and Effendi & Tasrif (2019) underscore the system's ability to foster quality education culture and institutional accountability. Digitization also supports sustainable and equitable development, aligning with several Sustainable Development Goals (SDGs) such as quality education (SDG 4), gender equality (SDG 5), and strong institutions (SDG 16) (Appio et al., 2021).

Studies reveal that academic records, spanning memos, curriculum documents, grading sheets, and student petitions are crucial for institutional transparency, legal compliance, and historical preservation (Rankin, 2023; Isah, 2019). Manual systems are often plagued by inefficiencies, risks of data loss, and limited accessibility. In contrast, digital systems provide secure, centralized, and searchable repositories that enhance accessibility and reduce processing times (Adra, Sarmiento, & Bausa, 2024). They also support version control and metadata tagging, further boosting accuracy and reliability.

Implementation success depends on managing four key areas: project management, organizational alignment, human resources, and technological infrastructure (Yusof, Mohamed, & Mukred, 2019). These interdependent factors determine user adoption and long-term effectiveness.

Therefore, this study proposes a Web-Based Records Management System tailored for the Academic Affairs Office to address existing limitations, improve service delivery, and support sustainable digital transformation in education. By doing so, it seeks to bridge the gap between manual processes and modern digital solutions enhancing efficiency, data integrity, and institutional accountability in alignment with global development goals.

Literature Review

Many recent studies have highlighted the essential role of Digital Records Management Systems (DRMS) in transforming institutional workflows, particularly in academic settings. A DRMS, as described by Brown & Williams (2023), revolutionizes document handling by enabling centralized, secure, and accessible storage of digital assets, effectively addressing inefficiencies of traditional paper-based systems. The role of digital systems in academic services and student outcomes is well-documented. Sarah, Sugiarto, and Ahmad (2023) emphasized the importance of digital tools in supporting students' academic achievements and enhancing the quality of open university management. Similarly, Nasrullah et al. (2022) and Effendi & Tasrif (2019) highlighted how digitalization elevates service quality and contributes to a culture of academic excellence.

Zhu et al. (2018) and Wambugu & Ochieng (2019) found that digital records reduce administrative workload and processing time while promoting data accessibility for decision-making. These efficiencies are supported by Pascarella et al. (2020), who emphasized that DRMS ensures data integrity and compliance with privacy laws critical in maintaining institutional credibility.

The implementation of DRMS is influenced by various factors. Yusof, Mohamed, and Mukred (2019) identified project management, organizational structure, human resource capacity, and technology as key pillars for successful system integration. This aligns with the need for proper training, leadership support, and robust infrastructure to enable adoption. The value of academic records is further underscored by Isah (2019) and Rankin (2023), who stressed their legal and historical importance, reinforcing the necessity of reliable record-keeping systems. Fasasi in Osakwe (2021) supported this by noting how efficient record management improves internal communication and administrative coordination.

Moreover, Adra, Sarmiento, and Bausa (2024) demonstrated how DRMS enhances user experience with features like advanced search and version control, helping institutions transition from manual to streamlined digital processes, reducing errors and increasing data accuracy. From a sustainability perspective, scholars like Appio et al. (2021), George et al. (2020), and Mosweu (2022) tied DRMS implementation to broader Sustainable Development Goals (SDGs). These systems support goals such as Quality Education (SDG 4), Gender Equality (SDG 5), Industry and Innovation (SDG 9), and Peace, Justice, and Strong Institutions (SDG 16) by promoting transparency, inclusivity, efficiency, and innovation in institutional practices. Cerilli (2016) also emphasized aligning DRMS with the SDG framework for enhanced accountability and data-driven development monitoring.

Generally, these studies affirm the critical need for a robust, web-based DRMS in academic institutions. They provide the theoretical and practical foundation for proposing a Feasibility Program for the Web-Based Records Management System for the Academic Affairs Office, aimed at improving accessibility, security, and operational effectiveness in handling academic.

II. Methodology

The researcher shall use the descriptive survey method to identify and address the issues faced by the academic affairs office of Urdaneta City University. By adopting this method, the researcher would be able to accurately and systematically describe the problems faced by stakeholders in a consistent manner. The respondents in this study were the deans, faculty members, academic staff and administrative staff of Urdaneta City University. The researcher shall use stratified sampling to determine the exact number based on characteristics of a population and objective of the study.

A total population of 200 was gathered for this study, following Slovin's Formula with a margin of error of five percent, to determine the appropriate sample size of the said respondents. To ensure the reliability of these instruments, a pilot test was conducted with a sample of 30 randomly chosen respondents. The data collected from these respondents were used to perform a reliability analysis, specifically measuring the internal consistency of each set of items. Internal consistency was assessed using Cronbach's alpha, a statistical measure commonly used to evaluate the degree to which items in a set are related as a group. This analysis helps determine whether the items within each subcomponent reliably measure the same underlying construct. By conducting this reliability analysis, the researchers aimed to confirm that the developed instruments are consistent and reliable for measuring the extent of implementation and challenges of the manual records management system in the larger study. The reliability analysis yielded a Cronbach's alpha of 0.958 for the items measuring the extent of implementation of the manual records management system. This value falls more than 0.9, which indicates excellent internal consistency. Similarly, the reliability for the items measuring the challenges of the manual records management system resulted in a Cronbach's alpha of $\alpha = .946$. This value also exceeds the .90 threshold, indicating excellent internal consistency. Thus, this suggests that the items are consistent in capturing the same underlying construct.

In this study, the researcher employed a survey questionnaire as the primary data collection instrument. This questionnaire served as a structured list of questions designed to gather information from the respondents, thereby facilitating the collection of data. The sets of data gathered, organized, analyzed and interpreted in accordance with the order of the specific research problems. To interpret the data to be gathered, the following were used, the profile of the respondents, the researcher used frequency count and percentage distribution. To analyze the extent of implementation in using manual processing within the Office of Vice President for Academic Affairs, the Average Weighted Mean (AWM) was utilized. Similarly, AWM was also applied to identify the challenges encountered in the manual process of the Office of Vice President for Academic Affairs. To evaluate the significant relationship between the extent of implementation of the current manual records management system and the challenges experienced, the Pearson r correlation coefficient was employed. Lastly, to assess the proposed feasibility study of the records management system, a systematic review was conducted.

III. Results and Discussion

The study results indicate that most respondents had a positive experience with the current manual records management system used by the Office of the Vice President for Academic Affairs. Respondents generally agreed that the system facilitated key record-related tasks efficiently, despite being paper-based. This demonstrates a strong organizational culture around discipline and procedural consistency, which appears to uphold functionality even in the absence of automation.

The study's findings reveal that, despite its manual nature, the existing records management system under the Office of the Vice President for Academic Affairs is perceived by respondents as functionally efficient in handling transactions. Most notably, respondents acknowledged that the current manual system maintains a smooth and structured approach to processing and organizing academic records. This suggests that the effectiveness of the system is rooted more in disciplined implementation and human diligence than in technological support.

However, the study also highlights critical limitations of manual systems, particularly in terms of inaccuracy, data fragmentation, and inefficiency in locating needed records. These findings align with the concerns raised by Zhu et al. (2018) and Wambugu & Ochieng (2019), who pointed out that manual records management often leads to delayed processing, errors, and increased workload due to a lack of automation. The identified challenges such as data duplication, misfiling, and time constraints in accomplishing academic tasks echo the drawbacks of paper-based systems widely documented in recent literature.

Furthermore, respondents noted an increasing need for faster, more accessible, and secure data handling, reinforcing the rationale for transitioning to a web-based digital system. This aligns with the perspective of Brown & Williams (2023), who argue that digital records management not only improves operational efficiency but also enhances collaboration and decision-making through centralized access to information.

The study revealed that the current manual records management system used by the Office of the Vice President for Academic Affairs is generally perceived as functionally efficient by respondents. Despite its paper-based nature, the system supports structured and disciplined records handling, largely due to the diligence and competency of administrative personnel. This reflects findings from Joy and Agala (2019) and Giba-Fosu (2020), who emphasize the importance of records in supporting decision-making, accountability, and legal documentation in higher education.

However, the study also identified critical limitations in the manual system, including inaccuracies, data fragmentation, and inefficiencies in document retrieval. These issues align with prior research (e.g., Zhu et al., 2018; Wambugu & Ochieng, 2019) that critiques manual processes for being prone to errors and time-consuming operations. Certain functions like issuing pass slips were rated highly, while routine tasks such as sorting and checking emails received lower ratings, pointing to inconsistent implementation.

Given these weaknesses, the study strongly supports the transition to a web-based digital records management system. Such a system promises enhanced data accuracy, centralized access, faster processing, and reduced administrative workload outcomes backed by studies like Brown & Williams (2023) and Aleru (2024). Furthermore, digitization aligns with broader institutional goals, including achieving Sustainable Development Goals (SDGs) related to education, innovation, and transparency (as emphasized by Appio et al., 2021 and Mosweu, 2022).

All correlations observed in the study were positive, indicating that as challenges in records management increase, there is a corresponding rise in the performance of the seven associated variables. Although the correlations were generally low, the strongest relationship emerged between challenges and the delivery of "Other Services," suggesting that rising difficulties may drive improvements or adaptations in this area.

This finding supports the view of Modebelu and Nwakpadolu (2014), who suggest that effective educational administration depends not only on strong leadership skills but also on the administrator's ability to manage records properly. Competence in maintaining precise, accessible, and well-organized records emerges as a vital element of administrative success. Complementing this view, Aleru (2024) highlights the transformative impact of digital technologies on records management in higher education. The adoption of electronic systems has significantly streamlined processes such as managing student profiles, tracking fee payments, and issuing invoices. These advancements suggest that administrative challenges are prompting institutions to evolve, especially in service areas like "Other Services," where technology facilitates more efficient and dependable operations. This interplay between administrative demands, technological innovation, and service enhancement illustrates the dynamic and responsive nature of modern institutional management.

In the broader context of the digital era, managing timely and accurate information has become indispensable. As Buchanan et al. (2017) argue, organizations increasingly require personnel who are not only proficient in information and communication technologies (ICTs) but also stay current with emerging digital tools to ensure effective information creation, storage, and retrieval. Tale and Alefaio (2005) further observe that ICT has greatly expanded opportunities for records management in developing countries. As a result, good records management supported by technology not only helps with daily operations but also gives organizations an advantage in achieving their goals.

Overall, while the manual system is sustained by human diligence and discipline, the growing complexity of academic operations necessitates a digital transformation. The study confirms the feasibility and necessity of implementing a web-based system to improve efficiency, service delivery, and long-term institutional effectiveness.

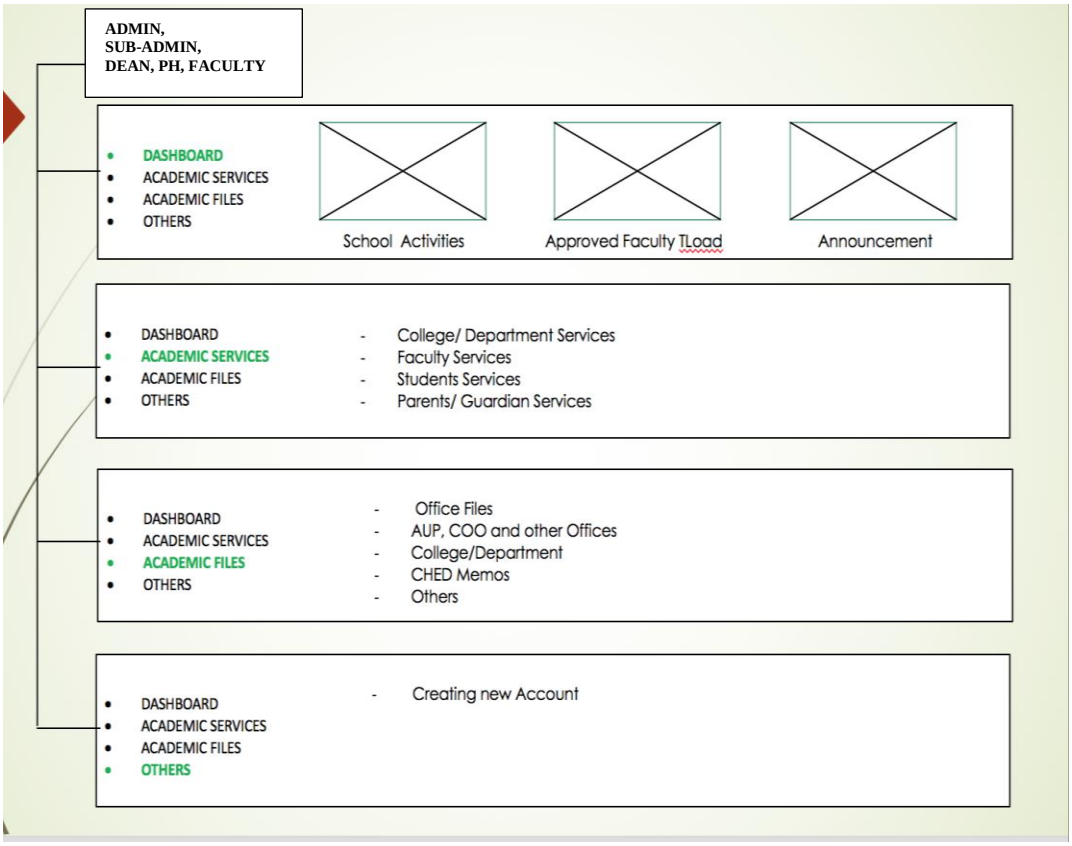

Figure 1. Wireframe of the Proposed Web-based Records Management System

Figure 1 present the Proposed Web-based Records Management System composed of the following: First, Log-in Page. Admin, a person who holds significant authority over the system. Responsible for managing the entire processes in the Web-based Records Management System. Sub-Admin (ACAD Staff), a person who is responsible for entering, validating and verifying data coming from different colleges and students, and also the uploaded files by deans, program heads and faculty of various colleges. Sub-Administrator is not allowed to delete uploaded files from different colleges. Dean/PH/Faculty, a person from the college who has the rights to upload pertinent documents/files to the system. Once documents/files are already uploaded to the system, Dean/PH/Faculty is not allowed to delete the uploaded documents/files. They can only update their uploaded documents/files. Second, Dashboard. Compose of School Activities, Approved Faculty Teaching Load and Announcement. Third, Academic Services. Compose of College/ Department services, Faculty services, Student services and Parent/Guardian services. Fourth, Academic Files. Compose of Academic files, AUP, COO, and other offices files, College/ Department files, CHED memos, and others. Fifth, others. Compose of creating New Account for the new user of the system.

IV. Conclusion

The research concluded that while the current manual records management system under the Office of the Vice President for Academic Affairs maintains basic accessibility and availability of records, it also presents significant operational limitations. The majority of respondents, primarily from the College of Teacher Education, reported relying on manual processes to request documents, processes that often result in inaccurate data collection, inefficient file retrieval, increased workload, and a higher risk of data loss due to file dispersal across locations.

The findings reveal that the extent of these challenges is directly tied to the limitations of the manual system, highlighting the need for a more structured, efficient, and accountable records management framework. Although manual systems benefit from human oversight, they lack the scalability and accuracy needed in today's digital academic environments.

Given the increasing demand for quick, accurate, and secure access to academic data, the study underscores the urgent need to transition to a centralized, web-based Records Management System. Such a system promises to streamline administrative processes, improve data accuracy, and enhance the overall efficiency of academic operations. It also supports transparency, better decision-making, and faster service delivery key elements for modern institutional governance.

The proposed web-based system is not only relevant but essential in responding to technological shifts and rising expectations in higher education. Its feasibility will be evaluated based on technical capability, cost-effectiveness, and operational impact. If successfully implemented, the system has the potential to significantly advance academic services, promote digital transformation, and align institutional practices with global standards for data management and sustainable development.

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