Propuesta de implementación de un enfoque DMF para la gestión documental en la Cooperativa JEP.

Proposal for the Implementation of a DMF Approach for Document Management at Cooperativa JEP

[1] Silvia Patricia Godos Rosales   https://orcid.org/0009-0009-9292-0376
Catholic University of Cuenca, Cuenca, Ecuador.
silvia.godos.95@est.ucacue.edu.ec

[2] Yonimil Castillo Ortega   https://orcid.org/0000-0002-7710-5199
Catholic University of Cuenca, Cuenca, Ecuador.
ycastilloo@ucacue.edu.ec

[3] Jorge Edwin Ormaza Andrade   https://orcid.org/0000-0001-5449-1042
Catholic University of Cuenca, Cuenca, Ecuador.
jormaza@ucacue.edu.ec

Palabras claves: Gestión documental, enfoque DMF, tecnología, tiempo, eficiencia.

Resumen

Introducción: La gestión eficaz de documentos constituye un elemento central en el funcionamiento de cualquier entidad, y la JEP Ltda. no es una excepción. En el contexto actual, donde la información se constituye como un activo estratégico, la habilidad para acceder, almacenar y administrar documentos de manera eficiente se convierte en un determinante para el desempeño organizacional. **Objetivo**: Evaluar un enfoque de Programa de Gestión Documental Gestión Documental Moderna (DMF) en la Cooperativa JEP para mejorar la eficiencia en el manejo de documentos, optimizando el acceso, la organización y la seguridad. **Metodología**: El estudio se caracterizó por tener un enfoque cuantitativo, y se empleó una encuesta adaptada de Caspi & Porras (2015); y Manrique y García (2023), dirigida a 137 empleados y gestores, de una población total de 250 personas en la cooperativa. **Resultados**: El análisis de la encuesta revela una actitud positiva hacia la adopción de tecnologías avanzadas en gestión documental, con un 67.9% esperando ahorro de tiempo. Existe un fuerte apoyo a la implementación de un sistema de gestión documental (97% de acuerdo) y la búsqueda de documentos es mayormente rápida, aunque hay margen de mejora. La integración de plataformas digitales es moderada y la ciberseguridad es altamente valorada, con un 69.2% considerándola muy importante. **Conclusión**: El análisis de la gestión documental en la Cooperativa JEP señaló varios desafíos, incluyendo la desorganización de la información, la ineficiencia en la búsqueda de documentos y la ausencia de integración tecnológica, por lo que se sugiere mejorar la eficiencia de la búsqueda a través de la formación del equipo y la adecuada aplicación de herramientas tecnológicas digitales. Área de estudio general: gestión empresarial**.** Área de estudio específica: gestión documental

Keywords: Document management, DMF approach, technology, time, efficiency.

Abstract

Introduction: Effective document management constitutes a central element in the functioning of any organization, and JEP Ltda. is no exception. In the current context, where information is considered as a strategic asset, the ability to access, store, and manage documents efficiently becomes a determinant for organizational performance. Objective: To evaluate a Modern Document Management Approach (DMF) in Cooperativa JEP to enhance efficiency in document handling, optimizing access, organization, and security. Methodology: The study was characterized by a quantitative approach, employing a survey

adapted from Caspi & Porras (2015); and Manrique and García (2023), directed at 137 employees and managers, out of a total population of 250 individuals in the cooperative. Results: The survey analysis reveals a positive attitude towards the adoption of advanced technologies in document management, with 67.9% expecting time savings. There is strong support for the implementation of a document management system (97% agreement), and document retrieval is mostly quick, although there is room for improvement. The integration of digital platforms is moderate, and cybersecurity is highly valued, with 69.2% considering it very important. Conclusion: The analysis of document management in Cooperativa JEP identified several challenges, including information disorganization, inefficiency in document retrieval, and lack of technological integration, suggesting the need to enhance search efficiency through team training and the appropriate application of digital technological tools.

Introduction

The disorganization of information and ineffective document management represent challenges that affect the operation and decision-making within the JEP cooperative, highlighting the need for a structured document management system. In addition, the simplification of procedures to access and manage documents, both internally and externally, and the proper management of physical information storage, are highlighted as factors to improve the efficiency, transparency and productivity of the cooperative (Congress of the Republic of Colombia, 2019).

The lack of access to relevant information at the JEP Cooperative represents a significant challenge, as the inability to obtain necessary documents quickly and efficiently limits its ability to respond to both internal and external requests, negatively impacting its dynamism and the satisfaction of its members (Espinel & Ferie, 2020). Furthermore, the lack of adequate technological tools for document management hinders the efficient processing, storage and retrieval of information, which slows down operations and increases the risk of loss or mishandling of critical documents (Ruiz et al., 2020).

The lack of availability of updated and timely information represents a significant challenge for the cooperative, as it limits its ability to perform accurate analysis and make informed decisions (Trujillo, 2021). This situation becomes even more critical given the need to respond quickly to market changes or specific requirements from members or regulatory entities. Furthermore, ineffective document management hinders interaction

between different departments, compromising team collaboration and productivity (Pérez, 2020). Inadequate sharing of documents and reports contributes to this problem, and the lack of adequate document management results in a loss of productivity of more than 20% among employees.

Archival methodology, a fundamental basis for business document management, is constantly evolving due to technological advances.(Gonzalez, 2022). Considering the magnitude of the "Juventud Ecuatoriana Progresista" Ltda. Savings and Credit Cooperative, with 63 branches nationwide and a large number of documents that require classification and filing by department, the implementation of a DMF approach to document management is proposed. This approach seeks to establish a system that allows the digital registration, control and monitoring of files currently managed in paper. With this, administrative operations will be optimized, facilitating the search and organization of documents, and contributing to a more agile and efficient management of information. The design of this DMF approach aims to improve document management at the JEP Cooperative, optimizing access, organization, information flow and security.

The implementation of a Program with an appropriate DMF approach not only optimizes workflow and productivity, but also highlights the importance of documents as pillars of transparency and informed decision-making (Congreso de la República de Colombia, 2019). Considering digitalization and the adoption of advanced technological tools, cooperatives can overcome traditional barriers, facilitating timely and efficient access to information (Espinel & Ferie, 2020). The adoption of virtual channels and the implementation of electronic document management systems are revealed as key strategies to foster a culture of transparency and collaboration, optimizing the user experience and the productivity of the cooperative (Ruiz et al., 2020). On the other hand, the management of documentary diversity in cooperatives, including administrative documents and those linked to services provided, is usually centralized in a single storage space, as opposed to a decentralized archiving approach.

Constantly updating document retention tables and transitioning to digital solutions are essential to using resources more efficiently, minimizing waste, and improving return on investment (Trujillo, 2021). A DMF approach introduces practices and technologies that transform information management, from creation to final disposition of documents. By adopting a DMF approach, solid foundations are established for digitization, information security, and accessibility, elements that are fundamental to improving document management (Congreso de la República de Colombia, 2019).

In terms of efficiency, process automation and document digitization significantly reduce the time and resources spent on document management, ensuring increased productivity and reduced physical storage costs (Espinel & Ferie, 2020). However, the cooperative's efficiency is compromised when employees face uncertainty about where to find specific

required documents. Russo (2009, p. 10) highlights that "an efficient document management system not only increases productivity and prevents problems related to information and document management, but also optimizes resource costs."

In the study by Manrique & García (2023) they focused on Alianza Fiduciaria, evaluating traditional and contemporary methods to improve administrative efficiency. Furthermore, their analysis led to the development of a customized proposal focused on Cybersecurity, Digital Marketing, Training and People, and Big Data and Analytics, with the aim of optimizing the digital management of information in the organization. On the other hand, Caspi & Porras (2015) turned their attention to the Cooperativa de Ahorro y Crédito "Andina" Ltda., using the Extreme Programming (XP) methodology to address the demands of the credit area. Both projects benefited from meticulous and detailed approaches, offering clear guidelines for continuous improvement in digital document management in their respective entities.

The aim is to evaluate a DMF approach to improve efficiency in document management at the JEP Cooperative, seeking to optimize access, organization, information flow and document security. First, a diagnosis of the current situation of document management at the JEP Cooperative will be carried out, in order to identify the most urgent problems and needs. Subsequently, theories and applied studies on document management in various contexts will be investigated. Finally, research will be carried out on the tools and technologies necessary for the effective implementation of the DMF approach at the Cooperative.

Theoretical Foundation

Document management in cooperatives

Document management is understood as the set of practices, technologies and techniques used to manage the flow of documents within an organization, covering everything from their creation to their eventual archiving or elimination. As Trujillo (2021) points out, the essence of a document management system in cooperatives lies in its ability to digitize and store physical documents, which significantly optimizes administrative operations. In addition, such a system facilitates the search and organization of documents and data in various formats, contributing to more agile and efficient information management in the company.

According to Piñeros et al. (2018), the approach to document management stands out for its dual purpose: while it promotes the effective conservation of relevant information, it simultaneously combats the unnecessary accumulation of paper. In the operational dynamics of the cooperative, the evaluation and monitoring of its performance is based on the integrity and organization of its documentation. As Pérez (2020) points out, "all

operations that the institution develops are supported by legalities or forms signed and sealed by those who correspond, mainly in the accounting area and the credit and collection area" (p. 12). Therefore, the intrinsic connection between efficient document management and the cooperative's ability to progress and operate effectively is highlighted, emphasizing the need for consistent and well-structured file management practices.

Chuquimarca (2018) highlights the relevance of Savings and Credit Cooperatives (COAC) within the Ecuadorian financial system, citing that "The participation of Savings and Credit Cooperatives (COAC) in 2017 was 19.8% in the national financial system, and the JEP Ltda. Savings and Credit Cooperative participated with 2.62%, demonstrating that it has a significant participation in the Ecuadorian financial system" (Chuquimarca, 2018, p. 15). This highlights the significant impact that COACs have on the national economy, and the important role that the JEP Ltda. Savings and Credit Cooperative specifically plays within this segment, pointing out its contribution and presence in the Ecuadorian financial system.

A pertinent example is the implementation of a document management system in the Savings and Credit Cooperative "Andina" Ltda., which was undertaken with a specific objective: to optimize response times in credit management, which was anticipated to bring a series of tangible benefits. Among these, an improvement in the quality of customer service, an increase in customer acceptance, easier access to credit and, finally, a significant reduction in operational costs were expected. The effective implementation of this system was facilitated by the creation of a comprehensive manual, designed to support the Credit area manager (Caspi & Porras, 2015).

Importance of document management

The effectiveness with which an organization manages its documents has a direct impact on the performance of its administrative functions and responsibilities. Plúa et al. (2021) highlight that document management positions the archive as the essential administrative core for the effective administration of the institution. Therefore, it is not just a matter of storing documents, but also maintaining the administrative structure and facilitating the fulfillment of organizational objectives.

According to Zambrano et al. (2021), for the implementation of a document management system (DMS) in organizations to be successful, "it must be carried out on solid archival foundations and in close collaboration between information managers, archivists and information technology specialists" (p23). In addition, the system must focus on the technical rules of document management specific to each country, which ensures that the implementation of the DMS is not only effective but also in compliance with local regulations.

For their part, Camilo and Castro (2021) argue that it is not possible to guarantee the obtaining of information that is timely, truthful, complete, authentic and accessible without effective document management and file administration. This emphasizes that robust document management is a cornerstone for organizational success and transparency.

Challenges of traditional document management

Berrocal (2016) identifies that traditional document management has "certain drawbacks, such as lack of immediate availability, lack of control over copies and duplicate documents, poor security, poor distribution of information, high production and storage costs; lack of knowledge management in documents and processes" (p.100). This highlights limitations such as: difficulty in accessing relevant information in a timely manner, ineffective management of document redundancy, vulnerability to security risks, inefficient distribution of information, high costs associated with the production and storage of physical documents, and inadequate knowledge management.

According to Sánchez (2021), public institutions currently require information systems that allow them to effectively manage the documents generated in their processes through digital platforms. Thus, information and communication technologies (ICT) facilitate the transition to digital environments by improving the efficiency and accessibility of information.

García & Gallegos (2022) point out that in order to preserve these digitally-born information assets in the long term, it is necessary to consider the application of digital preservation practices, which cannot be dissociated from adequate document management from the moment these documents and content are created and generated. Another challenge is to guarantee the security and protection of digital documents, since they may be exposed to cyberattacks. In addition, some of the emerging trends include the use of artificial intelligence and machine learning for document classification and analysis, the implementation of cloud-based document management solutions, and the use of blockchain to ensure the authenticity and integrity of records.

DMF approach to document management

According to Cáceres & Archivists (2023), they point out that the objective of the Document Management Program (PGD) or DMF approach is "the process of identifying the general flow of documentation generated by each "business" area of the museum" (p.5), which covers the creation, capture and circulation of documents, thus facilitating the retrieval of information when necessary, and determining which documents have vital or historical value to be transferred to the Archive for conservation, valorization and access based on specific characteristics.

The DMF approach, according to the Congress of the Republic of Colombia (2019), is made up of five fundamental processes: 1. Document Planning, where guidelines and objectives are established; 2. Document Production, which includes the creation and registration of documents; 3. Document Management and Processing, which refers to the handling and movement of documents within the organization; 4. Document Organization and Transfer, which includes the classification, ordering, and transfer of documents to their respective archives; and 5. Final Disposition of Documents - Valuation, which determines the final destination of the documents, whether their permanent conservation or their elimination.

For his part, Rendón (2017) illustrates the concept of the life cycle of a document within the DMF approach, in the following stages: the Management Archive, which houses documents with a high frequency of use and consultation, produced specifically by each area of the company; the Central Archive, which gathers documents transferred from the various management archives, which are still current, but with less frequency of consultation; and finally, the Historical Archive, intended for the permanent preservation of documents that have a significant value and importance for the entity.

Dimensions of the DMF approach

According to the General Assembly of the Nation (2017), the dimensions include the regulatory framework, which is composed of the normogram related to document management, general archival legislation, national and international standards, monitoring and control mechanisms, and the internal regulations governing document management. Regarding resources, the importance of ensuring adequate funding for the investment action plan is emphasized, which allows the execution, implementation and fulfillment of the established objectives. At the technological and infrastructure level, the need to have advanced technological tools and an adequate infrastructure for document management, including the identification and characterization of information systems, is highlighted. Finally, the human and organizational dimension focuses on the formation of an interdisciplinary team or group in charge of leadership in document management, establishing roles, responsibilities, profiles, a work plan, quality methodologies, risk identification and an action plan.

For their part, Espinel & Ferie (2020) highlight how technological support facilitates a paradigm shift in both the thinking and the action of individuals within an organization. The adoption of advanced technologies leads to significant improvements in communication and in the management of customer service information. The implementation of virtual channels to manage information related to banking and non-banking procedures, requests, appointment scheduling, and a suggestion box are clear examples of how technology can redefine the interaction between the user and the institution.

On the other hand, Rendón (2027) points out the importance of a constant update of the document retention tables to adapt to the new processes in the organization, effectively integrating changes in the document management system. In addition, periodic review is essential for these tables to reflect operational evolution and documentation needs, guaranteeing management that complies with legal regulations and adjusts to internal organizational improvements and dynamics.

Optimizing Document Management with the DMF Approach

The implementation of the DMF approach is oriented towards achieving objectives that strengthen public administration and its relationship with citizens. According to the General Assembly of the Nation (2017), the objectives include the importance of documents and archives as the foundations of administrative language, essential for the exercise of citizen participation, transparency and control of public management, as well as the guarantee of individual and collective rights. It also seeks to rationalize and control document production, standardize procedures and formats, improve correspondence management through efficient mail and messaging systems, and regulate the organization of documents according to Total Archive principles, which cover purpose, responsibility, confidentiality, security and accessibility.

According to Duran & Molano (2019), they highlight the benefits of implementing effective document management in organizations, stating that it allows "to reduce the volume of unnecessary documents, manage the information captured in documents to add value to the management of the entity's knowledge, support transparency, effectiveness, efficiency and integrated model of the entity's management" (p.32). For their part, Caspi & Porras (2015) highlight that the implementation of an efficient document management system leads to significant savings of time and resources in organizations.

Rendón (2017) highlights the importance of transversality in the implementation of a Document Management Program (PGD) to ensure its effectiveness. It is emphasized that the PGD must cover the entire organization, since all administrative units manage documents, regardless of the format or production methods. On the other hand, Trujillo (2021) highlights the document management cycle as a process that ensures the comprehensive protection of documents from their creation to their final disposal.

Furthermore, Ascanio (2019) defines the Document Management Program as a set of "administrative and technical activities applied to plan, manage and organize the documentation produced and received, in addition to creating and implementing procedures to define the final disposition of the documentation, with the aim of facilitating its use and conservation" (p 34). Also, he highlights the importance of the Document Retention Table as a master list that not only enumerates the documents

generated by the organization, but also specifies those responsible, the storage locations and the retention times for each file.

Obstacles to Adopting the DMF Approach

The adoption of the DMF approach faces obstacles such as resistance to change and lack of knowledge about its benefits. According to Piñeros et al. (2018), highlighting the usefulness of the Document Management Program (DMP) in decision-making is an effective strategy to overcome these challenges. Therefore, DMP optimizes daily operations, and is fundamental in administrative, operational, emergency, and strategic decisions. By demonstrating how documents provide a reliable record of organizational activities for informed decisions, acceptance and commitment to the DMF approach is promoted.

Ruiz et al. (2020) highlight the importance of considering the various forms and types of electronic documents, as well as the suitability of current IT tools for managing current documentation. In addition, they highlight the need for organizations to adopt technological document managers that organize and systematize all information efficiently, preventing data loss and promoting collaboration between work groups in different business units.

In the context of the transition towards the digitalization of document management in cooperatives, Manrique & García (2023) highlight the need to establish a methodological strategy focused on digital document management, including the implementation of awareness and training sessions aimed at all employees, highlighting the adoption of good practices in the administration of digital information and adaptation to the changes that this entails.

Furthermore, Manrique & García (2023) point out the importance of integrating various technologies and methodological strategies for effective and secure document management. The pillars identified in their study include Cybersecurity, with a score of 5.20, to audit, monitor and secure ICT services; followed by Digital Marketing and Training and People, both with a score of 4.80; and Big Data & Analytics, with a score of 4.70. They also highlight the adoption of Cloud Technologies and specific Solutions such as ERP, CRM, MES, CMMS, etc., given their significant investment.

The evolution towards document management in cooperatives implies a reengineering of processes that maximizes resources and improves results (Ruiz et al., 2020). While Manrique and García (2023) highlight that "the expansion of digital services not only streamlines operations, but also improves customer service and experience" (p.47), highlighting the importance of establishing interconnected virtual channels that facilitate

interaction with other regulated services, thus increasing accessibility and reach within digital platforms.

Methodology

The study on the improvement of document management in the Cooperativa Juventud Ecuatoriana Progresista was characterized by being quantitative, focusing on the collection and analysis of data to objectively evaluate the document management variables. In addition, methods such as the analytical-synthetic method were used to investigate current document management practices and align them with a descriptive approach, delving into their aspects, relationships and dynamics. On the other hand, a survey was used to collect data, which consists of a carefully prepared questionnaire to analyze the effectiveness, efficiency and possible areas of improvement in the cooperative's document management. The instrument was adapted from Caspi & Porras (2015); and Manrique & García (2023); in addition, it included 18 open questions. The population of interest was the employees and managers directly involved in the document processes, with a representative sample of 137 participants selected by simple random sampling, from a total population of 250 people in the cooperative.

Results

After analyzing document management at the JEP Cooperative under the Modern Document Management (DMF) approach, significant findings are highlighted that reveal the perception and willingness of staff towards the adoption of advanced technologies.

Table 1:

Correlation of variables

		Considers that the cooperative is prepared to adopt advanced technologies in document management				
		Fully prepared	**Prepared**	**Neutral**	**Not prepared**	**Total**
To what extent is it expected to benefit from the automation of the cooperative's files?		2	0	0	0	0	2
	Saving time in searching and retrieving documents	0	71	21	0	0	92
	Reduction of costs associated with handling physical documents	0	4	22	0	1	27

Better use of human resources	0	4	6	1	0	11
No benefit is expected	0	3	0	1	0	4
Other	0	0	1	0	0	1
Total	2	83	50	2	1	137

Note: The table shows the correlation of the dependent and independent variables of the research

Analysis of the survey results at the Cooperativa Juventud Ecuatoriana Progresista reveals that the majority of respondents perceive the cooperative as ready to adopt advanced technologies in document management, with a predominantly positive or neutral attitude in this regard. The expected benefits of automation focus on time savings in searching for and retrieving documents, followed by the reduction of costs associated with handling physical documents and the better use of human resources. Only a small minority does not expect any benefit from automation. Therefore, these results suggest a widespread acceptance of the need to modernize document processes to improve the cooperative's operational efficiency.

Table 2:

Binomial analysis

Variable Level		Counts	Total	Proportion	p
To what extent is it expected to benefit from the automation of the cooperative's files?	Saving time in searching and retrieving documents	93	137	0.679	<.001
	Reduction of costs associated with handling physical documents	27	137	0.219	<.001
	Better use of human resources	11	137	0.080	<.001
	No benefit is expected	2	137	0.015	<.001
	Other	1	137	0.007	<.001

Note: Contrasting proportions in relation to the value 0.5

The binomial analysis of the benefit expectations with file automation at the Cooperativa Juventud Ecuatoriana Progresista reveals that the majority of respondents (67.9%) expect to save time in searching and retrieving documents. In comparison, 21.9% consider that the costs associated with handling physical documents will be reduced, while 8% anticipate a better use of human resources. Only a small percentage, 1.5% and 0.7%, do not expect any benefit or mention other specific benefits, respectively. These results, all with a significance of $p<.001$, indicate a strong expectation of improvement in operational efficiency with the implementation of document automation, highlighting mainly time savings as the most significant benefit. In conclusion, file automation at the cooperative

is predominantly perceived as a measure that will save time in document management, followed by cost reduction and better use of human resources.

Table 3

Frequency table

	Frequency	Percentage	Valid percentage	Cumulative percentage
Is the search time to identify a user's document fast?				
Always	28	20.7	20.7	21.5
Often	82	60.7	60.7	82.2

Table 3

Frequency table (continued)

	Frequency	Percentage	Valid percentage	Cumulative percentage
Is the search time to identify a user's document fast?				
Sometimes	19	14.1	14.1	96.3
Rarely	2	1.5	1.5	97.8
Never	3	2.2	2.2	100.0
Total	135	100.0	100.0	

Analysis of the results on the speed of document searches shows that 60.7% of respondents consider that the search time is "often" fast, while 20.7% think that it is "always" fast. 14.1% indicate that the time is "sometimes" fast, and only 1.5% and 2.2% consider that it is "rarely" or "never" fast, respectively. In addition, a large majority of respondents (81.4%) perceive that the search time to identify a document is generally fast, either always or often, indicating a good level of efficiency in the current document management processes of the JEP Cooperative. Therefore, it is suggested to further optimize the search processes to eliminate the problems experienced by the remaining small percentage.

Figure 1

Evaluation of processes and technologies in the JEP Cooperative
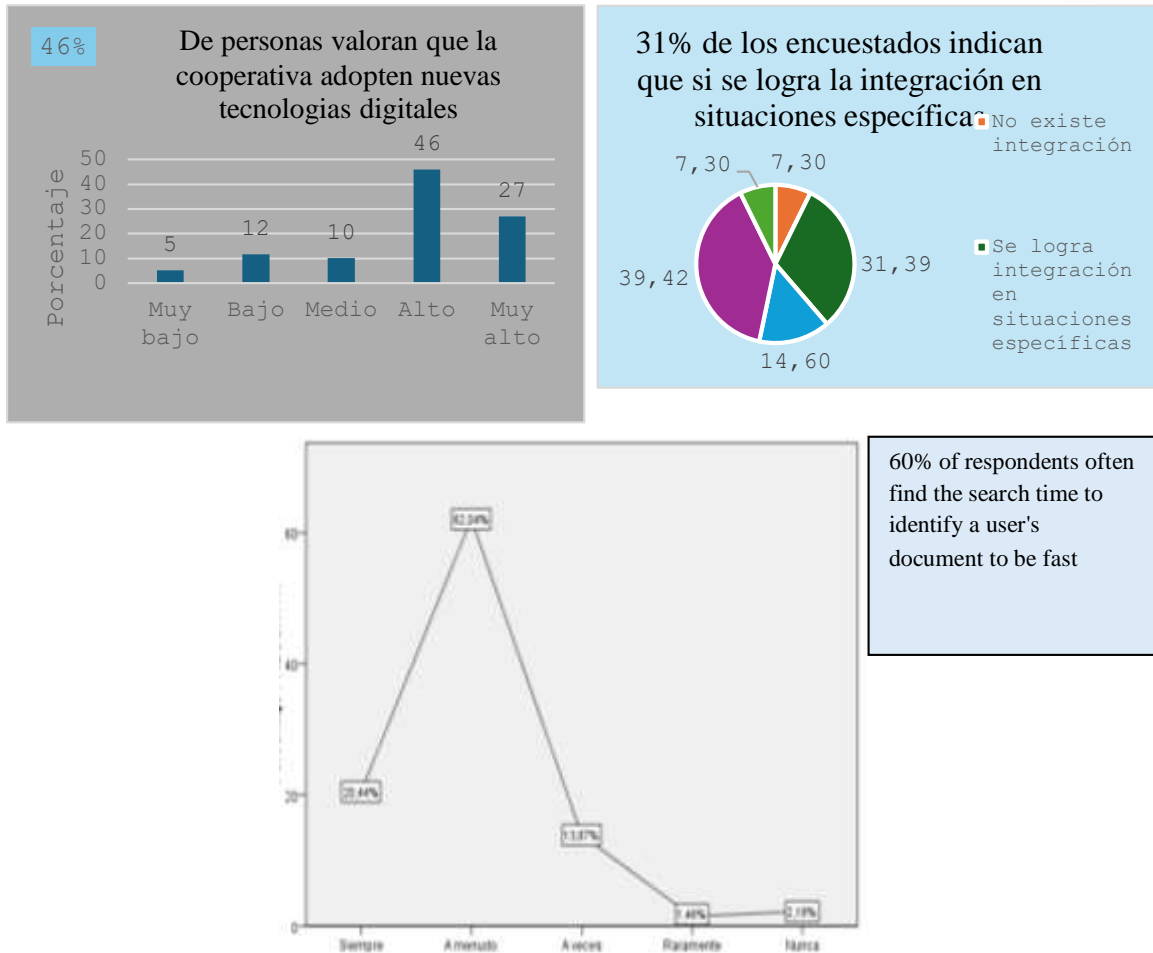
Note: The figure presents the perception of the importance of cybersecurity, the level of integration of digital platforms and the speed in searching for documents among employees and managers of the Cooperativa Juventud Ecuatoriana Progresista.

According to Figure 1, the Cooperativa Juventud Ecuatoriana Progresista shows a high level of readiness to adopt new digital technologies, with 46% of respondents rating their readiness as high and 28% as very high. Regarding the speed of document searches, 62.04% of users consider that this is often fast and 20.44% always fast, which indicates good efficiency in current processes. However, current digital platforms have room for improvement in their integration, as only 30% report that integration occurs in specific situations and only 7.41% indicate full integration in all processes, and 46% value that the cooperative adopts new digital technologies. Although the Cooperativa JEP shows a high readiness to adopt digital technologies, the low integration of these in document processes indicates the need to improve efficiency through greater technological integration and staff training.

Analysis of respondents' familiarity with file management in the Cooperative revealed that 52.6% are fully familiar with document management procedures, indicating a solid and comprehensive knowledge of the systems used. This high level of familiarity is positive for operational efficiency. However, the 37% who are moderately familiar and the 10.4% who are not familiar highlight the need for additional training. Therefore, it is recommended that improving the knowledge of these groups through training programs could ensure greater consistency and efficiency in file management, thus optimizing operations and organization within the cooperative.

Regarding the perception of the ease and speed of finding important documents in the Cooperative, it is shown that 27.4% of respondents are in complete agreement and 54.8% are in agreement, with 82.2% having a positive opinion on the matter. This majority perception reflects considerable efficiency in the document management processes of the cooperative. However, the 11.1% who remain neutral and the 6.5% who disagree or completely disagree suggest that there is still room for improvement in the accessibility and speed of locating documents. Therefore, it is suggested that addressing the concerns of this group through improvements in the filing systems and processes could further strengthen the operational efficiency of the cooperative.

The analysis of the perception of security and access control to information in the Cooperative's document management systems reveals that 46.3% of respondents fully agree and 39.6% agree, adding up to 85.9% who trust in the capacity of these systems to provide secure and controlled access to information. This significant majority indicates that current systems are generally effective in ensuring security and control of information. Therefore, it is suggested that strengthening these aspects could increase confidence in the document management systems and ensure more robust protection of the data managed by the cooperative.

Regarding the loss of important documents due to deficiencies in document management at the JEP Cooperative, it shows that 18.8% of respondents say they have never experienced such losses, while 61.7% indicate that this rarely occurs. However, 15% indicate that documents are sometimes lost, and 3.8% mention that this happens often. Only 0.8% indicate that there are always document losses. These results indicate that, although most respondents perceive that document losses are infrequent, there is significant room for improvement in document management practices.

Regarding the monitoring of the life cycle of documents in the Cooperativa Juventud JEP", it indicates that 45.9% of respondents fully agree that adequate monitoring is carried out, while 39.1% agree. 8.3% remain neutral, and 6% disagree with this statement. Only 0.8% fully disagree. These results suggest that a significant majority of respondents perceive that the cooperative carries out adequate monitoring of the life cycle of

documents, although there is still a small percentage that believes that improvements can be made in this regard.

The analysis of the implementation of a Document Management System in the Cooperative reveals strong support for this initiative. 63.2% of respondents fully agree with the implementation, while 33.8% agree. Only 2.3% remain neutral, and 0.8% disagree, with no total disagreement responses. These results indicate overwhelming support for the adoption of a document management system, reflecting a clear perception of the potential benefits in terms of efficiency, security and accessibility of information.

Furthermore, the willingness to collaborate in the implementation of a Document Management System for the Cooperative indicates a strong commitment of the respondents. 58.8% fully agree with collaborating, while 35.1% agree. 6.1% remain neutral, and notably, there were no responses in disagreement or totally disagreement. These results demonstrate a clear willingness to actively participate in the implementation of the system, which is crucial for the success of the project.

Regarding the use of paper to document and support activities within the company, a high dependence on paper in document processes is revealed. 48.9% of respondents indicate that they depend on paper all the time for their processes, and 44.4% mention that paper is used in various document processes. Therefore, a considerable opportunity is suggested for the digitalization of document processes.

Analysis of the types of documents currently handled in physical (paper) format at the Cooperative shows that administrative and legal documents, such as contracts, legal reports and meeting minutes, represent the largest percentage, at 43.9%. This is followed by financial documentation, which includes invoices, payment vouchers and financial statements, at 28%. Human resources records, such as employment contracts, company policies and personnel records, make up 22.7% of the documents in physical format. This suggests a wide range of areas within the cooperative that still rely on paper for their operations.

Regarding the interconnection of systems with external platforms in the Cooperative, there is a variety in the level of technological integration. Although a small percentage (12.8%) indicates the absence of interconnected platforms, the majority of respondents report some degree of connection. 31.6% mention that this interconnection occurs in particular situations, while 18.8% indicate that it occurs in several key processes. These results show a trend towards technological integration in the cooperative, although there is still room for improvement.

The analysis of the degree of importance that the Cooperative assigns to the implementation of mechanisms to manage large volumes of information reveals a diverse

perception among the respondents. While a significant percentage (22.6%) is unaware of the importance of these mechanisms, a similar proportion (22.6%) considers them to be of utmost importance. In addition, a considerable part of the respondents (17.3%) attributes a high importance to these mechanisms, while another segment (14.3%) rates them as of medium importance. These results reflect a variety of perceptions within the cooperative and suggest the need for greater clarity and communication about the potential benefits that these technologies could bring to the development of the organization.

The analysis of the level of importance that the Cooperative places on the implementation of monitoring and control of processes based on Cybersecurity principles reveals a significant assessment by respondents. A considerable percentage (37.6%) rates this implementation as of high importance, while an even higher percentage (31.6%) considers it of very high importance. In addition, a smaller but significant proportion (5.3%) classifies it as of medium importance. These results indicate an awareness within the cooperative of the critical importance of securing operations in an interconnected environment, highlighting the need to implement robust cybersecurity measures to protect the assets and integrity of the organization.

Discussion of results

The survey results at the Cooperativa Juventud Ecuatoriana Progresista suggest a widespread acceptance of the need to modernize document processes to improve the cooperative's operational efficiency. This finding aligns with Sánchez's research.(2012), which demonstrated that the implementation of a Document Management System significantly impacts the efficiency of document processes. In the case of the Juan Pio de Mora Savings and Credit Cooperative, the adoption of a similar system resulted in a reduction in administrative process time of approximately 75%.

In addition, the value proposition focused on establishing a conceptual structure and an implementation path for the Electronic Archive Document Management System (SGDEA), as described by Cataño(2019), highlights the importance of defining and applying principles, guidelines and standards to manage the information life cycle. These national and international standards provide a solid framework for the design and implementation of document management systems, which can be fundamental to improve the efficiency and effectiveness of document management practices at the Cooperativa Juventud Ecuatoriana Progresista.

However, despite the widespread perception of readiness to adopt advanced technologies and the potential benefits expected from automation in document management, there are still challenges in integrating these technologies into existing processes, as reflected in the low rate of integration of current digital platforms in most document processes. This

suggests the need for greater attention and efforts to improve technological integration and staff training at the Cooperativa Juventud Ecuatoriana Progresista.

Furthermore, although the cooperative shows a general acceptance of the need to modernize its document processes and there is evidence of the potential benefits of implementing document management systems, it is crucial to address technological integration challenges to further optimize operational efficiency and maximize the benefits of automation in document management.

On the other hand, the results point to a positive and widespread expectation regarding the benefits of document automation. The majority of respondents anticipate a saving of time in searching for and retrieving documents, followed by a significant proportion who expect a reduction in the costs associated with handling physical documents. Similarly, Sánchez(2012), demonstrated that the implementation of a Document Management System leads to a significant improvement in the efficiency of document processes.

While these results are promising, they also highlight significant challenges in terms of technological integration and divergent perceptions among employees. The experience of some respondents with slow response times when requesting documentation within the cooperative highlights the need for improved technological integration and staff training, as suggested by Caspi & Porras.(2015). Meanwhile, resistance to change and concerns about loss of control may influence the opinions of those who do not expect benefits from automation, as mentioned in Trujillo's proposal.(2019).

Analysis of the results at the Cooperativa Juventud Ecuatoriana Progresista shows a high level of readiness to adopt new digital technologies, with a significant percentage of respondents rating their readiness as high or very high. However, although the majority considers document searches to be fast in current processes, digital platforms still have room for improvement in their integration. Only a small percentage reports full integration in all processes, which points to the need to improve efficiency through greater technological integration and staff training.

These findings are consistent with previous research. Piñeros et al.(2018), found that, although most areas of the COPEVISA Cooperative manage quality control in the transfer and review of documents, there is a proportion that lacks these basic controls, which underlines the importance of implementing uniform controls to ensure accuracy in document management. On the other hand, Manrique & García (2023) highlight the importance of human capital in an efficient document management system, emphasizing the need for training and updating of personnel to optimize processes.

The analysis of the results on the speed of searching for documents in the Cooperativa Juventud Ecuatoriana Progresista reflects a generally positive perception among

respondents, with the majority considering the search time to be fast. This finding is supported by previous research, such as that conducted by Masqui(2018)at the Mushuc Runa Ltda Cooperative, which highlights the importance of better training employees to improve efficiency in the provision of services.

Furthermore, the reference provided by Sanchez(2021)The study on the conversion of physical documents into digital format highlights the importance of implementing digital technologies in document management to optimize accessibility to information. These studies reinforce the importance of addressing the problems identified in the small percentage of respondents who experience problems with the speed of searches, as this can have implications for staff satisfaction and the quality of service offered to customers.

Conclusions

- The diagnosis carried out revealed the existence of significant challenges in the Cooperative's document management, such as the disorganization of information, inefficiency in document searches and the lack of technological integration. These findings highlight the importance of implementing improvements to optimize document processes and improve operational efficiency.
- Tracing theories and applied studies has provided a broader view of best practices in document management, showing how other organizations have addressed similar challenges and implemented effective solutions. This provides a solid basis for the implementation of innovative strategies tailored to the specific needs of the Cooperative.
- The Cooperativa Juventud Ecuatoriana Progresista shows a favorable disposition towards the adoption of advanced technologies in document management, as evidenced by the mostly positive perception of those surveyed regarding their preparation for the implementation of new digital tools.
- There is a consensus among respondents on the expected benefits of automation in document management, highlighting mainly the saving of time in searching and retrieving documents as the most significant benefit. This perception underlines the importance of moving towards digital solutions to optimize the operational efficiency of the cooperative.
- Although most respondents perceive document searching in the cooperative to be fast, there is still room for further improvement, especially to address the concerns of a small percentage who experience problems with the speed of searching. This highlights the importance of optimizing search processes through staff training and the effective implementation of digital technologies.

Conflict of interest

The authors declare that there is no conflict of interest in relation to the submitted article.

References bibliographical

General Assembly of the Nation. (2017). Document Management Program - PGD. https://scholar.google.es/scholar?hl=es&as_sdt=0%2C5&q=https%3A%2F%2F www.camara.gov.co%2Fsites%2Fdefault%2Ffiles%2F2017-12%2F3.1.1.2%2520Programa%2520de%2520Gestion%2520Documental%2520V.1.pdf++&btnG=#d=gs_cit&t=1709086397951&u=%2Fscholar%3Fq%3Dinfo%3AHL2-

Ascanio, G. (2019). Development of a document management system for the Ocaña United Transport Cooperative. Business administrator. Francisco de Paula University. https://repositorioinstitucional.ufpso.edu.co/bitstream/handle/20.500.14167/2495/CUERPO%20DEL%20TRABAJO%20Proyecto%20de%20Grado%20SGD%20FINAL_removed.pdf?sequence=1&isAllowed=y

Berrocal, M. (2016). Archival science and document management in the company. Tabularium Edit, 1(3).

Cáceres, I., Archivist, M. (2023). Document Management Program. https://www.mssa.cl/wp-content/uploads/2020/12/Plan_GestionDocumental.pdf

Camilo, L., Castro, H. (2021). Document management and internal control: An indispensable binomial. Santiago, 118-129.

Caspi, N., Porras, M. (2015). Implementation of a document management system for the Savings and Credit Cooperative ANDINA LTDA. Province of Cotopaxi, Canton Latacunga, in the period 2013–2014.

Cataño, K. (2019). Proposal for the implementation of a document management system for the projects of the program and project bank of the district planning secretary. Obtained from https://repository.ucc.edu.co/entities/publication/183305f8-de55-434a-8792-44ae211071f7

Chuquimarca, C. (2018). Savings and credit cooperatives: their development in the financial, popular and solidarity sector, period 2015-2017. University of Guayaquil. Faculty of Economic Sciences. https://repositorio.ug.edu.ec/handle/redug/34086

Congress of the Republic of Colombia (2019). Document Management Program. https://www.camara.gov.co/sites/default/files/2017-12/3.1.1.2%20Programa%20de%20Gestion%20Documental%20V.1.pdf

Duran, B., Molano, P. (2019). Design of the Document Management System for the COLOMBIACOOP Company. Technical University of Cotopaxi.

Espinel, J., Ferie, C. (2020). Quality management in customer service. Case of the Chone Ltda. Knowledge Pole:, 5(8). https://dialnet.unirioja.es/servlet/articulo?codigo=7554392

García, E., Gallego, Á. (2022). New challenges in document management and digital preservation in engineering companies. https://thinkepi.scimagoepi.com/index.php/ThinkEPI/article/view/91573

González, E. (2022). Business Document Management in the face of the challenge of digital transition. Retrieved from https://doi.org/10.47251/clip.n85.69

Manrique, F., García, A. (2023). Methodological strategy for digital document management for the company Alianza Fiduciaria. https://ciencia.lasalle.edu.co/cgi/viewcontent.cgi?article=1043&context=maest_gestion_informacion_documental

Masqui, C. (2018). Proposal of techniques and procedures for file management in the secretariat and customer service of the Mushuc Runa Ltda Savings and Credit Cooperative, Píllaro agency, Tungurahua province. Obtained from http://dspace.espoch.edu.ec/handle/123456789/13228

Perez, D. (2020). Document management at COAC San Antonio Ltda. of Montalvo canton. Technical University of Babahoyo.

Piñeros, Y., Rueda, J., & Sánchez, M. (2018). Proposal for the implementation of the Copevisa cooperative document management program. Cooperative University of Colombia. https://repository.ucc.edu.co/server/api/core/bitstreams/a9b0e2bf-a697-4988-b200-8e7a3fd7276a/content

Plúa, I., Torrijo, E., León, F. (2021). Document management in universities: A look from Latin America. ReHuSo: Journal of Humanistic and Social Sciences, 6 (Special), 108-119.

Rendón, L. (2017). Design of a document management program (PGD) for the company Onest negocios de capital SAS. Professional in Information Science - Librarian. Pontificia Universidad Javeriana. Obtained from https://core.ac.uk/reader/161250000

Ruiz, J., Cristancho, M., & Alviz, O. (2020). Evaluation of a document manager for the Coounibosque Cooperative by adopting the ideal model.

https://repositorio.unbosque.edu.co/server/api/core/bitstreams/05d951f6-7dec-4135-ab37-14ccedad5c04/content

Russo, P. (2009). Document management in organizations (First ed.). Barcelona: Editorial UOC. Obtained from https://www.editorialuoc.com/gestion-documental-en-las-organizaciones_1

Sanchez, V. (2021). Document management and information management in a forensic medical unit in Lima, 2021. Master in Public Management. César Vallejo University. https://repositorio.ucv.edu.pe/handle/20.500.12692/67099

Trujillo, V. (2021). Document Management System at the Serfunllanos Los Olivos Villavicencio Cooperative Center. https://repositorio.cecar.edu.co/handle/cecar/8534

Trujillo, J. (2019). Proposal for the implementation of the document management area of the company Lineas Aéreas Suramericanas. Obtained from https://repository.unad.edu.co/handle/10596/33381

Zambrano, I., Quindemil, E., Rumbaut, F. (2021). Document management in universities: A look from Latin America. ReHuSo, 6,, 108-119. https://revistas.utm.edu.ec/index.php/Rehuso/article/view/1684

Indexaciones