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Knowledge Management in Organizations Using Emerging Technologies

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Abstract* – Emerging technologies are tools that allow companies to create, manipulate and manage consistent data over time, the study was based on the general objective: to analyze how knowledge management is developed in organizations that use emerging technologies; the analysis presents three key aspects: acquisition, generation and transfer of knowledge, as well as the emerging technologies that are being implemented in these organizations. The study was of quantitative approach, documentary analysis, developed from the systematic analysis of eight scientific articles coded for a better interpretation of the data. The study finds that internal sources for knowledge acquisition include artificial intelligence (AI), big data analysis and collaborative work, while external sources include technologies such as blockchain and the Internet of Things (IoT). In terms of knowledge generation, organizations employ big data and digital technologies that foster a favorable environment for innovation. Knowledge transfer is facilitated by emerging technologies, which promote effective communication and collaboration between teams. The most commonly used technologies are AI, big data analytics, blockchain, robotic process automation (RPA), augmented reality, 3D printing, chatbots and online platforms. Implementing these technologies not only improves efficiency and communication, but also presents challenges, such as cultural resistance and digital competence, that organizations must address to maximize their potential.

Keywords. Acquisition, Generation, Transfer, Knowledge Management and Emerging Technologies.

I. Introducción

Knowledge management in organizations using emerging technologies is a problem that still goes unnoticed, despite playing a crucial role in operational efficiency and decision making. Emerging technologies are tools that allow companies to create, manipulate and manage consistent data over time, are characterized by continuous development tools, are constantly being updated and will create significant economic and social effects in the coming years.

In global organizations, knowledge management in the use of emerging technologies is revolutionizing organizational management, since it involves the use of computer tools that guide the use of statistical methods to extract information from large volumes of data to predict or decide the undertaking based on the internal and external analysis of the organization. The reference [1], states that in response to the Sustainable Development Goals (SDGs), States are obliged to diversify economies in a digitized environment, promoting the use of technologies that contribute to sustainable development. In this regard, the Commission on Science and Technology for Development (CSTD) seeks permanent innovation in Information Technology (IT) within a strategic framework, to make emerging technology a key to economic and social development.

Knowledge management in organizations using emerging technologies in Latin America and the Caribbean is increasingly recognized as a strategic asset that fosters innovation and competitive advantage. Reference [2], highlight that the integration of information and communication technologies (ICTs) improves the flow of knowledge, enabling organizations to adapt to changing environments and improve decision-making processes. While it is true that in Latin America and the Caribbean organizations have science, technology and innovation systems different from developed countries, currently in attention to the SDGs, many organizations are implementing Research, Development and Innovation (R+D+I) tools values leading to entrepreneurship, using emerging technologies of AI, Internet, Big Data, Robotics, Cybersecurity, 5G Networks, among others [3]. This response will explore the key aspects of knowledge management in the context of emerging technology use, including technology adoption, the role of ICT and knowledge risk management; it focuses on technology adoption patterns among low-income consumers and the factors that influence their adoption of digital technologies.

Knowledge management in organizations that use emerging technologies in Peru is increasingly recognized as a strategic asset that improves performance and innovation. Even though the country has problems with the use of emerging technologies, the promotion of technological development and innovation demands greater efforts, which is reflected in the increase in the budget for research and development, going from 0.07% to 0.14% between 2017 and 2022, even so, it is insufficient for R+D+I [4]. Integrating knowledge management practices with emerging technologies is essential for organizations to adapt to modern challenges and leverage collective knowledge effectively. This synthesis highlights the key aspects of knowledge management in Peruvian organizations, particularly in educational institutions.

Given this scenario, the following question arises: How is knowledge management developed in organizations that use emerging technologies?

In the theoretical field, the study is justified because it allows obtaining knowledge about knowledge management in organizations that use emerging technologies, analyzing organizational culture, operational efficiency, competitiveness and innovation. Methodologically, it seeks to explain the development of knowledge management through a qualitative analysis of scientific articles from databases such as Scielo, Scopus and WOS, related to the topic. In practice, the study promotes research skills through a deductive analysis of the problem and the use of the scientific method with a qualitative bibliographic approach.

The general objective of the study is to analyze how knowledge management is developed in organizations that use Emerging Technologies, which leads to identify the acquisition, generation and transfer of knowledge in organizations that use Emerging Technologies; as well as to determine the Emerging Technologies that organizations are using.

The research has as background the reference [5], which explores the relationship between knowledge management and the fourth industrial revolution. Twenty-eight publications in Econbiz and Scopus databases between 2021 and 2023 are analyzed. The results show that organizations using technologies of the fourth industrial revolution create databases that facilitate the exchange and adoption of new knowledge, promoting a new organizational culture and leadership to generate knowledge.

The reference study [6], developed with the objective of presenting the relationship between knowledge management and emerging technologies, as well as the variation between the type of companies, based on the application of a questionnaire to 5207 managers of companies operating in Hungary; the results show that knowledge management, technological intensity and operational processes significantly influence the adoption of emerging technologies, having a positive impact on financial performance.

In the work developed with the objective of analyzing technology-driven knowledge management, from the systematic analysis of 956 contributions that were published in Scopus during 11 years and that the information coincides with knowledge management and emerging technologies; the research specifies that there is interest in incorporating Artificial Intelligence (AI) the blokchain and internet to manage knowledge, finding 10399 citations, being the average of 945.2 per year and per article 10.88; the results demonstrate the influence of the use of emerging technologies in knowledge management [7].

In the study worked with the objective of designing an improved emergent model of knowledge management processes incorporating AI to manufacturing factories; according to the systematic literature review, the factors of collaboration and communication, risk management practice, use of information technology, leadership and organizational alignment, sub categories that served as the basis for the design of the improved emergent model to help the performance of manufacturing factories [8] are highlighted.

In the research developed with the objective of examining the use of digital management methods through the analysis of practical cases based on emerging information technologies, where big data, AI, internet of things, blockchain, BI, etc. were included. With the analysis of the information the study concluded that the digital management model and the use of modern digital information technology allows progressively creating the division of labor, speed of communication, efficient operations, timely responses and solutions, optimizes work according to the pursued objectives, standardizes and refines operations responsibly [9].

In the study developed with the aim of explaining whether knowledge management strategies and emerging technologies improve business management, the analysis of the information indicates that knowledge management in companies that use emerging technologies, not only improves the responsiveness of customers, but also improves the ability to solve problems, promotes the development of individual and collective capabilities, as well as fosters competitive advantage and innovation in the various organizations that practice it [10].

In its study developed for the purpose of analyzing the use of AI in knowledge management, the study indicates that knowledge management focuses on digital advances and AI on improving the development of algorithmic capabilities in knowledge management; the actions leads to AI improves algorithmic capabilities in knowledge management, and that AI applications are reshaping knowledge management practices, the information highlights that AI and knowledge management through data visualization, leads to a knowledge management that facilitates and improves decision making [11].

In the article knowledge management strategies and emerging technologies in organizational development, developed with the purpose of analyzing the use of categories in business organizations, based on the collection of information that led to demonstrate that knowledge management acts as a strategic asset in organizations and that the collection, capture and sharing of knowledge is important for the development of societies, highlights that knowledge management is fundamental for the achievement of results in organizations and that SE emerging technologies are used more frequently for business knowledge management: the study concluded that, organizational knowledge is considered a strategic asset, while knowledge management has important performance in economic development [12].

In the paper on emerging technologies that support knowledge management, it explains that emerging technologies, particularly the Internet of Things and artificial intelligence, improve knowledge management in organizations by improving access to digital information, facilitating document management and optimizing the use of intellectual capital, ultimately increasing productivity and innovation outcomes of emerging technologies that positively impact knowledge management productivity, while digital technology, IoT and AI improve knowledge management systems for effective use of intellectual capital. With the

information the paper concluded that knowledge management positively impacts business innovation and outcomes, and knowledge management systems are more effective with IoT and AI, highlighting that digital technology improves business knowledge management and effective use of intellectual capital [13].

The article on enterprise systems, emerging technologies and the data-driven knowledge organization states that emerging technologies improves knowledge management in organizations by addressing data collection and analysis, which leads to better quality and timeliness of information. The evolution supports managerial decision making and strategic planning and ultimately enhances human knowledge for better outcomes; among the relevant findings, it was noted that ET improves data quality and timeliness for decision making, increasing human knowledge. The study concluded that business systems have become critical for organizations, and that new technologies have improved data analysis and decision making [14].

Knowledge management is a key strategy for organizations using emerging technologies. It helps to promote knowledge creation, sharing, and combination, which improves educational processes and problem solving. In addition, it can influence the curriculum and reduce reluctance to share knowledge. It is important to note that information and data should always be verified.

Knowledge management in organizations involves the effective collection, organization and dissemination of knowledge. This process is essential for developing a competitive advantage in today's rapidly changing economic landscape, influenced by various technological, market, and global challenges [15]. knowledge management is essential for organizations seeking to maintain a competitive advantage in today's rapidly changing business landscape. It encompasses the systematic processes of acquiring, organizing, and disseminating knowledge to improve decision making, innovation, and operational efficiency.

The importance of knowledge management lies in competitive advantage and adaptability. Competitive advantage is embodied in effective knowledge management practices, which enable organizations to leverage their collective knowledge, foster innovation, and improve profitability [15]. Adaptability is the process that organizations that manage knowledge well can adapt quickly to market and technology changes, ensuring long-term success [16]. They specify that knowledge management in organizations involves acquiring, managing and transferring knowledge to improve competitiveness. It includes strategies such as collaboration, continuous learning and effective structuring of information, which promote innovation, decision making and operational efficiency in a dynamic business environment.

Among the strategies for effective knowledge management are knowledge acquisition and organizational culture. The former is crucial to identify and gather relevant information through research and collaboration [16]. The second, which promotes continuous learning and knowledge sharing is vital for successful knowledge management implementation [17]. Knowledge management in organizations involves the dissemination, creation, retrieval, and storage of knowledge to improve operations and profitability. It requires cultural changes and leadership commitment, which facilitate innovation and competitive advantage through the effective use of collective organizational learning and knowledge.

Among the challenges in knowledge management, cultural resistance and the dynamics of telecommuting stand out. To control cultural resistance, the implementation of knowledge management requires a change in organizational culture, which can address employee resistance [17]. The dynamics of remote work, demand for tactical knowledge management in remote work environments poses unique challenges that require information management systems [18]. Effective knowledge management in organizations enhances innovation and problem solving, especially in remote environments. It transforms tacit knowledge into valuable information, enabling organizations to leverage the diverse skills of employees and ultimately support organizational innovation and address the challenges posed by dispersed workforces.

Knowledge management is decomposed into several subcategories, each of which addresses a key aspect of how knowledge is produced, shared, and used within organizations. Reference [16], indicates that the dimensions of knowledge management are knowledge acquisition, which involves identifying and gathering relevant information from internal and external sources, techniques include research, data analysis and collaboration with experts, is essential for fostering innovation and informed decision making, involves developing databases and promoting a culture of continuous learning, improves operational efficiency and adaptability to market changes; knowledge generation, which focuses on identifying, organizing and structuring knowledge for accessibility and usability of information systems; and knowledge transfer, which refers to the dissemination of knowledge throughout the organization, is critical to ensure that all employees can use the available knowledge effectively. The source [19], highlights as dimensions of knowledge management the creation, transfer and storage, and application and use of knowledge. These dimensions are fundamental to facilitate that knowledge is generated, shared and retained within an organization. These dimensions are interrelated and, together, create a framework that enables organizations to manage their knowledge more effectively, promoting innovation and competitiveness.

Theories of knowledge management in organizations emphasize the systematic management of knowledge to improve competitive advantage and operational efficiency. These theories have evolved to address the complexities of modern business environments by focusing on knowledge acquisition, organization, and dissemination. The theory of knowledge acquisition demands organizations to identify and

collect relevant information both internally and externally, through research and collaboration with experts, seeks effective management, which involves structuring information to facilitate access to databases and information systems, fostering a culture of continuous learning [16].

The theory of knowledge creation and innovation, emphasizes the importance of transforming individual knowledge into organizational knowledge, which is crucial for innovation; it highlights Ikujiro Nonaka's knowledge creation model, which is fundamental in knowledge management theories, emphasizes the management of knowledge assets, called intellectual capital, to maximize their value within organizations, a concept that Thomas A. Stewart further popularized [20]. It is emphasized that knowledge management theories focus on the effective acquisition, utilization and protection of knowledge as organizational assets, this management is crucial to improve human resources, in order to improve overall organizational performance and service delivery [21].

The learning organization theory emphasizes open communication, empowerment and worker participation, as opposed to traditional knowledge management methods that focus on control. This theory supports informal interactions and adaptability, which can enhance knowledge sharing and skill development [22].

While knowledge management theories provide frameworks for managing knowledge effectively, some critics suggest that an overemphasis on control can stifle creativity and innovation, highlighting the need for a balanced approach that fosters both knowledge management and a culture of learning within organizations.

Emerging technologies are those innovations that are in the early stages of development and have the potential to radically change the way we live, work and interact. These technologies often arise from new scientific findings and advances in areas such as computing, biotechnology, energy, and communications [23]. Emerging technologies enable knowledge creation in organizations, such as big data analytics (BDA), which enhances organizational knowledge creation by facilitating collective intelligence; BDA is particularly effective for low complexity tasks, whereas online platforms may not be suitable for high complexity tasks [23].

Enabling marketing innovation through the use of AI technologies, augmented reality, and blockchain are revolutionizing marketing strategies by personalizing customer experiences and improving engagement, added to this is the Internet of Things, and data analytics, which are increasingly used in marketing to understand and meet individual customer needs and ultimately improve overall customer experience and marketing strategies [24]. These tools help companies understand customer needs more effectively, which improves satisfaction and loyalty.

Advances in healthcare, leads to the use of Healthcare 4.0 integrates technologies such as IoT and machine learning to improve service quality and patient outcomes. Emerging technologies in Healthcare 4.0 include big data analytics, blockchain, cloud computing, perimeter and fog computing, telehealth, and machine learning. These technologies enhance healthcare services by improving quality, security, and privacy, while addressing critical research gaps in contemporary healthcare systems [25]. Innovations in telehealth and data analytics are crucial for developing next-generation healthcare applications.

In forensic applications, the use of matrix-assisted laser desorption ionization mass spectrometry (MALDI MS) is becoming a powerful tool for analyzing forensic evidence as it links chemical intelligence with biometric data, is an emerging technology for analyzing fingerprint and blood evidence, provides biometric and chemical intelligence information, and describes operational capabilities and limitations [26]. This technology is gaining traction in operational environments, although further validation is needed.

In predictive maintenance emerging technologies facilitate condition monitoring and predictive maintenance of infrastructure, such as medium voltage cables, by analyzing large data sets to predict faults, data acquisition (SCADA), enables improved diagnostic capabilities of medium voltage cables, this integration supports predictive maintenance by enabling early detection of faults and minimizing unscheduled outages [27]. This proactive approach minimizes downtime and maintenance costs.

Among the sub-categories of emerging technology is determined by the technologies being used by organizations, among which AI stands out as a tool that allows learning and performing tasks that normally require human intelligence; Advanced Robotics, which is represented by machines that can perform complex tasks, from manufacturing to medical care; Biotechnology, which allows the manipulation of cells and organisms to create useful products, from medicines to food; Biotechnology, which allows the manipulation of cells and organisms to create useful products, from medicines to food; Blockchain, which is a distributed registry technology that offers transparency and security in digital transactions; 3D Printing, which is a process of creating three-dimensional objects from digital models, enabling customized manufacturing; Augmented and Virtual Reality, are technologies that overlay digital information on top of the real world or create completely virtual environments [23]. These technologies have the potential to offer solutions to current problems, improve efficiency, and create new economic opportunities. However, they also pose ethical and social challenges that must be carefully managed.

Emerging technology theories encompass a variety of frameworks that analyze the impact and implications of new technologies on organizations and society. These theories, are crucial to understanding how technologies such as AI, blockchain and robotics influence organizational structures and strategic decision making. The performativity of technological theories, can produce social realities and influence organizational change through their performative nature; the lack of distinction between technology characteristics and organizational outcomes can lead to

generic applications of these theories and affect their effectiveness [28]. Emerging technological theories in their performativity, arises from the indistinction between technology characteristics, organizational possibilities and outcomes, which influences management research, practice and public policy.

In strategic considerations, States should evaluate how emerging technologies align with their strategic objectives, taking into account the risks and rewards associated with technological advances, the rapid pace of technological change requires organizations to adapt quickly to maintain competitive advantages, the importance of scaling quickly during crises, becoming skilled in network-centric environments, establishing artificial intelligence standards, and addressing the diffusion of dual-use technology in their emerging technology strategies [29]

Within relational perspectives, emerging technologies should be viewed as evolving relationships rather than as stable entities, allowing for a more nuanced understanding of their organizational impacts; this perspective encourages scholars to incorporate the dynamic role of technology in organizational processes; technologies such as artificial intelligence, robotics, and social networks impact the organization by presenting a relational perspective on emerging technologies and the organization [13].

II. METHODOLOGY

The study was developed under the parameters of the qualitative, documentary analysis approach [30]. It sought to explain knowledge management from its acquisition to its transfer through the use of emerging technologies, such as AI, Internet, Big Data, Robotics, Cybersecurity, 5G Networks, etc. Its analysis is concretized from the systematic analysis of the subcategories acquisition, generation and transfer of knowledge through the use of emerging technologies, following the methodological process from the observation of articles related to the research [31].

The population consisted of articles published in knowledge management and emerging technologies in journals indexed in specialized databases, and published between 2024 and 2025. The sample consisted of eight articles obtained from the database, as shown in the following table:

TABLE 1
ARTICLES ON KNOWLEDGE MANAGEMENT IN ORGANIZATIONS USING EMERGING TECHNOLOGIES

Authors	Article Title	DOI
[32]	Emerging technologies and knowledge management, a bibliometric mapping.	https://doi.org/10.69821/JoSME.v3i1.18
[33]	Exploring the intersection of emerging technologies and knowledge management in the context of ownership structures.	https://doi.org/10.62222/TORQ7440
[23]	Impact of the use of emerging technologies on organizational knowledge creation capacity according to task complexity.	https://doi.org/10.1177/09717218241238206
[34]	The use of modern generative models of artificial intelligence for the organization of the knowledge management subsystem in information and analysis systems.	https://doi.org/10.1109/SCM62608.2024.10554198
[7]	Technology-driven knowledge management: a bibliometric exploration of emerging trends.	https://doi.org/10.35631/jistm.934007
[8]	An improved emerging model for knowledge management processes.	https://doi.org//10.47514/kjcs/2024.1.1.004
[35]	The role of artificial intelligence in knowledge management in a data mining environment through knowledge reuse.	https://doi.org/10.30534/ijiscs/2024/011312024
[36]	Adoption of emerging information technologies: a new process framework of possibilities.	https://doi.org/10.1016/j.ijinfomgt.2024.102772

The technique used in the collection and analysis of information was observation, and the instrument used was the documentary analysis matrix, which was used to identify and record information on the acquisition, management and transfer of knowledge in organizations that use emerging technologies, as well as to determine the emerging technologies being used by the organizations. The documentary analysis matrix was composed of four items; three to identify knowledge management and one to verify the use of emerging technologies. The validity of the instrument was assessed by 5 research experts, who gave their approval for its application; the reliability is in the criteria of credibility and transferability, according to the time, theoretical demands and analysis of the information recorded in the documentary analysis matrix [37].

The results were analyzed and interpreted according to the categories and subcategories observed in each article, given that in qualitative studies, the analysis and interpretation of results is based on each category, subcategory and the responses recorded in each item, which are discussed with the background and theoretical bases [31]

III. RESULTS

In order to analyze how knowledge management is developed in organizations that use Emerging Technologies, the information recorded in the documentary analysis matrix of the eight selected articles was analyzed. The analysis and interpretation of the information obtained was aided by the following matrix, which codifies each article that responds to the categories and subcategories of the present work.

TABLE 2
SCIENTIFIC ARTICLES USED TO ANALYZE KNOWLEDGE MANAGEMENT IN ORGANIZATIONS USING EMERGING TECHNOLOGIES

Scientific articles	Codification
Emerging technologies and knowledge management, a bibliometric mapping.	AC_GCYTE_1

Exploring the intersection of emerging technologies and knowledge management in the context of ownership structures.	AC_GCYTE_2
Impact of the use of emerging technologies on organizational knowledge creation capacity according to task complexity.	AC_GCYTE_3
The use of modern generative models of artificial intelligence for the organization of the knowledge management subsystem in information and analysis systems.	AC_GCYTE_4
Technology-driven knowledge management: a bibliometric exploration of emerging trends.	AC_GCYTE_5
An improved emerging model for knowledge management processes.	AC_GCYTE_6
The role of artificial intelligence in knowledge management in a data mining environment through knowledge reuse.	AC_GCYTE_7
Adoption of emerging information technologies: a new process framework of possibilities.	AC_GCYTE_8

The established articles led to obtain information on the category knowledge management, according to the subcategories: acquisition, generation and transfer of knowledge; also, the category emerging technologies and its subcategory emerging technologies used by organizations, in accordance with the general and specific objectives established for the development of the study.

Category 1: Knowledge management

Sub-category 1. Knowledge acquisition

TABLE 3
KNOWLEDGE ACQUISITION IN THE ORGANIZATIONS USING EMERGING TECHNOLOGIES

Codification	Internal and external sources used by organizations for the acquisition of knowledge
AC_GCYTE_1	Internal sources: AI to create and share knowledge, macradata analytics (BDA) and predictive modeling to adapt to market changes, and teamwork External sources: Blockchain and the Internet of Things (IoT).
AC_GCYTE_2	Internal sources: QA projects, technology and organizational culture. External sources, foreign companies using TE, national culture and market dynamics, AI and digitalization.
AC_GCYTE_3	Internal sources: collective intelligence, use of big data analytics (BDA) and online platforms. External sources: market trends, customer feedback, use of alliances and partnerships, and implementation of new ET.
AC_GCYTE_4	Internal sources: organizational data, employee knowledge and company documentation. External sources: market data, organizational reports, environmental data (climate, resources), national and international standards, new approaches and innovation ideas.
AC_GCYTE_5	Internal sources. Employee knowledge, organizational database, and organizational culture. External sources: academic publications on blockchain, AI and IoT, industry reports, partnerships and collaborations, conferences and workshops.
AC_GCYTE_6	Internal sources: employee skills and knowledge, big data analysis (BDA), and multidisciplinary teams. External sources: consulting services, alliances and collaborations, market trends and customer feedback.
AC_GCYTE_7	Internal sources: collaboration among employees, existing databases and archives. External sources: AI applications, research institutions, companies, market trends and customer feedback.
AC_GCYTE_8	Internal sources: skills and knowledge of employees and data provided by the company's technologies. External sources: training of its employees in the effective use of ET such as BDA, and the use of AI applications.

The information presented in Table 3 shows that in AC_GCYTE_1, AC_GCYTE_2, AC_GCYTE_3, AC_GCYTE_5, AC_GCYTE_6, AC_GCYTE_7 and AC_GCYTE_8, the organizations use as internal and external sources AI applications and big data analysis (BDA) in the acquisition of knowledge. The AC_GCYTE_1 complements it with predictive models to adapt to market changes, and teamwork; as external sources, they use the technological advancement of blockchain and the Internet of Things (IoT); the AC_GCYTE_2 contemplates as internal sources to QA projects, technology and organizational culture to use TE; as external sources, they take into account the development of foreign-owned companies that have better access to TE, national culture and market dynamics. AC_GCYTE_3, AC_GCYTE_6 and AC_GCYTE_7 agree that market trends and customer feedback are external sources that help the acquisition of knowledge, complemented by the implementation of new TE, consulting services, and research institutions; internally, they highlight the use of collective intelligence and online platforms to obtain information, the skills and knowledge of employees, multidisciplinary teams, existing databases and archives. AC_GCYTE_3 and AC_GCYTE_6 specify that as an external source, alliances and collaborations with partner companies are used. AC_GCYTE_4 specifies the internal use of the organization's data, the knowledge of the workers and the company's documentation; as external sources they use market data, reports from organizations, environmental data such as climate, resources, national and international standards, new approaches and ideas for innovation and decision making. The AC_GCYTE_5, specifies as internal sources the knowledge of employees, the organization's database, and organizational culture; while external sources, academic publications on blockchain and IoT use, review of industry reports, alliances and collaborations, publication of conferences and workshops, are important for the acquisition of knowledge. The AC_GCYTE_8, uses as internal sources the skills and knowledge of employees and the data provided by technologies that the company has; as external sources, is the

training of its workers in the management of TE to optimize time and avoid duplication of jobs.

The information obtained from each article highlights that both internal and external sources within organizations are vital to promote innovation and effective decision making. Organizations must leverage their internal knowledge and capabilities and, at the same time, take advantage of external technological advances and academic research to remain competitive in a rapidly changing landscape. The interplay between internal sources, and external sources, serve to create a complex landscape for innovation and decision making in companies. Understanding these factors can help organizations strategically allocate resources and improve their capabilities to adopt emerging technologies.

Subcategory 2. Knowledge generation

TABLE 4
KNOWLEDGE GENERATION IN ORGANIZATIONS THAT USE EMERGING TECHNOLOGIES

Codification	Means of knowledge generation in organizations
AC_GCYTE_1	Analysis of big data produced by AI, real-time data using the IoT.
AC_GCYTE_2	The use of digital technology, QA projects, organizational environment, knowledge sharing culture, digital big data tools.
AC_GCYTE_3	Collective intelligence, teamwork, big data analytics (BDA) and online platforms.
AC_GCYTE_4	Use of AI to automate diverse sources, market information, real-time data analysis, and collaborative platforms.
AC_GCYTE_5	The use of blockchain, artificial intelligence (AI) and the Internet of Things (IoT).
AC_GCYTE_6	Big data analysis (BDA) and strategic planning.
AC_GCYTE_7	Integrated use of AI to access large amounts of data.
AC_GCYTE_8	The use of emerging technologies such as big data analysis (BDA).

The information in Table 4 shows that AC_GCYTE_1, AC_GCYTE_2, AC_GCYTE_3, AC_GCYTE_6 and AC_GCYTE_8 agree that organizations generate knowledge by accessing information provided by big data analysis (BDA); AC_GCYTE_1 and AC_GCYTE_5 consider that real-time data provided by IoT are means to generate knowledge. The AC_GCYTE_2, specifies that the means to generate knowledge in organizations, is the use of digital technology since it serves to ensure the workforce and facilitate the achievement of results, specifies that QA projects improves access to information, creating an enabling environment, leads employees and customers to access and interact with information, culture in knowledge sharing. The AC_GCYTE_3, highlights collective intelligence, teamwork, and online platforms help knowledge generation. AC_GCYTE_4 and AC_GCYTE_7 highlight the use of AI to automate diverse sources, market information, real-time data analysis, and collaborative platforms. AC_GCYTE_5, specifies that the use of blockchain, and artificial intelligence (AI) is crucial to generate knowledge.

Accessing information and using it effectively is critical to generating knowledge in organizations. By leveraging digital technologies, fostering a supportive culture and addressing challenges related to digital competence, companies can improve their knowledge management practices and drive innovation. Accessing information and using it effectively is vital for organizations to generate knowledge. By leveraging collective intelligence, making appropriate use of emerging technologies, and taking into account the complexity of tasks, organizations can improve their knowledge creation capabilities and maintain a competitive advantage in the knowledge-based economy.

Subcategory 3. Knowledge Transfer

TABLE 5
KNOWLEDGE TRANSFER IN ORGANIZATIONS USING EMERGING TECHNOLOGIES

Codification	Dissemination of knowledge in organizations
AC_GCYTE_1	They use blockchain and IoT to share information in real time.
AC_GCYTE_2	Through dissemination projects, the cultural environment, the use of digital tools and platforms.
AC_GCYTE_3	Through dissemination projects, the cultural environment, the use of digital tools and platforms.
AC_GCYTE_4	Uses AI and collaborative platforms.
AC_GCYTE_5	Uses the integration of technologies such as: blockchain, AI, IoT.
AC_GCYTE_6	Utilizes “grant preparation” through TE, organizational culture, external collaborations and multidisciplinary teams.
AC_GCYTE_7	Knowledge dissemination systems on a structured platform that stores and shares information using AI applications, AI-driven search engines, Natural Language Generation (NLG), AI collaborative platforms, information sharing, and AI-based knowledge graphs.
AC_GCYTE_8	Use of collaborative tools and platforms, and creation of comprehensive documentation and reports.

The information in Table 5 indicates that; according to AC_GCYTE_1 and AC_GCYTE_5 agree that blockchain and IoT are fundamental to share and disseminate information in real time, complemented by the use of AI. The AC_GCYTE_2, AC_GCYTE_3 and AC_GCYTE_4 highlight that the use of digital platforms is essential to disseminate information, dissemination projects, the cultural environment, and the use of Big Data are supported, they specify that the integration that human integration with technology, facilitates the development of capabilities to generate and transfer knowledge. The AC_GCYTE_4 and AC_GCYTE_7, emphasize that AI is a tool that facilitates the dissemination of knowledge, it is complemented with knowledge dissemination systems to a structured platform that stores and shares information using AI applications, search engines powered by AI, automated generation of content such as Natural Language Generation (NLG), collaborative platforms with AI,

information sharing, knowledge graphs based on AI, are tools that help disseminate information effectively. AC_GCYTE_6, uses "grant preparation" as a fundamental process to disseminate knowledge through TE, adds training and development to create a well-informed workforce, the document emphasizes that fostering a data-driven culture is fundamental to knowledge dissemination, external collaborations and multidisciplinary teams also facilitate knowledge dissemination. The AC_GCYTE_8, highlights the use of collaborative tools and platforms, which allows teams to share ideas and knowledge in real time; the creation of comprehensive documentation and reporting on the results of data analysis is essential for knowledge dissemination.

Knowledge sharing is significantly enhanced by emerging technologies, such as blockchain and IoT, that facilitate the secure and efficient exchange of information. By addressing challenges and promoting collaboration, organizations can improve their knowledge management practices, leading to greater innovation and success. Knowledge dissemination is a multifaceted process that involves creating a supportive culture, leveraging digital technologies and ensuring effective communication. By addressing challenges such as trust and digital competence, organizations can improve their knowledge management practices and facilitate effective knowledge diffusion throughout the organization.

Category 2: Emerging Technologies

Subcategory 1. Emerging technologies used by organizations

TABLE 6
EMERGING TECHNOLOGIES USED BY ORGANIZATIONS

Codification	Emerging technologies used by organizations
AC_GCYTE_1	AI, Big Data Analytics (BDA), Blockchain and IoT.
AC_GCYTE_2	AI, robotic process automation (RPA), big data analytics (BDA), augmented reality (AR), 3D printing, chatbots, ticketing systems and IoT.
AC_GCYTE_3	Big Data Analytics (BDA) and Online Platforms
AC_GCYTE_4	AI, Generative Models
AC_GCYTE_5	AI, Blockchain, and IoT.
AC_GCYTE_6	AI
AC_GCYTE_7	AI
AC_GCYTE_8	Big Data Analysis (BDA) or Big Data

Table 6 highlights the emerging technologies used by organizations to generate knowledge; first of all, the eight analyzed articles highlight that organizations use AI to process large volumes of data to optimize resources, improve communication and make business decisions. In addition, the knowledge generation AC_GCYTE_1, AC_GCYTE_3, AC_GCYTE_3 and AC_GCYTE_8, agree that the use of Big Data Analysis (BDA) is used by organizations for the acquisition, generation and transfer of knowledge based on the variety of data they handle. The AC_GCYTE_1 and AC_GCYTE_5 highlight the use of Blockchain (blockchain) which consists of a digital file that shares a public accounting, it is characterized by recording transactional data from a network of money. The AC_GCYTE_1, AC_GCYTE_2 and AC_GCYTE_5 specify that the use of the Internet of Things (IoT) allows organizations to network with objects and devices that facilitate communication with the cloud and between devices themselves. The AC_GCYTE_2, adds the use of robotic process automation (RPA) using software that automates repetitive tasks, augmented reality (AR) used in the combination of the real and virtual world, used for entertainment, product design, education, training, etc.; 3D printing to create digital three-dimensional objects of media and materials offered by the company; Chatbots to converse with customers via the Internet, and ticketing systems to manage problems reported by users, collecting and tracking work items as tickets. AC_GCYTE_3, highlights the Online Platforms, used for user interaction, transactions, information sharing and participation in various activities. AC_GCYTE_4, adds Generative Models, which consists of a machine learning model that aims to discover patterns in the data and generate new data.

Emerging technologies are transforming the way organizations operate and offer numerous benefits, such as improved communication, increased efficiency and better knowledge management. However, challenges such as digital competence and cultural resistance must be addressed to take full advantage of these technologies for organizational success.

IV. DISCUSSION

The analysis of the articles on knowledge generation in organizations that use Emerging Technologies, Table 1 shows that knowledge acquisition in organizations is obtained from internal and external sources; In the internal field, AI applications and big data analysis (BDA) stand out, complemented with predictive models, teamwork, QA projects, technology, organizational culture to use TE, the use of collective intelligence, online platforms, organizational data, workers' knowledge and the company's documentation, employees' knowledge, the organization's database, employees' skills and knowledge, and multidisciplinary teams, files and data provided by the company's technologies. The information agrees with the approaches of the reference [12], highlighting that organizational knowledge is considered a strategic asset, while QA has an important performance in economic development. Likewise, it strengthens the study of the reference [14], by specifying that TE improves data quality and timeliness for decision making, increasing human knowledge. Strengthening the theoretical contributions of references [16] and [17], the first by highlighting that in effective QA, knowledge acquisition is crucial to identify and gather relevant information through research and collaboration. The second states that organizational culture, which promotes continuous learning and knowledge sharing, is vital for the successful implementation of knowledge management.

As external sources, they use the technological advancement of AI applications, blockchain and the Internet of Things (IoT), development of foreign companies using TE, national culture and market dynamics, market trends, customer feedback, alliances and partnerships and the development of new TE, reports, environmental data, resources, national and international standards, new approaches and ideas, academic publications on the use of blockchain and IoT, review of industry reports, publication of conferences and workshops, consulting services, research institutions, companies, and training of their workers. The information is consistent with the approaches of the reference [5] in demonstrating that organizations using technologies of the fourth industrial revolution are creating databases that allow the exchange and adoption of new knowledge to generate a new organizational culture, acquisition of technological means and leadership to generate knowledge. It also contributes to the study of the study [9], the digital management model and the use of modern digital information technology allow to progressively create division of labor, speed in communication, efficient operations, timely responses and solutions, optimize work according to the objectives pursued, standardize and refine operations in a responsible manner. The information, founds the theoretical contribution of the reference [21], who state that the theories of knowledge management focus on the effective acquisition, utilization and protection of knowledge as organizational assets, this management is crucial to improve human resources, in order to improve overall organizational performance and service delivery.

The information expressed in Table 3 indicates that organizations generate knowledge from big data analytics (BDA); IoT, digital technology, QA projects, collective intelligence, teamwork, online platforms, the use of AI and blockchain. The information is in agreement with the reference [6], highlighting that knowledge management, technological intentionality and operational processes significantly influence the adoption of emerging technologies, having a positive impact on financial performance and knowledge generation. It is also in line with the results of the reference [11], highlighting that AI and knowledge management through data visualization leads to a knowledge management that facilitates and improves decision making. It also supports the theoretical approaches of reference [22] by highlighting that the theory of learning organizations is open to worker empowerment and participation, in contrast to traditional approaches to knowledge management that focus on knowledge control.

The information in Table 4 indicates that; according to analyzed documents, it indicates that knowledge dissemination is performed by organizations using blockchain, IoT, knowledge dissemination projects, the cultural environment, digital tools and platforms, BDA technology, online platforms, AI, blockchain, grant preparation, external collaborations, multidisciplinary teams, Natural Language Generation (NLG), information sharing, AI-based knowledge graphs, creation of documentation and comprehensive reports on the results of data analysis. The information is consistent with reference [14], noting that business systems have become critical to organizations, and that new technologies have improved data analysis and decision making. It also strengthens reference [13] by finding innovation results from emerging technologies that positively impact QA productivity, while digital technology, loT and AI enhance QA systems for effective use of intellectual capital. The work supports the approaches of the reference [23], who find that emerging technologies foster knowledge creation in organizations, such as big data analytics (BDA), which enhances organizational knowledge creation by facilitating collective intelligence.

The results of Table 5 show that the emerging technologies used by organizations to generate knowledge according to the eight articles are: AI, the use of Big Data Analysis (BDA), Blockchain, the Internet of Things (IoT), Robotic Process Automation (RPA), Augmented Reality (AR), 3D printing, Chatbots, ticketing systems, Online Platforms, and Generative Models. The study contributes to the work of the reference [7], who point out that there is interest in incorporating Artificial Intelligence (AI), blokchain and the Internet to manage knowledge. The results contribute to the foundations of the reference [28], indicating that the emerging technological theories in its performativity, arises from the indistinction between the characteristics of technology, possibilities and organizational results, which influences research, practice and public policies of management.

CONCLUSIONS

The analysis of the information determines that knowledge management in organizations that adopt Emerging Technologies, it is evident that the ability to acquire, generate and transfer knowledge is essential to maintain their competitiveness and adaptability in a rapidly changing environment.

It was identified that organizations acquire knowledge using internal sources such as AI and Big Data, teamwork, QA projects, technology, organizational culture, online platforms, organizational data, employee knowledge, documents, employee knowledge, multidisciplinary teams, archives, and data provided by technologies. External sources are AI, blockchain, IoT, market culture and dynamics, customer feedback, alliances and partnerships, reports, environmental data, resources, national and international standards, academic publications, consulting services.

It was identified that organizations generate knowledge from big data analysis (BDA); IoT, digital technology, QA projects, collective intelligence, teamwork, online platforms, the use of AI and blockchain.

It was identified that knowledge transfer of organizations is performed using blockchain, IoT, knowledge dissemination projects, cultural environment, digital tools, BDA technology, online platforms, AI, blockchain, grant preparation, external collaborations, multidisciplinary teams, Natural Language

Generation (NLG), information sharing, AI-based knowledge graphs, creation of documentation and comprehensive reports on the results of data analysis.

It was determined that the Emerging Technologies that are being used by organizations are AI, the use of Big Data Analytics (BDA), Blockchain, Internet of Things (IoT), Robotic Process Automation (RPA), Augmented Reality (AR), 3D printing, Chatbots, ticketing systems, Online Platforms, and Generative Models.

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