

Analysis of Knowledge Management Practices for Knowledge Intensive Organizations Self-Management

Flávia Pereira Conti, Marlise There Dias, Macedo Marcelo, Fernando Alvaro Ostuni Gauthier, Geneis Lucas dos Santos, Girlane Bondan, Grazieli Izidorio, Debora Cardoso da Silva, Vinicius Dezem, Louise de Lira Roedel Botelho

Postgraduate Program in Knowledge Management and Engineering, Federal University of Santa Catarina, Florianópolis, Brasil
Email: marcelo.macedo@ufsc.br

How to cite this paper: Conti, F. P., Dias, M. T., Marcelo, M., Gauthier, F. A. O., dos Santos, G. L., Bondan, G., Izidorio, G., da Silva, D. C., Dezem, V., & de Lira Roedel Botelho, L. (2024). Analysis of Knowledge Management Practices for Knowledge Intensive Organizations Self-Management. *Open Journal of Social Sciences*, 12, 1-23.
<https://doi.org/10.4236/jss.2024.126001>

Received: April 23, 2024

Accepted: June 9, 2024

Published: June 12, 2024

Copyright © 2024 by author(s) and Scientific Research Publishing Inc.
This work is licensed under the Creative Commons Attribution International License (CC BY 4.0).

<http://creativecommons.org/licenses/by/4.0/>



Open Access

Abstract

In the contemporary BANI (Brittle, Anxious, Nonlinear, Incomprehensible) landscape, characterized by fragility and high anxiety, organizations face significant challenges, impacting creativity, trust in decision-making, and promoting a competitive culture. This study explores how Knowledge Management (KM) methods and techniques can foster self-management in Knowledge-Intensive Organizations (KIOs), turning knowledge into a key driver for innovation and competitive advantage. Using an exploratory research design, this study investigates the applicable KM characteristics that enhance self-management, focusing on people, processes, and technology within KIOs. Data collection spanned extensive literature reviews across Web of Science and Scopus, focusing on self-management, KM, and KIOs. The findings reveal that integrating KM practices not only supports autonomous management among employees but also plays a pivotal role in transitioning from traditional organizational structures to innovative KIO configurations, ultimately fostering a culture that values autonomy and innovation at all levels of the organization.

Keywords

Knowledge Management, Knowledge-Intensive Organizations, Self-Management

1. Introduction

In the contemporary BANI (Brittle, Anxious, Nonlinear e Incomprehensible) scenario (Cascio, 2020) individuals and organizations face considerable chal-

lenges that lead to high anxiety, limited creativity in problem solving, low confidence in decisions and the promotion of a culture of competitiveness both inside and outside organizations (Nataliia & Olena, 2023). This scenario has a direct impact on companies where work overload among employees harms productivity, affecting the achievement of competitive advantages (Pearson, 2023).

In this BANI context, knowledge acts as the driving force of advancement, stimulating innovation on personal, community and global scales (Każmierczak, 2017). Nonaka (1991) highlights that, in an uncertain economy, the success of companies is intrinsically linked to the continuous generation of new knowledge, the broad dissemination of this knowledge within the organization and the agile incorporation of new technologies and products. These actions shape the profile of a knowledge intensive organization, which maintains continuous innovation as its primary focus.

The knowledge intensive organizations value their highly qualified employees and adopt effective knowledge management practices (Nadai & Calado, 2006), investing not only in technology, but also in human resources to remain competitive in the market (Macedo & Souza, 2023b).

However, the knowledge intensive organizations management model differs from the traditional one. The traditional model is characterized by rigid and inflexible bureaucratic processes and requires a change in organizational culture that affects employees' work processes. This may initially encounter resistance among employees, as they do not realize the individual gain resulting from the change process (Moraes et al., 2018).

Aiming to analyze the strain on company-employee relationships and highlight autonomous individual management that contributes to competitive advantage through knowledge, this research aims to answer the following question: how knowledge management methods and techniques can be implemented to encourage self-management in knowledge-intensive organizations?

To develop this study, exploratory research (Gil, 2002) was adopted to understand the characteristics of knowledge management applicable in knowledge-intensive organizations, with emphasis on promoting self-management. Data collection involved bibliographic research in the Web of Science and Scopus databases, using three keywords that covered the constructs: self-management, knowledge management and knowledge-intensive organizations. In the discussion, an intersection was made between the mapped knowledge management practices and the guidelines for self-managed work, considering knowledge-intensive organizations and the dimensions of an organization, people, processes and technology.

However, despite the extensive literature on knowledge management practices in knowledge-intensive organizations, few studies have explored how these practices can be specifically tailored and implemented to foster self-management in these challenging and dynamic contexts. This study innovates by detailing how knowledge management techniques and methods can be effectively applied to promote self-management in knowledge-intensive organizations within the BANI

scenario.

Through an exploratory approach, this work not only identifies applicable knowledge management practices but also directly correlates them with self-management characteristics, considering the dimensions of people, processes, and technology within organizations. This specific focus contributes significantly to the literature by proposing a practical and adaptable model that organizations can implement to enhance autonomy, innovation, and competitiveness in an increasingly volatile and uncertain business environment.

2. Bibliographic Review

2.1. Knowledge Management

Knowledge management has emerged as a pivotal force in modern organizational strategy, leveraging intellectual capital to carve out competitive edges in increasingly complex markets. It enables companies to systematically organize, process, and share critical information that drives decision-making, innovation, and efficiency improvements across all levels of the enterprise (Vieira, 2020). As such, knowledge management serves not only as a framework for enhancing operational efficiency but also as a catalyst for continuous organizational learning and adaptation in response to dynamic market conditions (De Carvalho, Ponciano, & Bianchi, 2021).

Moreover, efficient knowledge management is instrumental in minimizing errors and redundancy within processes, thereby accelerating the development of new products and the refinement of existing systems (Chen & Huang, 2009; Ode & Ayavoo, 2020). This strategic integration of knowledge management into daily operations and long term planning activities underscores its significance as an indispensable asset in the pursuit of sustainable competitive advantage and operational excellence.

It plays a prominent role in creating a competitive differentiator for organizations, as it results in reducing the probability of errors, reducing redundancy, increasing efficiency and constantly transforming organizational expertise into tangible products (Chen & Huang, 2009). Additionally, the use of organizational knowledge allows organizations to accelerate the development of new products and administrative and technological systems (Ode & Ayavoo, 2020).

The absence of efficient knowledge management can result in several obstacles including: the loss of critical knowledge, duplication of efforts, lack of uniformity in organizational practices, exposure to legal risks, inadequate provision of services to customers and inadequate resources allocation in the pursuit of existing knowledge (Nakash & Bouhnik, 2020).

In the scenario of fundamental divergences between American and Japanese management models, the different approaches reflect on the cultural roots of the Fordist and Toyotism production paradigms (Paula & Paes, 2022). These cultural differences include (Mendehall & Oddou, 1986):

- 1) Dualism: in the western, dualism is perceived as a conflict between oppos-

ing concepts, such as good and bad, seeking to eliminate one in favor of the other. In contrast, the Japanese see these opposites coexisting harmoniously, resulting in distinct approaches to business challenges, negotiations, and values;

2) Contextuality: the Western sense of belonging involves internal reflection before social interaction, while Eastern philosophy seeks purpose in the external context, encouraging Easterners to integrate into society and contribute to the environment, promoting flexibility and a less individualistic mindset when faced with challenges or different environments;

3) Flow principle: the concept of non-permanence, including in organizational contexts, implies the absence of rigid rules. This results in unlimited responsibilities of members, guiding their actions according to the context, and contributes to knowledge management practices, such as high loyalty, low turnover and implicit control systems;

4) Holism: unlike Westerners, Easterners prioritize a holistic vision when approaching information, starting intuitively before rationally analyzing the parts. In organizations, this implies that managers must maintain teams linked to the company's mission to promote effectiveness, efficiency and stimulate creativity and innovation;

5) Intuitive bias: due to the appreciation of the complexity of contexts and the emphasis on the global vision, Easterners do not seek total control or absolute understanding of the parties involved. They avoid a strict focus on the analytical use of words and do not rely excessively on logical consistency. When the analytical process fails, they seek to return to wholeness, reflecting true reality.

In this context, a holistic view of knowledge management is essential. [Nonaka and Takeuchi \(2008\)](#) introduce the knowledge spiral, highlighting the bidirectional conversion between tacit and explicit knowledge as a crucial source of competitive advantage. The theory of knowledge addressed by [Macedo and Souza \(2023a\)](#) emphasizes the complementarity of tacit and explicit knowledge in the generation of innovative solutions. [Davenport and Prusak \(1998\)](#) focus on the classification and tangibility of knowledge, while [Wiig \(1999\)](#) highlights the integration of knowledge management with organizational strategy.

Although these approaches offer valuable directions for KNOWLEDGE MANAGEMENT, it is essential to recognize that their successful implementation requires a solid alignment with the areas of knowledge engineering and knowledge media, ensuring effective and efficient management and avoiding the loss of knowledge due to difficulties in access by employees.

Knowledge management allows organizations to take advantage of their intellectual capital and obtain a competitive advantage, involving the systematic collection, organization and dissemination of knowledge to facilitate decision making, problem solving and innovation ([Vieira, 2020](#)). Effective knowledge management practices can improve organizational performance, increase employee productivity and promote a culture of continuous learning ([De Carvalho, Ponciano, & Bianchi, 2021](#)).

2.2. Knowledge Management Methods and Techniques

Knowledge Management methods and techniques play a crucial role in organizations, providing diverse approaches to developing processes related to the creation, storage, sharing and dissemination of knowledge (Macedo & Souza, 2023b), putting into practice the models created by Nonaka and Takeuchi (2008), Davenport & Prusak (1998) and Wiig (1999).

Orofino (2011) presents some practices following the distinction made by Servin (2005) in people, processes and technologies, which will be presented below in Tables 1-3 respectively, according to a survey carried out in current literature.

2.3. Self-Management

The Frenchman Pierre-Joseph Proudhon, a 19th century political philosopher and economist, believed in the self-administration of workers, being one of those who theorized this idea as self-management. His study proposed foundations based on a self-managed and organically autonomous society, in which the collective self-manages itself, but there is no hierarchy (Motta, 1981). It is said that the philosopher brought the first ideas about self-management and some consider him the father of such theory.

Other older authors, also considered visionaries, such as Robert Owen, Charles Fourier and Louis Blanc, also addressed studies in their works that prioritize the collective, such as cooperativism, and which are precursors of self-management (Sguarezi, et al., 2017).

Mothé (2009) conceptualizes self-management as a design aimed at what he calls direct democracy, in which participants voluntarily in periodic meetings debate all relevant aspects without there being any intermediary in the negotiation.

An evolution of concepts and their application in organizations can be seen. Martela (2019) presents the definition of self-managing organizations containing three main characteristics:

1. Authority is radically decentralized, that is, employees have complete freedom to make decisions regarding their work. The author emphasizes that there is practically no relationship of subordination and management;
2. Decentralization occurs throughout the organization;
3. The decentralization process is carried out formally and fully systematized to avoid possible resumption of hierarchy.

In addition, self-management can be seen in organizations that carried out the process of decentralization of authority in its entirety, in a systematic and formal manner (Lee & Edmondson, 2017). Considering this way of working, the authors also state that all employees can act in decision-making without worrying that this benefit will be taken away. In this sense, there is an understanding that property rights in the organization are shared by all its employees.

Table 1. Knowledge Management methods and techniques for people.

Methods and techniques – People	Descriptive
Peer assistance (1)	Practice of acquiring knowledge from the experiences of others prior to executing a new activity or project (Davenport & Prusak, 1998; Servin, 2005; BCPR-UNDP, 2007; APO, 2020).
Cognitive Task Analysis (CTA) (2)	A set of methods designed to identify and describe cognitive structures, such as the organizational bases of knowledge, the representation formats of skills and processes, including attention, problem solving, decision making and tacit knowledge, among others (France, Haddad, & Luquetti, 2018).
Coaching (3)	The act of playing the role of mentor involves facilitating and supporting the development of another person, incorporating the practice of modeling. This means that the mentor must be able to effectively exemplify the messages and suggestions conveyed to the beginner (Kamarudin, Kamarudin, Darmi, & Saad, 2020).
Community of practice (4)	Collaboration in groups dedicated to the development and sharing of specific knowledge accelerates learning, transcending conventional organizational barriers (DON-USA, 2001; Bergeron, 2003; Rao, 2005; Servin, 2005; BCPR-UNDP, 2007; Kazi et al., 2007; APO, 2020).
Virtual project execution communities (5)	They allow remote collaboration, facilitating the sharing of documents, real-time communication and the carrying out of joint analyses, discussion lists and visual maps, contributing to decision-making processes and other benefits (Rao, 2005; Servin, 2005; Kazi et al., 2007; APO, 2020).
Get-togethers/Shared history (6)	Meetings between individuals or work teams that consolidate relationships of trust, enabling informal dialogues about opportunities, challenges and the future of companies (Ahmadjian, 2008).
Innovation Day/Stimuli for innovation (7)	Periodic holding of an event to present current and future technologies, processes and products to all employees, accompanied by an awards policy to recognize exceptional ideas (Fraga, 2019).
Collaborative teams or knowledge clusters (8)	The complexity of modern tasks demands comprehensive knowledge, something a single person may not acquire or provide. This need is met by collaborative teams, in which participants engage to offer complementary knowledge (Davenport & Prusak, 1998; DON-USA, 2001; Wiig, 2004; APO, 2020).
Shared knowledge analysis groups (9)	Meeting to share knowledge external to the organization, boosting updating and competitive advantage (Kazi, Wohlfart, & Wolf, 2007). Term suggested by APO (2020): “Knowledge Cafe”.
Competency-Based Management Models (10)	Aligns human resources practices with strategic objectives, identifying and developing essential skills for individual and organizational success. It focuses on skills, knowledge and behaviors, aiming to improve the performance, productivity and professional development of employees, contributing to the achievement of organizational goals (Knapik, Fernandes, & Sales, 2020).
Review of lived action (11)	Development of individual knowledge through direct experience in projects or activities, with an emphasis on feedback, event analysis and lessons extraction (BCPR-UNDP, 2007; Servin, 2005; APO, 2009).
Storytelling or narratives(12)	Narratives are used as a powerful tool for sharing knowledge, adding context to experiences and rescuing organizational memory, giving meaning to both individual and corporate experiences (Davenport & Prusak, 1998; DON-USA, 2001; Bergeron, 2003; Rao, 2005; Servin, 2005; Brown, 2010; APO, 2020).
Personnel Exchange (shukko) (13)	Exchange of employees at different levels to facilitate the implementation of new technologies and promote understanding of work processes (Fraga, 2019).

Source: Orofino (2011) modified by the authors.

Table 2. Knowledge Management methods and techniques for processes.

Methods and techniques – Processes	Description
Knowledge audit (14)	The systematic approach to knowledge management aims to identify an organization's knowledge needs, resources and dynamics, providing a basis for improving knowledge management and adding value (Bergeron, 2003; Rao, 2005; Servin, 2005).
Benchmarking (15)	Constant and systematic procedure used to evaluate products, services and work processes in organizations recognized as exemplary of best practices, with the aim of promoting organizational improvements (D'Avila, Biessimo, Esteves, Barros, & Vargas, 2017).
Brainstorming (16)	The practice involves bringing together individuals with diverse expertise, focused on a specific topic, with the deliberate aim of generating unconventional proposals, exploring as many solutions as possible. The process is divided into two phases: divergent, in which ideas are generated without judgment, and convergent, in which ideas are evaluated using feasibility criteria (Bergeron, 2003; APO, 2020; Brown, 2010).
Knowledge centers (17)	The system is intended for consolidating information on customer contacts and activities, facilitating connections between people and integrating data from documents and databases. It also covers comparative experiences through the compilation of experiences on specific themes (Davenport & Prusak, 1998; DON-USA, 2001; Bergeron, 2003; Servin, 2005; BCPR-UNDP, 2007).
Concept note (18)	These brief documents are aimed at reflection and conceptualization, exploring new themes, emerging trends and overarching questions (BCPR-UNDP, 2007).
Scenario construction (19)	Strategic narrative focused on creating a future vision for the organization, identifying threats, opportunities, strengths and weaknesses. The objective is to guide the achievement of the desired scenario through strategic planning (DON-USA, 2001).
Contactivity events (20)	Structured meetings to promote opportunities and stimulate the generation of new ideas, strengthening connections between people and fostering bottom-up strategies in an organized way (Kazi, Wohlfart, & Wolf, 2007).
Creation of Key Performance Indicators (KPIs) (21)	Process performance measurement tool pre-established by employees in a sector or organization. Helps in understanding future improvements and monitoring goals (Werner, Yamada, Domingos, Leite, & Pereira, 2021; Oliva & Kotabe, 2019).
Crowdsourcing (22)	Distributed participatory design approach to identify collaborative environments between team members and the target audience (Brown, 2010).
Knowledge management strategy development (23)	Methods for establishing a formal knowledge management plan aligned with the organization's global strategy and objectives (Bergeron, 2003; Rao, 2005; Servin, 2005).
Social media design and analysis (24)	Knowledge flow mapping instrument used to identify gaps, enabling the reinforcement of existing flows and improving the integration of knowledge after events such as mergers and acquisitions (Rao, 2005).
E-Learning (25)	Solution that provides knowledge and information, facilitates learning and increases performance by developing an adequate flow of knowledge within organizations. (Bergeron, 2003; DON-USA, 2001; Rao, 2005; Servin, 2005).
Assessment interviews (26)	Structured meetings between superiors and subordinates, held at defined periods, aimed at management by objectives. These meetings aim to evaluate goals, establish future plans, analyze results and discuss threats and opportunities, outlining responsibilities and forms of knowledge creation that occurred during the period (Kazi, Wohlfart, & Wolf, 2007).
Exit interviews(27)	Instrument used to record the knowledge of employees who leave the organization (BCPR-UNDP, 2007; Servin, 2005).
Discussion Forums(28)	Tool designed to establish an "informal meeting space" that favors an environment where people can seek advice or share information on topics of interest. It facilitates team collaboration through a network, regardless of location or time (Bergeron, 2003; Servin, 2005).

Continued

Content Management (29)	Strategic tools for efficient implementation of collaboration and efficiency in the value chain through websites and portals. They include creating models, content maintenance, strategic links, storing online databases and integration with various platforms (Rao, 2005; APO, 2020).
Competitive intelligence (30)	Competitive Intelligence is an ethical and continuous process that collects and analyzes data from the competitive environment to support decisions. Aiming to improve market position, it involves systematically obtaining information about competitors and trends. In addition to retrospective, it seeks to anticipate threats and identify opportunities, transforming information into strategic knowledge for proactive decisions (Gomes & Braga, 2004).
Lessons learned (31)	Instrument used through modeling and simulation techniques in organizations to record lessons learned during and after an activity or project, involving specialists in different areas. These tools reflect past practices and offer tangible recommendations to improve organizational performance in the future (DON-USA, 2001; Bergeron, 2003; Servin, 2005; BCPR-UNDP, 2007).
Knowledge mapping (32)	Recognition and categorization of knowledge assets in the organizational context, covering elements such as individuals, procedures and technology (APO, 2020).
Best practices (33)	Systems to capture and share best practices identified in an organization aiming for collective benefit (Davenport & Prusak, 1998; DON-USA, 2001; Bergeron, 2003; Rao, 2005; Servin, 2005; BCPR-UNDP, 2007).
Mentoring (34)	Process in which a more experienced professional intentionally transfers his experience and knowledge to a younger professional, promoting the apprentice's career development (APO, 2020; Oliva & Kotabe, 2019).
Metaphors and analogies (35)	Use of figures of speech as a method of perception, allowing different concepts and contexts to make sense to people with different life experiences, through the use of imagination and symbols (Nonaka & Takeuchi, 1997; Choo, 2006).
Mental models (36)	Mental models are representations that reflect reality or imaginary scenarios, being used to encode operational knowledge from lived experiences or inferences observed from different sources (Davenport & Prusak, 1998; Wiig, 2004).
White pages, yellow pages, or skills bank (37)	The electronic directory, often accessible online, allows people to locate professionals with specific and specialized knowledge, by mapping their skills and abilities (DON-USA, 2001; Servin, 2005; APO, 2020).
Visual thinking (38)	The practice of using drawings as a means of expressing ideas, as proposed by Brown (2010), aims to obtain results different from those achieved through words or numbers.
Individual skills development plan (39)	With the purpose of developing the essential critical capacity to transform individuals into effective knowledge workers, this method is associated with the performance evaluation and merit recognition system (APO, 2020).
Pitch (40)	Strategic presentation, often short, where the passion and involvement demonstrated by the presenter seek to captivate and interest listeners, positively influencing their evaluations and decisions (Shane, Drover, Clingensmith, & Cerf, 2019; Scheepers, Barnes, & Garrett, 2021; Oliva & Kotabe, 2019).
Peer review (41)	Instruments that seek to obtain feedback from colleagues in a specific work area, activity or product (BCPR-UNDP, 2007).
Idea and innovation management system (42)	The system aims to improve connectivity and collaboration between experts, using integration technology to promote new ideas and create a "global brain", providing conditions for serendipity (Rao, 2005; APO, 2020).

Continued

Storyboards (43)	Visual narrative that represents a sequence of events, similar to a comic book (Brown, 2010).
Knowledge taxonomy (44)	It seeks to classify information in a hierarchical manner to facilitate access, the Knowledge Taxonomy aligns with the company's objectives and strategies, reflecting the needs and vocabulary of users (Rao, 2005; APO, 2020).
Exploratory tourism (45)	"Investigative trips" represent a collaborative and playful approach to replace conventional learning methods. This format involves the joint preparation of study itineraries, covering the definition of themes, route planning, interaction with local suppliers and planned activities. In addition to promoting integration and knowledge, these trips offer an engaging alternative to explore concepts and content (Kazi, Wohlfart, & Wolf, 2007).
Visual power networking (46)	The team bonding technique, applicable at the beginning of meetings or lectures, aims to allow each participant to get to know each other better, promoting integration and preparing the mind to receive new ideas and possibilities (Kazi, Wohlfart, & Wolf, 2007).

Table 3. Knowledge Management methods and techniques for processes.

Methods and techniques – Technology	Description
Blog (47)	A virtual environment, editable by the author and recommended by him, that integrates short articles, images and videos, offering a quick update compared to a website (APO, 2020).
Chat (48)	Instant text communication between two or more people via web in real time (Bergeron, 2003; Rao, 2005; APO, 2020).
Knowledge harvesting (49)	Instrument used to record the knowledge of experts and make it accessible to others (DON-USA, 2001; Servin, 2005).
Multimodal conference (50)	Use of technology to integrate groups in real time, involving resources such as electronic whiteboards, text forums and audio and video channels for sharing knowledge (Bergeron, 2003; Rao, 2005; APO, 2020).
Construction of manuals for replication of successful practices/Routines (51)	The company seeks to make execution procedures explicit and accessible, using databases, manuals or guidelines, aiming to facilitate the understanding of this knowledge by a wide number of employees (Fraga, 2019).
Cyber-Physical Production System (CPPS) (52)	Transparent and autonomous integration of computing technologies, networks and process monitoring that physically supervise operations with sensors and actuators (Andronie, Lazarioiu, Iatagam, Hurloiu, & Dijmarescu, 2021; Villalonga, Negri, Biscardo, Castano, Haber, Fumagalli, & Macchi, 2021).
Email (53)	Collaborative platform widely used for sending messages over the internet, making it possible to reach a wide audience in different places and in real time (Bergeron, 2003; Rao, 2005; Servin, 2005).
Collaborative physical spaces (54)	Space designated for informal interactions between team members (APO, 2020).
Space for prototyping (55)	Space intended for experimentation and implementation of ideas, providing an environment conducive to the development and expansion of employees' creativity within an organization (APO, 2020).
wireless Tools (56)	Implementation of mobile technologies with the aim of disseminating knowledge among members of an organization's workforce, promoting connectivity and mobility, especially for those who perform their functions in external environments (Rao, 2005).
Groupware (57)	Software and hardware dedicated to CSCW (Computer Supported Cooperative Work 28) technology are essential for offering computational support, expanding interaction between individuals and groups from different areas. Desirable features include affinity, knowledge mapping, segmentation, search, group document creation, classification, anonymity, notification and access management (Rao, 2005: p. 9).

Continued

Knowledge portals (58)	Online platform that offers knowledge management applications for the organizational environment, providing continuous integration between employees, without time and space restrictions (Rao, 2005; APO, 2020).
Network (59)	Analysis that seeks to map interactions between people, groups and organizations to understand how these relationships impact on facilitating or hindering knowledge (Rao, 2005; Servin, 2005).
Social media (60)	Identification and analysis of interactions between people in groups formed mainly on the internet, including the study of information transmitted from one individual or group to another (Bergeron, 2003; Rao, 2005; Kazi et al., 2007; APO, 2020).
Advanced techniques in search portals (61)	Continuous improvement of systematic search tools and methods, aiming to improve internet portals and expand the results achieved (APO, 2020).
Virtual work (62)	Application of advanced technology, supported by the internet and telecommunications, which allows a person to work in one location, applying their knowledge and experiences remotely in another location, in real time (Servin, 2005).
Video conference (63)	Used in situations that require trust and relationship building, virtual communication allows the discussion of issues and exploration of ideas. This approach makes it easier to access expert knowledge regardless of physical location. An additional advantage is the reduction of expenses associated with travel, transportation and accommodation on business or training trips (Bergeron, 2003; Rao, 2005; Servin, 2005).
ethnography video (64)	Visual recording devices that record the dynamic interactions of a group over time, allowing subsequent analysis of collective behavior (Brown, 2010).
Video (65)	Creation of brief videos with strategic content intended for internal dissemination within organizations or to specific audiences via the internet (Rao, 2005; APO, 2020).
VOIP (66)	Acronym in English for “knowledge-intensive organizations and over Internet Protocol”, it refers to the transmission of audio and video signals between computers, allowing the exchange of information (APO, 2020).
Wiki (67)	Virtual spaces known as wikis are dedicated to the collaborative construction of collective knowledge (APO, 2020).

Source: Orofino (2011) modified by the authors.

Martela (2019) presents six problems considered basic in organizations and explains how the self-management model deals with each of these possible adversities:

- 1) Basic structural arrangement: plan.
- 2) Manager’s power over subordinates: almost non-existent.
- 3) Decision-making power: use of radical decentralization.
- 4) Division of work:
 - Division of tasks: bottom-up and top-down, both top management and individuals have responsibility and authority to create new tasks.
 - Task allocation: arises from the interaction between employees who are aware of the roles they must fulfill.
- 5) Reward Provision:
 - Desired behavior: salaries and bonuses determined through a peer-based process, always striving to make work interesting.

- Elimination of the “free rider effect”: employees are primarily responsible for resolving conflicts through specific strategies.

6) Providing information:

- Setting the direction of information provision: it must be distributed and there must be a guarantee that everyone receives essential information so that employees can make appropriate decisions so that the organization benefits.
- Coordination of interdependent tasks: constant communication and use of computerized systems guarantee team coordination.

There is a propensity for the growth of followers of self-managed organizations, considering the way they deal with universal problems. Observing the volatile world of business, which requires rapid changes in direction, it is necessary to have an organizational structure that has more specialized and autonomous professionals, who are capable of dealing with agile decision-making in order to keep the organization competitive in the complex dynamics of the current business environment (Martela, 2019).

2.4. Knowledge-Intensive Organizations

In this volatile and constantly changing business context, Knowledge Intensive Organizations assume a prominent role, driven by global digital transformation. The term “Knowledge Intensive Organizations” refers to companies that rely heavily on intangible assets, such as knowledge, for the production and offering of products and services. These organizations stand out for their solid base of intellectual skills among employees, who perform specific functions, and for their effective knowledge management practices (Nadai & Calado, 2006).

To thrive in this dynamic environment, knowledge-intensive organizations must constantly redefine their boundaries and adopt new collaboration paradigms, such as business networks. In this scenario, knowledge management plays a critical role in success, enabling organizations to respond to constantly evolving demands and opportunities. It is imperative to invest in knowledge-based technologies and infrastructures to maintain competitiveness and relevance in the market (Rossetti et al., 2008).

However, Macedo and Souza (2023b) highlight the importance of finding a balance between technological and human aspects within these organizations. Fostering an environment that promotes technological evolution, while valuing and preserving employees’ skills and competencies, is essential for long-term success.

The autonomy of operational workers is encouraged, making them the main holders of practical and specific knowledge, with managers acting as guides, rather than applying strict monitoring. This horizontal approach with less bureaucracy allows for greater flexibility and integration between areas of the organization, promoting effective communication before imposing rigid rules (Nonaka & Takeuchi, 1997).

Furthermore, a knowledge-intensive organization focuses its attention on the

customer, recognizing them as the backbone of the business and guiding changes to improve service and the offering of personalized products and services. Although data collection in this environment is challenging due to the complexity of operations, the search for explicit information and the continuous improvement of processes and projects are constant priorities, stimulating evolution and innovation (Macedo & Souza, 2023b).

3. Methodology

This study employs an exploratory research design aimed at understanding the characteristics of knowledge management applicable to knowledge-intensive organizations, with a particular focus on promoting self-management. The methodology was executed through an extensive bibliographic review in the Web of Science and Scopus databases using three carefully selected keywords: “self-management,” “knowledge management,” and “knowledge-intensive organizations.” This choice ensured a thorough exploration of the relevant literature across these interconnected areas (Gil, 2002).

The exploratory method guidelines suggested by Gil (2002) are suitable for in-depth investigation of complex phenomena that have not been extensively studied. This approach allows for a deeper understanding of the dynamics within knowledge management practices and their impact on fostering autonomous work environments.

The study’s analytical process involved mapping out identified knowledge management practices against the guidelines for self-managed work, with a focus on organizational dimensions including people, processes, and technology. This mapping facilitated a detailed analysis of how knowledge management practices can be tailored to meet the specific needs of knowledge-intensive organizations (Nonaka & Takeuchi, 1995; Davenport & Prusak, 1998).

Finally, the synthesis of findings from the literature reviewed provided a theoretical grounding that connects the practices of knowledge management with the enhancement of self-management capabilities. This connection highlights how customized knowledge management strategies can help develop a more autonomous and adaptive organizational culture, thus improving both individual and organizational effectiveness in knowledge-intensive settings (Drucker, 1993; Senge, 1990).

4. Discussion

Nonaka and Takeuchi (1997) challenge the idea of the systemic view of knowledge management, proposing that the creation of knowledge not only impacts managerial functions, but also fundamentally changes the organizational structure, transforming everyone, to some extent, into knowledge workers. They highlight specific people management practices, such as promoting diversity in tasks (necessary variety) and allowing time for non-work-related activities (redundancy), as drivers of knowledge creation.

This approach suggests the need for comprehensive changes in the organizational environment, echoing Gumbley (1998), who argues that organizations committed to the long-term benefits of knowledge management must change not only technology, but also operational systems, structures and procedures. Johannessen (2008) expand this perspective, emphasizing that investment in new technologies alone will not lead to knowledge management. It is necessary employees driving the transition to knowledge organizations through organizational learning processes.

Effective adaptation to employees' production styles and personal needs is vital to the success of new ways of working (Van Diemen & Beltman, 2016), with self-management considered crucial for knowledge workers, as emphasized by Drucker (1993). The ability to self-manage is essential when faced with high pressure and the need to deal with multiple tasks simultaneously.

In order to meet the objective of this article, the following intrinsic characteristics of self-management were defined based on the literary framework presented: decision making (a), decentralization of authority (b), division of labor (c), autonomy (d), conflict resolution (e), information transparency (f), and task coordination interdependent(g). Based on these characteristics, it was verified which knowledge management practices could be applied, considering the dimensions of people, processes and technology, in order to support knowledge-intensive organizations in incorporating self-management. Table 4 illustrates this intersection between all knowledge management practices identified, numbered from 1 to 67 (previously designated in Tables 1-3), with self-management characteristics scored, identified by letters from a to g, also previously designated earlier in this topic.

Considering Table 4, with regard to the People dimension, it was found that the 12 knowledge management tools studied can be used to support Self-Management. When it comes to Processes, it was found that of the total of 33 knowledge management tools suggested in the literature, 29 of them can be applied to improve processes in the knowledge-intensive organizations for the implementation of Self-Management. And finally, regarding the Technology dimension in the context of self-management, only two (52 e66) of the knowledge management tools does not have a direct influence on the adoption of self-management as a way of working. In order to select the most appropriate practices for the development of self-management, priority was given to those that correspond to five or more of the seven total characteristics intended for self-management, representing more than 70% of the qualities, as shown in Table 5.

To better understand how each of these tools fits into the self-management model of knowledge-intensive organizations, they are presented individually. Within each of the dimensions, people, processes and technology are presented, the knowledge management practice tool and the self-management characteristics that benefit from its use.

Table 4. Intersection of KM practices and Self-Management characteristics.

People	a	b	c	d	e	f	g
5		8	8		8	8	8
	2			4	4	4	4
	11	1		11	1	5	5
	3			3			
5		13	13		13	13	13
6	12	12		12	12	12	12
		6				6	6
		10	10	10		9	9
Processes	a	b	c	d	e	f	g
				14		14	
	15	15					
	16	16			16		
		22	22			22	
	21	21	21	21			
5		33	33	33	33	33	
	25			25		25	
		32	32	32		32	
5	34	34	34	34	34		
5	31		31	31	31	31	
		29		29		29	29
		19				19	19
			26	26		26	26
	27				27	27	
					40	18	
					38	17	17
6	28	28	28	28	28	28	
6	20	20			20	20	20
5	23	23		23		23	23
	24					24	
		36	36	36		36	
	41	41			41		
5	42	42	42		42	42	
	30						
					35	35	35
	37			37	37	37	
				39	44	42	39
		46	46		46		46

Continued

Technology	a	b	c	d	e	f	g
	49	49		49		49	
		54	54		54		54
	56			56	56		56
	55				55		
6	58	58	58	58		58	58
		50	50		50	50	
7	51	51	51	51	51	51	51
						53	53
						48	48
	60			62		47	62
6	57	57	57		57	57	57
5	61	61		61	61	61	
	64				63	64	63
		59	59		59	65	59
5	67	67	67		67	67	

Source: developed by the researchers (2023).

Table 5. List of practices with self-management characteristics.

	Tool	Number of applicable self-management features
People	Personnel Change (shukko) (13)	5
	Storytelling or narratives (12)	5
	Collaborative teams or knowledge clusters (8)	5
Process	Best practices (33)	5
	Mentoring (34)	5
	Lessons learned (31)	5
	Discussion Forums (28)	6
	Contactivity events (20)	6
	knowledge management strategy development (23)	5
	Idea and innovation management system (42)	5
Technology	Knowledge portals (58)	6
	Construction of manuals for replication of successful practices/routines (51)	7
	Groupware (57)	6
	Advanced techniques in search portals (61)	5
	Wiki (67)	5

Source: developed by the researchers (2023).

In the people category, three of them met the criteria, namely:

- Collaborative teams or knowledge clusters: provides decentralization of authority, division of work, conflict resolution, enables the formation of collaborative teams (decentralization of authority and division of work) for more complex tasks (conflict resolution) based on the exchange of complementary knowledge of participants (transparency of information and coordination of interdependent tasks);
- Personnel exchange (shukko): by rotating employees into different functions within the organization, the professional develops a systemic view of the business (transparency of information and coordination of interdependent tasks), better understanding the functions of their colleagues (conflict resolution), the importance of their role (division of labor and decentralization of authority) in addition to allowing each individual to innovate in processes by bringing their specialist vision to other activities;
- Storytelling /narratives: this practice, widely used in marketing, can be explored internally, allowing different people with different mental models to understand the same idea, enabling better transparency of information that leads to conflict resolution, enabling a more horizontal treatment of employees (decentralization of authority), assists in the coordination of interdependent tasks with better communication and, as a consequence, there is better decision-making both individually, developing autonomy, and collectively.
- In the process category, seven practices were obtained that met the requirements:
- Best practices: the use of best practice systems makes information about the organization and all its sectors more transparent, accelerating the process of decentralization of authority, allowing individuals to be autonomous, as they now have a guide at hand for possible doubts, allowing that everyone understands how to fulfill their role, optimizing the division of tasks and, finally, by having a guide for organizational conduct, an environment with fewer conflicts is created and, when there is, it becomes easier to resolve them;
- Mentoring: by assigning more experienced mentors to younger professionals, these mentees develop greater confidence in their work, who become more autonomous and have a mindset focused on resolving conflicts and challenges. The practice also promotes a better division of labor by understanding the qualities of each employee and enables a decentralization of authority by promoting in individuals a sense of their own direction within their role;
- Lessons learned: fundamental knowledge management practice, lessons learned allow learning through practice (information transparency and conflict resolution), and can even contribute to the creation and maintenance of best practices. With the possibility of learning through practice, employees are encouraged to try new ways of producing and solving problems, developing autonomy and facilitating the decision-making process. Finally, this

practice contributes to a better division of tasks as employees learn who is good at performing which functions;

- Discussion forums: this informal meeting space provides an environment where people can seek advice (conflict resolution and decision-making) or share information on topics of interest (information transparency). By facilitating team collaboration through a network, it fosters the decentralization of authority, contributes to the understanding of the division of work and autonomy of groups and individuals, realizing their knowledge of value and that they can count on their teammates;
- Contactivity events: these meetings aim to promote opportunities and stimulate the generation of new ideas (transparency of information), enabling conflict resolution and decision-making and, when carried out with a certain frequency, it is also an excellent practice for coordination of interdependent tasks. By strengthening connections between people and fostering bottom-up strategies, authority is also decentralized;
- Development of knowledge management strategy: by using methods to establish a formal knowledge management plan aligned with the organization's strategy and global objectives, transparency of information from tacit to explicit knowledge is achieved, promoting employee autonomy, helping them to make decisions more quickly, the coordination of interdependent tasks is carried out more fluidly and, as a consequence, the decentralization of authority is created;
- Idea and innovation management system: with such a system, the aim is to clarify and facilitate access to information with a "global brain" which, consequently, provides the decentralization of authority, uniting the team to autonomously define the divisions of the work and, therefore, promotes better decision-making and clear conflict resolution.

And finally, the technology practices that met the criteria were:

- Knowledge portals: by concentrating the organization's explicit knowledge in a single accessible location, decision making is facilitated by consolidating organizational knowledge that allows for a comprehensive understanding when deciding on various topics. This facility promotes the decentralization of authority and encourages autonomy through access to knowledge shared by employees. All of this guarantees transparency of information by making all knowledge available in a place accessible to everyone. Thus, the coordination of interdependent tasks is simplified, as employees have access to the same knowledge in a common environment, facilitating the management of activities with clear objectives;
- Construction of manuals for replicating successful practices/Routines: explaining the practices and routines that meet specific objectives within the organization facilitates the materialization and sharing of knowledge produced by its employees, which promotes transparency of information for everyone, encouraging the autonomy of each person, facilitating decision-

- making and decentralizing authority;
- Groupware: the ability to collaborate triggers organizational fluidity in a self-management context, facilitating interaction between teams through virtual meetings and interactions during activities, favoring fluid conflict resolution, facilitating decision-making and promoting the improvement of division of labor by favoring moments of interaction and providing lists of activities for self-managed teams. Furthermore, it facilitates information transparency in a shared environment and promotes the chain of ideas, integrating with other Knowledge Management tools to support decisions. By providing knowledge of the different facets of employees, it contributes to the decentralization of authority and, finally, cooperates with the coordination of interdependent tasks, providing a conducive environment for communication between peers involved in interrelated activities;
 - Advanced techniques in search portals: by adopting this type of search, ICO employees will possibly have access to knowledge very easily that can be added to what already exists in the organization and that can help to implement this management method. In particular, the characteristics of decision making, decentralization of authority, autonomy, information transparency and conflict resolution will need to resort to this device when other devices do not demonstrate sufficient information to carry out their activities in a self-managed environment;
 - Wiki: the tool provides the development of a collaborative environment with information and knowledge, which encourages employees to better organize the theories and practices necessary in the organization's day-to-day activities, enabling information transparency, in addition to mobilizing decision-making, the decentralization of authority, the division of labor and the resolution of conflicts. A space in which everyone can collaborate allows personal visions to give way to evidence from rigorous studies and makes the aforementioned characteristics of self-management easier to implement.

It is worth noting that the relationships highlighted were based on theoretical concepts presented in this document through inference relating the themes of self-management and knowledge management tools, with knowledge-intensive organizations as the context. Therefore, it is possible that, depending on the context of the organization and its culture, not all knowledge management tools have the expected results with regard to self-management.

The application of knowledge management tools applied considering the knowledge-intensive organizations environment must be followed by indicators that determine in practice the degree of adherence of these tools to the self-management characteristics considered in this article. In this way, it will be possible to highlight adherence to the context and the relevance of knowledge management practices in knowledge-intensive organizations.

5. Conclusion

Considering that knowledge-intensive organizations are business entities that

seek to adopt a business model characterized by employee self-management, aiming to stimulate the creation of innovative knowledge, as indicated by [Nadai and Calado \(2006\)](#), the analysis carried out reveals that, despite all the practices of mapped knowledge management play a facilitating role in promoting self-management, it appears that effectiveness is achieved by adopting only fifteen of the sixty-seven practices presented.

These practices are recommended as conducive instruments for the transition from a conventional organizational structure to a configuration characteristic of a knowledge-intensive organization, in which employees assume self-management responsibilities, as they comply with five or more self-management criteria exposed in this study.

Therefore, considering the results found, it was evident that the integration of knowledge management practices in knowledge-intensive organizations not only makes self-management possible among employees, but also plays a crucial role in the transition from a conventional organizational structure to the distinctive configuration of a knowledge-intensive organization. The emphasis on self-management, supported by the identified practices, promotes an organizational culture that values the autonomy and responsibility of employees in relation to decisions and execution of tasks.

A detailed understanding of the mapped knowledge management practices demonstrates that each of them contributes in a unique way to the development of an organizational dynamic based on self-management, stimulating the creation of innovative knowledge, as well as strengthening the foundations of self-management as a central element in the efficient operation of knowledge-intensive organizations.

Furthermore, consideration of such an approach not only highlights the importance of self-management in the context of knowledge-intensive organizations, but also highlights the need for a strategic and rhythmic approach to implementing these practices. Therefore, it is suggested that future work be produced with the aim of developing methods that allow for a smoother and more effective organizational transition, ensuring that the adoption of these practices is integrated in a coherent manner and aligned with the objectives of each knowledge-intensive organizations.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

References

- Ahmadjian, C. (2008). Creation of Interorganizational Knowledge: Knowledge and Networks. In H. Takeuchi, & I. Nonaka (Eds.), *Knowledge Management* (pp. 201-216). Artmed.
- Andronie, M., Lazaroiu, G., Iatagan, M., Hurloiu, I., & Dijmarescu, I. (2021). Sustainable Cyber-Physical Production Systems in Big Data-Driven Smart Urban Economy: A Sys-

- tematic Literature Review. *Sustainability*, 13, Article No. 751. <https://doi.org/10.3390/su13020751>
- APO (2009). *Knowledge Management: Facilitator's Guide* (p. 237).
- APO (2020). *Knowledge Management Tools and Techniques Manual* (Revised Edition). Asian Productivity Organization. <https://doi.org/10.61145/COEE1851>
- BCPR-UNDP (2007). *Knowledge Management Toolkit* (p. 106). Bureau for Crisis Prevention and Recovery, United Nations Development Programme. https://www.fsnnetwork.org/sites/default/files/knowledge_management_toolkit_for_the_crisis_prevention_and_recovery_practice_area.pdf
- Bergeron, B. (2003). *Essentials of Knowledge Management (Studies in Health Technology and Informatics)* (Vol. 160, pp. 1-208). John Wiley & Sons, Inc.
- Brown, T. (2010). *Design Thinking: A Powerful Methodology to End Old Ideas*. Elsevier.
- Cascio, W. F. (2020). Managing a Brittle, Anxious, Nonlinear, Incomprehensible World. *Harvard Business Review*.
- Chen, C., & Huang, J. (2009). Strategic Human Resource Practices and Innovation Performance—The Mediating Role of Knowledge Management Capacity. *Journal of Business Research*, 62, 104-114. <https://doi.org/10.1016/j.jbusres.2007.11.016>
- Choo, C. (2006). *The Organization of Knowledge: How Organizations Use Information to Create Meaning, Build Knowledge, and Make Decisions* (2nd ed., p. 425). Editora Senac.
- D'avila, J., Bilessimo, S., Esteves, P., Barros, A., & Vargas, C. (2017). Knowledge Management Practices: A Study in a Federal Education Institution. *Journal of University Management in Latin America*, 10, 78-96. <https://doi.org/10.5007/1983-4535.2017v10n3p78>
- Davenport, T. H., & Prusak, L. (1998). *Working Knowledge: How Organizations Manage What They Know*. Harvard Business School Press.
- De Carvalho, T. M., Ponciano, E. S., & Bianchi, E. (2021). Knowledge Management in Work Teams: A Study Applied to Companies Associated with the Human Relations Center in the City of Araguari-MG. *Revista Fatec Sebrae em Debate-Management, Technologies and Business*, 8, 164-164.
- DON-USA (2001). *Metrics Guide for Knowledge Management Initiatives* (pp. 1-78). Report, Department of the Navy. <http://scholar.google.com/scholar?hl=en&btnG=Search&q=intitle:Metrics+Guide+for+Knowledge+Management+Initiatives#5>
- Drucker, P. F. (1993). *Post-Capitalist Society*. HarperBusiness.
- Fraga, B. (2019). *Framework for Analysis of Critical Knowledge of Organizational Resilience Capabilities*. Thesis (Doctoral Thesis), Postgraduate Program in Engineering and Knowledge Management, Federal University of Santa Catarina, 227f.
- France, J., Haddad, A., & Luquetti, I. (2018). Case Study: Analysis of Cognitive Work Tasks at the Operating Station of an Oil Transfer and Storage Terminal with a Focus on Human Factors. In *Rio Oil & Gas Expo and Conference* (pp. 1-10). Brazilian Institute of Oil, Gas and Biofuels. https://www.researchgate.net/publication/328415417_Estudo_de_Caso_Analise_de_Tas_Cognitivas_do_Trabalho_do_Posto_de_Operacao_de_um_Terminal_de_Transferencia_e_Estocagem_de_Petroleo_com_Foco_nos_Fatores_Humanos
- Gil, A. C. (2002). *Como Elaborar Projetos de Pesquisa* (4th ed.). Atlas.
- Gomes, E., & Braga, F. (2004). A Competitive Intelligence System for Renault Brasil.

- In *XXIV National Meeting of Production Engineering (ENEGEP)* (pp. 4698-4705). ABEPRO.
- Gumbley, H. (1998). Knowledge Management. *Work Study*, 47, 175-177.
<https://doi.org/10.1108/00438029810229318>
- Johannessen, J. (2008). Organisational Innovation as Part of Knowledge Management. *International Journal of Information Management*, 28, 403-412.
<https://doi.org/10.1016/j.ijinfomgt.2008.04.007>
- Kamarudin, M., Kamarudin, A., Darmi, R., & Saad, N. (2020). A Review of Coaching an Mentoring Theories and Models. *International Journal of Academic Research in Progressive Education & Development*, 9, 289-298.
<https://doi.org/10.6007/IJARPED/v9-i2/7302>
- Kazi, A. S., Wohlfart, L., & Wolf, P. (2007). *Hands-On Knowledge Co-Creation and Sharing: Practical Methods and Techniques* (p. 584). Knowledge Board.
<http://www.knowledgeboard.com>
- Kaźmierczak, D. (2017). Skills and Capabilities in the Knowledge Society. In E. Smyrnowa-Trybulska (Ed.), *E-Learning Vol. 9 Effective Development of Teacher's Skills in the Area of ICT and E-Learning* (pp. 23-51). Katowice-Cieszyn.
- Knapik, J., Fernandes, B. H. R., & Sales, S. S. (2020). Competency Management Models: A Longitudinal Study in an Automobile Company. *Psychology Magazine: Organizations and Work*, 20, 1122-1131. <https://doi.org/10.17652/rpot/2020.3.19713>
- Lee, M. Y., & Edmondson, A. C. (2017). Self-Managing Organizations: Exploring the Limits of Less-Hierarchical Organizing. *Research in Organizational Behavior*, 37, 35-58. <https://doi.org/10.1016/j.riob.2017.10.002>
- Macedo, M., & Souza, M. (2023a). *Innovation Environments: From Pre-Incubators to Smart Cities*. New Academic Editions.
- Macedo, M., & Souza, M. (2023b). *Fundamentals of Knowledge Management*. New Academic Editions.
- Martela, F. (2019). What Makes Self-Managing Organizations Novel? Comparing How Weberian Bureaucracy, Mintzberg's Adhocracy, and Self-Organizing Solve Six Fundamental Problems of Organizing. *Journal of Organization Design*, 8, Article No. 23.
<https://doi.org/10.1186/s41469-019-0062-9>
- Mendehall, M. E., & Oddou, G. (1986). The Cognitive, Psychological and Social Contexts of Japanese Management. *Asia Pacific Journal of Management*, 4, 24-37.
<https://doi.org/10.1007/BF01733497>
- Moraes, J. P., Sagaz, S. M., Santos, G. L. dos, & Lucietto, D. A. (2018). Information Technology, Management Information Systems and Knowledge Management with Views to the Creation of Competitive Advantages: Literature Review. *Visão*, 7, 39-51.
<https://doi.org/10.33362/visao.v7i1.1227>
- Mothé, D. (2009). Self-Management. In A. D. Cattani, J. L. Laville, L. I. Gaiger, & P. Hespanha (Eds.), *International Dictionary of the Other Economy* (pp. 26-30). Almedina.
- Motta, F. C. P. (1981). *Bureaucracy and Self-Management: Proudhon's Proposal*. Brasiliense.
- Nadai, F., & Calado, L. (2006). A Critical Analysis of the Term "Knowledge-Intensive Organizations". *Unesp Gerpros Magazine*, 1, 1.
- Nakash, R., & Bouhnik, D. (2020). Challenges of Knowledge Management Systems in Modern Organizations. *International Journal of Information Management*, 54, Article ID: 102144. <https://doi.org/10.1016/j.ijinfomgt.2020.102144>
- Nataliia, R., & Olena, S. (2023). High Anxiety in Organizations: Causes and Remedies.

- Journal of Business Psychology*, 38, 101-119.
- Nonaka, I. (1991). The Knowledge-Creating Company. *Harvard Business Review*, 69, 96-104.
- Nonaka, I., & Takeuchi, H. (1995). *The Knowledge-Creating Company: How Japanese Companies Create the Dynamics of Innovation*. Oxford University Press.
<https://doi.org/10.1093/oso/9780195092691.001.0001>
- Nonaka, I., & Takeuchi, H. (1997). *The Knowledge-Creating Company: How Japanese Companies Generate the Dynamics of Innovation* (10th ed.). Campus.
- Nonaka, I., & Takeuchi, H. (2008). *Knowledge Management*. Bookman.
- Ode, E., & Ayavoo, R. (2020). The Role of Knowledge Management in Innovation. *Journal of Knowledge Management*, 24, 145-165.
- Oliva, F., & Kotabe, M. (2019). Barriers, Practices, Methods and Knowledge Management Tools in Startups. *Journal of Knowledge Management*, 23, 1838-1856.
<https://doi.org/10.1108/JKM-06-2018-0361>
- Orofino, M. A. R. (2011). *Knowledge Creation Techniques in the Development of Business Models*. Master's Dissertation, Federal University of Santa Catarina.
<https://repositorio.ufsc.br/handle/123456789/95255>
- Paula, A. P. P. D., & Paes, K. D. (2022). Fordism, Post-Fordism, and Cyberfordism: The Paths and Detours of Industry 4.0. *Cadernos EBAPE. BR*, 19, 1047-1058.
<https://doi.org/10.1590/1679-395120210011>
- Pearson, C. M. (2023). The Impact of Anxiety on Organizational Productivity. *Journal of Organizational Behavior*, 45, 123-135.
- Rao, M. (2005). *Knowledge Management Tools and Techniques: Practitioners and Experts Evaluate KM Solutions* (Vol. 3, p. 453). Elsevier Butterworth-Heinemann.
<https://doi.org/10.1057/palgrave.kmrp.8500047>
- Rossetti, A. et al. (2008). The Knowledge-Based Organization: New Structures, Strategies, and Relationship Networks. *Information Science*, 37, 61-72.
- Scheepers, M., Barnes, R., & Garret, L. (2021). Decoding the Nascent Entrepreneurial Pitch. *International Journal of Entrepreneurial Behavior & Research*, 27, 1936-1957.
<https://doi.org/10.1108/IJEBR-10-2020-0673>
- Senge, P. (1990). *The Fifth Discipline: The Art and Practice of the Learning Organization*. Doubleday/Currency.
- Servin, G. (2005). *ABC of Knowledge Management* (pp. 1-68). National Library for Health: Knowledge Management.
https://www.fao.org/fileadmin/user_upload/knowledge/docs/ABC_of_KM.pdf
- Squarezi, B. et al. (2017). Education and Self-Management: Challenges and Possibilities in the Process of Forming Collective Subjects in the Solidarity Economy. *Revista Mundo do Trabalho Contemporâneo*, 2, 29-49.
- Shane, S., Drover, W., Clingingsmith, D., & Cerf, M. (2019). Founder Passion, Neural Engagement and Informal Investor Interest in Startup Pitches: An fMRI Study. *Journal of Business Venturing*, 35, Article ID: 105949.
<https://doi.org/10.1016/j.jbusvent.2019.105949>
- Van Diemen, O. G., & Beltman, S. (2016). Managing Working Behaviour towards New Ways of Working: A Case Study. *Journal of Corporate Real Estate*, 18, 270-286.
<https://doi.org/10.1108/JCRE-11-2015-0039>
- Vieira, T. O. (2020). The Contribution of Document Management to Knowledge Management in Organizations: An Exploratory Approach. *In Question*, 26, 327-350.
<https://doi.org/10.19132/1808-5245261.327-350>

-
- Villalonga, A., Negri, E., Biscardo, G., Castano, F., Haber, R., Fumagalli, L., & Macchi, M. (2021). A Decision-Making Framework for Dynamic Scheduling of Cyber-Physical Production Systems Based on Digital Twins. *Annual Reviews in Control*, *51*, 357-373. <https://doi.org/10.1016/j.arcontrol.2021.04.008>
- Werner, M. J., Yamada, A. P., Sundays, E. G., Leite, L., & Pereira, C. (2021). Exploring Organizational Resilience through Key Performance Indicators. *Journal of Industrial and Production Engineering*, *38*, 51-65. <https://doi.org/10.1080/21681015.2020.1839582>
- Wiig, K. M. (1999). Knowledge Management: An Emerging Discipline Rooted in a Long History. In C. Despres, & D. Chauvel (Eds.), *Knowledge Horizons* (pp. 3-26). Elsevier. <https://doi.org/10.1016/B978-0-7506-7247-4.50004-5>
- Wiig, K. M. (2004). *People-Focused Knowledge Management: How Effective Decision Making Leads to Corporate Success* (p. 364). Elsevier.