

FUNDAMENTAL CONCEPTS IN ORGANIZATIONAL KNOWLEDGE MANAGEMENT ORGANİZASYON BİLGİ YÖNETİMİNDE TEMEL KAVRAMLAR

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ÖZET

Bu makalenin amacı, bilgi yönetimi kavramları, süreçleri ve araçları üzerine kapsamlı bir inceleme ve eleştirel bir değerlendirme sağlamak, bugünkü iş dünyasında rekabet gücünü artırmanın önemini vurgulamaktır. Bilgi yönetiminin evrimini izleyerek, bilgi oluşturma, paylaşma ve uygulama gibi ana süreçleri belirleyerek bilgi yönetim araçları teknik ve teknik olmayan kategorilere ayrılarak tamamlayıcı rollerini vurgulanmıştır. Detaylı bir literatür taraması aracılığıyla, bilgi yönetiminde öne çıkan başlıca zorluklar tanımlanıp ele alınmış özellikle örtük bilginin yönetilmesiyle ilişkili zorluklar vurgulanmıştır. Bulgular bilgi yönetiminde bilgi teknolojisinden yararlanarak karar verme süreçlerini otomatikleştirmek ve yeni uygulamalar geliştirmek için yenilikçi stratejiler ortaya çıkartmıştır. Ayrıca, örtük bilginin etkin depolanması ve paylaşımı için pratik çözümler önererek literatürde kritik bir boşluk ele alınmıştır. Çalışma, sadece mevcut araştırmaların sentezlenmiş bir özetini sağlayarak bilgi yönetimi alanını zenginleştirmekle kalmayarak, belirli zorlukları vurgulayarak ve uygulayıcılara kanıta dayalı öneriler sunarak yeni iç görülerle de katkıda bulunmaktadır. Sonuç olarak, araştırmamız, bilgi yönetiminin çok yönlü faydalarını ve zorluklarını listeleyerek, hem gelecekteki bilgi yönetimi konusunda daha fazla çalışmaların yapılmasına ve kurumlara olan olası faydaları ve uygulamadaki zorluklar anlatılarak bulguların uygulanmasına neden olacaktır.

Anahtar Kelimeler: Stratejik Yönetim, Bilgi Yönetimi, Organizasyon Bilgi Yönetimi.

ABSTRACT

The purpose of this article is to provide a comprehensive review and critical examination of knowledge management (KM) concepts, processes, and tools, highlighting their significance for enhancing competitiveness in today's business landscape. We trace the evolution of KM, delineating key processes such as knowledge creation, sharing, and application, and classify KM tools into technical and non-technical categories, underscoring their complementary roles. Through a detailed literature review, we identify and tackle the predominant challenges in KM, particularly emphasizing the difficulties associated with managing tacit knowledge. Our findings reveal innovative strategies for leveraging information technology in KM to automate decision-making processes and foster novel applications. Furthermore, we propose practical solutions for the efficient storage and sharing of tacit knowledge, addressing a critical gap in the literature. The study not only enriches the KM field by providing a synthesized overview of existing research but also contributes novel insights by highlighting specific challenges and offering evidence-based recommendations for practitioners. In conclusion, our research elucidates the multifaceted benefits and challenges of KM, paving the way for future studies to explore uncharted territories in the KM landscape.

Keywords: Strategic Management, Knowledge Management, Organizational Knowledge Management.



1. Introduction

Knowledge Management (KM) is a dynamic process that involves the creation, sharing, utilization, and governance of information within an organization. It extends beyond the implementation of information systems or software solutions, focusing on leveraging organizational knowledge for strategic advantage. The roots of KM can be traced back to 1975 when Chaparral Steel Company pioneered knowledge-focused practices, demonstrating its efficacy in maintaining technical and market leadership in the absence of modern information technologies (Wiig, 1997). The term knowledge management gained prominence in 1986, with KM perspectives on new opportunities unveiled in a 1986 European management conference keynote sponsored by the International Labor Organization of the United Nations (Milton, 2018). Since then, interest in KM has burgeoned among scholars and businesses, leading to the establishment of the European Knowledge Management Association in 1996.

Wiig (1997) noted the gradual momentum gained by KM over the years, emphasizing that organizations, at the time, were unfamiliar with KM, and even if aware, they hesitated to implement it. Despite initial reservations, between 1996 and 2020, the landscape of KM witnessed the emergence of new conceptual terms and continuous developments that expanded the toolkit for managing knowledge. Wiig's foresight in 1997 projected future developments and directions for KM, which subsequent years validated. Today, KM functions are integral to daily operations, driving organizational collaboration and creativity. Advanced information technology plays a pivotal role, harnessing increased computing power for automated knowledge processing, personal assistants, and complex situation visualization (p. 9). The essence of KM lies in explaining how organizations achieve and sustain competitive advantage through continuous learning, leveraging various types of knowledge (Davenport and Prusak, 2000). Wensley and Verwijk-O'Sullivan (2000) underscore the importance of a culture supportive of exploring new ideas for knowledge development. In the realm of organizational activities, managing and developing knowledge stands out as a vital function, ensuring continuous learning, innovation, and improved performance (Loebbecke et al., 2016). KM and information development are crucial components contributing to sustained competitive advantage. A persistent debate revolves around the distinction between information and knowledge. Bouthillier and Shearer (2002, as cited in Mitchell, 2000) clarify this, defining information as data made meaningful within a context, while knowledge involves data endowed with beliefs about causal relationships gained through inference or experience. Knowledge, being predictive, guides actions, whereas information is contextualized data. Organizations differ in how they utilize KM; for instance, knowledge-based production may be suitable for some, while others thrive on innovation. However, the technologies and systems for managing knowledge might exhibit similarities across organizations. Egbu et al. (2005, as cited in Frey, 2001) emphasize that knowledge, unlike finite resources, expands with use, underscoring its role in preventing loss due to employee turnover, retirement, downsizing, or outsourcing. Newman (1996) contends that KM directs organizational decisions on when, where, and how to account for new knowledge, contributing to education, training, technical refreshment, and on-the-job experience.



In the 21st century, competition revolves around knowledge-based products and services, making knowledge the primary driver in the knowledge-based economy (Nooshinfard & Nemati-Anaraki, 2014). Alexy et al. (2013) and Kogut & Zander (1992, 1996) emphasize the pivotal role of knowledge as the most essential organizational resource. Innovative organizations possess two types of knowledge relevant to innovation—solution-related and problem-related—yielding higher rents from innovation (Alexy et al., 2013). Chen et al. (2006) highlight the shift where knowledge-related aspects now outweigh traditional production concerns. Within small and Medium-sized Enterprises (SMEs), KM needs are significant, with tacit knowledge often exchanged through personal relationships and team interactions. Despite increased investment in IT, SMEs encounter barriers such as protecting intellectual capital and cultural resistance. Nonetheless, SMEs are increasingly adopting KM practices, following the lead of larger corporations (Cerchione and Esposito, 2016). In conclusion, knowledge management stands as a fundamental driver for organizational performance and value creation. As the landscape evolves, organizations must navigate the dynamic interplay of information, technology, and human dynamics to harness the full potential of knowledge.

2. Methodology

This paper adopts a literature review approach, meticulously collating and scrutinizing mainstream research within the sphere of knowledge management. The aim is to methodically dissect the field, offering a thorough and critical overview of the accumulated research in knowledge management, thereby evaluating its contributions to both the practical and theoretical dimensions of the discipline. The burgeoning body of research in this area often leads to fragmentation, making it challenging to navigate. Employing a literature review methodology addresses this challenge by aggregating and distilling the extant research, providing clarity and insight into the current state of knowledge management research and suggesting directions for future inquiry (Tranfield, et al. 2003).

In our study, we utilize a narrative-integrative literature review methodology, deemed highly appropriate for achieving our goal of compiling the extant research in knowledge management. This methodological approach, as described by Tranfield et al. (2003), facilitates a holistic examination, critique, and synthesis of the literature, yielding a cohesive overview of the field. We meticulously selected our literature corpus to span from the genesis of knowledge management as a distinct discipline to the latest research, covering a broad spectrum of viewpoints and developments within the area. Our literature selection was strategically focused on peer-reviewed journal articles, foundational texts, and pivotal conference proceedings to ensure a comprehensive representation of both seminal and novel theories.

In the process of gathering data, we utilized several databases, including Web of Science, Scopus, and Google Scholar, guided by keywords such as "knowledge management," "information sharing," and "organizational learning. Moreover, we integrated insights from a myriad of sources, critically assessing the progression and current gaps in knowledge management practices. This narrative-integrative approach not only facilitated a deep dive into the existing body of work but also illuminated the path forward for the field, outlining potential areas for future research and exploration.



3. The Knowledge Management Process

Knowledge Management (KM) plays a pivotal role in enhancing competitive advantage by facilitating the creation, acquisition, dissemination, interpretation, and application of new knowledge within an organization. Turner and Makhija (2006) emphasize the significance of these processes in building and sustaining competitive advantage, drawing on earlier works by Cohen & Levinthal (1990), Kogut & Zander (1992), and Kusunoki, Nonaka, & Nagata (1998). Building competitive advantage, as highlighted by Turner and Makhija (2006), involves a multifaceted approach. This approach includes the creation and acquisition of new knowledge, its dissemination to relevant parts of the organization, interpretation, and integration with existing knowledge, and ultimately using it to achieve superior performance. The dynamics of these processes are crucial in maintaining a competitive edge. Control mechanisms, whether in the form of routines, coordination mechanisms, or organizational norms, play a decisive role in shaping the relationships between individuals and groups within the organization. Turner and Makhija (2006) underscore the impact of these mechanisms on how information is shared and knowledge is disseminated. Specifically, control mechanisms wield significant influence over "how knowledge is acquired, disseminated, interpreted, and used to accomplish organizational goals" (p. 198). The knowledge management process includes creating, sharing, storing, interpreting, and applying knowledge. In the following sections, the knowledge management processes are summarized in detail.

3.1. Knowledge Creation

The process of knowledge creation begins with organizational learning, followed by the utilization of existing knowledge. According to Yang et al. (2010, as cited in Fleming, 2001), the creation of new knowledge often involves the fresh recombination of existing knowledge fundamentals or the reconfiguration of how knowledge elements are interconnected (Yang et al., 2010, as cited in Henderson & Clark, 1990). This may entail changing individual components of a known solution separately, with the subsequent change in performance marking the progression in creating new knowledge. Organizations, drawing from their own experiences, tend to be less receptive to external developments and outcomes (Levinthal & March, 1993).

Gnyawali and Grant (1997, as cited in Senge, 1990) delineate two distinct modes of learning within organizations: interactive and informational modes. The interactive mode involves the creation of shared new knowledge through the exchange of ideas and opinions within the organization. Learning in this mode occurs as individuals or units develop insights based on experience and reflection (as cited in Duncan & Weiss, 1979). Conversely, the informational mode encompasses the processing, collecting, distributing, and interpretation of data (as cited in Huber, 1991). Unlike the interactive mode, the informational mode supports the search, acquisition, and processing of data, enabling organizations to absorb knowledge quickly and efficiently. Gnyawali and Grant (1997) emphasize that organizational learning contributes to the creation of organizational knowledge, and the effectiveness of the learning process depends on the context and organizational knowledge decision outcomes, necessitating systematic Knowledge Management (KM) (Wiig, 1997).

In the early 1990s, a group of Japanese researchers criticized Western-style knowledge management theories. Nonaka (1991) highlighted the key difference between Western and



Japanese approaches. He argued that creating new knowledge is not merely the result of processing explicit information. The Japanese approach, in contrast, relies on tacit and subjective insights, allowing Japanese companies to successfully generate new knowledge. Employee insights and experiences serve as the foundation for new ideas and knowledge, which are then formalized by the company's processes. This holistic approach to knowledge creation views the organization as having a mutual sense of identity and fundamental purpose, akin to self-knowledge. Understanding where the company stands, its direction, the desired world it envisions, and, crucially, how it transforms that vision into reality, represents the essence of this organizational self-awareness (Nonaka, 1991).

3.2. Knowledge Sharing

Knowledge becomes immensely valuable when shared, underscoring the importance of effective communication and exchange within organizations. Nooshinfard & Nemati-Anaraki (2014) emphasize that knowledge sharing is integral to enhancing knowledge creation, a social process involving the sharing of tacit knowledge (Nonaka and Takeuchi, 1995). Understanding the factors influencing successful knowledge sharing is essential for organizations to harness this valuable resource.

There are distinctions between transferring tacit and explicit knowledge, and organizations can enhance coordination and control methods by assessing the type and means of knowledge sharing. Loebbecke et al. (2016) define knowledge sharing as the transfer of useful know-how or information across company lines, with the primary goal being the creation of new knowledge through the amalgamation of existing and new knowledge.

In line with Nooshinfard & Nemati-Anaraki (2014), knowledge sharing is a process where individuals and groups communicate their knowledge for mutual benefit. Kaser and Milles (2001) highlight essential contingencies for knowledge sharing, including opportunities for self-directed, voluntary, intrinsically motivated interaction within trustworthy relationships. Various facilitators of knowledge sharing, such as networking, communities of practice, and education, have been proposed, emphasizing that knowledge-sharing information technology can enable both explicit and tacit knowledge sharing.

Human interaction remains fundamental for sharing and hiding knowledge, underscoring the importance of aligning KM strategies with organizational culture. Motivators like monetary rewards, recognition, and praise encourage people to share knowledge, and trust is pivotal for enabling knowledge sharing. Employees with specific, challenging objectives are more inclined to share knowledge, especially when facing new tasks. Both personalization and IT-based approaches are recommended for effective knowledge sharing. Establishing a robust and flexible knowledge-sharing network between organizations necessitates high levels of trust and reciprocity, fostering effective communication and learning. However, practical complexities make sharing knowledge among organizations a challenging task. Balancing personalization and IT-based approaches, aligning with organizational culture, and fostering trust are essential considerations for successful knowledge sharing practices.



3.3. Interpreting Knowledge

Knowledge acquisition occurs through learning from diverse sources, including interactions with people, exposure to culture, learning from mistakes, and accumulating experiences. Within the knowledge management process, interpreting knowledge is a critical step, drawing insights from various inputs. Turner and Makhija (2006, as cited in Daft and Weick, 1984) define knowledge interpretation as the process of assigning meaning to new information or knowledge within the framework of existing organizational understanding (p.202). Explicit knowledge, being easily articulated, recorded, and shared, is more amenable to interpretation due to its clarity and tangibility. In contrast, tacit knowledge, residing in people's minds and often unspoken, poses a challenge for interpretation. This difference in interpretability makes explicit knowledge more flexible and conducive to accurate understanding.

According to Turner and Makhija (2006), when individuals share a common interpretation, knowledge interpretation can be effectively communicated. However, as Fang, Yang & Hsu (2013) point out, individuals with similar knowledge bases may still hold different interpretations of the same knowledge, introducing challenges to knowledge transfer. It is crucial to acknowledge that understanding and assimilating new knowledge depends significantly on the existing knowledge within the organization.

In essence, the interpretation of knowledge is a dynamic process influenced by the nature of the knowledge itself—whether explicit or tacit—and the diversity of perspectives within the organization. Effective interpretation ensures that knowledge is not only acquired but also comprehended and applied in ways that contribute to organizational learning and performance. Recognizing and addressing the nuances of interpretation, especially in the context of varying perspectives, is essential for maximizing the value derived from knowledge within an organization.

3.4. Applying knowledge

The fundamental purpose of Knowledge Management (KM) is to enhance organizational performance by effectively applying knowledge to achieve organizational goals. Internal knowledge, particularly professional knowledge, offers numerous advantages to organizations. Dalmarco et al. (2017) highlight that internal knowledge allows organizations to strategically decide when to acquire external knowledge, when to commercialize internal knowledge, establish knowledge relationships through external partnerships, and reduce uncertainty. Dalmarco et al. (2017) identify the advantages of internal knowledge, including the ability to strategically choose between external and internal knowledge acquisition, establishing knowledge relationships through external partnerships, and reducing uncertainty. Egbu et al. (2005) further propose potential benefits of KM, such as increasing organizational knowledge, enhancing performance and productivity, fostering innovation and services, identifying knowledge gaps, mapping knowledge flow and assets, improving efficiency, and facilitating knowledge sharing.

For startups, especially, the use of KM applications can be particularly beneficial, enhancing market knowledge and overall organizational improvement. Egbu et al. (2005) caution that focusing solely on cash flow, without understanding the identification, mapping, and knowledge creation processes, and failing to integrate them into daily operations, can



lead to early failures for companies. Additionally, the KM process is significantly correlated with organizational performance. Payal et al. (2019) propose that applying a system-oriented strategy, a human-oriented strategy, or a combination of both, deployed by managers, can contribute to enhanced organizational performance. They advocate for a comprehensive approach, combining various strategies to optimize the application of knowledge within an organization. In summary, the application of knowledge through KM practices is crucial for organizational success. Internal knowledge, when strategically managed, can lead to informed decision-making, reduced uncertainty, and improved performance. Recognizing and leveraging the potential benefits of KM, especially in the context of system-oriented and human-oriented strategies, ensures organizations effectively apply knowledge to meet their goals and challenges.

4. KM Tools

In the realm of Knowledge Management (KM), a plethora of tools is available, broadly categorized as technical and non-technical tools. Both types of tools are integral and complementary, collectively enabling organizations to effectively manage their knowledge. It is noteworthy that while non-technical tools are generally more accessible, IT-based tools necessitate a more substantial investment. Prior to any investment, organizations should meticulously examine their existing KM system, evaluate specific needs, and gauge the anticipated benefits of the investment. The selection of tools should align with organizational goals, and their roles within the KM process should be clearly understood. It's imperative to recognize that the suitability of tools may vary among organizations.

4.1. Technical Tools

Groupware Systems: These systems facilitate technological coordination and collaboration, offering features such as communication (emails, file sharing, conferencing, chats) and collaboration tools (project management, workflow, information management systems) (Aghajan, Carlos & Delgado, 2009).

The Intranet and Extranet: Exclusive to organizations, these systems enhance collaboration, productivity, and socialization. In addition, they influence organizational culture and act as repositories for embedded knowledge. The intranet supports electronic publishing, searching, transacting, interacting, and recording, while the extranet extends these capabilities to the organization's external network, including partners and suppliers (Carayannis, 1998).

Data Warehousing and Online Analytical Processing (OLAP): These tools, crucial for decision support, empower executives, managers, and analysts to make faster and informed decisions. Data warehousing collects decision support technologies, providing vital components for decision-making (Chaudhuri and Dayal, 1997).

Decision Support Systems: Integral to gaining a sustainable competitive advantage, decision support systems enrich decision-making and problem-solving processes by collaborating with decision-makers (Louw, 2002).

Content Management Systems: Utilized across organizations, these systems empower managers to handle unstructured information and knowledge. They assist in dealing with metadata, including standards, workflows, and barriers to effective knowledge management (Wan et al., 2016).



Document Management Systems: Designed for storing, managing, tracking, controlling, and retrieving documents in electronic or paper-based formats, these systems enhance document-centric knowledge management (Ahmad et al., 2017).

Information and Data Retrieval Systems: Appropriate for the storage and retrieval of structured data, these systems, including web search engines, efficiently locate relevant documents or web pages. The integration of big data in these systems enables better business understanding and transforms generated knowledge into effective decisions, enhancing overall performance (Ferrariset et al., 2019; Yao et al., 2008).

Open-Source Knowledge Base: Open-source software integrated into various organizational functions, such as HR, management, quality monitoring, and customer support, operates as an entire KM system. This helps in preparing, managing, and optimizing the flow of knowledge within the organization (Awazu & Desouza, 2004).

4.2. Non-Technical Tools

Building Cross-Functional Project Teams: This tool involves assembling teams from different units within the organization, offering numerous benefits. The project manager, a key figure, should possess extensive experience, expertise, and soft skills. Granting teams freedom and flexibility in decision-making enhances the creation of new knowledge (Zoerman, 2008). Cross-functional teams facilitate the amalgamation of organizational knowledge, empowering the transfer of diverse knowledge forms and fostering future collaboration (Nonaka & Takeuchi, 1995). *Providing KM Training and Education by Consultants:* While relatively more expensive, this tool can be highly beneficial for organizations. Bringing in consultants for hands-on training of local managers, planning, and implementing KM initiatives ensures effective knowledge transfer and application.

Storytelling and Sharing Knowledge: This tool is effective in shaping vision, identity, and organizational culture. Stories play a crucial role in communicating complex knowledge, providing insights into values, norms, and practical solutions to intricate problems. Sole & Wilson (2002) identified four roles of storytelling:

- i. **Sharing Norms and Values:** Stories communicate organizational norms and values, shaping both its past and future.
- ii. **Developing Trust and Commitment:** Stories about the organization and management convey information about the organization's trustworthiness.
- iii. **Sharing Tacit Knowledge:** Stories make the transfer of tacit knowledge more manageable and absorbable, allowing users to articulate and communicate tacit knowledge effectively.
- iv. **Facilitating Unlearning:** New knowledge creation requires changes, and storytelling helps people unlearn existing practices and mental frames.
- v. **Generating Emotional Connection:** Stories evoke emotions from the past, creating a connection by highlighting anomalies or unexpected situations (Szulanski, 1996; Damasio, 2000).

Mentoring: Crucial in Knowledge Management (KM), mentoring is the most effective way to transfer tacit knowledge from an expert to others (Sprinkle & Urick, 2018). Beyond



knowledge transfer, mentoring aids in employee retention. Companies should consider implementing formal mentoring relationships and mentor training as an investment in future KM. Mentorship can be organized formally or informally, both proving beneficial for organizations.

5. Issues and Challenges in KM

In the realm of Knowledge Management (KM), several challenges and issues must be addressed to effectively control and navigate the landscape.

Ethical Considerations in KM: Akhavan et al. (2013) highlight the ethical principles encompassing intellectual property, trust, and credibility in KM. The transition from personal explicit to non-personal explicit knowledge is stimulated by these principles. Socialization, a critical aspect in organizations, involves learning from each other and sharing experiences. Ethical considerations become crucial in this context as knowledge, being a powerful asset, is managed through KM practices. Employee values and fairness perceptions impact knowledge refinement, and a declaration of ownership by the organization may lead to feelings of unfairness, hindering the application of KM.

Incorporating Tacit and Explicit Knowledge: Egbu et al. (2005) emphasize the importance of incorporating both tacit and explicit knowledge into organizational memory. Tacit knowledge, primarily derived from informal discussions and groups, is challenging to formalize and transfer. The challenges in KM sub-processes include knowledge identification, capture, storage, mapping, dissemination, and creation, particularly for small and medium-sized organizations.

Specific Challenges in KM Sub-Processes:

- i. **Knowledge Creation:** Knowledge creation involves adding value to existing knowledge through innovation. Organizations need employees with new skills and capabilities to remain competitive. Motivating employees to adopt new methods and learn new skills is a time-consuming challenge.
- ii. **Knowledge Capturing:** The departure of employees leads to the loss of tacit knowledge. Organizations must capture and maintain knowledge, especially when it is difficult to codify, share, capture, and transfer tacit knowledge.
- iii. **Knowledge Storing:** Storing tacit knowledge and converting it into explicit knowledge poses a challenge. Some types of knowledge cannot be stored easily, and the process requires management support, proper training, leadership, and committed efforts.
- iv. **Knowledge Mapping:** Knowledge mapping aims to optimize the efficient and effective use of organizational knowledge. It involves locating knowledge and creating easily understandable knowledge maps. The challenges include how individuals use knowledge and how organizations manage the coordination of knowledge among individuals and other organizations.
- v. **Knowledge Dissemination:** Trust is crucial in knowledge dissemination, as it forms the collective mind that requires reliable performance. In-person discussions and interactions are effective for disseminating knowledge. Barriers to growth include a lack of vision and skill by management.



Each of these challenges requires careful consideration and strategic approaches to ensure successful Knowledge Management within organizations.

6. Other Challenges and Issues

Several additional challenges and issues in Knowledge Management (KM) merit attention in the literature:

- i. **Trustworthy Information:** Durand (2007) highlights the challenge of ensuring trustworthy information in KM, particularly in the context of organizational learning and performance. Rapid transmission and sharing of trustworthy information among organizational members are crucial. The willingness of knowledge holders to share trustworthy information in a timely manner is vital, addressing concerns related to organizational silence where members may even provide inaccurate information, potentially leading to serious consequences.
- ii. **Transferring Knowledge in Cross-Functional Teams:** The transfer of knowledge between cross-functional teams presents a complex challenge. Research on cross-functional teams explores the impact of physical distance on knowledge incorporation. Zahra et al. (2020) note that high cultural distance hinders information transfer due to challenges in bridging space and time boundaries and adjusting content to the recipient. Overcoming this challenge requires organizational motivation for strategic change, renewal, and adoption.
- iii. **Knowledge Transfer in Multicultural Organizations:** Knowledge transfer in multicultural organizations is identified as an additional challenge in the KM process. Hadjimichael and Tsoukas (2019) argue that understanding each other is problematic when individuals work in the same field but for organizations in different cultural settings. Diverse cultural settings significantly impact knowledge transfer. This challenge is also observed in organizational mergers, where different cultures and committees develop their own tacit knowledge. Managers attempt to navigate these challenges by making changes to understand and accommodate different cultures.

These challenges underscore the nuanced and multifaceted nature of KM, requiring organizations to address issues related to information trustworthiness, cross-functional collaboration, and cultural diversity in their knowledge transfer processes.

7. Discussion and Conclusion

In today's globalized and highly competitive environment, the capability of firms to generate and orchestrate knowledge is foundational for securing a competitive advantage and ensuring its sustainability. This pivotal role of Knowledge Management (KM) spans across the entirety of an organization's value chain, including procurement, production, distribution, and various managerial support functions. The effectiveness of these operations relies heavily on a robust KM framework, underscoring the critical role of knowledge in achieving organizational triumph. Echoing the sentiments of HP's former CEO, "If HP knew what HP knows, we would be three times more productive," illustrates the profound impact of effective knowledge utilization. Ford stands out as a quintessential example of KM's successful implementation. Through its pioneering use of web-based software early in the



internet era, Ford enhanced the quality of its products while simultaneously reducing warranty costs, by ensuring adherence to quality standards across its product lines.

The burgeoning interest in knowledge creation and management over recent decades underscores the increasing recognition of its significance. This research aims to distill the core principles and facets of KM, providing a historical overview and amalgamating existing studies to furnish a nuanced understanding of KM that is both informative for scholars and actionable for practitioners.

In the contemporary business milieu, where tangible resources among organizations often mirror each other, knowledge distinguishes itself as the foremost driver of competitive edge. KM involves the cultivation, dissemination, and application of knowledge to elevate the quality of products and services, thereby driving superior organizational performance. The interplay of tacit knowledge, with its roots in informal interactions and communities, presents a challenge in codification and transfer, contrasting with the more readily shareable explicit knowledge. The arsenal of KM tools, spanning technical to non-technical varieties, forms the backbone of effective knowledge management. Despite the potential for higher investment requirements for technical tools, a strategic evaluation of organizational objectives and necessities is imperative. Moreover, fostering an organizational culture that promotes learning and knowledge sharing is crucial, necessitating an atmosphere where teamwork, commitment, and motivation thrive, thereby bolstering KM efforts.

To encapsulate, KM is a comprehensive system that integrates technical, non-technical, organizational, cultural, and managerial elements. An organization's prowess in KM is indicated by its systematic capability to generate value, thus maintaining its competitiveness. In an era increasingly dominated by digital and AI technologies, the role of KM is set to become even more pivotal. Organizations that adeptly merge AI or smart technologies with their KM practices will not only augment their efficiency but also magnify their value creation. This evolution suggests a fertile ground for future research, especially in exploring how KM can harness the power of emerging technologies to foster innovation, adaptability, and growth in the ever-evolving business landscape.

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Geniřletilmiř Özet

Bu makalenin amacı, bilgi yönetimi kavramlarını, süreçlerini ve araçlarını kapsamlı bir şekilde inceleyip eleřtirel bir deęerlendirme yapmak ve rekabet avantajını artırmanın önemini iř dünyası bağlamında vurgulamaktır. Bilgi yönetiminin evrimi incelenmiř, bilgi oluřturma, paylařma ve uygulama gibi temel süreçler belirlenmiř ve bilgi yönetimi araçları teknik ve teknik olmayan olmak üzere iki kategoriye ayrılarak, bu araçların tamamlayıcı rolleri üzerinde durulmuřtur. Detaylı literatür taraması yoluyla, bilgi yönetiminde karřılařılan bařlıca zorluklar tanımlanmiř ve özellikle örtük bilginin yönetimi ile ilgili zorluklara dikkat çekilmiřtir. Arařtırma, bilgi teknolojilerini kullanarak karar alma süreçlerini otomatikleřtirmenin ve yenilikçi stratejilerle yeni uygulamalar geliřtirmenin önemini ortaya koymuřtur. Ayrıca, örtük bilginin etkin bir şekilde depolanması ve paylařılması için pratik çözümler önererek literatürdeki bir boşluęu ele almıřtır. Çalıřma, mevcut arařtırmaların özetlenmesiyle kalmayıp, spesifik zorlukları vurgulayarak ve uygulayıcılara kanıt temelli öneriler sunarak bilgi yönetimi literatürüne yeni katkılarda bulunmuřtur. Sonuç olarak, bu arařtırma bilgi yönetiminin çeřitli fayda ve zorluklarını ele alarak, hem gelecekteki arařtırmalar için yönlendirmeler sunmuř hem de kurumsal uygulamalarda karřılařılan zorlukları ve potansiyel faydaları detaylandırarak bulguların nasıl uygulanabileceęi konusunda da bilgi sunmaktadır.

Bilgi Yönetimi Süreci, Turner ve Makhija (2006) tarafından vurgulandıęı üzere, rekabet avantajını geliřtirme konusunda merkezi bir role sahiptir. Bu süreç, organizasyon içinde yeni bilginin yaratılmasını, edinilmesini, paylařılmasını, yorumlanmasını ve uygulanmasını içerir. Kontrol mekanizmaları, bilginin nasıl paylařıldıęını ve yayıldıęını şekillendirmede önemli bir role sahipken, bu sürecin dinamikleri rekabeti korumada hayati öneme sahiptir. Bu sürecin etkin yönetimi, organizasyonel hedeflere ulařmak için bilginin nasıl edinildięi, paylařıldıęı, yorumlandıęı ve kullanıldıęı üzerinde belirleyici bir etkiye sahiptir. Bilgi yaratım süreci, organizasyonel öğrenme ile bařlar ve var olan bilginin kullanımı ile devam eder. Yeni bilginin yaratılmasının genellikle mevcut bilgilerin yeniden kombinasyonu veya bilgi unsurlarının nasıl bağlantılı olduęunun yeniden yapılandırılmasıyla ilgilidir. Bu, bilinen bir çözümün bireysel bileřenlerini deęiřtirerek ve performanstaki deęiřikliklerle yeni bilgi yaratımındaki ilerlemeyi yol açacaktır.

Organizasyonlar içerisinde etkileřimli ve bilgilendirici olmak üzere iki temel öğrenme biçimi mevcuttur. Etkileřimli öğrenme, fikir ve görüş alışveriřiyle yeni bilginin paylařılmasını içerirken, bilgilendirici öğrenme veri iřleme ve yorumlamayı kapsar. Her iki öğrenme biçimi de, organizasyonel bilgi yaratımında önemli roller oynar. Wiig (1997) tarafından vurgulandıęı üzere, öğrenme sürecinin başarısı, organizasyonun kořulları ve bilgiyle ilgili kararların sonuçlarına baęlıdır ve etkili bir Bilgi Yönetimi sistemi gerektirir. Bilgi Paylařımı, etkili iletiřim ve organizasyonlar içindeki deęiřim önemini vurgular. Nooshinfard ve Nemati-Anaraki (2014), Nonaka ve Takeuchi (1995), bilgi paylařımının, bilgi yaratımını güçlendiren sosyal bir süreç olduęunu ve özellikle örtük bilginin paylařımını içerdięini belirtir. Bilgi paylařımını başarılı kılan faktörleri anlamak, bu deęerli kaynaęı kullanmak için hayati öneme sahiptir. Loebbecke vd. (2016), bilgi paylařımını, řirketler arası faydalı bilgi veya bilgi transferi olarak tanımlar, ana hedefin mevcut ve yeni bilginin birleřtirilmesi yoluyla yeni bilgi yaratılması olduęunu vurgular. Bilgi yorumlama, bilgi yönetimi sürecinde kritik bir adımdır ve çeřitli girdilerden içgörüler çıkarma iřlemidir.



Turner ve Makhija'ya (2006) göre, bilgi yorumlama, yeni bilgilere veya bilgiye mevcut organizasyonel anlayış çerçevesinde anlam atama sürecidir. Açık bilgi, kolayca ifade edilebilir, kaydedilebilir ve paylaşılabilirken; örtük bilgi, insanların zihinlerinde yaşar ve sıklıkla söylenmez, bu da yorumlama için bir zorluk oluşturur. Etkili yorumlama, bilginin sadece edinilmesini değil, aynı zamanda anlaşılmasını ve organizasyonel öğrenme ve performansa katkıda bulunacak şekillerde uygulanmasını sağlar. Bilginin uygulanması, Bilgi Yönetimi'nin temel amacıdır ve organizasyonel performansı, bilgiyi etkili bir şekilde kullanarak organizasyonel hedeflere ulaşmak için artırmayı amaçlar. Dalmarco vd. (2017), Egbu vd. (2005), iç bilginin stratejik avantajlarını ve Bilgi Yönetimi'nin potansiyel faydalarını stratejik karar verme, performans ve verimlilik artışı, yenilik ve hizmet teşviki, bilgi akışı ve varlıklarının haritalandırılması olarak sıralamıştır. Payal vd. (2019), yönetim tarafından uygulanan sistem ve insan odaklı stratejilerin birleşiminin organizasyonel performansı artırabileceğini öne sürmüştür. Bu yaklaşımlar, bilginin optimizasyonu ve organizasyonel başarıya katkıda bulunmaktadır.

Bilgi Yönetimi alanında, teknik ve teknik olmayan araçlar olmak üzere geniş bir araç yelpazesi mevcuttur. Her iki tür araç da bütünleyici ve ayrılmaz birer parça olup, organizasyonların bilgilerini etkili bir şekilde yönetmelerini sağlar. Organizasyonlar, yatırım yapmadan önce mevcut Bilgi Yönetim sistemlerini dikkatlice incelemeli, özel ihtiyaçları değerlendirmeli ve yatırımın beklenen faydalarını ölçmelidir. Araç seçimi, organizasyonel hedeflerle uyumlu olmalıdır.

Teknik Araçlar; Grup Çalışma Sistemleri: Bu sistemler, iletişim (e-postalar, dosya paylaşımı, konferanslar, sohbetler) ve işbirliği araçları (proje yönetimi, iş akışı, bilgi yönetim sistemleri) gibi özellikler sunarak teknolojik koordinasyon ve işbirliğini kolaylaştırır (Aghajan, Carlos & Delgado, 2009). **Intranet ve Extranet:** Organizasyonlara özgü bu sistemler, işbirliğini, üretkenliği ve sosyalleşmeyi artırır. Ayrıca, organizasyon kültürünü etkiler ve gömülü bilginin depolandığı yerler olarak işlev görürler. **Intranet,** elektronik yayıncılığı, aramayı, işlem yapmayı, etkileşimde bulunmayı ve kayıt tutmayı desteklerken, **extranet** bu yetenekleri organizasyonun dış ağına, ortaklar ve tedarikçiler dahil olmak üzere genişletir (Carayannis, 1998). **Veri Ambarlama ve Çevrimiçi Analitik İşleme (OLAP):** Karar destek için hayati öneme sahip bu araçlar, yöneticilerin ve analistlerin daha hızlı ve bilgilendirilmiş kararlar almasını sağlar. Veri ambarlama, karar verme için hayati bileşenleri sağlayan karar destek teknolojilerini toplar (Chaudhuri ve Dayal, 1997). **Karar Destek Sistemleri:** Sürdürülebilir rekabet avantajı kazanmak için hayati öneme sahip olan karar destek sistemleri, karar verme ve problem çözme süreçlerini, karar vericilerle işbirliği yaparak zenginleştirir (Louw, 2002). **İçerik Yönetim Sistemleri:** Organizasyonlar genelinde kullanılan bu sistemler, yöneticilerin yapılandırılmamış bilgi ve bilgiyi yönetmelerine olanak tanır. Metaveri ile ilgilenmelerine, standartlar, iş akışları ve etkili bilgi yönetimine engel olan bariyerlerle başa çıkmalarına yardımcı olurlar (Wan vd. 2016). **Belge Yönetim Sistemleri:** Elektronik veya kağıt tabanlı formatlarda belgeleri depolamak, yönetmek, takip etmek, kontrol etmek ve geri almak için tasarlanan bu sistemler, belge odaklı bilgi yönetimini geliştirir (Ahmad vd. 2017). **Bilgi ve Veri Alma Sistemleri:** Yapılandırılmış verilerin depolanması ve alınması için uygun olan bu sistemler, web arama motorları da dahil olmak üzere, ilgili belgeleri veya web sayfalarını etkili bir şekilde bulur. Bu sistemlerde büyük verinin entegrasyonu, iş anlayışını iyileştirir ve üretilen bilgiyi etkili kararlara dönüştürür, genel performansı artırır (Ferrariset vd. 2019, Yao vd. 2008). Açık Kaynak Bilgi



Tabanı: İK, yönetim, kalite izleme ve müşteri desteği gibi çeşitli organizasyonel işlevlere entegre edilen açık kaynak yazılımları, tam bir Bilgi Yönetimi sistemi olarak işler. Bu, organizasyon içinde bilgi akışını hazırlamada, yönetmede ve optimize etmede yardımcı olur (Awazu ve Desouza, 2004).

Teknik Olmayan Araçlar; Çapraz Fonksiyonel Proje Takımlarının Kurulması: Bu araç, organizasyon içinde farklı birimlerden ekiplerin bir araya getirilmesini içerir ve çok sayıda fayda sunar. Proje yöneticisi, önemli bir figür olarak, geniş bir deneyim, uzmanlık ve yumuşak becerilere sahip olmalıdır. Ekiplere karar alma süreçlerinde özgürlük ve esneklik tanınması, yeni bilginin oluşturulmasını artırır (Zoerman, 2008). **Çapraz fonksiyonel ekipler,** organizasyonel bilginin birleştirilmesini kolaylaştırır, çeşitli bilgi formlarının aktarımını güçlendirir ve gelecekteki işbirliğini teşvik eder (Nonaka ve Takeuchi, 1995). **Danışmanlar Tarafından Bilgi Yönetimi Eğitimi ve Öğretimi Sağlama:** Göreceli olarak daha maliyetli olmasına rağmen, bu araç organizasyonlar için son derece faydalı olabilir. Yerel yöneticilere uygulamalı eğitim, planlama ve Bilgi Yönetimi girişimlerinin uygulanması için danışman getirmek, etkili bilgi transferi ve uygulamasını sağlar. **Hikaye Anlatımı ve Bilgi Paylaşımı:** Bu araç, vizyon, kimlik ve organizasyonel kültür şekillendirmede etkilidir. Hikayeler, karmaşık bilgileri iletmekte kritik bir rol oynar, değerler, normlar ve karmaşık sorunlara pratik çözümler hakkında içgörüler sağlar. Sole ve Wilson (2002) hikaye anlatımının dört rolünü şu şekilde belirlemiştir: **Norm ve Değerleri Paylaşma:** Hikayeler, organizasyonun norm ve değerlerini ileterek, hem geçmişini hem de geleceğini şekillendirir. **Güven ve Bağlılık Geliştirme:** Organizasyon ve yönetim hakkındaki hikayeler, organizasyonun güvenilirliği hakkında bilgi verir. **Örtük Bilgiyi Paylaşma:** Hikayeler, örtük bilginin aktarımını daha yönetilebilir ve sindirilebilir hale getirir, kullanıcıların örtük bilgiyi etkili bir şekilde ifade etmesini ve iletmelerini sağlar. **Öğrenmeyi Kolaylaştırma:** Yeni bilgi oluşturma, değişiklikler gerektirir ve hikaye anlatımı, insanların mevcut pratiklerini ve zihinsel çerçevelerini unutmalarına yardımcı olur. **Duygusal Bağ Oluşturma:** Hikayeler, geçmişten duygular uyandırır, anormallikleri veya beklenmedik durumları vurgulayarak bir bağlantı oluşturur (Szulanski, 1996; Damasio, 2000). **Mentorluk:** Bilgi Yönetiminde hayati öneme sahip olan mentorluk, örtük bilginin bir uzmandan diğerlerine aktarılmasında en etkili yoldur (Sprinkle ve Urick, 2018). Bilgi transferinin ötesinde, mentorluk, çalışanların işte kalmasına da yardımcı olur. Şirketler, gelecekteki Bilgi Yönetimi için resmi mentorluk ilişkileri ve mentor eğitimini bir yatırım olarak değerlendirmelidir. Mentorluk resmi veya gayri resmi olarak düzenlenebilir, her ikisi de organizasyonlar için faydalıdır.

Bilgi Yönetiminin uygulanması ve sürekli gelişimi karşısında organizasyonlar çeşitli zorluklarla karşı karşıyadır. Bilgi Yönetimini etkili bir şekilde kontrol edebilmek ve yönlendirebilmek için ele alınması gereken birçok sorun ve zorluk bulunmaktadır. Literature taraması ortaya çıkan zorluklar aşağıdaki gibi listelenmiştir.

Bilgi Yönetiminde Etiksel Zorluklar: Akhavan ve diğerleri (2013), Bilgi Yönetiminde fikri mülkiyet, güven ve güvenilirlik gibi etik ilkelere dikkat çekmiştir. Çalışan değerleri ve adil algıları, bilgi rafinasyonunu etkiler ve organizasyon tarafından mülkiyet beyanı, Bilgi Yönetimin uygulanmasını engelleyebilecek adaletsizlik duygularına yol açabilir. Kişisel ve kişisel olmayan açık bilgiye geçişlerde bu ilkeler göz ardı edilmemelidir. Kuruluşlarda kritik bir yön olan sosyalleşme, birbirinden öğrenmeyi ve deneyimleri paylaşmayı içerir. Bilginin güçlü bir varlık olması nedeniyle, bu bağlamda etik düşünceler önem kazanır ve Bilgi



Yönetimi uygulamaları aracılığıyla yönetilebilir. Örtük ve Açık Bilginin Entegrasyonu: Egbu ve diğerleri (2005), örtük ve açık bilginin kurumsal hafızaya dahil edilmesinin önemini vurgulamıştır. Öncelikle formalite dışı tartışmalardan ve gruplardan elde edilen örtük bilgiyi, formalize etmek ve aktarmak en büyük zorluklardan biridir. Bilgi Yönetimi alt süreçlerindeki zorluklar özellikle küçük ve orta ölçekli kuruluşlar için, bilginin tanımlanması, yakalanması, depolanması, haritalanması, yayılması ve yaratılmasını içerir. Alt süreçlerindeki zorluklar, Bilgi Yaratımı: mevcut bilgiye yenilik ekleyerek değer katmayı içermektedir. Kuruluşlar rekabetçi kalmak için yeni beceri ve yeteneklere sahip çalışanlara ihtiyaç duyduklarından, çalışanlarını bu yeni yöntemleri benimsemeye ve yeni beceriler geliştirmeye önem vermeleri gerekir. Bilgi Yakalama: Çalışanların ayrılması örtük bilginin kaybına yol açar. Özellikle kodlaması, paylaşması, yakalaması ve örtük bilgiyi aktarması zor olduğundan kuruluşlar, sürekli olarak bu bilgileri yakalamalı ve muhafaza etmelidir. Bilgi Depolama: Örtük bilginin depolanması ve açık bilgiye dönüştürülmesi en büyük zorluktur. Dolaysıyla bu süreç, yönetim desteği, uygun eğitim ve liderlik uygulamalarını gerektirir. Bilgi Haritalama: organizasyonel bilginin etkili ve verimli kullanımını optimize etmeyi amaçlar. Bilginin yerini bulmayı ve kolayca anlaşılır bilgi haritaları oluşturmayı içerir. Zorluklar, bireylerin bilgiyi nasıl kullandığı ve kuruluşların bilgiyi bireyler ve diğer kuruluşlar arasında nasıl koordine ettiği ile ilgilidir. Bilgi Paylaşma: Bilgi paylaşımında güven kritik öneme sahiptir, çünkü güvenilir performans gerektiren kolektif zihni oluşturur. Yüz yüze tartışmalar ve etkileşimler bilgi yayımı için etkilidir. Bilgi paylaşımı organizasyonların büyüme engelleri arasında önemli bir yer oynar. Listelenen zorlukların her biri, organizasyonlar içinde başarılı Bilgi Yönetimi sağlamak için dikkatli düşünülmesini ve stratejik yaklaşımları gerektirir. Bilgi Yönetimi alanında dikkate alınması gereken birkaç ek zorluk ve sorun bulunmaktadır bunlar: Güvenilir Bilgi: Bilgi yönetiminde, özellikle organizasyonel öğrenme ve performans bağlamında, güvenilir bilgiyi sağlama zorluğu vurgulanmaktadır (Durand, 2007). Organizasyon üyeleri arasında güvenilir bilginin hızlı iletimi ve paylaşımı hayati öneme sahiptir. Çapraz Fonksiyonel Takımlarda Bilgi Aktarımı: takımlar arasında bilgi aktarımı karmaşık bir durum oluşturur. Çok kültürlü organizasyonlarda bilgi transferi, (Hadjimichael ve Tsoukas, 2019) Bilgi Yönetimi sürecinde ek bir zorluk olarak tanımlanır. Kültürel farklılıklar bilgi transferini önemli ölçüde etkiler. Farklı kültürlerin ve komitelerin kendi örtük bilgilerini geliştirdiği (Zahra vd. 2020) özellikle organizasyonel birleşmelerde gözlemlenir. Yöneticiler, farklı kültürleri anlamak ve onlara uyum sağlamak için değişiklikler yaparak bu zorlukların üstesinden gelmeye çalışmalıdır. Bu zorluklar, Bilgi Yönetiminin nüanslı ve çok yönlü doğasını vurgulamakta ve organizasyonların bilgi transfer süreçlerinde bilgi güvenilirliği, çapraz fonksiyonel işbirliği ve kültürel çeşitlilikle ilgili sorunları ele almasını gerektirmektedir.

Günümüzün küreselleşmiş ve rekabetçi ortamında, bilgi yönetimi rekabet avantajı sağlamanın ve bunun sürdürülebilirliğini garanti altına almanın temelini oluşturur. HP ve Ford gibi örnekler, bilgi yönetiminin etkili kullanımının organizasyonel başarıya nasıl katkıda bulunduğunu göstermektedir. Son yıllarda bilgi oluşturma ve yönetimine olan ilginin artması, bu konunun önemini daha da vurgulamaktadır. Özetle, Bilgi Yönetimi, teknik ve teknik olmayan araçları, organizasyonel, kültürel ve yönetsel unsurları bütünleştiren kapsamlı bir sistemdir. Bir organizasyonun Bilgi Yönetimindeki başarısı, rekabetçiliğini sürdürme yeteneğini ve sistemli bir şekilde değer yaratma kapasitesini gösterir. Yapay Zeka ve dijital teknolojilerin giderek daha hakim olduğu bir çağda, Bilgi Yönetimi'nin rolü daha



da önemli hale gelmektedir. Bu araştırma, Bilgi Yönetiminin temel ilkelerini ve yönlerini belirleyerek, tarihsel bir bakış açısı sunarak ve mevcut çalışmaları bir araya getirerek, hem akademisyenler için bilgilendirici hem de uygulayıcılar için uygulanabilir bir Bilgi Yönetimi anlayışı sağlamaktadır. İlaveten, özellikle Bilgi Yönetiminin, sürekli değişen iş dünyasında yenilik, uyumluluk ve büyüme teşvik etmek için ortaya çıkan teknolojilerin gücünden nasıl yararlanabileceğini keşfetme konusunda gelecek araştırmalar için verimli bir zemin sunmaktadır.



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