

Features of Knowledge Management Implementation in the Context of the Covid-19 Pandemic

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Abstract

This study focuses on proactive managerial actions, reflecting the implementation of knowledge management in the context of the Covid-19 pandemic. Management was compelled by the Covid-19 pandemic, and the transformation of preliminary information into knowledge allowed its creation, sharing, and efficient use in the short term. The conceptual model of this study combines actions across three areas of influence in order to achieve a unified understanding of the knowledge among operational staff, management, and operational capacity. The results of this study reveal that knowledge dissemination, communication, and use of knowledge contribute to a unified operational response. Adaptability and operational capacity help implement knowledge management practices, make new products, share them with customers, and get through this pandemic context.

Key words: knowledge, management, operational, customers, leadership

J.E.L. classification: M12, M54, M21

1. Introduction

Knowledge management is seen as a key factor that promotes the growth of products and also the organizational one. Understanding how to manage knowledge can improve operational responsiveness and coordination. Methods for managing knowledge will also help when it comes to getting and keeping a competitive edge (Andrade Barros Ouriques *et al*, 2019, p.362). Management influences through its knowledge, developing new products using specific methods and tools, which include information, ensuring that all data and operational risk control are classified and disseminated in an optimized manner. However, knowledge management and the ability to transfer information face numerous challenges. According to the organization, the contemporary market's unpredictability demands a more flexible and agile strategy. In order to achieve higher levels of organizational success, the process of knowledge flow must be managed.

In our case, knowledge management refers to the rapid delivery of knowledge that is adaptable to the company, its context, and market climate. Knowledge management activities are constantly evaluated on the basis of specific organizational criteria. By exchanging and sharing information, practices that have been proven by knowledge management are put into place. The difficulty of allocating knowledge in a logical manner is linked to the dilemma of extracting and using knowledge, which is also widespread in the minds of employees. The subconscious is the source of a person's beliefs, practices, attitudes, and habits, from which knowledge is derived. Explicit knowledge is easy to convey because it is already systematized into data, parameters, and other forms (Nonaka *et al*, 2000, p.18). Even though knowledge is considered to be the main source of long-term advantage for many businesses, managing it remains difficult.

The literature review focused on explaining the concepts of knowledge management and operational management. The methods and dynamic characteristics of adaptation as well as their connection to knowledge management were explained with reference to the management within the organization, the limitation being the operational capacity. The concepts of knowledge management in an operational approach presented in the literature are not extended but will be described from a practical point of view. It is not very clear what basic knowledge is involved in the new operational practice within the company at the beginning of the Covid-19 pandemic and what the mood of the company in this unknown was. Using the interview method, in our paper we will present, under a conceptual aspect, the managerial actions that define the mission and vision of the company.

2. Literature review

Knowledge management is described as a system that simplifies the process of exchanging, transmitting, developing, capturing, and understanding company knowledge. Knowledge transfer is the transmission of information from one individual to another. It can happen in a scheduled or unplanned way, as a result of an operation, as the transformation of knowledge into information and the transformation of information back into knowledge (Harrison *et al*, 2012, p.3772).

Knowledge management involves the use of different reports to gather knowledge relevant to the various operational procedures. In contrast to conventional approaches, adaptability methods emphasize tacit knowledge over explicit knowledge, depending on the person, team, communication, and consumer experiences (Andriyani *et al*, 2017, p.202). Three levels of knowledge are recognized (Ebert *et al*, 2008, p.580). These are associated with knowledge of: product-understanding of product specifications and how they apply to other devices and requirements; project-understanding of product specifications and performance criteria; process-awareness of procedures, roles, technology and their limitations.

Cumulative evidence from previous research in operations management and other disciplines suggests that effective communication styles and knowledge management are key elements in successful process integration. In particular, previous research has shown that facilitating the effective communication of business knowledge plays a key role in operational improvement (Pagell, 2004, p.462). Knowledge management requires more than just transferring information. An open dialogue on information is needed for all parties to reach a common understanding as a basis for integrated decision-making and unified action. The use of effective communications to achieve a common interpretation of information dissemination has been mentioned in strategic management, marketing, and organizational behavior research, although the concept has not been the subject of comprehensive empirical research (Hult *et al*, 2004, p.249). Knowledge-based business processes make up the predominant knowledge in cultivating competitive advantage and longevity for organizations.

Due to human resources and capital shortages, most SMEs are forced to exploit external knowledge for development. Because knowledge-oriented leaders encourage learning and support a learning-tolerant learning environment, employees can explore and exploit knowledge for the benefit of their firms through knowledge-oriented leadership (Donate *et al*, 2015, p.364). In other words, employees will learn best and respond best to uncertainty when their leaders support the acquisition and sharing of knowledge.

Although the link between leaders and knowledge management has been studied in recent papers (Sadeghi *et al*, 2018, p.154), the impact of leaders on the management of specific types of knowledge, such as customer knowledge, is still limited. Because knowledge is considered one of the most important assets to manage today, companies need to manage the basic knowledge and knowledge required of customers (Chaithanapat *et al*, 2021, p.82). Knowledge-oriented leaders promote, encourage, and appreciate new ideas from employees and usually occur when leaders are perceived as actively involved and committed to supporting knowledge and learning activities within the organization (Naqshbandi *et al*, 2021, p.708).

In several studies it is argued that an integration of transformational leadership and transactional leadership together with motivational and communicative elements is necessary. However, transactional leadership is best used to institutionalize, consolidate, and refine existing knowledge,

while transformational leadership is best used to challenge a particular situation. During organizational crises, transformational leadership plays a crucial role in helping organizations overcome difficulties and challenges. Increased attention has been paid to transformational leadership by correlating it with employee responses. For example, it has been found that transformational leadership has had a positive impact on knowledge exchange behavior. Through transformational leadership, employees can be encouraged, inspired and motivated to innovate, accept change, accept more challenges, and contribute to the development of the organization (Schmid *et al*, 2019, p.1415).

According to Peter Drucker, the father of modern management theory, the biggest challenge for scientists and management strategies in the 20th century has been to increase employee productivity. The reason was that the companies were production-oriented and focused more on the amount of production. Therefore, management scientists have used scientific management techniques to increase productivity in terms of task efficiency (Palvalin *et al*, 2017, p.18). 21st century companies serve primarily in the service sector and are driven by knowledge and the digital economy. Currently, companies have put more emphasis on the quality of services and production.

Therefore, the biggest challenge for scientists and management strategies is to increase the "productivity of employees in knowledge", mainly in terms of intellectual tasks (Shujahat *et al*, 2017, p.71). However, the end result of knowledge management is innovation which in turn improves organizational performance and increases competitive advantage. Therefore, much of the research has demonstrated the positive impact of knowledge management processes, practices and infrastructure on innovation (Acosta *et al*, 2014, p.108). Innovation can be defined from two perspectives: traditional and knowledge-based.

There are many definitions of innovation that are available in traditional literature. For example, innovation is the creation and application of new internal products, services and business processes for customer satisfaction (Meroño-Cerdán *et al*, 2017, p.211). However, the operational definition is the introduction of new products in terms of features and the use and implementation of new processes to solve customer problems to meet the dynamic needs of stakeholders (Shang *et al*, 2017, p.342).

Knowledge sharing is a vital component of the innovation process that depends on how firms use their knowledge, skills, and experience during organizational value creation processes. For example, a firm's ability to use knowledge can influence innovation levels, for example, how firms use the latest tools, techniques, and problem-solving methods (Du Plessis, 2007, p.28). However, firms can only begin to deal effectively with knowledge when the workforce is willing to engage in knowledge-sharing activities. Knowledge exchange practices in companies are essential for generating ideas for innovative organizational actions to respond to evolving business opportunities in the markets (Lundvall *et al*, 2007, p.215) and result in rapid responses to customer requirements at minimal cost (Sher *et al*, 2004, p.940). In the same way, the literature confirms that the exchange of knowledge is a key part of the company's learning tasks, which leads to the growth of activities that improve the market (Lin, 2007, p.320).

The Covid-19 pandemic was one of the worst crises in human history and could take many years to recover (Ozili *et al*, 2020, p.12). Many organizations have faced organizational crises because they have had to close, merge, downsize or restructure to minimize costs to survive the pandemic. Crises can create lasting conflicts between employee roles such as job insecurity, which leads to hidden knowledge (Kořnig *et al*, 2020, p.142).

Employees may be forced to perform a number of tasks that they may not be able to perform due to lack of information and ability, leading to low workplace commitment and refusal to share knowledge with the others. Employees are unsure of job security, so they retain their knowledge to maintain their competitive advantage (Aarabi *et al*, 2013, p.305). Such an environment can lead employees to look suspiciously at their workplace, which leads to many adverse consequences, including employee concealment behaviors.

Although organizations often make significant efforts to encourage their employees to share knowledge, to express their concerns, many employees still do not want to share their knowledge with others and deliberately choose to hide it (Prouska *et al*, 2021, p.382). For example, others share knowledge based on their responsibilities for payroll policies that emphasize that concealment of knowledge does not mean a lack of knowledge. Instead, employees may

intentionally retain or conceal knowledge that has been requested by their colleagues (Connelly *et al*, 2019, p.780). Because the concealment of knowledge takes place in the context of interactions between two or more colleagues, it is generally governed by an implicit and sometimes explicit social exchange. Concealment of knowledge is low in contexts where there is a rule, a rule, for the reciprocity of social exchanges between employees.

However, in times of major global crises, such as the COVID-19 crisis, the potential economic loss of resources and livelihoods can trigger a very different set of employee concealment behaviors. In these situations, keeping information to yourself can be seen as a selfish way for employees to keep their resources to themselves to avoid any bad effects of sharing, especially during times of crisis when employees tend to keep their resources threatened (Malik *et al*, 2021, p.8).

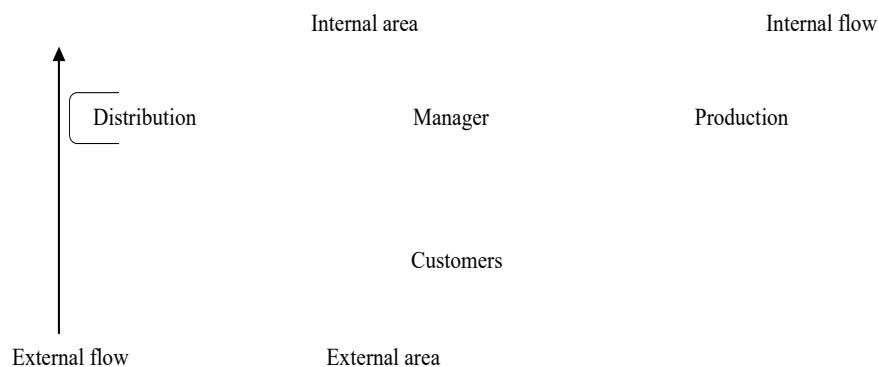
3. Research methodology

The research method used is the interview, which is applied in a company that has 35 employees. The legal form of the company is limited liability. The analyzed company carries out two types of activities with the CAEN code: 1071 and 4724. These determine a very important characteristic of the obtained goods, this being the perishability of the products, which puts pressure on the managerial decisions. The products are distributed through its own sales department, which has a fleet of seven vans.

The interview took place over a period of two days. On the first day, the interview took place at the management level of the company, and on the next day, the discussions involved the employees from the operational activities of production and distribution. The main ideas of the discussions focused on the effects of the Covid-19 pandemic resulting from the social restrictions implemented in the first few days regarding the company's market (customers) and the operational processes of production and distribution.

Confronting new knowledge with the company's ability to adapt to new market conditions, in optimizing operational processes, led to the first observations that began with the construction of a knowledge management structure (Figure no. 1). When managers collect new data, turn it into information, sort it, gain new knowledge, and compare it to what they already know, they make decisions that have operational effects.

Figure no. 1. Conceptual model



Source: (Internal rules of the company)

4. Findings

The manager (intersection) represents the common operational point, of common interpretation of knowledge. The integration of many activities, which constitute the operational processes, namely, input data, internal circulation and output distribution to customers, has received little attention in the literature on operations management. However, the integration of operations is particularly interesting, as operational staff need to focus on both inbound and outbound flows, while other functions that have an explicit impact on the efficient flow through the organization tend to focus only on in certain areas.

For example, distribution staff tends to focus on the distribution side of the business, production staff tends to focus on internal operations, and marketing staff tends to focus externally on customer and competitive issues (Swing *et al*, 2007, p.211). In order to achieve the objective of common interpretation of knowledge, the managerial decisions were the following: reuniting the marketing department with the delivery department, forming a new distribution department, passing under the direct authority of the manager the company's customers and the production department.

The second decision step was to assemble the production lines, forming a modular system, based on production cells, to increase the flexibility of the process according to the input data (orders). This stage was considered necessary by the company's management and allowed the use of specific methods and knowledge management tools to achieve the common interpretation of knowledge.

The literature highlights the need to create a strong way of communication between employees within the company. The centralized system created, under the direct authority of the manager, consolidates the information and does not distort it, but also increases the speed of sharing and appropriation to departments. This way of organizing finds its theoretical foundation in the company's vision based on the company's available resources. The literature argues that gaining a competitive advantage comes from a company's internal resources, especially new market knowledge (Zack *et al*, 1999a, p.130). The chosen method of communication was bidirectional, between departments and manager.

It is important to reach a common understanding of knowledge in a short period of time. Employees can lose important information because those involved in the process spend too much time arguing about the significance of the transferred knowledge. However, if agreements are reached quickly, employees can capitalize on their knowledge.

Even if at first sight, the change of organizational structure, by eliminating hierarchical levels, shows a decisional rigidity, the purpose of these transformations is to create a system of fast communication and correlation of internal and external information flows for knowledge creation, assimilation, and especially their storage in operational processes. This conceptual model is called by the company's management the "tree of knowledge," which is noted by the type of one-way communication between manager and customer.

The centralized structure of the company, characterized by hierarchical power in decision-making, largely coincides with the centralized structures (Anand, 2011, p.291). The correlation of vertical information flows between external and internal information is the acquisition of knowledge. For example, the area delimited by the internal flow and the external area, consisting of customers, managers, and production, expresses the technological operational capacity. The structure of the external area and the external flow represent the information of operational adaptation and customer dynamics. The choice of information to be transformed into knowledge is to merge them horizontally on the internal area.

The literature emphasizes that common interpretation is facilitated when the information is presented in a way that can be easily understood in a short period of time. The more relevant the information is to an individual, the more likely it is that the individual will be able to understand such information (Hult *et al*, 2004, p.243). Effective dissemination of knowledge results in timely sharing with the right people. Selective distribution of knowledge to the right people increases the likelihood that knowledge will be more relevant and provides a common understanding (as opposed to knowledge) to be transferred (Choo *et al*, 2007, p.920).

The presentation in our Figure no.1, of a common point (the manager), increases the perceived quality by customers of the delivered products and services, thus improving the efficiency, because there is less discord between employees and customers (Hartline *et al*, 2000, p.43). The less time it takes to plan and implement a response to market information, the lower the cost of resources, which increases operational efficiency. Efficiency should be improved, as a higher level of response to knowledge results in a faster implementation of the response, which should increase the likelihood of meeting deadlines for distribution targets (eg order fulfillment, delivery times). The faster a manager plans and implements a response, the more likely it is that employees will succeed in the face of competition and deliver value to the customer.

In addition, the more a response is based on customer knowledge (one-way communication) and faster implementation, the more likely the company's value to grow relative to competitors. Recent studies suggest that firms need to manage the rudimentary knowledge and knowledge required of customers (Chaithanapat *et al*, 2021, p.78).

Customer knowledge management can help companies better understand the wishes, requirements and behaviors of their customers, being a dynamic ability to generate, share and protect customer knowledge (Centobelli *et al*, 2021, p.118).

The literature proposes three classifications of customer knowledge: customer knowledge, customer knowledge, and customer knowledge. The firm can discern customer issues, wants, and needs by interacting directly with them through the manager, and largely depends on how the manager can manage customer relationships to gain, share, and leverage customer knowledge for the benefit of customers and the business. Customers are a source of knowledge for a company (Khosravi *et al*, 2016, p.271).

The sudden decrease in production due to the closure of HORECA and the social restrictions imposed on it produced changes in the internal organization of the company. Following the analysis performed on the remaining market, it was decided to introduce new products to cover the lost assortment range. Two directions of action stood out. Preparing a new production process by creating a parallel cell in the production flow to ensure the experimentation of new products. The second direction is the way to communicate with employees.

The brainstorming sessions created an emotional connection among the employees, by declaring the support of the management to protect the human resources and thus the involvement of the employees in the crisis was obtained. By delegating part of the managerial authority to the older employees, the social factor in terms of the ability to adapt to the operational flow of the production flow was also reached in the production process. The implementation of these decisions took about two weeks. The speed of implementation is necessary to arrive at a cost optimization formula adapted to the new conditions. Assuming the responsibility to create new products in a traditional market known to the company, is based on two motivations: the first being the compensation of the production deficit; the second being to fill the market gap as soon as possible, to create new products. This fact is also confirmed by researchers in the field. The faster the speed of developing new products, the more companies can increase their competence when they enter the market, and the lower the development costs (Wu *et al*, 2020, p.86). These actions and managerial decisions were the only ones that could be measured. The guarantee of job protection has certainly had a positive impact, changing the behavior of employees.

The literature emphasizes organizational learning behavior (integration of new knowledge) as a significant factor in the successful implementation of creating new products (Eslami *et al*, 2018, p.149). The theory of organizational learning argues that in order to better adapt to the competitive environment, companies can undertake learning activities to change their knowledge base (Bao *et al*, 2012, p.1230). In our case, the decision to form a team and designate for new products was not an easy one. The team had to start from scratch.

The old knowledge was no longer useful, and the new ones had to be assimilated, integrated, for the success of the production of new products. Moreover, the development of innovative products is an effective strategy for companies to maintain their market position in competitive environments (Nagaraj *et al*, 2020, p.315). The tightening of the market has led to an intensification of the competitive environment. Many companies in the field have tried to diversify their services to customers. Therefore, the integration of knowledge plays a critical role in the speed of assimilating new knowledge. The conclusion of contracts with certain suppliers in the

know-how system, determined the increased speed of assimilation of new knowledge and facilitated the operational integration.

Although the literature confirms that the abandonment of knowledge, by eliminating basic rigidity, improves the performance of innovation (Zhang *et al*, 2021, p.187), it does not guarantee satisfactory positive results for the success of new products. Based on these considerations, the operational strategy, to form a parallel structure of production of new knowledge, in the realization of some products, without giving up the traditional knowledge, is well chosen.

5. Conclusions

Knowledge is a valuable, rare, and difficult-to-imitate resource that provides an organization with a sustainable competitive advantage. Overall, organizations have embraced knowledge management in the hopes of enhancing performance through better management of their knowledge. Although knowledge management theories are oriented towards either people or technology, in general knowledge management is defined as an ability to capitalize on knowledge to achieve organizational goals. On the other hand, although many organizations introduce knowledge management practices, there is no generally accepted methodology for assessing the organization compared to the competitive environment (Rašula *et al*, 2008, p.53).

Managers need to actively manage their knowledge gap between the knowledge they should have and the knowledge they actually have. From a conceptual point of view, the distinction between desired and available knowledge emphasizes the existence of knowledge gaps in organizations (in our case, the use of certain providers).

From a practical point of view, this distinction is useful as part of a methodology that guides managers to decide what knowledge they should have to support their strategy, to compare that knowledge with the current knowledge they have, and to make decisions regarding the assumed objectives. Managers need to have an explicit understanding of how their knowledge can be explained, shared, and leveraged in order to renew their operational capabilities when needed.

6. References

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