

# JOURNAL OF APPLIED INTELLIGENT SYSTEMS & INFORMATION SCIENCES

Vol. 4, Issue. 2, Pp. 8-14, November 2023. Available at: https://journal.research.fanap.com/ **DOI:** https://doi.org/10.22034/JAISIS.2023.417304.1068

# KNOWLEDGE MANAGEMENT AND ATTENTION CONTROL TOWARD SUCCESSFULLY IMPLEMENT TIME-LIMITED PROJECTS

Sina Shamsi<sup>1,\*</sup>

<sup>1</sup> Department of Computer Engineering, Babol Noshirvani University of Technology, Babol, Iran.

### ABSTRACT

In the current era, technological advancements have increased the significance of accessing and evaluating knowledge. As a result, organizational knowledge is now considered a valuable intangible resource that can provide a competitive edge for knowledge-based organizations. Therefore, modern companies must prioritize knowledge management, which can ensure sustainable development. However, for the sustainable development and long-term survival of any organization, effective and efficient knowledge sharing is essential. Traditional knowledge sharing is a time-consuming task that can distract employees from their work since it relies on communication between them. Indeed, due to the importance of the main activities to implement time-limited projects, knowledge management gets less priority in such projects. Because knowledge management should be considered at every level of an organization, this paper highlights the problem of knowledge management for a team working on a time-limited project. This paper tries to investigate that problem. In addition, this proposes a few solutions for the mentioned problem. This paper could apply to managers of know-based organizations to establish efficient knowledge management systems.

KEYWORDS: Knowledge management, Knowledge sharing, Team working

## 1. Introduction

In recent years (known as "the knowledge and information era" and "the century of the exponential growth of knowledge"), one of the main aspects of the competition between companies rests on knowledge (Sammnos, 2018; Nielsen, 2008). Indeed, knowledge can drive the company's development towards economic and production (Javadi, 2012). This indicates that knowledge capital becomes a main resource of companies (Bilginoğlu, 2019). Accordingly, today, every company tries to become a knowledge-based organization to guarantee its sustainable development (Mohajan, 2019).

Hence, today, knowledge is a wealth for an organization. However, the ability to create, retain, and use knowledge for the production and improvement of new products and services needs more managing actions in the organization (Javadi, 2012). Moreover, a main concern of organizations is that most organizational knowledge is situated at the individual level. In the literature, the actions related to the mentioned issues are known as knowledge management. Accordingly, companies consider knowledge management as the most



<sup>\*</sup> Corresponding Author, Email: sinashamsi92@gmail.com

Shamsi (2023) 9

critical process for achieving their corporate goals and the key driver to long-term success for their organizations (Guhl, 1999; Emiliano de Souza, et al., 2022).

Knowledge management strategies result in several benefits for companies. Some key ones include: 1-Identification and highlighting the gaps of skills in the company, 2- It makes the current enterprise knowledge more verifiable for making better decisions, 3- It maintains enterprise knowledge for the organization, 4- It improves operational efficiency with creating a knowledge system that enables workers to find relevant information more quickly, 5- It provides useful communications between the employees, and 6- It enables organizations to customize permission control to individuals to access a selected knowledge database. Moreover, this technology increases intellectual capital, changes individual competitiveness, and changes the organizational competitiveness of the company (Jackson, 2006).

The operations of knowledge management can be organized into three aspects: 1- Knowledge creation, 2-Knowledge sharing, and 3- Knowledge retention and storage (Manohar Singh, 2014). The first one relates to the organization's actions to identify any existing or new knowledge and circulate it across its organization. The second stage includes spreading knowledge and making it accessible between individuals and sub-organization units (Paulin 2012; Riege 2007). During the last one, a physical system is prepared for hosting the organization's knowledge to store the organization's knowledge for long-term use.

For knowledge management, the knowledge can be defined in three levels: 1- Tacit knowledge, 2- Implicit knowledge, and 3- Explicit knowledge (Nonaka, 2007). The first one is typically acquired through experience, and it is intuitively understood. As a result, it is challenging to transfer this information to other individuals. The second one relates to information that has yet to be documented. Hence, this type of knowledge depends on the individuals with a piece of specific knowledge. Also, in the last one, knowledge is captured within various document types (such as reports and white papers) (Serban, 2002). Hence, one of the key actions for knowledge management is making strategies to share and retain implicit knowledge in the organization.

Hence, the success of a knowledge management system depends on efficient knowledge sharing (especially implicit knowledge) among employees in the organization (Wang, 2010). On the other hand, knowledge sharing between employees on a problem may gain new information and so may create new knowledge to achieve a competitive advantage (Gurteen, 1999). Accordingly, the knowledge-sharing procedure for organizations is recommended in the literature as an essential procedure for sustainable development (Kim, 2012).

However, knowledge sharing is a complex process, so the knowledge holders have different perceptions and organizational or self-ownership of information (Jarvenpaa, 2001) and actively make decisions about what knowledge they would share with whom and when (Bilginoğlu, 2019). Also, the intentions of sharing (or not sharing) knowledge can be influenced by the identity of the sharer and the recipient. For instance, knowledge sharing may vary depending on whether it is between supervisors, colleagues, or subordinates (Šajeva, 2014).

To highlight the problem of un-sharing between individuals, the term "knowledge hoarding" is defined in the literature. According to (Nowak, 2013), a knowledge hoarder is someone who fears that sharing knowledge will diminish their power. They believe that the more they share, the less power they will have left, and therefore withhold information.

Nevertheless, one reason that staff do not like to share their knowledge is that they may see knowledge sharing as more difficult than others or may even feel that their colleagues do not want to learn something from them (Siemsen, 2008). Moreover, knowledge sharing is a time-consuming task for educators.

Knowledge sharing should be considered in all tasks of an organization. However, knowledge management is more challenging for a project close to its deadline to avoid project delivery delay (Putri, 2021). For such projects, because time pressure and the main activities of the project impose more stress on employees, knowledge sharing gets less priority. On the other hand, though the knowledge obtained in the project implementation process can be recorded after the completion of the project, the delay due to project completion



could loss of some of the gained knowledge. Moreover, because learning in implementation could have better results, knowledge sharing during the implementation of projects achieves a better result.

The problem arises here is that how an organization should consider knowledge management for a project with a limited time. For such conditions, it is very important to successfully implement the project. On the other hand, knowledge sharing between staff is another desired aspect that should be considered for the project. The main contribution of this paper is highlighting this problem and trying to suggest a few solutions for this problem.

The rest of the paper is structured as follows: Section 2 states the problem of interest. Then, Section 3 proposed a few solutions to address the mentioned problem. Also, the paper ends with discussions and conclusions in Section 4 and Section 5, respectively.

### 2. PROBLEM STATEMENT

A company includes several employees with low to high levels of expertise. Junior employees not only have low efficiency in solving the company's problems but also do not have proper control over their emotions in the presence of stressful situations. In other words, in the face of small failures, the junior employees may suffer more stress. Moreover, these personnel usually would like to gain more expertise to empower themselves for their job positions.

On the other hand, expert ones, that have a high level of expertise and knowledge, are more efficient in handling problems. Also, if the company in the process of doing a project with a high level of importance encountered a problem, experts maintain their focus on the project to solve the raised problems. However, usually, these personnel prefer to be placed in a proper environment to keep their focus on the problems. In other words, when experts are working to tackle a problem, they have less desire to make communication for knowledge sharing.

Now, consider the company accepted to perform a project with a deadline to be finished. A main feature of such a project is that closing the project deadline increases more stress on the employees. Hence, the employees need more focus to handle the project progress. On the other hand, performing each project provides some technical knowledge that should be retained in the company. Hence, knowledge management among employees (especially, sharing the obtained implicit knowledge from experts with the juniors) is another aspect that the managers of the company should consider in the project to enforce their development for the future. However, knowledge sharing is established based on communication between employees, so it may reduce employees' focus on the project. Moreover, knowledge sharing is a time-consuming task and for a such time-constrained project this would be more challenging.

Hence, managing these conditions is a big challenge for the company. Accordingly, in the following, this paper tries to introduce a few solutions to choose proper combinations of the employees as the executive team members to efficiently implement the project.

## 3. SOLUTIONS

Firstly, it should be mentioned we assume making conditions for communication between junior and expert employees results in knowledge sharing between them. Accordingly, to perform the project, we can consider two strict strategies for choosing the members of the executive team:

# 3.1. Strict Strategies

• Expertise Overflow: This strategy is to choose only expert employees to work on the project. This approach makes the environment proper for the expert employees to focus on the project. In this case, if the project encountered a problem, the accumulated expertise and knowledge make the team more effective in solving the problem. Hence, the project will be successful with a higher probability. However, this policy decreases knowledge sharing; and the organization's knowledge is enclosed around the experts. Also, in the long term, it makes the expert employees very tired.



Shamsi (2023) 11

• Excessive Communication: In this case, combining experts with several non-expert employees is suggested for the team members to have proper situations for knowledge sharing. Because the non-expert employees usually communicate with the experts to empower themselves with technical knowledge, the knowledge of expert employees is shared. Hence, if the expert personnel leave the company, the technical knowledge is retained in the company. However, in this strategy, if the project progresses encounters an under-estimated problem, due to the formed communications between the employees, and the focus of the experts is decreased. Consequently, this approach has a lower chance of finishing the project successfully (in comparison with the first strategy).

Nevertheless, each of the mentioned strict approaches demonstrated a worst case for managing a such condition. Accordingly, in the following, we introduce two moderate strategies to address the problem.

# 3.2. Moderate Strategies

- Dynamic Membership: In this approach, the members of the executive team can be changed during the execution time. Hence, according to the progress of the project, the manager can establish a suitable balance between knowledge sharing and increasing concentration for the experts. In this approach, when the project faces a problem, the employees with less technical knowledge can be left from the space to make the execution space proper for the experts. Also, when the problems are resolved and the project is progressing with no problem, the manager can place the junior employees around the experts to establish knowledge sharing.
- Friendship Communication: Choosing a proper trainee as a partner for each expert employee is suggested as another strategy. In this case, the favorable partner is chosen by the ethical characteristics of the expert employee. Accordingly, an efficient knowledge exchange established between the trainee and expert employees lets the expert pay more attention to the project. Hence, if the project encountered a problem, the team had a more suitable situation to focus on the problem to solve.

Table 1 presents the advantages and disadvantages of the introduced strategies.

**Table 1.** The advantages and disadvantages of the introduced solutions for selecting members for an executive team to implement a time-limited project

Strategy	Advantages	Disadvantages
Expertise Overflow	High chance of successfully implementing the project	Ignoring knowledge sharing
Excessive Communication	High chance to make communication for knowledge sharing	Increase pressure on the experts and reducing the performance of them
Dynamics Membership	High chance to successfully implement the project and make communication for knowledge sharing	A manager should investigate the situation + The success of the project depends on the proper manager's decisions
Friendship Communication	High chance to successfully implement the project and make efficient communication for knowledge sharing	It is not easy to find proper trainees according to experts' features

# 4. DISCUSSIONS

As mentioned in this paper, today, knowledge is an important asset for organizations. Knowledge management is a technique to create, share, and store this asset in the organization. However, this procedure usually faces several challenges to be efficiently implemented in an organization.



Usually, the challenges of knowledge creation are lack of support from other domains, the cost of acquiring new knowledge, time constraints to obtain new knowledge, no one interested in creating new knowledge, and fear of failure to create new knowledge. In other words, knowledge sharing could face several challenges: time-consumption of conventional educating methods, the unwillingness of people to learn the shared knowledge, and knowledge hidden by the experts. The challenges of knowledge retention may be that documents had low quality and documents were not recognized. Nevertheless, knowledge hoarding and knowledge hiding are two fundamental issues of modern organizations.

It is worth noting that employees at all levels in almost every organization tend to retain knowledge, particularly if it is considered valuable. This may be due to self-preservation tactics, such as feeling more secure in their role if they are the only ones who possess knowledge of a particular task. In addition, in organizations where expertise is highly valued, but mentoring and assisting others is not, knowledgeable individuals may be less inclined to share their expertise.

This can lead to a power imbalance, where those who receive the information and expertise may use it against the interests of the person providing it (Bilginoğlu, 2019). Nonetheless, it is a well-known fact that individuals cannot be forced to share their knowledge and skills with others. Sharing can only occur voluntarily (Empson, 2001). Therefore, the willingness of individuals to share their knowledge when the organization requires it is crucial to successful knowledge sharing (Zyngier, 2015).

Now, a question is raised here: "Though knowledge sharing is a reasonable option for the organization, what is in it for the workers?". In other words, company managers will not be able to circumvent the innate reluctance of employees to share their knowledge simply by telling them it is better for the company. Indeed, they should try to convince the employees that knowledge sharing will benefit them.

Another solution that should be considered in managing an organization is that knowledge sharing should be considered a part of the organizational culture. It is the organizational culture that can promote or discourage knowledge sharing (Lam, et al., 2021). Accordingly, where competition and success are the only measures of worth, knowledge hoarding will become a norm. Hence, encouraging positive relationships and trust among employees is an effective way to demonstrate to them that knowledge sharing is valued (Bilginoğlu, 2019).

Managers could improve knowledge sharing by recognizing and rewarding employees who are good at teaching their employees. However, it is still a matter of discussion among researchers whether rewards have a significant effect on knowledge-sharing behavior (Šajeva, 2014).

As mentioned before, managers could empower knowledge sharing in the organization by convincing the employees that knowledge sharing achieves benefits for them. For this, a manager could highlight the issue that sharing knowledge can increase the visibility of employees. Accordingly, for employees, this feature may result in more recognition from their peers and superiors. In addition, teaching and helping others makes employees more likely to be part of bigger projects. Also, it should be emphasized that times are changing. Thus, knowledge hoarding will not guarantee job security in the long run.

Moreover, according to the literature, four primary factors impact the process of sharing knowledge within an organization: 1) the type of knowledge, 2) the willingness to share, 3) the availability of opportunities to share, and 4) the work environment's culture (Mohajan, 2019).

As mentioned, this paper addressed the problem of knowledge management for a project close to its deadline. Accordingly, time pressure imposes more stress on employees. This could increase the chance of failure of the project. To handle this, managers could set fake deadlines for the project. Moreover, taking time to think in a space out of work would reduce the pressure of stress. Also, because stress usually comes with a lack of knowledge and control about the project procedure, writing a plan creates a virtual of how the situation will be controlled and how success will be achieved. Breaking the project into several manageable mini-projects and assigning employees responsible for them could help managers control stress and pressure on the employees. Moreover, celebrating each mini-accomplishment could motivate the team to finish the project.



Shamsi (2023) 13

### 5. CONCLUSIONS

Technological advances in the 21<sup>st</sup> century raise the importance of the process of accessing and evaluating knowledge. Hence, today, organizational knowledge has been recognized as a valuable intangible source that holds the key to competitive advantage. Accordingly, knowledge management is important for modern companies and effective knowledge management could guarantee sustainable development for companies. Nevertheless, one of the methods of measuring knowledge management is knowledge sharing. However, knowledge sharing is a time-consuming task. Also, because this is established based on communication between employees, it may reduce the focus of employees on their work. The effect of these issues is aggravated when little time has remained for the implementation of the project. This paper, with highlighting this problem, tried to investigate that and propose a few solutions for that. This could apply to managers of know-based organizations.

## REFERENCES

- Bilginoğlu, E. (2019). Knowledge hoarding: A literature review. Management Science Letters, 9(1), 61-72.
- Emiliano de Souza, D., Favoretto, C., & Carvalho, M. M. (2022). Knowledge management, absorptive and dynamic capacities, and Project success: a review and framework. Engineering Management Journal, 34(1), 50-69.
- Empson, L. (2001). Fear of exploitation and fear of contamination: Impediments to knowledge transfer in mergers between professional service firms. Human Relations, 54(7), 839-862.
- Guhl, S. (1999). Knowledge management. Diplom. de.
- Gurteen, D. (1999). Creating a knowledge-sharing culture. Knowledge Management Magazine, 2(5), 1-4.
- Jackson, S. E., Chuang, C. H., Harden, E. E., & Jiang, Y. (2006). Toward developing human resource management systems for knowledge-intensive teamwork. In Research in personnel and human resources management (pp. 27-70). Emerald Group Publishing Limited.
- Jarvenpaa, S. L., & Staples, D. S. (2001). Exploring perceptions of organizational ownership of information and expertise. Journal of Management Information Systems, 18(1), 151-183.
- Javadi, M. H. M., Zadeh, N. D., Zandi, M., & Yavarian, J. (2012). Effect of motivation and trust on knowledge sharing and effect of knowledge sharing on employee's performance. International journal of human resource studies, 2(1), 210.
- Kim, Y., & Tcha, M. (2012). Introduction to the Knowledge Sharing Program (KSP) of Korea.
- Lam, L., Nguyen, P., Le, N., & Tran, K. (2021). The relation among organizational culture, knowledge management, and innovation capability: Its implication for open innovation. Journal of Open Innovation: Technology, Market, and Complexity, 7(1), 66.
- Manohar Singh, R., & Gupta, M. (2014). Knowledge management in teams: empirical integration and development of a scale. Journal of Knowledge Management, 18(4), 777-794.
- Mohajan, H. K. (2019). Knowledge sharing among employees in organizations. Journal of Economic Development, Environment, and People, 8(1), 52-61.
- Nonaka, I., & Takeuchi, H. (2007). The knowledge-creating company. Harvard Business Review, 85(7/8), 162.
- Nowak, A. (2013). Infectious: how to connect deeply and unleash the energetic leader within. Skyhorse Publishing Inc..
- Nielsen, M. K. J. (2008). Japanese Knowledge Management-From Japanese traditions to an American IT project-management tool. OTAGO MANAGEMENT GRADUATE, 47.
- Paulin, D., & Suneson, K. (2012). Knowledge transfer, knowledge sharing, and knowledge barriers—three blurry terms in KM. Electronic Journal of Knowledge Management, 10(1), pp82-92.
- Putri, C. A. (2021). Overcoming Project Delivery Delays in A Consulting Firm: A Knowledge Management Perspective. IPTEK Journal of Proceedings Series, (1), 199-206.
- Riege, A. (2007). Actions to overcome knowledge transfer barriers in MNCs. Journal of Knowledge Management, 11(1), 48-67.
- Sammons, P. (2018). Buying Knowledge: Effective Acquisition of External Knowledge. Routledge.



- Serban, A. M., & Luan, J. (2002). Overview of knowledge management. New directions for institutional research, 2002(113), 5-16.
- Siemsen, E., Roth, A. V., & Balasubramanian, S. (2008). How motivation, opportunity, and ability drive knowledge sharing: The constraining-factor model. Journal of Operations Management, 26(3), 426-445.
- Šajeva, S. (2014). Encouraging knowledge sharing among employees: how reward matters. Procedia-Social and Behavioral Sciences, 156, 130-134.
- Wang, S., & Noe, R. A. (2010). Knowledge sharing: A review and directions for future research. Human resource management review, 20(2), 115-131.
- Zyngier, S., & Nagpal, A. (2015, January). Knowledge Management Ethics: located within a governance framework. In 2015 48th Hawaii International Conference on System Sciences (pp. 3990-3999). IEEE.

