STRATEGIES TO IMPROVE KNOWLEDGE SHARING IN PROJECT-BASED ORGANIZATIONS

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The purpose of this article was to compare the research findings of McNealy’s (2017) dissertation titled, Knowledge Management Practice Strategies in Project-Based Organizations, to the research findings of 2017 scholarly articles. Knowledge management strategies are vital for effective knowledge sharing within project-based organizations. The findings from McNealy’s dissertation resulted in the six strategies of (a) communication, (b) practices to overcome barriers, (c) centralized resource center, (d) training and development, (e) technology, and (f) informational briefings. The findings from 2017 scholarly articles were comparable to and supported McNealy’s research findings.

Keywords: - Knowledge sharing; knowledge transfer; knowledge management; project-based organizations; project managers; and project teams
INTRODUCTION
The culture of an organization can limit the transfer of knowledge at different organizational levels and amongst the employees within (Wei & Miraglia, 2017). Knowledge sharing is important for the continued growth and competitive advantage of an organization (Serrat, 2017; Tyagi, Agrawal, Yang, & Ying, 2017; Wang, Yu, & Xu, 2017). In this article, I compared the research findings of McNealy’s (2017) dissertation titled, Knowledge Management Practice Strategies in Project Based Organizations, to the research findings of 2017 scholarly articles. The research question for McNealy’s research was as follows: What knowledge management practice strategies do project management business leaders use to improve knowledge sharing in project-based organizations? For the data collection process, McNealy conducted semistructured interviews through Skype/phone interviews with project management business leaders. In addition, McNealy held a focus group discussion with project team members and had the focus group participants complete an interview questionnaire. For data analysis, McNealy used data source triangulation and crosscase synthesis, which resulted in the key themes of (a) communication, (b) practices to overcome barriers, (c) centralized resource center, (d) training and development, (e) technology, and (f) informational briefings. McNealy found that many global companies are losing profit each year because of the lack of organizational wide knowledge sharing. “Organizational leaders must build a culture where project management business leaders are free to use their knowledge management strategies to transfer knowledge to their project team members for successful project outcomes; thus, increasing the competitive advantage of the overall organization” (McNealy, 2017, p.106). The purpose of knowledge management is to generate results (Serrat, 2017); therefore, knowledge management strategies are vital for the transfer of knowledge (Khoza & Pretorius, 2017).

Literature Review
For the literature review, McNealy (2017) researched the five categories of (a) knowledge transfer approaches, (b) knowledge management barriers, (c) knowledge management processes and resources, (d) knowledge learning methods, and (e) competitive advantage, along with the conceptual framework of knowledge management. McNealy also categorized the research findings within the five categories of the literature review. For this article, I used McNealy’s research findings of (a) communication, (b) practices to overcome barriers, (c) centralized resource center, (d) training and development, (e) technology, and (f) informational briefings for my comparison of 2017 scholarly articles.

Communication
Knowledge transfer occurs when the sender of information exchanges this information to a receiver (Lind & Kang, 2017). Communication is vital for the transfer of knowledge within project-based organizations (McNealy, 2017). As people communicate with each other, this communication becomes a gateway to knowledge (Leonardi, 2017). Project managers should establish communication channels and enable open communication practices with project team members (Meng & Boyd, 2017). Bosch-Sijtsema and Tjell (2017) developed a project space in which project team members could have face-to-face communication and share knowledge with each other. Al-Busaidi and Olfman (2017) researched inter-organizational knowledge sharing systems within organizations for the distribution of knowledge through shared repositories and organizational networking. By implementing organizational networking, employees could have the opportunity to share knowledge with other individuals in various organizations (Al-Busaidi & Olfman, 2017). Project managers should also incorporate the communication skills of listening and rapid responses within project teams to establish shared understanding and objectives (Meng & Boyd, 2017). The practice of communication may result in project team building; thus, establishing lasting business relationships and opportunities (Meng & Boyd, 2017). Organizational leaders must communicate their organizational values to employees to emphasise the importance of knowing sharing (Dasi, Pedersen, Goorheder, Elter, & Hildrum, 2017). The effectiveness of organizational values will determine the relevance of knowledge sharing within an organization (Dasi et al., 2017).

Practices to Overcome Barriers
Many factors limit knowledge sharing within organizations such as individual, peer, organizational, perceived system, and industry sector factors (Al-Busaidi & Olfman, 2017). Individual factors include technology self-efficacy, image, and knowledge efficacy (Al-Busaidi & Olfman, 2017). Peer factors include attitude, trustworthiness, communication, and interactivity (Al-Busaidi & Olfman, 2017). Organizational factors include organizational culture, organizational structure, and technological competence (Al-Busaidi & Olfman, 2017). Perceived system factors include perceived ease of use, perceived usefulness and capabilities, and perceived security (Al-Busaidi & Olfman, 2017). Industry sector factors include regulations and homogeneity of organizational IT-platforms (Al-Busaidi & Olfman, 2017). However, there are various practices project managers can utilize to overcome barriers that prevent knowledge sharing (McNealy, 2017). When knowledge sharing barriers occur, project managers should recognize the barriers, communicate with their project teams, discuss and resolve issues as a team, listen to team members’ recommendations, and implement changes (McNealy, 2017). Project managers should follow the standards of their project-based organizations for knowledge sharing (McNealy, 2017). If there are no organizational-wide standards, project managers should follow and implement the industry’s best practices (Safarzyńska & van den Bergh, 2017). Project managers should be a leader for their project teams and not just a manager; thus, establishing teammates who work together (Akgün, Keskin, Ayar, & Okunakol, 2017). When leaders provide positive leadership, members can have better opportunities to advance psychological resources for sharing knowledge (Wu & Lee, 2017). Project managers and organizational leaders should provide awards and initiatives for knowledge sharing to alleviate any knowledge sharing barriers and establish a knowledge sharing culture within their organizations (Akgün et al., 2017). When organizations have a knowledge sharing culture, employees would be more...
prone to share knowledge (Akgün et al., 2017). Organizational leaders can encourage knowledge sharing by having seminars, webinars, and conferences in which employees could attend to establish professional connections and learn new skills (Muqadas, Rehman, Aslam, & Ur-Rahman, 2017).

**Training and Development**

Project-based organizations should have a culture in which employees get training and development on obtaining and sharing knowledge (McNealy, 2017). Organizational leaders will need to develop individuals’ knowledge and skills (Dong, Bartol, Zhang, & Li, 2017). The knowledge and skills individuals bring to their teams may result in the exchange of knowledge amongst team members; thus, influencing individual and team creativity (Dong et al., 2017). “Coaching and mentoring, knowledge facilitators, and internet forums” are methods project managers can utilize with project team members for knowledge management (Serrat, 2017, p. 519). Al-Busaidi and Olffman (2017) found in their research of inter-organizational knowledge sharing systems that implementing these types of knowledge systems may result in the training and learning of knowledge worker; thus, building national knowledge management. Sommerstein et al. (2017) focused on the use of on-site training and web-based training for educating employees. Web-based training is just as effective as on-site training for the dissemination of knowledge (Sommerstein et al., 2017). However, web-based training is more accessible to employees and easier to implement (Sommerstein et al., 2017). Organizations can become knowledge-based organizations if organizational leaders implement quality training for employees (Wie, Choi, & Park, 2017). When employees fail to produce successful work, this failure may result from the lack of inefficient training for knowledge sharing (Wie et al., 2017). Training employees on how to share knowledge is vital for successful knowledge sharing within organizations (Wie et al., 2017).

**Centralized Resource Center**

A centralized resource center is a repository for storing organizational resources and documents that are accessible by everyone within an organization for knowledge sharing (McNealy, 2017). The lack of a repository within an organization can affect knowledge management (Veer Ramjeawon & Rowley, 2017). Repositories are a communication channel for the storage and distribution of explicit knowledge (Al-Busaidi & Olffman, 2017). Chhim, Somers, and Chinnam (2017) referenced the term electronic knowledge repository as a location for storing knowledge. Dvorak et al. (2017) referenced the term central population-based data repository for storing accessible data. Wei and Miraglia (2017) referenced the term knowledge reservoirs for storing knowledge within organizations. Due to the effectiveness that knowledge reservoirs can bring to an organization, employees can ultimately transfer knowledge throughout their organization and across other organizations (Wei & Miraglia, 2017). However, the method in which the projects are delivered, such as parallel or sequence, will determine the knowledge transfer occurrence (Wei & Miraglia, 2017). Mattarelli, Tagliaventi, Carli, and Gupta (2017) discovered how brokers were also a centralized resource for distributing knowledge and maintaining communication within project teams. All aspects of a project life cycle should go into a repository for new project team members to learn from the projects (Tyagi et al., 2017). Many project team members rely on documenting their knowledge versus storing knowledge within an electronic repository (Serrat, 2017). However, having a repository within an organization can ensure project team members obtain lessons learned from the valuable knowledge of past projects for future projects (Tyagi et al., 2017).

**Technology**

Through innovative technology, organizational leaders could implement new methods of communicating knowledge (McNealy, 2017). Information and communication technologies are “networking technologies such as emails, instant messages, chat rooms, discussion forums, bulletin boards, video conferencing, and teleconferencing; or information repositories [such as] document management systems, databases/data warehouses, collaborative authoring systems, workflow and coordination systems, or corporate portals” (Al-Busaidi & Olffman, 2017, p. 114). Intranets and knowledge management systems are additional knowledge management technologies for sharing knowledge (Leonardi, 2017). Olaisen and Revang (2017) utilized virtual global project teams for collaborating and sharing high-quality knowledge. Project team members could interact professionally and socially with each other via online technology platforms, without physically meeting, to have offline communications; thus, increasing the competitive advantage of their organization (Olaisen & Revang, 2017). Winter and Chaves (2017) utilized social media for disseminating knowledge in real-time for the management of lessons learned. Kane (2017) utilized social media for organizational knowledge management. Social media is changing the knowledge management process (Leonardi, 2017). Because social media is a rapidly evolving technological infrastructure that can affect organizational knowledge management, the techniques people use to communicate and collaborate with each other will continuously change (Kane, 2017). Social media are leaky communication pipes for sharing knowledge (Leonardi, 2017). Knowledge leaks out from social media through senders of the knowledge, then receivers obtain the leaked knowledge (Leonardi, 2017). Social media platforms such as Facebook, Twitter, and Snapchat are a gateway for employees to socially interact with other employees within their organizations (Kane, 2017). However, there can be some drawbacks to these social interactions such as organizational leaders monitoring and punishing employees for their social media interactions; thus, resulting in a resistance to share knowledge (Kane, 2017).

**Informational Briefings**

Organizational leaders can support knowledge sharing by organizing informational briefings (Serrat, 2017). Informational briefings are a time for project managers, project team members, and organizational leaders to disseminate and share
information and documents between each other regarding the outcome of past projects, the status of current projects, and the details of upcoming projects (McNealy, 2017; Tyagi et al., 2017). Informational briefings are also an opportunity for project team members to gain information from more knowledgeable team members and apply this knowledge to future projects (Tyagi et al., 2017). Knowledgeable team members can share their positive and negative project experiences so project team members with no experience can learn from their projects (Tyagi et al., 2017). Through knowledge sharing, team members can gain relevant information that may result in the team members’ abilities to develop new strategies for solving existing problems (Dong et al., 2017). Twine, Kahn, and Hundt (2017) conducted face-to-face briefings to effectively acquire knowledge from participants. Singh (2017) explored Knowledge Cafés for sharing knowledge. “A Knowledge Café is an effective way of both sharing knowledge, but also of testing ideas through active conversation” (Singh, 2017, p. 31). Some organizational leaders utilize Knowledge Cafés to encourage the sharing of knowledge and experiences within their organizations (Singh, 2017). Knowledge Cafés also result in the development of communities of interest (Singh, 2017). To have a successful Knowledge Café, organizational leaders must recruit a group of knowledgeable individuals to participate in sharing their knowledge and experiences with others (Singh, 2017). Organizational leaders must also utilize individuals who can facilitate and manage the Knowledge Cafés (Singh, 2017). The facilitators of Knowledge Cafés must conduct an attentive informational briefing in which others can learn from the knowledge they gain (Singh, 2017). “A thorough briefing is critical, as it sets specific objectives which will determine the trajectory of the subsequent discussion and, therefore, offer some focus to the possible ideas which might arise during the event” (Singh, 2017, p. 31). Through informational briefings, employees could communicate, connect, and collaborate with each other, while capitalizing on the information they obtain (Serrat, 2017).

Conceptual Framework
McNealy (2017) referenced Wiig (1997) as a seminal source for the conceptual framework of knowledge management. The concept of knowledge management first derived in 1975 at Chaparral Steel, a U.S.-based company (Wiig, 1997). In 1989, various Fortune 500 CEOs completed a survey and agreed that knowledge and competitive knowledge assets result in successful organizations (Wiig, 1997). Per Leonardi (2017), knowledge management is generating, documenting, sharing, gathering, and applying knowledge. Mabey and Zhao (2017) explored the five paradoxes of knowledge management from the research of scientists in the ATLAS collaboration. The first knowledge management paradox is formal management of knowledge may result in ineffective knowledge exchange (Mabey & Zhao, 2017). The second knowledge management paradox is democratic knowledge exchange requires planned leadership (Mabey & Zhao, 2017). The third knowledge management paradox is knowledgeable professionals may not become great leaders (Mabey & Zhao, 2017). The fourth knowledge management paradox is pervasive technology may result in isolated knowledge experts (Mabey & Zhao, 2017). The fifth knowledge management paradox is informal knowledge exchange may result in bias (Mabey & Zhao, 2017). Knowledge management has two goals: (a) to reveal intelligence for an organization’s success and (b) to recognize the value that knowledge assets can bring to an organization (Wiig, 1997). Knowledge management consists of two dimensions of knowledge: (a) explicit knowledge and (b) tacit knowledge (Jin-Feng, Ming-Yan, Li-Jie, & Jun-Ju, 2017). Explicit knowledge derives from the natural language of individuals and is easy to share; whereas, tacit knowledge is more difficult to share because it derives from individuals’ behaviors, experiences, and situations (Jin-Feng et al., 2017). “The essence of knowledge sharing is the process of sending and receiving the explicit knowledge and tacit knowledge between individuals, individual and organization, and the organizations” (Jin-Feng et al., 2017, p. 291). Individual knowledge is the knowledge of an individual employee such as past and current experiences or a skill-set (Jin-Feng et al., 2017). Team knowledge is the knowledge of a group of team members such as processes and procedures (Jin-Feng et al., 2017). Organizational knowledge is all knowledge regarding the property of an organization such as technology and the organizational culture (Jin-Feng et al., 2017). Knowledge is not a commodity, rather than a vague concept (Mabey & Zhao, 2017). The success factors of knowledge sharing for knowledge management include (a) leadership commitment, (b) the creation of knowledge through a single individual, multiple individuals, or various levels of an organization, (c) learning organizations, and (d) effective information systems (Wie et al, 2017). According to Leonardi (2017), knowledge management is a difficult process because people need much convincing to share and obtain knowledge. Many people need knowledge, but may not realize they need it (Leonardi, 2017). Knowledge management involves encouraging knowledgeable people to share their knowledge with others (Leonardi, 2017). Knowledge management also involves encouraging people who lack the knowledge to obtain knowledge for the benefit of themselves and their organizations (Leonardi, 2017). Because knowledge management is valuable to organizations, organizational leaders will immediately see positive effects during the distribution of knowledge (Kasemapsirat, 2017).

Relevance towards Project Management
Knowledge is beneficial for all organizations (Al-Busaidi & Olfman, 2017); however, knowledge management for project-based learning can be challenging within project-based organizations because of the project-centric nature of projects (Serrat, 2017). The more international organizations become, knowledge sharing practices may become more vital across diverse cultural boundaries (Mabey & Zhao, 2017). Project-based organizational leaders could increase knowledge management by implementing the right techniques for each project because many of the projects within an organization are different (Serrat, 2017). Many project managers do not stress the importance of storing and sharing knowledge for lessons learned because they are more focused on delivering timely projects on budget (Serrat, 2017). Moreover, many project team members do not share knowledge because they believe their knowledge is inimitable (Serrat, 2017). When project managers encourage knowledge sharing within project teams, this process could result in the sharing of essential information project team members may need to complete current projects and the sharing of useful
information for future team projects (Akgün et al., 2017). Knowledge management may result in the formation of communities of practice within project-based organizations and throughout the community (McNealy, 2017; Serrat, 2017). Depending on the type of organizational culture and climate that exist within an organization, knowledge management may also result in the positive job performance of employees (Kasemsap, 2017). The culture of an organization may be a determining factor of the knowledge sharing practices; whereas, the perception of employees regarding knowledge management maybe a result of their organizational climate (Kasemsap, 2017). Knowledge sharing must occur within organizations to increase the ideas and viewpoints of employees which may result in possible solutions to preexisting problems (Kasemsap, 2017).

**Conclusion**

Researchers have confirmed the importance of knowledge sharing in organizations (Giampaoli, Ciambotti, & Bontis, 2017). Knowledge results in power for organizations and the individuals within (Khoza & Pretorius, 2017). McNealy’s (2017) research findings of (a) communication, (b) practices to overcome barriers, (c) centralized resource center, (d) training and development, (e) technology, and (f) informational briefings were in great comparison to numerous 2017 scholarly articles, which supported McNealy’s findings. “The ideal organization culture includes effective communication and employee participation, subjective norms, social trust, shared goals, support for knowledge sharing practices, a social network, and introductions to new technology” (Muqadas et al., 2017, p. 4). Project-based organizations should have the appropriate communication strategies in position for distributing knowledge (McNealy, 2017). If any barriers arise that prevent knowledge management, project managers must implement practices for overcoming these barriers (McNealy, 2017). The establishment of a centralized resource center is a great method for transferring knowledge to employees; however, project team members will also need adequate training and development to deliver effective knowledge management (McNealy, 2017). Technology is significant for the linkage of project team members (Serrat, 2017), but through informational briefings, organizational leaders, project managers, and project team members can disseminate and share information and documents between each other regarding the outcome of past projects, the status of current projects, and the details of upcoming projects (McNealy, 2017; Tyagi et al., 2017).

**References**


