

Tacit Knowledge Sharing in Educational Organizations: Literature Review

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Purpose: The development of an organization is highly dependent on knowledge management. In educational organizations, a great amount of knowledge is created by teachers themselves and, as such, much of it is tacit knowledge. In this paper we will discuss tacit knowledge sharing in schools and other educational organizations.

Study design/methodology/approach: This paper presents a literature review of about 30 papers and books on knowledge sharing and tacit knowledge sharing in educational organizations, from as early as 1956 up to 2021.

Findings: This paper sheds light on the processes applied by many educational organizations related to tacit knowledge management, the difficulties they come across in this endeavor, and some recommendations to improve the strategies of such a process.

Originality/value: This paper aims to present a comprehensive approach on the complexity of the challenges and barriers faced by the educational organizations regarding tacit knowledge sharing, as well as possible strategies to capture such knowledge with the aim of enhancing the quality in these organizations.

Keywords: tacit knowledge, knowledge management in education, knowledge flow, educational organizations, professional learning communities, communities of practice

1. Introduction

In today's information society, knowledge is most probably the most precious asset of any organization. For these organizations, be it a small business, a behemoth corporate or even a small town school, being successful requires efficient generation and share of knowledge. An organization's competitive advantage increasingly depends on 'knowledge-based intangibles' such as the know-how (Quinn, 1992). There are many the scholars who believe that knowledge management and know-how is a "categorical organizational imperative" (Sallis & Jones, 2002). Although the importance of knowledge management in the business world has been recognized and appreciated, unfortunately, educational managers have only recently started to realize what a vital role it has (Petrides & Guiney, 2002). It is time for schools (and other educational organizations) to begin implementing knowledge management systematically and institutionally in order to build a coherent and enduring school development (Cheng et al., 2017). A very important aspect and focus of knowledge management in educational organizations is capturing tacit knowledge (Ozmen, 2010) – the knowledge that is at the very heart of the knowledge management process – and transforming it into tangible knowledge.

"I shall reconsider human knowledge by starting from the fact that we can know more than we can tell," (Polanyi, 1966) is a seminal quote of the famous Hungarian polymath that would be on the foundations of a two-faceted approach to knowledge - explicit and tacit knowledge. While explicit knowledge is about 'knowing that' and it regards tangible information that can



Management,
Knowledge and Learning
International Conference 2021
Technology, Innovation
and Industrial Management

Economy for a New Normal:
Digitalisation and Human Relations
in Business and Education
20–21 May 2021
Online Conference

be easily codified and transferred through databases, tacit or personal knowledge, on the other hand, is about ‘knowing how’ and is socially constructed knowledge. As such, it is stored inside people’s heads and is made up of insights, hunches, prejudices, feelings (Sallis & Jones, 2002), skills and competences, experiences, relationships, individual beliefs, values, and ideas (Kidwell et al., 2000).

The mission of schools and other educational organizations in today’s society, which is highly and increasingly dependent on knowledge and learning, is to cultivate special capacities and not simply any kind of learning. These capacities include deep cognitive learning, creativity and ingenuity among learners (Hargreaves, 2002). In this respect, the role of teachers and educators with their values, ideas, skills and competencies, hence their tacit knowledge becomes indispensably important.

This paper, based on literature review, aims to analyze the current state of tacit knowledge capture and sharing among educational organizations, as well as the enablers and barriers present in this process. It also tries to offer some recommendations for a better and more efficient exploitation of tacit knowledge.

2. The nature and importance of tacit knowledge

Tacit knowledge refers to skills, abilities an individual gains through experience and is “personal, context-specific and therefore hard to formalize and communicate” (Nonaka et al., 1996). Alternate terms used to describe it are: experiential knowledge, social knowledge, “know-how” knowledge, etc.

Its capture and sharing refers to the transformation of such knowledge from an intangible one to an explicit one, therefore being transferred from the individual who creates it to the organization that reuses it.

Many teachers and educators when talking about the nature of their profession describe it as a mixture of art and science (Shim & Roth, 2008). The artistic nature of teaching has to do with the skills, expertise and experience of the teacher, as well as with their ideas, values, beliefs, etc. In other words, such an artistic nature of teaching is nothing but the tacit knowledge of the teacher. Having in mind the fact that tacit knowledge is essentially personal and socially embedded, and also that organizations cannot create knowledge without individuals (Nonaka et al., 1996), organizational knowledge is nothing but the personal knowledge created by each individual in the organization. Needless to say, tacit knowledge has a pivotal function in the organizational knowledge, in our case, in the knowledge of the schools and other educational organizations.

A great example of how knowledge management, and tacit knowledge management in particular can make a huge difference in terms of the quality of the organization is that given by Milam (2001) referring to a Microsoft report according to which the universities that reward collaboration and information sharing outperform those that discourage such practice.

3. Enablers of tacit knowledge capturing

3.1 Knowledge management leadership

Designing a knowledge management strategy and implementing it is, first and foremost, a responsibility of the leadership of an organization (Kock et al., 1996). Altogether with building a knowledge sharing culture and the right knowledge management systems, they are critical success factors for an organization to make use of its knowledge. Thus, the role of an organization’s leader becomes crucial in creating the right organizational culture and also in managing knowledge workers (Drucker, 1959).

It is the duty of the administrator of the educational organization to establish a knowledge management strategy (KMS) which must be integrated with other organization strategies (Paliszkiwicz, 2021). On the other hand, the KMS is a “set of strategic choices that shape an organization’s learning processes and subsequently determine its knowledge resources” (Zack, 1999). Such a holistic approach to knowledge management can be applied to support educational administration which in turn will support teaching and learning (Petrides & Guiney, 2002).

3.2 Communities of Practice

In these regards and with the scope of building effective and efficient activities within KMS’s, communities of practice (CoP) have emerged as groups united by common practice to share their knowledge for their mutual benefit (Sallis & Jones, 2002). Although originally (in classical Greece and the Middle Ages (Petrides & Guiney, 2002)) these communities consisted of individuals who worked independently from each other, today’s concept of these communities encapsulates groups of people collaborating within the same environment (Wenger & Lave, 1991) – although not necessarily within the same organization, with the purpose of professional learning, increased research productivity, enhanced instruction and promotion of school improvement (Patton & Parker, 2017). For these CoP’s to function properly they must have these three characteristics (Wenger & Wenger-Trayner, 2015): a shared domain of interest; participation and engagement in joint activities to help each other and share information; and the development of a shared repertoire of resources including experiences, stories, tools and ways of addressing problems.

3.3 Storytelling

Another very important activity aiming to facilitate tacit knowledge capturing and sharing is storytelling. As pointed out by Chang et al (2017), personalization knowledge sharing highlights the use of dialogue through social networks, part of which may be CoP’s and teams. Storytelling is a very important practice for the implementation of such a personalization strategy. Knowledge-sharing stories about lessons learned can be used to nurture CoP’s, make staff training and coaching more significant by avoiding dry presentations, and collaborations can be motivated by using stories of proven practices instead of simply putting them down in written documents (Garfield, 2018). As suggested by Milam (2001) while capturing tacit knowledge storytelling serves two purposes: distribution of information and carrying out meaning at a high level of understanding.

3.4 Lesson Study

Lesson study is another very important knowledge management approach “for creating pedagogical knowledge for curriculum implementation (Cheng, 2019).” It was developed in Japan in the 1920’s as a means of teacher training, and as a response to the government-controlled national curriculum. At this time the idea of a student-centered approach emerged in the Japanese education system and at the same time good teaching practices were showcased in lesson demonstrations and documented in Lesson study, which had already become popular in schools (Cheng, 2019). It involves a Plan-Do-Check-Act (PDCA) process to improve teaching and learning by leveraging teachers’ tacit knowledge and codifying it into explicit knowledge for dissemination (Cheng, 2015). Today Lesson Study has worldwide attention and many western countries are attempting to implement it and use it as a model for teacher collaborative learning approach, teacher professional development model, as a professional learning community, as well as a knowledge creation platform. Based on the SECI model (Nonaka et al., 1996), Lesson study provides teachers with an opportunity to share their

knowledge in planning lessons, while tacit knowledge is leveraged, co-constructed and codified as explicit teaching knowledge in lesson plans and teaching materials (Cheng, 2019).

3.5 Expert teacher-mentee relationships

Sharing tacit knowledge through expert teacher-mentee (ETM) relationships is another KM approach in educational organizations. Based on symbolic interactionism and constructivism, the ETM relationship aims to provide novice teachers with a model of teaching from highly experienced expert teachers through peer observations and joint problem-solving. Although the results of such a knowledge-sharing approach are not always very productive (Shim & Roth, 2008), there are positive results promising further improvements of this approach.

3.6 Technology

Beside personalization strategies, a very important feature of the knowledge management structure that would facilitate knowledge sharing is the system-oriented approach focusing technology. If, in its earlier stages, digitalization meant “taking paper out of a process” (Liebowitz, 2016, p.192), now digital tools aim to transform processes and create new possibilities. In this respect, digital transformations are essential “to find, create, access, and apply the intangible capitals” (Liebowitz, 2016, p.151) of the organizations and to support a mind-set of continuous learning and knowledge sharing.

Although, schools may still use e-mails to share best practices, nowadays knowledge management systems use tools such as internet, portals, data storage mechanisms, such as electronic document management systems (EDMS), e-learning, talent finders, and decision support systems to capture tacit knowledge, transform it into explicit knowledge, or to acquire, codify, store and distribute explicit knowledge (Mitri, 2003).

3.6.1 Tacit performance assessment

Another application of technology to capture tacit knowledge is through tacit performance assessment. Assessment and evaluation are important means for identifying the needs for improvement of individual students, but also for improving the quality of education in general. While students’ explicit knowledge can be assessed through standardized tests, tacit knowledge assessment is much more difficult. Technology comes in as a great help in these regards through databases, Internet architectures, artificial intelligence, and decision support techniques (Mitri, 2003). Prototype systems like ASSESS, which combines semantic network knowledge representations and multi-attribute utility models, are used by evaluators to assess the very unstructured nature of tacit knowledge (and transform tacit judgements into explicit ones) through an ontology of topics and skill sets via a semantic network (Mitri, 2003). Such an assessment provides schools with precious feedback on student study practices (single-loop) as well as curriculum design (double-loop).

4. Barriers and challenges in capturing tacit knowledge

Contrary to the fact of being in the domain of learning and knowledge, schools and other educational organizations (local education authorities included) are “notoriously poor knowledge sharers” (Fullan, 2002). In a time when schools must rely on knowledge to create a strategic advantage for sustainable development in the current trend towards globalization and competition (Cheng, 2015), the countless cases of poorly managed schools, universities and other educational organizations in terms of knowledge management are a sign of the illiteracy of education managers in the field of knowledge management.

4.1 Leadership, structures and policies

A knowledge management initiative can only be successful if endorsed by the top management of an organization (Barnes & Milton, 2015). In order for this to happen, the administrators of an organization must be well-versed in knowledge management. The reality seems to be very different and quite disappointing (Fullan, 2002). School principals have little or no knowledge management training and most of them seem to struggle understanding what a knowledge sharing culture is.

Another hindrance is the way schools are structured. Although organization hierarchies are very important, paradoxically these structures are very often too rigid to allow for a productive flow of knowledge (Sallis & Jones, 2002). A more powerful of middle managers (vice principals, heads of departments, etc.) would help in the more flexible use of knowledge with their mediation role, bridging both top and bottom of the organization structures (Nonaka, 1988).

The challenges coming from policies and their frequent change are sometime threatening the sustainability of school management and undermine their knowledge management strategies, either through staff reduction, legal controversies, curriculum transformations, etc.

Developing a knowledge-sharing culture seems a mission impossible for many schools (Cheng, 2015). This is a result of poor knowledge identification, resistance of staff to socialize and share knowledge, different culture and values among staff, etc.

4.2 Communities of Practice

Participating in a group that shares the same interests is not always easy when it comes to educational institutions. Finding the incentives to become part of group activities is particularly hard for faculty in higher education who usually function in silos (Patton & Parker, 2017). Such an isolationist culture is the result of fear of sharing because of competition, lack of trust and no common vision, absence of a reward system, as well as opposing values and beliefs.

4.3 Storytelling

Using this technique to explicitate tacit knowledge must be a well-designed process. If storytelling is not well-structured, has no problem-solving agenda and does not culminate in an action plan to improve learning it will most probably fail. Timeframe is another very important factor to make it a worthwhile activity. Dissemination of lessons learned and the right distribution channels are also critical factors (Sallis & Jones, 2002).

4.4 Lesson Study

This is a tool that requires trust among educators involved in the process and also very close collaboration among them. Japan (the country of its origin) is a high-trust country and trust is a must for knowledge sharing. If the members participating in the utilization of this tool lack trust among them, this activity is destined to fail and will bring no results.

4.5 Expert teacher-mentee relationships

This approach to capturing and sharing tacit knowledge comes with many challenges. One of them is the fact that many consider teaching an art more than a scientific approach and as such find teaching skills hard to codify. The situational nature of teaching seems to be another impediment for mentees to capture the tacit knowledge and use it in other situations (Shim & Roth, 2008). In addition expert teachers tend to be very habitual and as the unconscious 'knower' of their teaching tools they are unable to articulate those skills/tools to their mentees (Tsoukas, 2002).

4.6 Technology

Technology can present many pitfalls in the implementation a school's knowledge management initiative. Tacit knowledge is created by people and as such it only requires technology to assist in capturing it. A common error that organizations do is that they mistake knowledge management of IT management. All initiatives to capture and share tacit knowledge need to be people-centered with processes and technology being supportive functions (*ABC of Knowledge Management*", 2005). Other factors, such as training before using technology, making technology user-friendly and keeping it updated, are also make-or-break factors.

4.6.1 Tacit performance assessment

Tacit performance assessment systems are very advanced and require a deep knowledge of technology, particularly specific applications of AI, machine learning, and decision support techniques. Educational organizations do not seem to have the necessary skills to design and operate such systems, nor do the local education authorities have the vision and means to start investing in expertise building. Higher education institutions are better-positioned in these regards, but unfortunately not much is being done to move from the traditional tests to tacit assessment ones.

5. Conclusions and recommendations

With the ever-increasing rate of globalization and the complexity of the environment surrounding educational organizations, they must rely on knowledge to create a strategic advantage for sustainable development (Cheng, 2015). In order for these organizations to improve and lead the way to research and innovation, tacit knowledge management is imperative. The literature review shows that schools and other educational organizations face many challenges regarding knowledge management and particularly in making efficient use of their tacit knowledge. Taking into consideration the nature of the challenges and barriers in capturing tacit knowledge these are recommendations made with the aim to enhance the management of tacit knowledge in these organizations:

- Educational organizations are learning organizations in their core and a knowledge-sharing culture must be instilled to support their mission. Knowledge management (KM) initiatives and strategies must be initiated and endorsed by the management of these organizations as well as by local education authorities. The school principal must be "the leader in a culture of change" (Fullan, 2002).
- Knowledge management initiatives must be the outcome of a thorough and all-inclusive knowledge audit that would identify knowledge sources and knowledge priorities and pave the way for feasible knowledge management strategies.
- Tacit knowledge sharing must be the center of any KM strategy and all stakeholders must be educated in these regards.
- Proactive staff participation is crucial for the successful implementation of KM strategies. A well-designed system of rewards and recognition must be utilized to incentivize participation in the implementation of the strategy.
- Tacit knowledge is individual knowledge and all strategies to capture it must be people-centered. Technology must be used as a facilitator in the process of capturing, sharing and disseminating, always keeping in mind that it must be well-placed in the organization and user-friendly.

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