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KNOWLEDGE SHARING IN A VIRTUAL AND MULTILINGUAL ORGANIZATION

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KNOWLEDGE SHARING IN A VIRTUAL AND MULTILINGUAL ORGANIZATION

Knowledge that the personnel of an organization has is the most important competitive advantage and resource organizations have today. Knowledge sharing is the process of providing and receiving information, advice or feedback. In order to maintain the competitive advantage, organizations need to encourage personnel actively share their knowledge and see that their knowledge sharing process is effective and clearly communicated.

The objective of the research was to examine how the personnel of the researched organization experience the current knowledge sharing process and do they think that the knowledge sharing process should be developed and how. The objective was also to find out do the language and geographical location have effect on knowledge sharing and whether they are causing differences on knowledge sharing behavior between the personnel in different countries of the researched organization.

This study was a mixed methods research. The data was collected using an observation and a survey including open-ended questions. The survey was sent to the whole personnel of the researched organization.

The research was a case study, which aimed at providing management the opinions of the personnel concerning their knowledge sharing and the current knowledge sharing process. At the moment, the challenges the researched organization had are that the process and guidelines of knowledge sharing were not clearly communicated to the personnel and neither was the choice of tools that are to be used. Also, the linguistic competencies, the lack of face-to-face meetings as well as lack in using virtual knowledge sharing tools were causing challenges on the knowledge sharing activity.

KEYWORDS:

Knowledge, knowledge sharing, knowledge management, virtual work, language proficiency

Hanna Koskenkorva

TIEDON JAKAMINEN VIRTUAALISESSA JA MONIKIELISESSÄ ORGANISAATIOSSA

Organisaation henkilöstöllä oleva tieto on organisaatioiden tärkein kilpailuetu ja resurssi nykypäivänä. Tiedon jakaminen on prosessi, jossa jaetaan ja vastaanotetaan tietoa, neuvoja sekä palautetta. Jotta organisaatio kykenee ylläpitämään kilpailuetunsa, organisaation tulee kannustaa henkilöstöään aktiiviseen tiedon jakamiseen sekä huolehtia, että sen tiedon jakamisen prosessi on tehokas ja viestitetty henkilöstölle selkeästi.

Tutkimuksen tavoitteena oli tutkia, miten tutkimuksen kohteena olevan organisaation henkilöstö kokee tiedon jakamisen prosessin sekä tulisiko tiedon jakamisen prosessia heidän mielestään kehittää ja jos niin miten. Tavoitteena oli lisäksi selvittää, vaikuttaako käytettävä kieli sekä maantieteellinen sijainti tiedon jakamiseen ja aiheutuuko niistä eroja maiden henkilöstön välillä.

Tutkimus oli monimenetelmällinen. Tiedonkeruumenetelminä käytettiin havainnointia sekä kyselyä, joka sisälsi myös avoimia kysymyksiä. Kysely lähetettiin koko tutkimuksen kohteena olevan organisaation henkilöstölle.

Tutkimus oli tapaustutkimus, jonka tarkoitus oli tarjota johdolle henkilöstön mielipiteitä liittyen heidän tiedon jakamiseen sekä nykyiseen tiedon jakamisen prosessiin. Tällä hetkellä organisaation haasteena oli, että sekä prosessia että ohjeistusta ei oltu selkeästi tiedotettu henkilökunnalle. Myöskään tiedon jakamiseen käytettävistä työkaluista ei oltu viestitty selkeästi. Haasteena olivat myös eritasoinen kielitaito, kasvokkaisten tapaamisten vähyyys sekä se, että tiedon jakamisen virtuaalityökalut eivät olleet aktiivisesti käytössä.

ASIASANAT:

Tieto, tiedon jakaminen, tietojohdaminen, virtuaalityö, kielitaito

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1 INTRODUCTION

1.1 Background

The world is in constant change and development and therefore companies have a big challenge on keeping up with the changes. Any successful company can't expect that they will remain successful also in the future with the way they are doing business today. New information, new innovations and new competitors are entering the market all the time. Therefore, companies are facing a challenge in keeping up with the change in order to be successful also in the future. (Tid & Bessant 2018, 2). Another big challenge is to keep the good employees and to keep them satisfied and motivated. Proper knowledge management and positive aspect towards knowledge sharing in the organization's culture are important factors which support organizational learning, increase employees' motivation for staying in the company and working with their best ability towards the high performance of the organization (Donnelly 2018, 345).

Due to the developing technological solutions, the amount of available knowledge is increasing. For the same reason, possibilities for sharing and using the knowledge are more versatile and sharing knowledge is technologically easier to put into practice. With the development of technology, organizations now have better possibilities to utilize the benefits of working virtually and to form virtual teams. The main characteristic of a virtual team and organization is that they are strongly dependent on technology-mediated communication and have only limited face-to-face interaction when completing their tasks. It is not rare either that virtual team members are situated in various countries and speak different native languages and thus use a foreign language with communication. (Dávideková 2017, 98). For organizations, virtual work has several benefits but causes also challenges compared to the traditional face-to-face teams. Among other challenges such as cultural differences, different values and norm of behavior and language barriers, internal communication and sharing knowledge are, according to previous researches, more challenging in virtual teams compared to traditional teams (Ellison et al. 2015, 104; Ford et al. 2016, 29; Moe et al. 2016, 30; Vilkman 2016, 156).

The researched organization is an international company. The headquarter is in Germany but in Scandinavia there is an own unit including teams in Sweden, Norway and Finland. Turnover of the Scandinavian branch was 9,8 million EUR in 2018. The

Scandinavian main office is in Sweden whereas Norway and Finland are its affiliates. Common CEO and CFO are sitting in Sweden. Employees in all three countries meet each other approximately only once per year. All three teams are doing similar work and have similar tasks to accomplish. These tasks are administration, purchase, sales and service. Because of three separated geographical locations and only rare possibilities to meet face-to-face, virtual working is an important part of work in the Scandinavian team. Employees also speak three different languages as their native language and the level of English language skills varies among employees. Different geographical locations, time zones, nationalities and cultures and languages are making it challenging for virtual teams to work together effectively (Ford et al. 2016, 29). In addition, language differences impact negatively on communication and knowledge sharing (Klitmøller et al. 2014, 271). The researched organization is a knowledge-based company, which could have big benefits of a shared and updated knowledge that is available to everyone at the same time. At the moment there is no clear procedure of what knowledge should be shared and where and also the motivational factors for sharing tacit knowledge are limited. Thus, the amount of knowledge shared depends only on every employee and their own interest towards knowledge sharing.

The idea for the topic of this research came from the researcher's own observation of the lack of clear knowledge sharing process in the researched organization. As a result of observation there is inequality on the available knowledge and therefore unsatisfaction within the personnel that could potentially cause problems on the team work and work efficiency. This could result even losing the organization's competitive advantage. Virtual work and multilingualism were chosen as aspects of the research since those are two big challenges the organization is facing when considering the knowledge sharing process.

1.2 Objective of the research and research questions

The objective of the research is to examine how the personnel experiences the current level of knowledge sharing in the researched organization and whether they are comfortable with sharing their knowledge. The aim is also to find out how they would develop the knowledge sharing process. Another objective is to get information if there are differences on these aspects between countries and whether the personnel think that the management of the company should prioritize knowledge management and

knowledge sharing more. With this research the researcher aims also on finding out do the language and geographical location have effect on knowledge sharing and are they causing differences on the quantity and quality of knowledge shared between countries.

The objectives of the research are approached with the following research questions:

- What is the opinion of the employees on the current knowledge sharing process?
- How do the language used and country of the employee affect the quantity and quality of shared knowledge?
- How important is knowledge sharing according to the employees?

By finding answers to these research question, this research can be used for presenting action suggestions to the management of the researched organization concerning the knowledge sharing process.

1.3 Research approach

In this research both qualitative and quantitative methods are used so the research is a mixed methods study. Quantitative methods include the collection and analysis of data in numerical forms and qualitative methods consist of the collection and analysis of data in narrative or experimental forms. "Mixed methods research is the type of research in which a researcher combines elements of qualitative and quantitative research approaches for the broad purposes of breadth and depth of understanding and collaboration". (Hayes et al. 2013, 8). The aim in this research is to find out the level of satisfaction on the current knowledge sharing activity by quantitative methods. Qualitative methods are used for researching how the knowledge is shared, how the personnel experiences the knowledge sharing tools and does the virtual work and the linguistic differences affect the actions of knowledge sharing.

A case study is a mix of qualitative and quantitative research and it doesn't aim at a change, instead its objective is to understand and explain a phenomenon (Kananen 2013, 57). A case study focuses on a single case aiming at producing detailed and intensive information on the chosen case. (University of Jyväskylä 2010). This research can thus be categorized as a case study since it focuses on a knowledge sharing phenomenon and a knowledge sharing process in one organization. In addition, the

results of the research are valid in broader socio-cultural contexts in similar organizations, which is distinctive to a case study (University of Jyväskylä 2010).

The theoretical concepts concerning knowledge, knowledge management and knowledge sharing are collected as a base for this study. Material for the theory part of this research is collected from a variety of related scientific researches, professional books and articles.

The methods for collecting information of the researched topic are a survey and an observation. The survey method is explained as questioning individuals on a chosen topic and continuing by describing their responses. In business studies survey method is widely used in testing concepts, reflecting attitudes of people or in establishing the level of satisfaction. (Dudovskiy 2019). The survey in this research contained both close-ended questions with multiple choice of answer options as well as open-ended questions. Close-ended questions are analyzed using quantitative methods and qualitative methods are used in analyzing open-ended questions (Dudovskiy 2019). A survey as a research method was chosen because with it a large size of information can be gathered in a short period of time, it is considerably cheaper than e.g. interviews and with a survey the respondents can remain anonymous. The survey was sent to the whole personnel (N=23) of the organization. The survey was in English due to the three different native languages spoken by the personnel. These native languages are Swedish, Norwegian and Finnish.

An observation is a way of collecting data through observation and it is classified as a participatory study, because the researcher includes herself in the setting where her respondents are and do the observation as the researched phenomena occurs (University of Jyväskylä 2010; Dudovskiy 2019). Observation can be used only when the researched phenomena can be observed instead of individuals' thinking (Kananen 2014, 65). In this research the researched phenomenon is the knowledge sharing activity in the researched organization and it is a phenomenon which can be observed. An observation is a valid data collection method since the researcher herself works in the case company. Observation is done by the insider point of view since the researcher has worked in the researched company for 10 years. Active observation has been started approximately two years ago. She therefore has knowledge about the challenges the company is facing concerning knowledge sharing.

2 DEFINITIONS OF KNOWLEDGE

2.1 Characteristics of knowledge

Knowledge is the information that is possessed in the minds of individuals related to procedures, facts, ideas and judgements that can help an individual to take action (Chen & Hew 2015, 467). Information is transformed into knowledge by being combined with individuals' experience, context, interpretation and reflection (Olaisen & Revang 2016, 1442). Salmela (2015,22) refers to the definition of Davenport and Prusak that knowledge is a mix of experiences, values, information and ideas. This mix then functions as a framework for evaluating new experiences and information. Most of the times knowledge itself is not enough, the ability to use and share the knowledge is what makes it valuable (Sydänmaanlakka 2012, 190).

Salmela (2015, 22) presents the hierarchy of knowledge as a learning process, where knowledge develops and receives more meaning in every step. As we ascend in the hierarchy, the value of knowledge increases whereas the volume of knowledge decreases. The hierarchy of knowledge is presented in Figure 1.

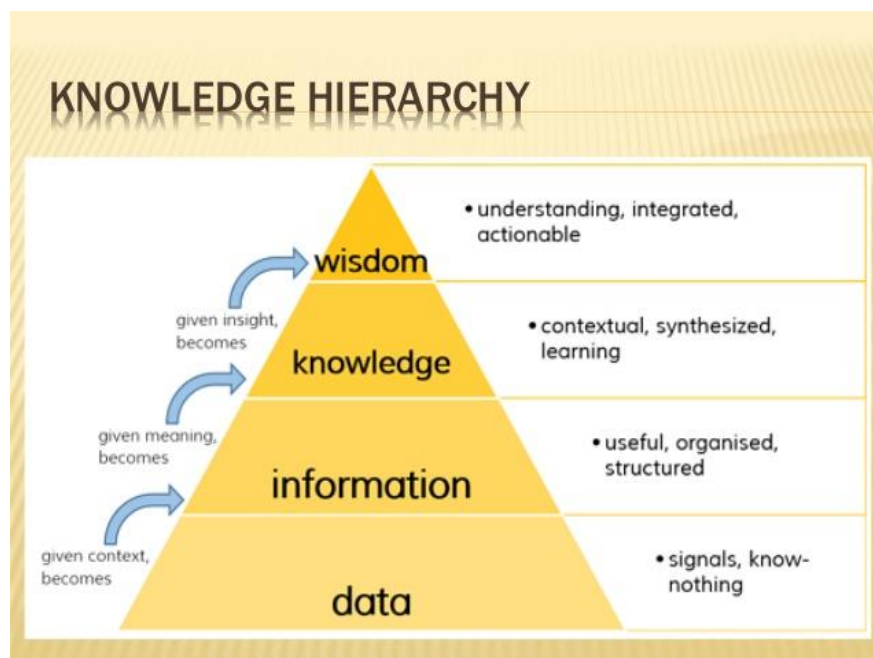


Figure 1. Knowledge Hierarchy (Yassin, M. 2015).

Organizations cannot create or share knowledge on their own. Knowledge is created and shared by individuals through their interaction that takes place within teams and organizations (Nonaka & Takeuchi 1995, 13). The role of the organizations is to integrate, store and apply the knowledge created by individuals (Nonaka & Takeuchi 1995, 74; Alsharo et al. 2016, 481). The organizations' role is also to support individuals on the creation of knowledge (Törmänen 2017, 85). Sydänmaanlakka (2012, 209) points also out that organizations can only own the structural capital, e.g. databases, registers, manuals and brands, i.e. the capital that is left when the personnel leave their workplaces. Human capital, e.g. skills, know-how and expertise are completely owned by the individuals working in the organization.

Knowledge that the personnel of an organization has is the most important competitive advantage and resource organizations have today (Sydänmaanlakka 2012, 178-179; Alsharo et al. 2016, 480). In many organizations the lack of know-how and knowledge is the factor which prevents the needed development the most (Sydänmaanlakka 2012, 175). Therefore, the growth of any company relies on the quality and quantity of the available knowledge. Knowledge is a valuable asset that has the potential to impact prosperity, maximize economic value and improve effectiveness (Sydänmaanlakka 2012, 175; Chung et al. 2014, 73; Chen & Hew 2015, 466; Alsharo et al. 2016, 479). Thus, the personnel of companies must efficiently create, locate and share the knowledge in order to develop and create strategies, which are aiming at organizational growth and at developing competitive advantage in the market (Chen & Hew 2015, 466; Ahmad 2018, 14).

2.2 Types of knowledge

Knowledge can be either tacit or explicit knowledge. Explicit knowledge is formal knowledge and it can be easily moved forward and shared inside the organization (Sydänmaanlakka 2012, 191). The most common forms of explicit knowledge are manuals, documents and procedures since they can be easily codified, stored, accessed and transmitted. Tacit knowledge is personal knowledge which a person has acquired with experience and involves intangible factors such as personal belief, perspective and values. (Nonaka & Takeuchi 1995, viii; Valkonen 2018, 59). Tacit knowledge is therefore knowledge which leaves the organization with an employee. Tacit knowledge is the least considered and least used resource of knowledge-based organizations. By paying more

attention to tacit knowledge as a resource, organizations could reach the best added value. (Salmela 2015, 19). The quantity of tacit knowledge individuals possess is often bigger and more valuable than it is thought.

In addition to the tacit and explicit nature of both individuals' and organizations' knowledge, there is also team knowledge which can be categorized. Moe et al. (2016, 31) cited in their research the framework by Wildman et al. concerning four different categories of team knowledge:

- Task-related knowledge is about how the task itself should be accomplished and what is the criteria used to determine if the task is successfully completed or not.
- Team-related knowledge are e.g. team members' knowledge, skills, attitudes, strengths, weaknesses and relationships, thus team members' tacit knowledge. By sharing team-related knowledge, team members learn who knows what and are able to address questions to the correct persons.
- Process-related knowledge is team member interaction and interpersonal processes in a team. Examples are communication, collaboration, coordination, decision-making and leadership.
- Goal-related knowledge refers to the goals, visions and overall agreements concerning the team's work.

New knowledge is created by interaction of tacit and explicit knowledge. One of the famous knowledge creation process is developed by Japanese professors Nonaka and Takeuchi. Their process is called SECI model. According to Nonaka and Takeuchi (1995, 61), human knowledge is created and expanded through the social interaction between tacit and explicit knowledge. During this process tacit and explicit knowledge expand in terms of both quality and quantity. SECI model is described in Figure 2.

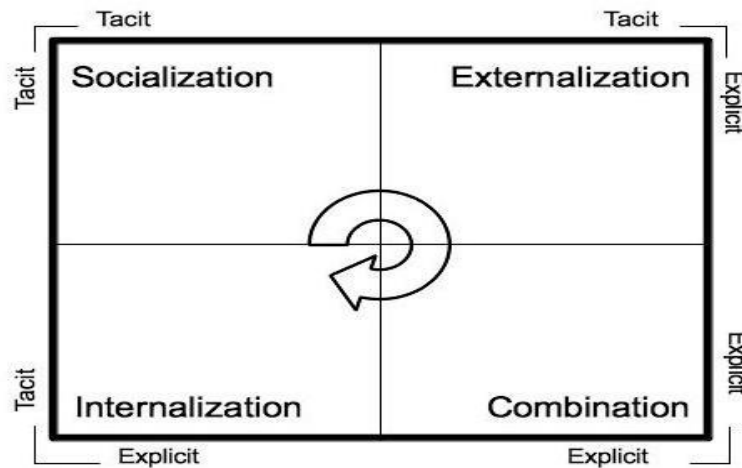


Figure 2. SECI-model (Akanmu & Jaja, 2012).

SECI-model consist of four different modes of knowledge conversion:

- **Socialization:** from tacit knowledge to tacit knowledge
- **Externalization:** from tacit knowledge to explicit knowledge
- **Combination:** from explicit knowledge to explicit knowledge
- **Internalization:** from explicit knowledge to tacit knowledge

The first mode of socialization happens through observation, imitation and practice. It is then followed by externalization in which learned new tacit knowledge is described and documented as explicit knowledge. This stage of externalization is especially important to organizations since it enables efficient knowledge sharing (Sydänmaanlakka 2012, 194). Third, the combination mode is triggered by networking the newly created and already existing explicit knowledge. Lastly, the final mode of internalization is about “learning by doing”. Internalization leads into individuals’ renewal and thus supports the renewal of the whole organization (Sydänmaanlakka 2012, 194). In order to organizational knowledge creation to take place, the tacit knowledge received at the individual level needs to be socialized with the other members of the organization, therefore starting a new spiral of the knowledge creation (Nonaka & Takeuchi 1995, 69). SECI-model highlights the importance of tacit knowledge and relevant human interventions in order to achieve well-balanced and properly shared knowledge among personnel (Dávideková 2017, 103).

2.3 Knowledge management

In today's society the meaning of knowledge increases. This leads to that information, knowledge and knowledge management are key factors affecting the company's success (Dayan et al. 2017, 309; Törmänen 2017, 23). The effective management of knowledge, which is in various forms, has a key role in supporting organizational learning and high performance (Donnelly 2018, 345). The goal of knowledge management is to gain a complete view of the knowledge in the organization and putting it to use for the development and success of the organization (Sydänmaanlakka 2012, 182; Sinokki 2016, 156). Hislop (2009, 116) refers to the suggestion by Alvesson and Kärreman (2001) that knowledge cannot be directly managed. Instead it can be managed only indirectly by shaping the way personnel use, create and share knowledge. By effective knowledge management, the knowledge in the organization will become visible and available for everyone.

Sydänmaanlakka (2012, 176) points out problems which organizations are facing concerning knowledge. One big problem organizations have is that they don't know what knowledge they possess and that they have difficulties in localizing the needed knowledge. Another problem he mentions is that organizations don't know what they should know and what knowledge is valuable to them. Third problem is how the knowledge should be shared so that everyone would have access to the needed knowledge. When everyone has equal access to knowledge, organizations become more effective by avoiding doing overlapping work (Sinokki 2016, 157).

The goal of knowledge management can be reached by a process where knowledge is created, acquired, stored, shared and applied (Sydänmaanlakka 2012, 183). Chen & Hew (2015, 466) defined knowledge management as "a complex socio-technical system that encompasses various forms of knowledge generation, storage, representation, and sharing". These sub-processes of knowledge management support turning tacit knowledge into explicit knowledge and individual knowledge into team and organization knowledge. The knowledge management process framework is presented in Figure 3.

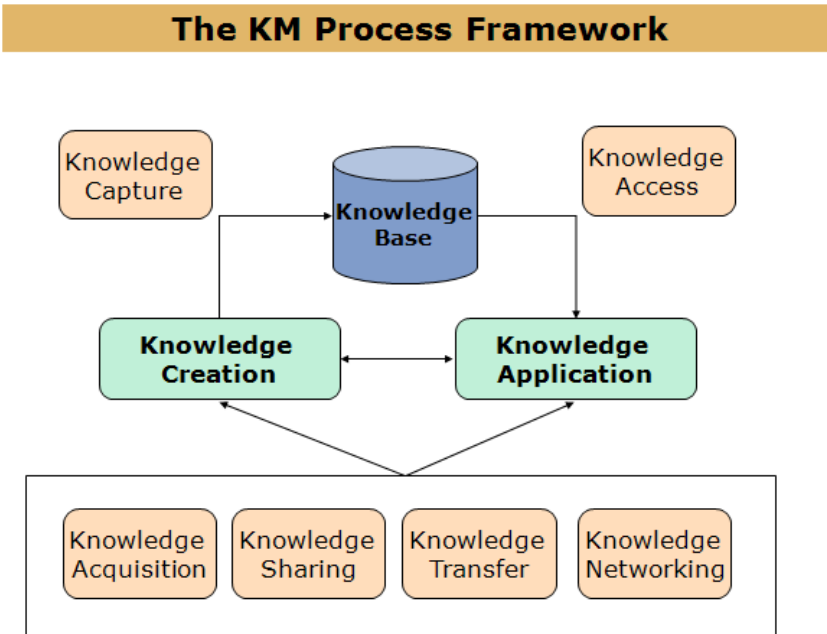


Figure 3. Knowledge management framework (School of Management Studies, NIT Calicut, 2016).

80% of knowledge management is about management of people and change and only 20% is information technology (Sydämaanlakka 2012, 186). Vilkmán (2016, 158) states that when the goal is a more open knowledge sharing, it demands changes also in attitudes and not only in technological solutions. In other words, both ability and will for sharing, receiving and applying knowledge are needed. Therefore, it is important that employees understand that active knowledge sharing is an important part of everyone's work, and they need to change their attitudes and values accordingly. In addition, employees need to update their behavior from passively waiting for information into actively searching for new information. Knowledge management is a change process which requires more investment in the beginning but in the long run should turn into a normal procedure in the organization (Sydänmaanlakka 2012, 202). Thus, it is not only employees who need to update their attitudes and values. It is equally important that the management fully engages and supports the culture of knowledge sharing in the organization and acts as an example (Vilkmán 2016, 62; Aali & Lindroos 2018, 36).

Alvesson and Kärreman divided knowledge management into four different approaches (Collings & Wood 2009, 115). Those are presented on Figure 4. The relevance of this framework for knowledge management is that Alvesson and Kärreman suggest that the

particular approach to management used in organizations shapes also the way knowledge is attempted to manage (Collings & Wood 2009, 116).

		Mode of managerial intervention	
		Co-ordination	Control
Medium of interaction	Social	Community (sharing of ideas)	Normative control (prescribed interpretations)
	Technostructural	Extended library (information exchange)	Enacted blueprints (templates for action)

Figure 4. Alvesson and Kärreman's knowledge management approaches (Collings & Wood, 2009).

The Extended Library represents relatively bureaucratic and centrally controlled knowledge management where the IT systems are important. In the Community approach IT has only a limited role. Instead the focus is on encouraging people to share knowledge directly and management needs to focus on creating a culture and context which encourages on such behavior. The Normative Control is knowledge management via culture management where management tries to create a culture that encourages employees to adapt a value system, which considers knowledge sharing as a norm. The fourth approach to knowledge management is the Enacted Blueprints approach. In this approach management is concerned with "creating codified databases of knowledge focused around particular roles and tasks that provide a mechanism for giving employees access to what are considered a set of best practices". (Collings & Wood 2009, 117).

3 KNOWLEDGE CREATION AND SHARING

3.1 Advantages of knowledge sharing

Knowledge management is about making the right knowledge or the right knowledge source available to the right people at the right time. And knowledge sharing plays the most important role in this process (Hajric 2017). Knowledge sharing is the process of providing and receiving information, advice, or feedback (Ellison et al. 2015, 105). Knowledge sharing contributes to higher productivity, to the higher performance of organizations and their competitive advantage, to reducing costs, to better problem-solving as well as to higher innovativeness (Ellison et al. 2015, 114; Donnelly 2018, 344; Matošková 2019, 83). Knowledge sharing can also lead to better understanding of customers and other stakeholders and naturally reduces the risk of losing essential knowledge if an employee leaves the organization (Matošková 2019, 83). But knowledge sharing and especially the lack of knowledge sharing can cause also tensions and challenges in the organization (Donnelly 2018, 344). Especially the importance of sharing tacit knowledge has not been discussed enough in organizations (Sydänmaanlakka 2012, 198). An individual's contribution to tacit knowledge is considered as a critical element for improving organizational competitive advantage (Chung et al. 2014, 71). This is because shared knowledge needs to become explicit before it can be used by whoever needs it in the whole organization (Nonaka & Takeuchi 1995, 70).

Teams inside an organization benefit also of knowledge sharing. Benefits for teams are effective collaboration and effective team outcomes by ensuring that everyone has all the knowledge needed for task performance and decision making (Ellison et al. 2015, 114; Alsharo et al. 2016, 481). And without shared knowledge there is a high risk that individuals are heading toward different goals which then turn into ineffective teamwork, lack of feedback or inadequate assistance (Moe et al. 2016, 29).

Even though knowledge sharing is important for the success of organizations, teams and on motivating individuals, individuals tend to also hoard knowledge. Individuals may think that their knowledge is not valuable enough and hoard their knowledge out of concern that other people will dismiss or even disdain the shared knowledge (Dixon 2007, 140). People also withhold their knowledge because of their career ambitions, to maintain their advantages with the knowledge they possess and to avoid exposing weaknesses in their

capabilities (Donnelly 2018, 348). A negative consequence of hoarding knowledge is that by doing so, people may never receive full recognition for what they really know (Hislop 2009, 119). As reasons for hoarding knowledge Alsharo et al (2016, 479) mentioned also losing the knowledge ownership and related loss of power. Knowledge sharing can also be quite time consuming (Hislop 2019, 119).

3.2 Motivational factors

Organization culture and values are the basis for the personnel's motivation to share knowledge. The organization culture needs to be open and supportive for honest communication so that everyone can trust that by sharing knowledge they enhance both individual's and organization's success. Organizational values need to include openness, continuous learning and respect for each other. (Sydänmaanlakka 2012, 177; 203; Ahmad 2018, 28). With this kind of culture and values the goal is that everyone in an organization grows to be an active and self-directive knowledge seeker, producer, transmitter and changer (Aali & Lindroos 2018, 36).

Factors that motivate knowledge sharing can be grouped into three main categories which are personal factors, social factors and organizational factors (Chen & Hew 2015, 466). Personal factors are self-efficacy, perceived relative advantage and perceived compatibility (Hislop 2009, 119; Chen & Hew 2015, 468). As social factors Chen & Hew mentioned trust, reciprocity and social network ties whereas incentive mechanism is an organizational factor. Chen & Hew (2015, 467) pointed out also two main factors that facilitate knowledge change activities. These are tangible returns such as organizational reward, perceived competitive advantage and access to information and knowledge and intangible returns such as perceived reputation.

The first personal factor self-efficacy is the confidence of an individual in providing and sharing valuable knowledge. An individual with high self-efficacy is more comfortable and willing to share knowledge. Perceived relative advantage is that individual's willingness to share knowledge comes from the expected benefits one can gain by sharing their knowledge. Examples of these benefits are increased job performance, economic benefits and higher expertise. Perceived compatibility means that knowledge can easily be shared among individuals if the new concept is in linear with the existing value system. (Chen & Hew 2015, 468). In addition to the personal factors of Chen & Hew, individuals were also more willing to share both their tacit and explicit knowledge

when they experienced a greater sense of well-being as well as positive emotions (Chung et al. 2014, 73). Personal factors are closely connected to the most important social factor trust.

As social factors Chen & Hew (2015, 468) stated firstly trust as a significant motivator that increases individual's willingness to share knowledge. Trust is closely connected to the personal factors since with the higher level of trust in the organization, individuals are more comfortable to share their useful knowledge and more willing to listen, to absorb and use that knowledge. When trust is lacking, exposing oneself includes a high risk of losing face or hurting one's self-esteem, which then causes people to rather hoard knowledge instead of sharing it. (Olaisen & Revang 2016, 1442). It is interesting that while trust increases the knowledge sharing activity in an organization, at the same time knowledge sharing is a key behavior that builds up trust, especially in virtual teams (Hislop 2009, 122; Alsharo et al. 2016, 479). In virtual teams developing trust is crucial but challenging since trust is found to evolve only in some form of physical contact (Olaisen & Revang 2016, 1442).

Another social factor is reciprocity which stands for the expectation that knowledge receiver should return the favor to the knowledge giver. As a third social factor Chen & Hew (2015, 468) mentioned social network ties, since individuals who have bigger networks are more likely to keep up with their active knowledge sharing. Individuals who have good relationships with management and colleagues and who are committed and feel like a valued member of a work group are more active in the knowledge sharing process (Hislop 2009, 119).

Incentive mechanism is an organizational factor that affects the motivation to share knowledge. Incentive mechanism means that if an individual's effort of knowledge sharing is credited and rewarded, he or she will be more willing to share knowledge also in the future. Also, if the environment in the organization is respectful and fair, individuals are likely to share knowledge for personal satisfaction (Hislop 2009, 120).

Factors that motivate individuals to share their knowledge are important but still having a motivation to share is often not enough. There can be situations when desire to share knowledge doesn't translate into sharing knowledge because individuals don't know how or with whom to share their knowledge with (Ahmad 2018, 14).

3.3 Knowledge sharing tools

Working more intelligent is sharing knowledge to improve knowledge sharing benefits such as organization success, competitive advantage and innovation whereas working smarter means using technological tools and platforms for developing trust, knowledge sharing and collaboration (Olaisen & Revang 2016, 1441). So, organizations need different kind of tools for knowledge sharing. The more traditional tools are e.g. face-to-face discussions, phone calls and emails. But the increasing number of work done virtually has brought up a need for virtual knowledge sharing tools. Organizations need to decide, which tools fit to their needs and how each of the tools is to be used so that those support working with the best possible way (Vilkman 2016, 60). Using incompatible or wrongly implemented tools or having tools, which are not used to their full extent, can cause problems and failures (Dávideková 2017, 107).

Media Synchronicity Theory (MST) focuses on how the media can support synchronicity, i.e. a shared pattern of coordinated behavior among individuals working together. Dennis et al. (2008, 575) argued that communication consists of two processes, which are conveyance and convergence. Conveyance focuses on sharing large amounts of information without a need to transmit and process the information at the same time. Convergence suggest that individuals have a need to quickly transmit and process smaller amounts of information to develop a shared understanding. (Dennis et al. 2008, 582). Dennis et al. suggested also that media has five different capabilities, which are presented on Figure 5.

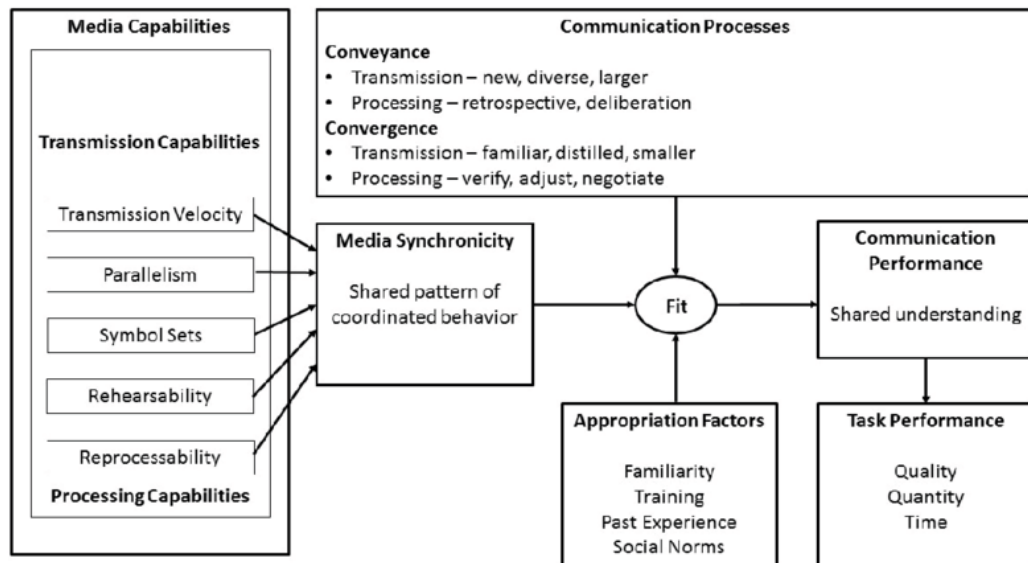


Figure 5. Media Synchronicity Theory (Dennis et al. 2008).

MST proposes that for conveyance processes, use of lower synchronicity media should result in better communication processes whereas for convergence processes using higher synchronicity media should result in better communication processes (Dennis et al. 2008, 575). Lower synchronicity means that individuals can take more time between messages and can take their time in analyzing the information whereas higher synchronicity requires the ability to assess and modify the information quickly, even during the sharing. Higher synchronicity allows also immediate feedback. (Dennis et al. 2008, 582). According to MST, to complete both conveyance and convergence processes, organizations need to have several available tools to improve communication and knowledge sharing between individuals (Tenzer & Pudelko 2016, 429).

MST therefore suggests that organization use knowledge sharing tools from low synchronicity to high synchronicity depending on the type of knowledge to be shared. Traditional face-to-face meetings and phone calls represent high synchronicity tools whereas documents shared e.g. through OneDrive and emails are tools with low synchronicity. With the choice of media, organizations need to pay attention also to the technology acceptance model. First, perceived usefulness refers to individual's willingness to use new technology to improve their performance and secondly perceived ease of use is individual's confidence to use new technology (Chen & Hew 2015, 468).

Virtual work has brought challenges on the tools organizations need to have to replace the tools used in traditional one-place organizations. In today's geographically dispersed organizations, online environments are potentially more viable facilitators of knowledge sharing than traditional face-to-face environments (Chen & Hew 2015, 466). Face-to-face meetings have played a big part especially in sharing tacit knowledge but in virtual organization meeting each other face-to-face cannot be organized very often because it cost both time and money. SECI-model can be used as a guideline for understanding the role of tools in the knowledge sharing process and in choosing the most convenient tools for knowledge sharing, especially in the challenging virtual work (Dávideková 2017, 104). Dávideková (2017, 104) points out the following in her research:

- Socialization: includes both formal and informal discussions, which can be accomplished by means of video conferences, e.g. Skype, desktop sharing in instant messaging, digital discussion platforms. The role of IT is only supportive.
- Externalization: most software tools are office tools, such as word editors, presentations and spreadsheet tools. Also, intranet pages can be used for sharing organizational information.
- Combination: mostly asynchronous communication tools are used. Examples are databases and SharePoint or other repositories.
- Internalization: learning by doing, e.g. product tests, visualization of processes and communicating them to the new users.

Tools play a vital role also in building up trust and equality in virtual organizations. Ford et al. (2016, 28) mentioned the following aspects that need to be considered when implementing the usage of new tools:

- Ensure that the usage of new technology is fully compatible by all users.
- Establish and enforce norms for communication.
- Ensure routine how home company communication gets routed to personnel in other offices.
- Make organizational information transparent and available asynchronously to personnel in all offices by providing accessible storage (e.g. SharePoint) for documents, data and decisions.
- Invest in conferencing capabilities so that personnel can meet and see one another.

One of the competencies the effective knowledge management needs is the capability of the management to know how and when to use the communications and knowledge sharing tools provided and to recognize the need to properly educate the personnel to use the provided tools (Maduka et al. 2017, 702).

Sydänmaanlakka (2012, 180) also pointed out on these topics that even though new IT technology has brought new possibilities for knowledge management and knowledge sharing, it is important to remember that only 10-30% of knowledge can be storage on databases and manuals. Majority of knowledge is owned by the individuals working in the organization, which connects the motivational factors to the discussion of selected tools.

Some researchers say that even though the new technological solutions for knowledge sharing are more and more used, they can't totally replace the face-to-face contact and discussions as a method for knowledge sharing as well as for building up and maintain social relations and trust (Aali & Lindroos 2018, 34). This is supported by the fact that 70% of information exchanged in face-to-face communication is non-verbal and that disappears in virtual work (Maduka et al. 2017, 700). But some researchers have found out that online technological platforms work perfectly well for sharing both tacit and explicit knowledge and building up social relationships and trust without the help an offline social platform (Olaisen & Revang 2016, 1446).

3.4 Linguistic diversity

The use of global virtual teams, which operate across language barriers, is expected to further increase mainly because of recent technological advances (Tenzer & Pudelko 2016, 428). Due to globalization and international business, the language proficiency has become an aspect that organizations cannot neglect when researching their knowledge sharing processes. There are a rising number of organizations where the personnel have several different native languages and English is used as a corporate language. This is situation even in organizations, which are based in countries where English is not the first or even the second language (Ahmad 2018, 15). Especially in virtual teams, linguistic diversity can be an obstacle to effective communication within individuals without a shared language in which they all have native or almost native proficiency (Tenzer & Pudelko 2016, 429).

Linguistic association affects on how people think and how they behave with people who speak other languages. Therefore, it has also consequences for knowledge sharing. (Ahmad 2018, 38). Organizations have traditionally focused mainly on how individuals can form knowledge sharing connections. It is however, equally important that they pay attention how linguistic diversity affects on these knowledge sharing interactions. Language is a similar factor with e.g. personality, organization culture and reward, which influences on knowledge sharing activity in organizations. Also, knowledge sharing is not only about through which tools the knowledge is shared, what kind on knowledge is shared and how much of it is shared. In multilingual organization it is important to pay attention to with whom knowledge is shared and how it is shared. (Ahmad 2018, 81).

Linguistic differences affect also the tools used for knowledge sharing. The individuals' accent, language proficiency and past experiences of interaction with each other influenced on which knowledge-sharing tools were used (Ahmad 2018, 77). Language appeared to influence only a little for the conveyance of knowledge and thus with the effectiveness of asynchronous media. But, regarding convergence, language barriers are disruptive. (Tenzer & Pudelko 2016, 437). These finding contradict with MST theory. MST suggests synchronous tools for convergence processes but according to the findings of Tenzer and Pudelko (2016, 427) language barriers often hinder the quick back-and-forth feedbacks, that are key features of convergence process.

To be able to understand how language affects knowledge sharing behavior in multilingual organizations, both the individual's language competence and socialization patterns existing within and between language communities need to be looked at. One of the most common consequence of multilingual organization is language clustering. "Language clustering in personal knowledge networks leads to sharing knowledge more with those who have similar linguistic backgrounds than with those who do not". (Ahmad 2018, 71).

In multilingual organizations the situation is often that even though English is the official corporate language, the head office has another language as their first language. Proficiency in the head office's language increases the possibility to develop contacts with personnel in the head office and also to get access to critical knowledge that may not be available through formal communication channels. Multilingual knowledge-sharing networks perform better compared to monolingual networks due to the diversity in thinking and innovativeness (Ahmad 2018, 80). According to Ahmad's (2018, 4) research, individuals who can speak the head office's language do not build knowledge-

sharing connections with those who belong to different language community. And when the most important positions in the organization are held by their home-country nationals, an individual who can speak their language can more easily build up relationship with them and have access to critical knowledge. Therefore, they are not that motivated anymore to connect and share their knowledge with individuals in different language communities. These findings are reasons for inequality between personnel with different language proficiency.

In a multilingual organization everyone is facing a situation when they would need to share their knowledge in a non-native language. This according to Ahmad (2018, 76) causes two kind of challenges to organizations. First, there is uncertainty of whether the problems in knowledge sharing are caused by the individuals' lack of topical knowledge or by their language proficiency. Tenzer & Pudelko (2016, 447) had similar findings in their research. They suggested that language barriers hinder individuals to share their task-related knowledge. Secondly, knowledge sharing in a non-native language has high possibilities for misunderstandings, which leads to costs both in terms of money and time. Misunderstanding and the clarifications needed can result in knowledge sharing in a non-native language feeling like a drag, which individuals want to avoid.

4 RESULTS OF THE RESEARCH

4.1 Research set

The objective of the research was to receive information on how the personnel of the researched organization experiences the current knowledge sharing process, knowledge sharing tools used now and knowledge sharing activity and how they would develop them. The research also aimed at finding out how comfortable the personnel are in sharing the knowledge they themselves possess.

Another objective was to get information whether there are differences on these aspects between countries and whether the personnel regard that the management of the company should prioritize knowledge management and knowledge sharing more. The research aimed also on receiving information if the language and geographical location were causing differences on the quantity and quality of knowledge shared between countries and between individuals of these countries.

The research aimed at finding answers to the following research questions:

- What is the opinion of the employees on the current knowledge sharing process?
- How do the language used and country of the employee affect the quantity and quality of shared knowledge?
- How important is knowledge sharing according to the employees?

The survey was sent by an email invitation to 23 persons in Sweden, Norway and Finland including personnel working in sales, service and administration. The survey was not sent to the managers of the Nordics organization because this research will be a tool for them for examining the knowledge sharing in the company. Of these 23 persons, 15 work in Sweden, 4 in Norway and 4 in Finland. The survey was carried out by using Webropol survey tool. The survey was in English, but the recipients were advised that they can use their native language on open-ended questions if they wish to do so.

The total number of respondents to the survey is 10 persons so the response rate is 43%. Respondents were from all the three countries and the respondents included persons working in all three business areas, i.e. sales, service and administration (Table 1). Therefore, the result of the survey can be seen reliable and representing a comprehensive view of the personnel concerning knowledge sharing in the researched

company. In this research the answers are not specified by the level of business areas and neither by countries of the respondents. However, to be able to find answers to the research question concerning differences between countries, the researcher identified the answers also by the nationality of the respondents. But results are presented on such level, which guarantees the promised anonymousness. The researcher must obey the promise of anonymousness in order not to risk the reliability of the research (Tuomi & Sarajärvi 2013, 131).

Table 1. Demographics of the respondents.

	n	Percent		n	Percent
Finland	2	20%	Sales	5	50%
Norway	3	30%	Service	4	40%
Sweden	5	50%	Administration	1	10%

Observation has been done by the insider point of view. This has been possible since the researcher has worked in the researched company for 10 years. Therefore, she has knowledge about the challenges the company has concerning knowledge sharing and has been involved in discussion concerning the researched topics. Active observation on the researched topic has been started approximately two years ago.

4.2 Results of the survey and observation

The survey and researcher's own observation aim to get answers on the research questions presented on chapter 4.1.

Question 1. What is the opinion of the employees on the current knowledge sharing process?

The reason why the topic of knowledge sharing was chosen for this research is that through observation it has been noted that there are problems and dissatisfaction with knowledge sharing in the organization. According to observation there are also differences on the quantity of the available knowledge between the personnel in different countries and knowledge sharing works better within one country compared to sharing between all the countries in the Nordic organization. Topics of knowledge management and knowledge sharing have also not been brought up by the management. Tools play also a vital part in the knowledge sharing process. Through observation it is noted that

tools used for knowledge sharing at the moment in the organization are quite few and there is not a clear process of what is shared and where, which hinders effective and consolidated knowledge sharing.

According to the survey only 1 of the respondents were quite satisfied with the quantity and quality of shared knowledge in the organization whereas 3 were quite unsatisfied. Alarmingly nobody was very satisfied and over half (6 respondents) were neither. (Figure 6). The most satisfied respondents were in Finland and the least satisfied were in Norway.

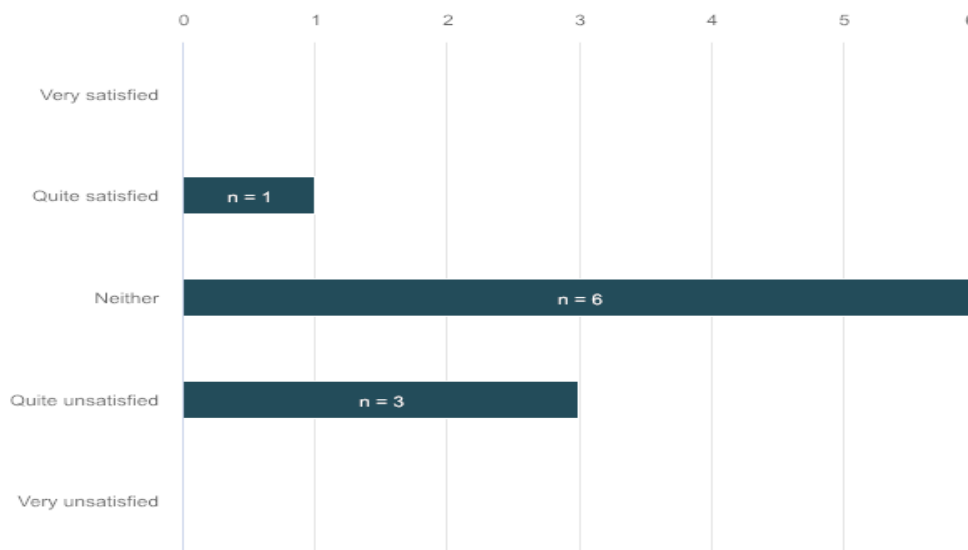


Figure 6. The level of satisfaction with the quantity and quality of shared knowledge.

From the survey it is not possible to get the information what are the reasons behind with those respondents who are neither satisfied nor unsatisfied. Some of the comments received when asking for the level of satisfaction were:

"The sharing of knowledge in the organization is not good enough, most of our knowledge is self-learned, by trying and failing."

"We are not so good to share the problems or the solutions. But I think the reason is that we don't share is that we have much to do. We/I don't have the energy to sit down after to send the information since it is probably after work hours and I don't do that."

“We do not have a good information sharing platform. A lot of things you tell your colleagues in other countries have never heard a lot of stuff we know or have happened in Sweden and the other way around.”

Somewhat controversially the answers on question “Do you feel that you get enough knowledge from your coworkers for being able to do your work efficiently?” were that 8 of the respondents feel that they get either enough or close to enough knowledge (Figure 7). 2 of the respondents felt that they don’t receive enough knowledge from their colleagues. In this question also the most unsatisfied respondents were Norwegians whereas the most satisfied were in Finland. But based on the answers of the research it was not possible to identify whether the respondents were thinking of colleagues in the whole Nordic organizations or only colleagues on their own country and would there have been differences on answers based on that.

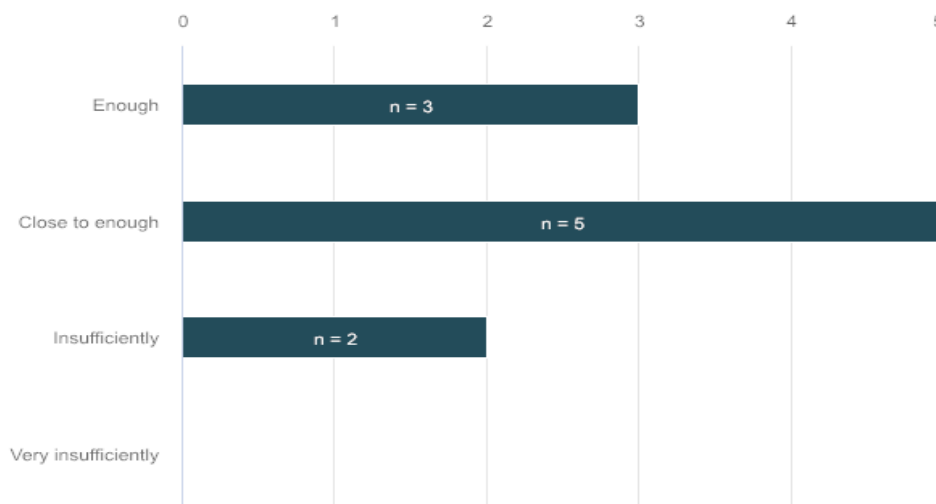


Figure 7. The level of satisfaction on the amount of knowledge from coworkers.

When researching knowledge sharing it cannot be concentrated only on the behavior of others but to look also the person’s own behavior. Most of the personnel were satisfied on their own behavior since 9 of the respondents answered either very satisfied or quite satisfied on question “Do you feel that your coworkers are satisfied on the amount of knowledge you share with them?”. When looking at the differences between nationalities, respondents in Sweden were most satisfied on their own knowledge sharing activity followed by Finns.

The level of trust has a high effect on knowledge sharing and how willingly persons share their knowledge. In the researched organization the trust is on fairly high level since 6 of

the respondents feel comfortable with sharing their knowledge in the organization. Only 2 of the respondents feel uncomfortable with sharing their knowledge. Swedes felt the most comfortable to share their knowledge and the Finnish respondents were the least comfortable. Below are some comments on this topic.

“Sharing is always based on giving, if you never get you never share.”

“I have worked in the organization for many years and have achieved experience over the years.”

“I hope that my sharing is ok, I try to help my coworkers if they have any questions.”

“I feel like I can contribute to more knowledge about our customers and products. And I feel like we can trust each other in our company.”

In an organization where virtual work is part of everyday work for most of the personnel, the tools used, how comfortable individuals are with the tools and how well they are taught to use them play a big part on the knowledge sharing activity. In the research it was asked which tools the personnel are using now for knowledge sharing and how comfortable they are using that tool. The tools used and mentioned in the survey are phone calls, emails, Skype, OneDrive, Yammer, face-to-face meetings and other tools, which respondents are given the possibility to define themselves. On Table 2 are presented the number of respondents using each of the tools mentioned. One respondent mentioned also WhatsApp as other tool.

Table 2. Tools used for knowledge sharing at the moment.

	n	Percent
Phone calls	10	100%
Emails	9	90%
Skype	0	0%
OneDrive	2	20%
Yammer	1	10%
Face-to-face meetings	6	60%
Others, what:	1	10%

On Table 3 is presented how comfortable or uncomfortable respondents are in using each of the researched knowledge sharing tool which are currently used in the researched organization. From that it can be seen that all the respondents are using the

more traditional tools phone calls and emails and they also feel comfortable in using those. Only 1 respondent answered that he/she is not comfortable with phone calls. Face-to-face meetings are also considered comfortable way to share knowledge by all the respondents. But as virtual work is part of everyday life in the researched organization, it is important to get information also on how the virtual tools are used and is the personnel comfortable in using those. According to this research the organization has a challenge to get the personnel use the virtual knowledge sharing tools more actively. More than half of the respondents (6) are not using Skype and OneDrive and Yammer is used only by 1 of respondents.

Table 3. Comfort level when using the tools.

	Phone calls	Emails	Skype	OneDrive	Yammer	Face-to-face	Others: WhatsApp
Very comfortable	n=2	n=3	n=1	n=1	n=0	n=6	
Quite comfortable	n=7	n=7	n=1	n=2	n=1	n=3	
Quite uncomfortable	n=1	n=0	n=2	n=1	n=0	n=0	
Very uncomfortable	n=0	n=0	n=0	n=0	n=0	n=0	
Not using this tool	n=0	n=0	n=6	n=6	n=9	n=1	

In addition to the tools mentioned in the research, there are several available knowledge sharing tools, which are not currently used in the researched organization. Therefore, the respondents were asked whether they are satisfied on the currently used tools for knowledge sharing. It was already found out that newer virtual tools are not as commonly used as the more traditional tools, such as phone calls, emails and face-to-face meetings. Thus, 8 of respondents answered that they are either very satisfied or quite satisfied on the knowledge sharing tools used in the organization. From this question it was not possible to identify whether the respondents based their answers on the tools they are themselves using or on the whole variety of tools available in the organization. Therefore, the respondents were asked also to list which tools they are satisfied and why:

“Email and telephone.”

“Phone calls, it is quite easy to explain by words and easy to use when driving a car. Email because it is easy to attach photos or other documents.”

“Face-to-face. The best way to share knowledge, you can make yourself understood easily and clarify misunderstandings easily.”

“Nothing compares to face-to-face meetings.”

“WhatsApp: quick to share files and bigger videos.”

“Service videos have been a great help.”

On tools which the respondents were not satisfied with were Skype, Yammer, phone and email. Phone and email were commented that those tools give bad understanding of information and knowledge. However, the respondents did not mention any new tools for knowledge sharing they would like to use except for a good CRM program. There were not big differences on the satisfaction of tools between respondents in different countries since the majority of respondents in all three countries were satisfied on the tools used at the moment.

Thus, answer to the research question 1 is that the personnel is not clearly neither satisfied nor unsatisfied on the current knowledge sharing process. But the personnel however feel that they can work effectively with the knowledge they receive from their colleagues and that they also help others by sharing their knowledge. The biggest dissatisfaction is directed on the knowledge sharing tools. There are tools available that majority of the personnel doesn't even use. Differences between personnel in different countries can be found but there is no clear trend where the most satisfied personnel are since the level of satisfaction varies between questions.

Question 2. How do the language used and country of the employee affect the quantity and quality of shared knowledge?

As previously seen on the answer of the respondents, virtual tools are not used by the majority of respondents. Therefore, according to the own observation of the researcher, the personnel in different countries are not equal with the quantity of knowledge available. This is because the majority of the personnel is situated in Sweden and thus, they have more opportunities to meet with more people face-to-face compared to the personnel in Norway and Finland. And as seen previously in the results of the survey, the virtual tools such as OneDrive, SharePoint or Skype are not widely used in the organization. Phone calls and email are tools which are commonly used in the

organization but with these tools the knowledge sharer can make the decision with whom he/she wants to share their knowledge. That, according to observation, causes a high risk in inequality of the quality and quantity of knowledge shared. Through observation it has been noted that individuals tend to share more knowledge with those individuals who can speak and understand their native language. This, however, varies between individuals depending on their English language skills. It has been observed that individuals who are fluent with English, tend to share their knowledge to individuals from all three countries compared to those who can't speak English fluently. And according to the researcher's own observation, there are personnel whose English skills are barely basics and are having big difficulties in communicating in English. Without a common language, the knowledge can't easily be shared.

The official language of the researched organization is English but since the head office and the majority of the personnel of the researched organization is in Sweden, Swedish is also widely used. Personnel in Sweden and in Norway can understand each other even though they are both communicating in their native language. But when communicating with the personnel in Finland, the language needs to be changed into English in most cases. It is however important to note, that the personnel in Finland includes individuals who can Swedish as well, which gives them an advantage on the knowledge shared in the organization and on the social network within the Nordic personnel.

On the survey the respondents were asked whether there is difference on the type of knowledge (e.g. technicality of knowledge, personal knowledge like experiences) shared when it is shared face-to-face vs. sharing through virtual tools. This seems to vary depending on the individual since both yes and no were among answers. The respondents were given a chance to comment the question openly:

"Yes, there are differences."

"No differences."

"I think it is easier to explain and share knowledge in face-to-face meetings, both by words and by practical demonstration."

"The big difference is that when you sit face-to-face you can also see the reactions of the knowledge receiver and see if the person understands what you mean."

“When you have a PowerPoint presentation you can re-check several times if needed, with face-to-face you have only one shoot.”

“Face-to-face is more personal experiences and customer cases.”

On Table 4 is presented the Swedish and English language skills of the respondents. From that table it can be seen that all the respondents had at least basics skills in both Swedish and English. But in Swedish other than native speakers were not fluent with Swedish whereas 3 of the respondents classified their English skills as fluent.

Table 4. Language skills in Swedish and in English.

Swedish	n	Percent
Native language	6	60%
Fluent	0	0%
Good	2	20%
Basics	2	20%
None	0	0%

English	n	Percent
Native language	1	10%
Fluent	3	30%
Good	5	50%
Basics	1	10%
None	0	0%

According to Table 4, over half of the respondents (6) have Swedish as their native language but at the same time the same number of respondents have either basics or good skills in English. The survey then aimed at finding answers on how much language affects the knowledge sharing process. On question “Does the language used in knowledge sharing affect on the amount you share knowledge?” 7 of the respondents answered that language doesn’t affect at all leaving 3 respondents answering that they share more in their own native language. No one answered that they share more in English. As reasons for why more knowledge is shared with native language, were that it is faster and more simple especially when sharing technical knowledge. Comparing the answers of the respondents in different countries, for 4 of the Swedish respondents the language doesn’t affect at all followed by 2 of the Norwegians respondents and 1 of the Finnish respondents.

When asking whether language used affect the quality (e.g. more technical vs. more personalized knowledge) of the shared knowledge, the numbers were the same as in previous question. Thus, 7 of the respondents said that language doesn’t affect at all but 3 respondents said that the quality is better when using own native language. In Finland the language doesn’t have any effect on the quality of knowledge but in Norway 2 of the

respondents answered that the quality is higher when being able to use their own language. Open comments on this question included:

“It is a little bit easier to understand in own language.”

“It is more simple with native language but I can manage with English as well.”

It is interesting also to know if there are differences on the choice of knowledge sharing tools in using native language vs. using English. The answer on question “Does the language used in sharing knowledge affect on the tools you share knowledge with” are presented in Figure 8.

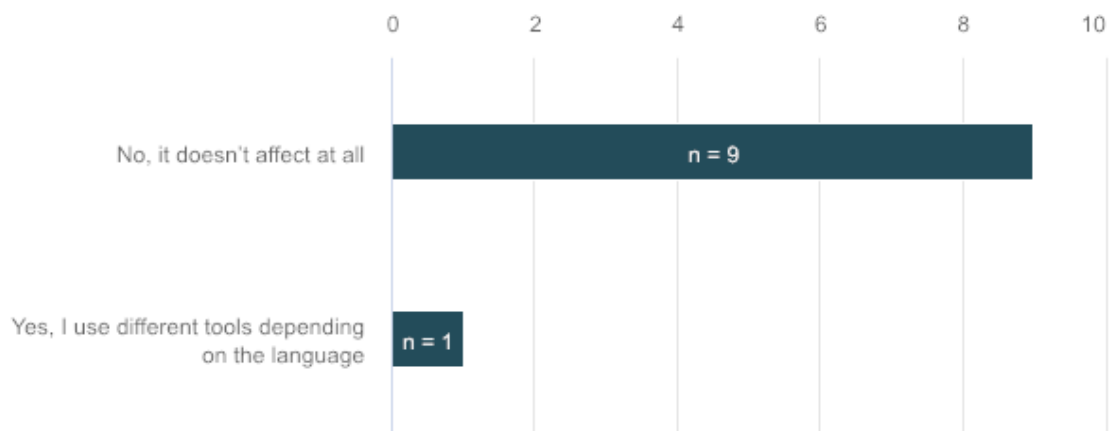


Figure 8. The effect of the language used on the choice of tools.

The results of the survey showed earlier that phone, email and face-to-face meetings were the most used tools for knowledge sharing and other tools such as Skype and OneDrive were not very widely used by the respondents. Based on this small variety of tools used for knowledge sharing in the researched organization, the results of this question don't give a reliable answer on how much language used affects on the choice of tools. Two examples were given on open comments. These were that WhatsApp is used in native language whereas sharing knowledge in English, email is widely used.

In addition to researching the effects of language to the quantity and quality of the knowledge shared, the survey included also a question whether the language used affect on whom the knowledge is shared with. Here also, 7 of the respondents answered that language does not have affect on the choice of individuals they share knowledge with leaving 3 of the respondents answering that they share more with those who can understand their native language (Figure 9). The reason expressed on open-ended

question for this were that it is easier to share knowledge and explain with native language.



Figure 9. The effect of language used on whom the knowledge is shared with.

To guarantee the anonymousness of the respondents, the results can't be separated by the nationalities of the respondents. Therefore, part of the research question 2, which aimed at finding differences between countries concerning quantity and quality of shared knowledge cannot be answered in this research.

The answer to the research question 2 is that there are differences on the quantity and quality of the shared knowledge between countries. This is because language used in knowledge sharing does have effect on the knowledge shared in the researched organization. But the differences are not that big since the majority (7) of the respondents said that that the language doesn't affect on the quantity, quality nor the extent of their knowledge sharing. According to open comments, it is easier to use own native language in knowledge sharing. The more traditional knowledge sharing tools, such as face-to-face meetings, emails and phones, are still valued because their positive features. The findings of this survey show that language doesn't have effect on the choice of tools used for knowledge sharing in the researched organization.

Question 3. How important is knowledge sharing according to the employees?

Knowledge management and knowledge sharing have not been officially brought up by the management so far. Also, the guidelines concerning what knowledge is shared where and which tools are to be used are not clear to everyone according to observation. This is one of the reasons for the information received by observation that personnel are not satisfied on the equality of knowledge available in different countries. The equality could be improved by better knowledge management. As proper platform and clear guidelines for knowledge sharing are missing at the moment, personnel that has best possibilities meeting as many colleagues as possible face-to-face are receiving a larger quantity of knowledge. This is because the virtual tools available are not utilized to their full extent.

The results of the survey show that 9 of respondents think that management should prioritize efficient knowledge sharing more (Figure 10).

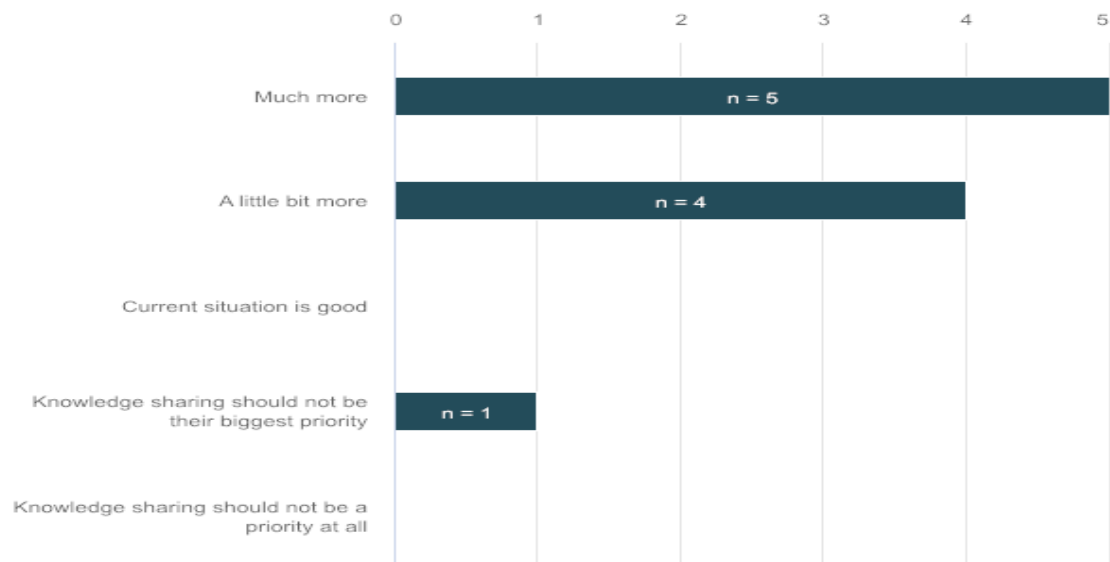


Figure 10. Opinion on whether the management should prioritize knowledge sharing more in the researched organization.

When looking at the answers by nationalities, in Finland followed by Norwegians most of the respondents feel that the management should prioritize knowledge sharing much more. Also, the current guidelines for knowledge sharing are quite clear only to 4 of the respondents and quite unclear to 4 respondents as well leaving 2 of the respondents answering that they are neither. The differences between countries is needed to get here as well. In Sweden the guidelines were quite clear to over half of the respondents but in contrary in Norway over half of the respondents felt that current guidelines were quite unclear.

The survey included also an open-ended question where the recipients were given a possibility to tell what is good in the existing system for knowledge sharing or what are the biggest problems in it. They were also encouraged to suggest ideas for how the knowledge sharing could be developed.

“It is up to the user to share.”

“More face-to-face meetings and practical training.”

“More open meetings would help, I think. Problem now is that not all information comes through organization.”

“We have a lack of information which kind of specialized systems they are selling / installing on other countries.”

“We would need a news/happening system that we all can use in an easy way. Problem today is that you don't have contact on a daily basis. It can go 3-4 months between you talk with different people, so it is hard to keep up with what is happening.”

“I feel that we do not have a system for knowledge sharing at all!”

So, the answer for the research question 3 is that personnel have understood the importance of knowledge sharing and would like management to prioritize knowledge sharing more. There is also a need for a clear knowledge sharing process that everyone understands. The personnel would benefit from having common virtual tools for knowledge sharing but it is also very clear that face-to-face meetings are still highly valued and cannot be neglected in the knowledge sharing process and guidelines.

5 CONCLUSIONS

5.1 Reliability

The main requirements of a research process are validity and reliability. Validity is concerned whether the research is believable and true and whether it is evaluating what it is supposed to evaluate. Reliability deals with the consistency, dependability and replicability of the data and findings. (Zohrabi 2013, 19). Mixed methods research includes both quantitative and qualitative data collection methods. In qualitative study the aim is to understand the researched phenomenon and give a reasonable interpretation to the phenomenon (Tuomi & Sarajärvi 2013, 85). Quantitative research's aim is to gather quantifiable data, which gives an unbiased result that can be generalized. In qualitative study it is essential to separate the reliability and neutrality in the observation. In this case the neutrality means that the researcher's age, gender and nationality don't affect on what she hears or observes (Tuomi & Sarajärvi 2013, 136).

For the reliability analysis, sufficient data is needed so that the research process can be followed (Kananen 2014, 153). In this research the survey and the answers are stored for possible later use. The answers can be counted as reliable since the demographics of the respondents is comprehensive, i.e. the respondents include personnel from all three countries and from all business areas. For receiving as truthful information as possible, the survey included several open-ended questions so that personnel were able to express their thoughts in their own words without the leading answer options. On open-ended questions it was given a possibility to answer also on the respondents' native language so that insufficient English language skills did not affect the answers and therefore the information received was as reliable as possible. These aspects in the survey increase its reliability. The observation is based on discussions with the personnel again from all three countries and from all business areas during past two years. And the observation does not include researcher's own opinions.

5.2 Summary of the results and discussion

This research has investigated knowledge sharing and the current knowledge sharing situation in the researched company from the point of view of the personnel. Special

attention is laid on knowledge sharing tools and to the language used in sharing knowledge and whether those affect on the quantity and quality of the shared knowledge and with whom the knowledge is shared with. Literature is focusing on what is knowledge and the benefits of knowledge sharing. Topics on the literature review include the challenges organizations are facing when managing and sharing knowledge as well as the motivational factors concerning knowledge sharing.

As discussed on the literature review, previous researches have proved that there are several advantages efficient knowledge sharing has for individuals, teams and whole organizations (Ellison et al. 2015, 114; Donnelly 2018, 344; Matošková 2019, 83). Knowledge needs to be properly managed so that the advantages can be reached. The attitudes of the individuals towards knowledge sharing and its importance to the success of the company cannot be neglected when researching knowledge sharing. Personal traits are important for knowledge sharing. Individuals who are open to new experiences, dutiful and achievement-oriented are usually more willing to cooperate and share their knowledge (Ahmad 2018, 29) It is equally important to get information on whether the management prioritizes knowledge management enough according to the personnel and do the personnel feel like knowledge sharing should have a higher priority in the management level.

In the researched organization knowledge sharing is vital for the whole organization but especially important it is for the sales and service personnel. Sales personnel are now lacking information on projects carried out in other countries and what have been the needs of the customers. This kind of information is very valuable and helpful for the sales when doing business on a competitive market. Thus, sales personnel would benefit of efficient co-operation and knowledge sharing between all three countries by gaining knowledge of technical solutions sold in other countries and whether they are working as planned. And if there have been problems, what kind of problems have they been facing and how have those problems been solved. With sufficient knowledge sales personnel in all countries can serve their customers with better experience and knowledge while saving also time and money by avoiding overlapping work. Knowledge sharing is as vital to the service personnel as it is for the sales department. It is very important that the service personnel are aware of the technical solutions sold in other countries and especially of how they are installed and of challenges faced during the installation. Service personnel also need constant knowledge daily from each other on

reclamations and technical problems they are facing in order not to struggle with possibly same problems in all the countries.

With the administration, the situation with knowledge sharing is already on a better level. The number of personnel in administration is lower than in sales and service, which already makes the knowledge sharing and communication easier. The tasks in administration are also not completely divided by countries. Part of the administration tasks of Finland and Norway are taken care of in Sweden thus resulting on active communication between these countries. However, Finland and Norway do not need to communicate actively with each other in administration neither so currently knowledge is not actively shared between the administration personnel in these countries.

According to the observation there is a need to improve the knowledge sharing process in the researched organization. This is supported by the results of the survey since only 1 of the respondents were quite satisfied on the quantity and quality of knowledge shared at the moment. Sydänmaanlakka (2012, 200) has pointed out questions management should think about when there is dissatisfaction on the knowledge management and knowledge sharing:

- How much attention has been paid on team work, virtual teams and the knowledge transfer within teams?
- Are individuals aware of the advantages of knowledge sharing?
- What is the level of motivation for sharing knowledge?
- Does the organization's culture support knowledge sharing?
- Is the organization's culture open and based on trust?
- What tools are already available and are there new tools that should be acquired?
- How can we more efficiently utilize the technology?

6 of the respondents were neither satisfied nor unsatisfied. From the survey it is not possible to get the information what are the reasons behind for this answer. It would be interesting to research further why such a big number didn't have a clear opinion on this. Is the topic of knowledge sharing something they haven't considered and don't have enough information on the importance of knowledge sharing has on them as individuals as well as for the whole organization?

Based on the literature review and the results of the observation and survey, the conclusion is summoned in a SWOT-analysis (Figure 11). SWOT-analysis is a technique used to determine and define the strengths, weaknesses, opportunities and threats.

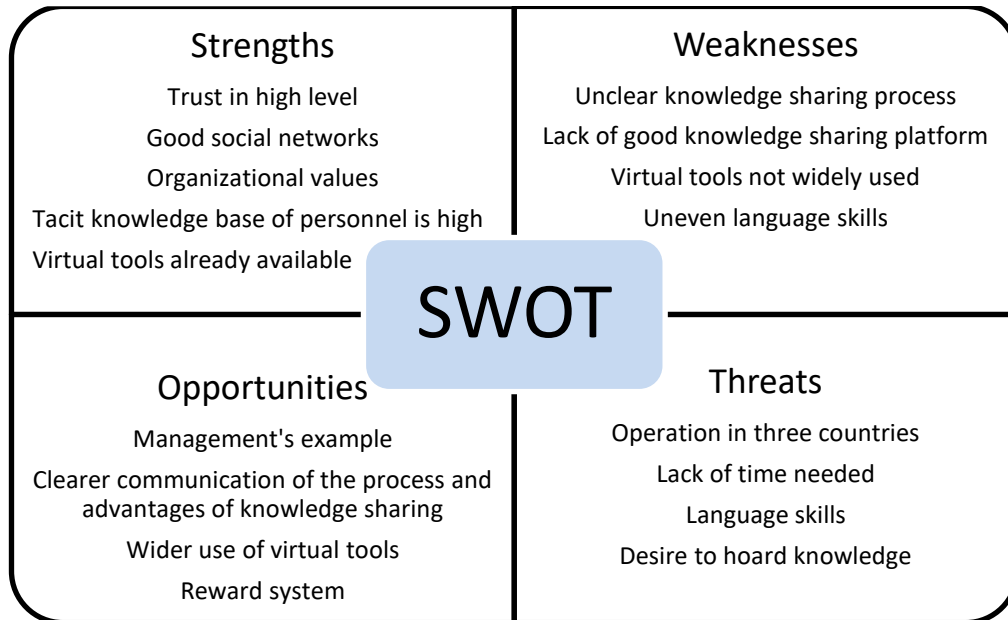


Figure 11. SWOT-analysis.

The organization has several important strengths needed for efficient knowledge sharing. Organizational values include already openness, continuous learning and respect for each other. As stated in the literature review trust is a significant motivator that increases knowledge sharing (Chen & Hew 2015, 468). In the researched organization the level of trust within personnel is high and thus there is a low risk for losing face when sharing knowledge. With the high trust level, the social networks exist as well. The challenge is however to grow these networks so that they include personnel from all three countries and from all business areas. In the researched organization the employee turnover is low and thus the tacit knowledge base of the personnel is very high. In the business area the organization operates, this experience and knowledge level is noticed and valued by the customers and cooperation partners. Organization also already has several virtual tools available so they can easily be included in the improved knowledge sharing process to guarantee both the conveyance and convergence processes stated in the media synchronicity theory (Dennis et al. 2008, 582).

There are also several weaknesses the management need to aim at eliminating. Based on the answers of the survey and also on the observation the current knowledge sharing

process has not been clearly communicated to the personnel. The survey included even a comment of a respondent that “I feel that we don’t have a system for knowledge sharing at all”, which is alarming. A need for proper knowledge sharing platform was mentioned several times in the answers of the survey. As this is missing, explicit knowledge cannot be shared effectively. As weakness can also be counted that the virtual tools already available are not in use to their full extent. There are neither clear guidelines that how and when they should be used and therefore it is totally up to individuals if they want to use them or not. Management needs therefore make clear guidelines and communicate them to everyone in the organization. In an organization where personnel speak different languages, uneven language skills cause challenges on the knowledge sharing. The situation now is that there is not a single language that everyone could use for communication and knowledge sharing. According to the answers of the survey, even though English skills are good, it is still easier to share knowledge in own native language as stated by Ahmad in his research (2018, 71).

One big opportunity is that when management starts to pay more attention to knowledge sharing and acts as an example with how they share their knowledge, the personnel will potentially have better motivation to act the same way. The results of the survey showed clearly that the personnel think that management should prioritize knowledge sharing more than it does at the moment. It is also important that the improved knowledge sharing process will be clearly communicated to everyone and the way that everyone understands that knowledge sharing is part of everyone’s work tasks. Management needs to also be ready to invest on tools and training the personnel in using them. A reward system can also be counted as an opportunity. Management could consider how individuals will be credited and rewarded for their effort for knowledge sharing.

The choice of tools used needs to be a vital part of the improved knowledge sharing process and the wider use of tools is a big opportunity for the organization. Individuals need to be able to trust that they get the knowledge they need in order to perform their tasks successfully and efficiently. Therefore, it is important that the knowledge sharing process is clear to everyone and everyone knows where they can find the needed knowledge (Aali & Lindroos 2018, 34). But when choosing the right tools for sharing both tacit and explicit knowledge, it is important that the information flood will be avoided. It is essential to remember that it isn’t relevant to share everything to everyone (Vilkman 2016, 62). From the answers of the survey it can be seen that the personnel is satisfied on the current knowledge sharing tools, but they are however not used as widely as

should. Based on the answers of the survey, the respondents prefer to share their knowledge through interpersonal communication rather than recording it in a database. This could be due to a fact that they are unsure that knowledge sharing is worthwhile especially when they are busy with their other work tasks. Management should think of the reasons why many of the especially virtual tools are not used by the majority of the personnel even though organization would benefit highly of the use of virtual knowledge sharing tools. Are the personnel lacking guidance on when each tool is to be used or are they lacking training on how to use them? The management should further research the reasons for the lack of usage of virtual tools and base their decision on the choice of tools on these reasons. The decision of the choice of tools needs to be in line with the MST theory so that both conveyance and convergences processes will be supported (Dennis et al. 2008, 582).

The personnel clearly still values highly face-to-face meetings and the interaction possibilities face-to-face meetings can offer. Many of the face-to-face meetings are unofficial meetings, e.g. on coffee breaks, where the valuable tacit knowledge is shared and therefore needs to be an important part of the knowledge sharing process in the future as well. Organizing face-to-face meetings is, however, challenging since they are time-consuming and expensive to organize among personnel that operates in three different countries. Thus, management should encourage to replace some of the face-to-face meetings by Skype-meetings since that saves both time and money and offers an opportunity to enlarge the current social networks. Yammer is not a popular knowledge sharing tool either and one of the big reasons for it is that it is used by the personnel worldwide and not just inside the Nordic countries. Thus, there is a higher risk for losing one's face by sharing knowledge through Yammer since the trust level in the worldwide organization is not as high as it is inside the Nordic organization. The organization needs also an efficient tool for sharing explicit knowledge so that everyone has access to it whenever and where-ever they need. OneDrive could be used for that also in the future but only after clear guidelines and training.

There are also threats for the knowledge sharing in the researched organization. The fact remains that there are operations in three different countries and the personnel have different native languages. Also, the language skills, especially in English, will still affect the knowledge sharing activity. The organization could offer the possibility to attend on language courses to improve individuals' language skills. Another threat is lack of time. Knowledge sharing is often seen as a time-consuming activity and is also perceived as

extra work and individuals tend to avoid excess work (Ahmad 2018, 30). The pace and amount of tasks to do are increasing continuously resulting in a situation that individuals need to prioritize what tasks they do during their workhours and what tasks can wait. As one respondent commented on the survey, especially explicit knowledge sharing is done mostly after workhours and that is a big reason why knowledge is not shared as much as it should be. Also, many of the sales and service personnel are not in the office daily and the occasions for unscheduled face-to-face meetings are rare as well. Even with the high level of trust, there is still a threat that individuals' desire to hoard knowledge instead of sharing it, is higher. As mentioned in the literature review, reasons for hoarding knowledge are the threat of losing the knowledge ownership and the related loss of power (Alsharo et al. 2016, 479).

Organizations have to keep in mind that work should be challenging and fulfilling, and it needs to provide individuals opportunities to use their existing skills and knowledge but also give them opportunities to develop their knowledge and skills. A significant amount of knowledge management research suggests that individuals regard the chance for such opportunities by their employers to be very important way for motivating them to share and create knowledge as well as to encourage them in remaining loyal to their employer (Collings & Wood 2009, 125).

Every individual has a lot they can contribute by sharing their knowledge. As Michael Polanyi said in his "The Tacit Dimension" -work already in year 1967: "We can know more than we can tell."

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Appendix - Survey

Knowledge Sharing in WISS

1. In which country do you work in? *

Finland

Norway

Sweden

2. Do you work with? *

Sales

Service

Administration

3. How do you describe your language skills in Swedish? *

Native language

Fluent

Good

Basics

None

4. How do you describe your language skills in English? *

Native language

Fluent

Good

Basics

None

5. Are you satisfied with the quantity and quality of shared knowledge in our organization? *

Very satisfied

Quite satisfied

Neither

Quite unsatisfied

Very unsatisfied

6. Please specify the reasons for your answer in the previous question (question nr. 4)

7. Do you feel that you get enough knowledge from your coworkers for being able to do your work efficiently? *

Enough

Close to enough

Insufficiently

Very insufficiently

8. Do you feel that your coworkers are satisfied on the amount of knowledge you share with them? *

Yes, very satisfied

Quite satisfied

Not satisfied at all

9. Do you feel comfortable with sharing your knowledge in the organization? *

Very comfortable

Quite comfortable

Neither

Quite uncomfortable

Very uncomfortable

10. Can you specify reasons which make you feel comfortable or uncomfortable with sharing your knowledge?

11. What tools for knowledge sharing are you using at the moment? *

Phone calls

Emails

Skype

OneDrive

Yammer

Face-to-face meetings

Others, what:

12. Are you comfortable with sharing knowledge through phone calls? *

Very comfortable

Quite comfortable

Quite uncomfortable

Very uncomfortable

Not using this tool

13. Are you comfortable with sharing knowledge through emails? *

Very comfortable

Quite comfortable

Quite uncomfortable

Very uncomfortable

Not using this tool

14. Are you comfortable with sharing knowledge through Skype? *

Very comfortable

Quite comfortable

Quite uncomfortable

Very uncomfortable

Not using this tool

15. Are you comfortable with sharing knowledge through OneDrive? *

Very comfortable

Quite comfortable

Quite uncomfortable

Very uncomfortable

Not using this tool

16. Are you comfortable with sharing knowledge through Yammer? *

Very comfortable

Quite comfortable

Quite uncomfortable

Very uncomfortable

Not using this tool

17. Are you comfortable with sharing knowledge through face-to-face meetings? *

Very comfortable

Quite comfortable

Quite uncomfortable

Very uncomfortable

Not using this tool

18. Are you comfortable with sharing knowledge through those other tools you mentioned on the question 10? *

Very comfortable

Quite comfortable

Quite uncomfortable

Very uncomfortable

Not using this tool

19. Are you satisfied on the tools used for knowledge sharing in our organizations? *

Yes, very satisfied

Quite satisfied

Not satisfied at all

20. Please list which of the tools you are satisfied and why

21. Please list which of the tools you are not satisfied and why

22. Are there new tools you would like to use for knowledge sharing in our organization?
If yes, describe which or what kind of tools?

23. Is there difference on the type of knowledge you share when sharing it face-to-face compared to sharing through virtual tools? (e.g. technicality of knowledge, personal knowledge such as own experiences etc.)

24. Do you feel that the current guidelines (e.g. what kind of knowledge should be shared and where, tools, security) for knowledge sharing are clear and known to everyone in the organization?

Very clear

Quite clear

Neither

Quite unclear

Very unclear

Please comment why:

25. Do you think that the management should prioritize efficient knowledge sharing more in our organization? *

Much more

A little bit more

Current situation is good

Knowledge sharing should not be their biggest priority

Knowledge sharing should not be a priority at all

26. Does the language used in knowledge sharing effect on the amount you share knowledge? *

No, it doesn't affect at all

Yes, I share more in my own native language

Yes, I share more in English

27. If you answered YES on previous question 26 please explain what could be reasons for that.

28. Does the language used in knowledge sharing effect on the quality you share knowledge (e.g. more technical knowledge vs. more personalized knowledge)? *

No, it doesn't affect at all

Yes, the quality is better when using my own native language

Yes, the quality is better when using English

29. If you answered YES on previous question 28 please explain what could be reasons for that.

30. Does the language used in sharing knowledge effect on the tools you share knowledge with?

No, it doesn't affect at all

Yes, I use different tools depending on the language

31. If you answered YES on previous question 30 please explain which tools you use in your own language and which in English and what causes that difference.

32. Does the language used in sharing knowledge affect on whom you share knowledge with?

No, I share knowledge always with same persons

Yes, I share more with persons who can understand my native language

Yes, I share more with persons with whom I can use English language

33. If you answered YES on question 32 please explain what could be reasons for that?

34. How would you develop the knowledge sharing in our organization? What is good in the existing system and what are the biggest problems in it?

35. Open comments on the topic of knowledge sharing in our organization: