Article

Knowledge sharing in a non-native language context: Challenges and strategies

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Abstract

Knowledge sharing is a language-based activity. With the rise of multilingual workforces and the adoption of common corporate languages such as English, knowledge sharing is happening in non-native language contexts more than ever before. This paper explores the challenges and strategies of knowledge sharing in a non-native language at the individual level. For this purpose, an exploratory case study was conducted in a multinational organization. Results show that the use of a non-native language can make knowledge sharing an ambiguous and costly process, eroding some of the benefits of knowledge sharing. It was found that employees adopt three different strategies to deal with problems in the knowledge-sharing process caused by the use of a non-native language. These strategies—namely discourse adjustment, language adjustment, and media adjustment—play an important role in the successful exchange of knowledge between linguistically diverse individuals.

Keywords

Knowledge management; knowledge sharing; language diversity; multilingual workplaces; multinational organizations

1. Introduction

Knowledge sharing is a key activity in organizational learning and innovation. In today's knowledge economy, the collaborative work between employees plays a major role in an organization's potential to compete in the market. Individuals engage with each other to gain insights for problem solution and innovation [1, 2]. The exchange of knowledge among employees helps potentiate the use of existing knowledge as well as the development of new knowledge in the organization [3]. Knowledge sharing not only helps the organization to achieve its goals but also allows individuals to strengthen their role in it. The benefits of knowledge sharing are well documented. However, it has also been recognized that knowledge sharing is a complex learning activity influenced by the organizational environment and any changes therein [4, 5].

In the 21st century, organizations have experienced increasing changes both internally and externally. The rapid expansion of cross-national operations has brought a bigger customer base and soaring profits for some organizations. However, this scenario has brought many challenges for organizations; one example is the ever-increasing multilingualism among the organizational workforce [6]. The increase in language diversity in organizations is a by-product of international organizational expansion—materialized through recruitments, mergers, and acquisitions—and the need to serve a linguistically diverse clientele [7]. Moreover, international immigration and ease of movement has also contributed to the development of language diversity in the organizational workforce. In response to rising multilingualism among employees, many organizations have adopted a common corporate language (usually English) [8]. This is intended to ensure smooth communication and coordination among employees with different linguistic backgrounds [9].

Since it is through language that individuals share knowledge, the adoption of a common corporate language means that many employees have to engage daily in knowledge sharing in a language of which they are not native speakers. This is a matter of concern because the proficiency and expressional confidence people enjoy in their native language is usually far superior to that they have in a different language [10, 11], making non-native language a relatively less efficient means of knowledge sharing. Knowledge of a language means not only knowing its linguistic forms but also knowing how to use it [12]. With their native or first language, individuals develop this kind of cognitive knowledge by

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being immersed in the society during the years spanning from childhood to adulthood [13]. However, with regard to a non-native language, most people learn it through schematic educational techniques without a broad time exposure to it [14]. Consequently, people find themselves constrained in their ideas and thought expression. As the philosopher Ludwig Wittgenstein once put it: 'the limits of my language mean the limits of my world'. Furthermore, the way people conceptualize, produce, and infer meaning in their native language has effects on their use of a non-native language [15, 16, 17]. In other words, speaking a common non-native language does not mean that people share a common understanding of the contextualization cues, thought processes, and cognitive thinking operating behind the language use [18, 19].

The knowledge-sharing process involves an exchange of diverse expertise and verbalization of complex cognitive thoughts by people with different mindsets [20]. Since language is a means of knowledge sharing, any variances, discrepancies, and limitations in participants' language proficiency are likely to have considerable impact on the quality of knowledge sharing [21]. Due to the varying proficiencies and thought processes involved when people with different linguistic backgrounds speak a non-native language, knowledge sharing in this context is likely to be a challenging experience. In the previous literature, we do not find much research exploring knowledge sharing in a non-native language context. This paper aims to fill this research gap by studying the experience of organizational employees involved in a knowledge sharing process in a non-native language context. More specifically, we aim to address the following research questions:

- What are the challenges of knowledge sharing in a non-native language?
- How do individuals manage knowledge sharing in a non-native language? Are there any specific strategies? If so, what are they?

Knowledge has been defined in many different ways. According to Nonaka, it is a 'justified true belief' [22, p.15]. Starbuck defines it as 'stocks of expertise' [23]. It has also been understood as 'information in action' [24] or simply 'actionable information' [25]. Dixon defines knowledge as the 'meaningful links people make in their minds between information and its application in action in a specific setting' [26]. Some scholars distinguish between information and knowledge [e.g. 22; 27], while others see no difference between them [e.g. 28; 29]. Distinctions drawn between information and knowledge are usually difficult to uphold in practice [30]. Therefore, many researchers believe that there is little practical utility in such differentiation [27; 31; 32; 33]. In agreement with this latter group of researchers, this paper considers knowledge to include 'information, ideas, and expertise relevant for individuals, teams, work units and the organization as a whole' [31, p.65].

Many types of knowledge have been identified in previous literature. The two most common types of knowledge are tacit and explicit knowledge. Explicit knowledge is considered to be 'objective and can be expressed unambiguously in words, numbers and specifications whereas tacit knowledge is subjective, situational and intimately tied to the knower's experience' [34]. Sharing of tacit knowledge, unlike explicit knowledge, requires extensive discussion and elaborate communication.

Knowledge sharing is defined as the exchange of task-related information, advice, and expertise to help others and to collaborate with others to carry out daily tasks, solve problems and develop new ideas [33]. For simplicity, 'knowledge sharing in non-native language', will be referred hereafter as 'non-native knowledge sharing'.

2. Language and knowledge sharing

Language is the most basic tool of communication between humans, and it has been used for knowledge dissemination throughout the history of mankind. In its simplest form, language enables knowledge sharing through the exchange of written material such as documents, and, in its most complex form, it allows knowledge sharing through knowledge creation and sense-making by providing a framework for discussion, dialogue, and contextualization [35]. Therefore, the phenomenon of language is not new to knowledge-sharing research and its effect has been studied in different forms and contexts [7, 36, 37]. A review of the literature shows that language has been important from both system and social perspectives of knowledge sharing.

The system perspective is anchored in the use of information technology and knowledge-management systems aimed at enhancing and supporting knowledge sharing among employees. Organizations have a plethora of knowledge in their employees' minds, and the optimal utilization of such knowledge depends on sharing and making it accessible to others in the organization [38]. For this purpose, knowledge-management systems are developed to connect the knowledge seeker with the knowledge or knowledge source. Language is an important factor in the successful production and execution of such systems [39]. Technological systems are devoid of the kind of intelligence that humans possess

regarding language use. Therefore, the ability of a knowledge-management system to handle language in the form of, for example, domain-specific concepts, linguistic and grammatical structure of queries, and text genres (according to fields such as engineering, marketing, medicine) play an important role in the success of knowledge-management systems [40]. Recently, there has been an interest in multilingual knowledge-management systems intended to support knowledge sharing among linguistically diverse employees in organizations [41]. Such systems usually help in searching, translating, and connecting the knowledge seeker with the knowledge available in a different language [42].

From a social perspective, knowledge sharing has been conceived more as an interaction-based, person-to-person learning activity [43, 44], and this study shares this focus. Employees develop their knowledge networks through socialization in the workplace and use such networks for knowledge acquisition and dissemination [45]. Moreover, they exchange knowledge through lengthy descriptions and daily conversations that provide a useful platform for a richer understanding of problems and the development of solutions. From this perspective, language has also been under discussion particularly in the context of diversity.

One of the most common findings in the studies analysing knowledge sharing in multilingual organizations is the capability of language to disconnect speakers of different languages from one another [7, 46]. In this regard, the phenomenon of language clustering has been specifically discussed. Language clustering is the individuals' 'orientation of social interaction towards the members of their own speech community' [47, p.228]. Language clustering influences knowledge-sharing patterns in multilingual organizations because it hampers cross-linguistic knowledge exchange [36]. It has been found that employees share critical information and seek advice from others who belong to the same speech community because of their lack of proficiency in the common language or due to a shared linguistic identity [7, 48]. Language clusters tend to act as knowledge networks, which makes knowledge seeking and dissemination a linguistic-association driven rather than an expertise-driven activity. Language clustering is usually not a conscious activity; rather, it evolves and operates at the unconscious level [7]. As a result, knowledge-sharing patterns driven by language clustering look natural and become difficult to change [7].

Beyond linguistic similarity-driven knowledge sharing, language is sometimes used as a tool to inhibit unintended knowledge spillovers. According to a study by Lauring and Bjerregaard [49], Danish expatriates working in a multinational subsidiary in Saudi Arabia intentionally spoke in Danish to keep information among themselves. Danish was spoken particularly in front of non-Danish-speaking local employees to avoid information leaks and to keep the knowledge of the business within the Danish circle. Such strategic use of language underlines the power aspect of language in multilingual organizations, where it can both allow and restrict access to knowledge or valuable sources of knowledge such as networks [46].

Language thus has the potential to inhibit knowledge sharing among different language groups for a number of reasons. However, this does not mean that there is not collaboration and exchange of information and know-how among employees with linguistically diverse backgrounds. Formally or informally, employees do engage in knowledge-sharing activities crossing linguistic borders, as a complete absence of connection is not a realistic scenario. Particularly in knowledge-intensive organizations, diversity is seen as a source of innovation, and quite often organizations intentionally devise teams composed of employees with diverse linguistic, cultural, and professional backgrounds in order to benefit from their diverse insights [50]. Some of the research focusing on English as corporate language shows that employees do engage in knowledge sharing with linguistically diverse employees, particularly when they have proficiency in the corporate language. For example, Piekkari et al. [48] found that employees proficient in the corporate language were able to participate in knowledge-intensive activities such as training and seminars, and were able to network with experts from other language communities; it elevated their status as knowledge brokers due to their broader multilingual knowledge networks, making them gatekeepers in interunit knowledge flow.

While it is acknowledged that knowledge sharing takes place between linguistically diverse employees, there is little research with an explicit focus on how employees experience and handle such knowledge sharing in their daily work routines. Therefore, this paper studies knowledge sharing among linguistically diverse employees at the interactional level with a focus on the use of a non-native language.

3. Methodology

3.1. Research design

A single case study was conducted in a Finnish multinational organization in 2015. A case-study method is useful when the purpose of the research is to answer what and why questions, and to build theory with inductive logic [51, 52, 53]. Given the exploratory purpose of finding challenges faced in the use of a non-native language, and strategies used to deal with non-native knowledge sharing, an in-depth case study was deemed a suitable research strategy.

The multinational organization used in this study is one of the biggest players in the marine and energy industry. The organization develops power sources, services and manufactures engines for the shipping industry. It has operations in 70 countries around the world and has more than 15,000 employees in its workforce. It has a multilingual workforce, so English is used as a common corporate language. Organizational multilingualism was evident not only in the company's subsidiaries operating in different countries and therefore using different languages, but also as intra-subsidiary multilingualism. For example, in the company's Finnish subsidiary, around half of the workforce is composed of non-Finns. Moreover, expatriation and staff movement across subsidiaries are quite common. Most of the work is done in the form of virtual teams consisting of members from different geographical locations. Due to the high level of multilingualism in its operations and workforce, this organization was a suitable candidate for studying knowledge sharing in a non-native language.

3.2. Data collection

In total, 21 in-depth interviews were conducted in the organization. All the interviewees were from operational and middle management levels working in different subsidiaries of the organization in Africa (Kenya), Europe (Finland, Norway, Germany, Italy, and Spain), South America (Panama, Puerto Rico) and the Middle East (Abu Dhabi). Inclusion of interviewees from different subsidiaries was intended to enhance the subject diversity and unit triangulation of the data [54 p.254]. None of the interviewees were English native speakers. Seven interviews were conducted face to face, while rest were done via audio/video call on Skype. All the interviews were audio-recorded. The average interview time was 58 minutes, the shortest was 28 minutes and the longest, 93 minutes.

An interview guide was developed that included open-ended questions focused on the knowledge-sharing activities and experiences with using a non-native language for this purpose. The focus was set on the problem-solving scenarios—both formal and informal—project meetings, and advice-seeking processes to contextualize the knowledge-sharing dynamics [55, 56]. Then, the use of the individuals' native language for knowledge sharing was discussed. Knowledge sharing in English was the focus of this study given that it was the official language within the organization and also a non-native language for most employees (and all the interviewees). Comparative questions were asked, such as how giving or receiving troubleshooting advice in English compares with the same activity in their native language. This comparative technique was intended to enable brainstorming processes among interviewees so more in-depth details regarding challenges and strategies related to non-native knowledge sharing could be obtained. It is important to note that the discussions about strategies for non-native knowledge sharing were not designed to meet the challenges mentioned by the interviewees. Rather, they were general discussions so that interviewees would not find their thinking process constrained or limited only to the challenges that they had mentioned during the interview.

Several steps were taken to ensure the validity and reliability of the study. Before data collection, interview questions were discussed with an academic expert in knowledge sharing and a senior executive from the target organization to enhance the validity and to adjust the relevance of the questions to the organization's working style [57]. Moreover, a pilot interview (115 minutes long) was conducted with an executive who had more than ten years of working experience in Microsoft and had worked in different multilingual teams and locations. This led to some adjustments to the questions regarding wording and content.

As recommended by Yin [53], a research protocol—including research questions, interview guide, and data collection guidelines—was designed and followed during the data collection process. Moreover, a research database was created that contained information regarding the interviewees, raw data, and coding schemes for more streamlined and reliable data analysis (ibid).

3.3. Data analysis

The data collection and analysis were intertwined, meaning the analysis started even during data collection [36]. This allowed the interviewer to further elaborate on the emerging themes and to adjust the orientation of the questions. Interviews were transcribed verbatim, and NVivo 11 was used for qualitative data analysis.

A method of 'two-stage' analytic coding was adopted [57, 58]. Initially, coding was done on a line-by-line basis. Then codes were categorized and sorted according to the research questions. Irrelevant codes were removed and relevant ones were further developed and classified around the major themes. During this whole process, memos were created continuously to structure the initial thoughts and possible suggestions for further analysis [53, 59].

In the next step, the emerging themes were juxtaposed against existing theory to develop a better understanding of the emerging patterns [52, p.24]. To enhance the robustness of the study, a systematic comparison of emerging patterns was performed by treating different regions as cases, for example, Puerto Ricans and Panamanians as one case, Nordics

as another and so on. This helped in identifying patterns consistent among all groups that are geographically, linguistically, and culturally different from each other. Similar patterns were discovered, which helped in establishing internal validity of the results, and in case of any peculiarities or divergences, alternative explanations were sought [53, 60]. In the end, with the continuous refinement and adjustment of the major categories against research questions, a conceptual map was created, outlining the flow of the concepts and the relationships between them.

Finally, these concepts were discussed with another researcher with expertise and interest in qualitative research and the topic of the study. The whole inductive research process resulted in novel findings presented in the following section.

4. Findings

A summary of challenges and strategies adopted during knowledge sharing in non-native language is presented in Table 1.

Table 1. Challenges and strategies in non-native knowledge sharing.

Challenges		Strategies	
Ambiguity	Knowledge comprehension difficulty	Discourse adjustments	Confirmatory question
	Dual translation		Small-talk avoidance
Cost	Time loss		Linguistic politeness
	Opinion loss		Vocabulary simplification and pace moderation
		Media adjustments	Written medium preferred
			Dual medium preferred
			Sketches and images preferred
		Language adjustments	Second common language use
			Code switching
			Knowledge 'translanguaging'
			Metaphors and technical language preferred

4.1. Challenges of non-native knowledge sharing

Based on the data analysis, the two most common challenges associated with non-native knowledge sharing were ambiguity and cost; they are discussed below.

4.1.1. Knowledge-sharing ambiguity

Knowledge sharing is a complex activity particularly when the aim is more than simply passing on explicit information. Problem solving, developing new processes, and making complex decisions are scenarios where knowledge sharing becomes an ambiguous and sometimes chaotic learning activity. Ambiguity is a characteristic of knowledge sharing, and therefore reducing ambiguity and uncertainty associated with the new knowledge is striven for as this enhances knowledge comprehension and internalization [21, 61, 62]. However, interviews show that employees found it difficult to reduce ambiguity in knowledge sharing when using a non-native language. Furthermore, the use of a non-native language was seen as a main contributor to ambiguity in knowledge sharing.

In knowledge-sharing processes, individuals tend to asses each other's expertise and attempt to adjust the complexity of the knowledge being shared accordingly [61, 63]. Many of the respondents mentioned that they find it difficult to evaluate their colleagues' level of knowledge and awareness of the topic at hand when knowledge sharing was conducted in a non-native language. They were confused about whether the difficulty in the knowledge-sharing process emanated from the other person's lack of topical knowledge or from her lack of non-native language proficiency. One of the respondents put it in a rather bold manner:

> When I give an advice for solving some complex problems, and understanding is not being established, the most challenging thing is that I do not know if the other person is bad in English or just less intelligent.

Consequently, it is difficult to adjust the complexity of the knowledge according to the knowledge receiver's level of understanding. While describing his experience of knowledge sharing in a non-native language, one of the respondents said:

> I do not understand as we say in Finnish *vääntää rautalangasta* [explaining in words of one syllable] how clear I should be. I don't know what level of detail I need to go into so the other person can understand.

Although most of our respondents put the onus on others, some of them also admitted that they themselves struggle in clearly explaining the tacit aspect of the knowledge to be shared in the non-native language. One of the respondents put it like this:

> Sometimes it is hard to explain the main points of your problem, to show the other guy that what you really want from him … because of my limited English skills.

In short, difficulty in understanding the knowledge level of others due to the use of a non-native language makes knowledge sharing in this context a very ambiguous process. To instil clarity in knowledge-sharing process, knowledge-sharing participants struggle to decide whether they should make adjustments in the knowledge content or in the sophistication level of the language being used. This extra layer of ambiguity added by the non-native language negatively influences knowledge-sharing interaction. It may also lead to what Lin et al. [64] call *signal jamming*, where knowledge-sharing participants find it difficult to assess the real value of knowledge and consequently to use it.

Another problem that added to this ambiguity/complexity of knowledge sharing was *dual translation*. Underlining the translative nature of knowledge sharing, Seaton [65] points out knowledge sharing is not simply saying 'this is what I know', the process of knowledge sharing goes one-step further to say 'this is what my knowledge means for you' (p.16). A key to successful knowledge sharing between participants is to contextualize the knowledge in the receiver's context, which according to Liyanage et al. [66], is an 'act of translation'. This was confirmed in the interviews as one of the respondents, regarding contextualization of the knowledge, said:

> It is not to only hand them the fish but teach them how to cook it that is how to solve the problem.

This kind of knowledge translation happens in all kinds of knowledge-sharing processes regardless of what language is being used. The use of a non-native language adds another layer of translation on top of knowledge contextualization translation, making knowledge sharing an act of dual translation. The data show that respondents translate knowledge content from their native to the non-native language cognitively and then simultaneously attempt to translate it into the context of the knowledge receiver. For example, explaining to a colleague engine vibration detection and adjustment in English while thinking in Finnish is the first layer of translation; how it applies to the current faulty engine (which the colleague is dealing with) that belongs to a specific generation and was installed in a particular power system is the second layer of translation. Such dual-translation-loaded knowledge sharing was sometimes seen as a frustrating activity, as was apparent in the comments of a manager:

> How to explain to another person when you are trying to think in Spanish, [cognitively] translate it into English, and discuss it with someone with specific problem and expertise who speaks French.

In verbal knowledge sharing, dual translation was the most challenging, while in written knowledge sharing, respondents had more time to respond, rendering dual translation relatively easier:

> How to respond to e-mail about a problem, how to develop a new way of working, normally we can just discuss it first in Spanish, translate it into English and then write back.

Translation of any kind (one language to another, one context to another) is prone to content loss [21], and the interviewees therefore believed sharing knowledge in a non-native language is prone to added ambiguity and lack of clarity.

4.1.2. Knowledge-sharing costs

Knowledge sharing is usually intended to reduce costs by utilizing the existing knowledge [67]. Employees benefit from each other's expertise, so they do not have to 'reinvent the wheel' [68]. It not only saves them time and effort but also enhances the organization's efficiency by reinventing uses of knowledge. The interviews show that non-native

knowledge sharing can actually bring back some of the costs that were meant to be avoided through knowledge sharing. Two types of costs were associated with non-native knowledge sharing.

First, was time cost. According to the respondents, knowledge sharing in a non-native language tends to become a protracted activity requiring many episodes of interaction. The time taken to resolve misunderstandings caused by language differences, such as accents and level of competency, was seen as a cost. It was reported that oftentimes a person would drop by a colleague's office and ask for quick advice on a matter only to find out that the other person had misunderstood the question after the practical application of the advice was made. Such misunderstandings required further attention and clarification, making knowledge sharing an extended and time-consuming activity.

> Misunderstandings and misinterpretations caused by variances in English language stall the discussions unless we clarify them.

In more official knowledge-sharing situations, such as project meetings, a pre-emptive approach was adopted. Some respondents mentioned that extra time is reserved for meetings conducted in English and when a complex issue is at hand. Although misunderstandings were usually trivial in nature and could be solved immediately with some extra effort, in some cases they could trigger a chain of communicative episodes, hence consuming more time. Importantly, misunderstandings were also acknowledged to cause financial cost when the wrong process or machine parts were used due to a misinterpretation caused by, for example, an individual's accent.

In written communication, time consumption was even higher because of the passive nature of e-mail as a communication medium. One of the respondents, describing her experience of knowledge sharing with colleagues from an Asian country, stated:

> Sometimes their written English is impossible to understand, it is really impossible to get the direction of their opinions or answers.

As a result, she had to send clarifying e-mails which could become a real time-consuming process when written communication is the major knowledge-sharing medium within a team and when there are many people involved in the interaction. For some teams it was not possible to always have synchronous communication because some of their engineers were on assignment in remote customer locations with limited phone and Internet connectivity. Therefore, they often relied on e-mail to discuss even the most complex issues, such as problems with engine installations or bugs in clients' power systems. As the adage goes, time is money, and organizational members found knowledge sharing in a non-native language more time consuming and considered it a drag on their daily routine as they considered they could have spent the same time in more productive ways.

There was another kind of cost associated with knowledge sharing in a non-native language termed 'opinion loss'. Many times in a collective knowledge-sharing situation, such as project or group meetings, experts' viewpoints do not come forward because of their limited skills in the non-native language. Hence, when experts find it difficult to postulate their opinions in the non-native language, their contributions to knowledge-sharing interactions start to plummet. This was recognized as a real problem and a threat by many interviewees who have personally experienced it. One of the respondents regards knowledge-sharing situations where people with limited knowledge and expertise prevail over those who are experts just because of their higher English proficiency as a cautionary note. This is not only a cost for the organization in terms of underutilization of its resources but also for the individuals who may find their careers stagnating because they could not prove their worth in their department or team.

Knowledge sharing has always been a complex task requiring commitment and effort from the parties involved. Employees perceive knowledge sharing in a non-native language as an ambiguous and costly activity. The use of a non-native language was seen as adding more problems to this activity, which is already a complex sense-making process.

4.2. Strategies for knowledge sharing in non-native language

The data analysis showed that employees identify different kinds of variations in the process of knowledge sharing when it is conducted in a non-native language. These variations are called adjustments and are of three different types: discourse adjustment, media adjustment, and language adjustment. These adjustments are presented in what follows.

4.2.1. Knowledge-sharing discourse adjustments

When two or more parties engage in knowledge sharing, the two most important aspects of this interaction are what to share and how to share it [63]. What to share refers to knowledge content, and how to share it involves the didactic strategies to communicate the knowledge in the best possible way. Different discourse strategies can be employed to

communicate the same type of knowledge [61, 69]. Such discourse strategies are not elements of knowledge per se, but they play a significant role in generating a collaborative dialogue that 'helps the other side to engage in goal-directed sense-making process' [70, p.292]. Therefore, Tan and Gartland underline that eloquent capacity is as important as absorptive capacity in knowledge sharing [62].

According to the interviewees, employees make many discourse-level adjustments in non-native knowledge sharing; the most common of them was using *confirmatory questions*. Employees use such questions in non-native knowledge-sharing interactions as a strategic tool to ensure that knowledge-sharing participants understand explanations and insights shared by their colleagues correctly. Usually confirmatory questions are asked when one knowledge-sharing participant does not understand another; however, in non-native knowledge sharing, confirmatory questions were asked pre-emptively to rule out the possibility of any false assumption of understanding.

> With the Indians, to get the right information, I will go around to get answers by asking in different ways just to make sure that I understand right.

Similarly, another respondent said:

> In English project meetings, I ask more questions to confirm whether others are following my ideas.

The question-asking strategy was prompted by employees' past experiences, as they are aware of the fact that non-native language limitations tend to create misunderstandings in knowledge dissemination that are costly to both parties later on.

Another discourse adjustment strategy in non-native knowledge sharing is to avoid small talk in and around knowledge-sharing interactions. Small talk requires not only language proficiency but also cultural knowledge that many non-native speakers do not possess. Therefore, in knowledge-sharing interactions, employees avoid small talk even though they agree that it not only improves the knowledge-sharing experience by building trust and friendship among participants but also increases the potential for future knowledge transactions.

Linguistic politeness is also considered an important discourse adjustment strategy in non-native knowledge-sharing interactions. Quite often in knowledge sharing—particularly of tacit knowledge—arguments are developed, assertions and accusations are put forward, insights and motives are explained, and acceptance and rejection of views are communicated [69]. Therefore, employees find politeness to be an important aspect of knowledge-sharing interaction. In the context of non-native knowledge sharing, individuals considered linguistic politeness extremely important, because people with different linguistic proficiency levels, communication styles, and cultural backgrounds have varying thresholds and expectations regarding politeness. Politeness is communicated in different ways according to the language being used and this affects the way people convey this trait in a non-native language [71]. Many respondents experienced that their colleagues have found their tone in knowledge-sharing interaction to be rude; instead of being thanked for the advice provided, they received complaints of impoliteness. In one case, a Finn employee working in a foreign subsidiary found herself in trouble when one of her colleagues reported her to the boss because the language she used in explaining some critical information was perceived as rude and arrogant, even though this was not her intention at all. According to the respondents, this politeness issue is mostly due to people unconsciously trying to translate their thoughts from their native language to the non-native language resulting in the message not always sounding polite to others. This prompted them to pay close attention to the tone of voice and message when knowledge sharing is in a non-native language and when it is more of a negotiation-based and argument-driven learning activity.

Two other discourse adjustment strategies in non-native knowledge sharing were adjustments of vocabulary and speaking pace. These two strategies were geared towards accommodating lack of linguistic skills or differences in accents among knowledge-sharing participants. Using simpler vocabulary and slowing down the conversation speed help others getting the information right.

4.2.2. Knowledge-sharing media adjustments

Knowledge sharing takes place through various communication channels, the most common being verbal and written. Employees used both of these channels for knowledge sharing, although the preferred one was verbal, particularly for complex discussions. It was found that the employees usually make adjustments in their media of interaction for non-native knowledge sharing. For sharing complex or tacit knowledge with a person who has good linguistic skills, face-to-face or virtual interaction over Skype were the preferred methods. Although the nature of knowledge was a decisive factor in deciding the communication medium, linguistic differences in terms of accent and proficiency speaking the non-native language also played an important role. The higher an individual's English proficiency, the more likely it is

that knowledge-sharing participants will pick up the phone or meet face to face and discuss the matters verbally. Verbal interaction provides interactive talk; as a result, counter-questions can be posed and misunderstandings can be cleared up on the spot.

However, if the linguistic competence of the person is low and accent is difficult to grasp, then employees preferred to use written communication for non-native knowledge sharing. This gives them more time to think and structure their message. One of the respondents mentioned that he has difficulty understanding Indian accents, which is a constant challenge since he is part of a project with Indian colleagues. He therefore chooses written communication as his first option if the nature of the task is not too complex. Similarly, another respondent put it this way:

> My Italian colleagues always want me to send an email for communicating very important details such as regulatory requirements for machine parts [that need to be bought], because when we discuss it over Skype they find my English complex and consequently always leave with uncertainty as to whether everything has been understood properly.

When it comes to tacit non-native knowledge sharing, written communication alone was not preferred. Varying linguistic and cultural backgrounds create a wide scope for interpretation, which may result in misunderstandings.

> There have been some cases especially in e-mails, where most of the tacit information is lost, because even though I speak English and they speak English, sometimes we use different phrasing and words. You can interpret them in different ways.

Therefore, for tacit knowledge sharing with non-native English speakers, written communication alone was not considered sufficient, but it was purposively used along with verbal communication.

> After face-to-face discussion, I ask my Scottish colleagues, whose accent I find quite challenging, to send me a written note to make sure that the most important points are understood.

The purpose behind using two media for sharing knowledge, which seems redundant, is to double check the comprehension of the communicated knowledge. This is actually intended to counter uncertainty that both parties experience due to different accents or their lack of confidence in their own or the other person's linguistic ability.

> In English if there is important information, relevant data that needs to be clearly communicated and received, then it should also be supported by something written [such as e-mail] to avoid any verbal language misunderstandings.

It was found that the availability of sketches and images in non-native knowledge sharing made language a relatively less important issue, decreasing the need to make media adjustments. This is in accordance with findings of Sunaoshi et al. [63] who underlined the central role of sketches in knowledge sharing between Japanese and Americans on the production floor. With the help of sketches, respondents found it easier to discuss even the most complex processes without paying any special attention to the medium of interaction. In this context, certain professions such as engineers, who are usually more spatially literate than other professionals, faced fewer problems with the use of a non-native language for knowledge sharing. Consequently, they were less likely to make adjustments in their communication channels. However, accent is still a problem to be tackled, even with the help of sketches. Accent can sometimes lead to confusing one word with another (for example, 'astern' with 'stem') when knowledge discussion involves very technical and complex vocabulary.

4.2.3. Knowledge-sharing language adjustments

The selection of the right language can play a critical role in successful knowledge sharing between multilingual employees [63]. As a multinational organization, the common language in the present context of study was English which was also the first choice for non-native knowledge sharing among employees. However, when employees found it difficult to explain and interpret each other's ideas and perspectives regarding, for instance, problem solving, they tried to use the second available common language among them. The second common language is the language that is understood or spoken by both participants to some extent, for example, Swedish for Finns and Norwegians. Such languages did not have any official status in the organization but were used when needed for knowledge sharing. The knowledge source was flexible in choosing the language that suited the receiver best. Furthermore, conveying the message in the receiver's native language was also considered a viable choice for improving clarity of instructions or arguments. This is not surprising as this strategy has been considered a suitable option for knowledge sharing in previous literature. According to Brasseur [72] knowledge flows better between sender and receiver when the recipient's

language is used because this lowers the latter's—who is already in a disadvantaged position—threshold of understanding.

Although adjusting the language of interaction according to the needs of the knowledge-sharing parties was a useful strategy, it was not always a possibility. When one or both parties are weak in the second common language, they cannot use it as a main language for knowledge-sharing discussion. In this case, individuals use code switching to support non-native knowledge sharing. Code switching is the shifting from one language to another for a single word, phrase, or sentence [73]. Participants use words and sentences from the second common language to improve the other person's understanding process or to explain some key points while carrying out most of the knowledge-sharing interaction in the first common language (English in this case). For example, a German engineer states his experience of knowledge sharing with Dutch colleagues:

> Normally I try to use English with them. But sometimes when I am under pressure or stressed, or I have a complex and big problem to discuss, then I try to explain in German also because it is easier to focus on my points even though my Dutch colleagues are not proficient in German.

Code switching was also used to repeat important aspects of information in two languages, a process that can be called *knowledge 'translanguaging'*. This strategy is used with the expectation that repeating the information in two languages with which the knowledge recipient is familiar would help them deciphering the meaning and making sense of the information.

This kind of code switching does not entail shifting completely to another language, which would not be a useful strategy due to the lack of proficiency of at least one person in the knowledge-sharing interaction. Rather, this code switching is used at the speaker's discretion, that is, they shift only when they consider they have the right word or sentence—in the second common language—to enhance understanding between the two parties. According to the respondents, code switching helps them fill the blanks in their knowledge-sharing interactions without creating disruptions or unneeded explanations or questioning.

Although language choice and code switching was helpful in knowledge sharing according to respondents, they were not able to apply this strategy in written communication. The main reason is the possibility that more people need to be included in the discussion who may not understand the second language at all. Respondents pointed out that many of their problem-solving discussions often end up including experts from different departments, and sometimes they have to communicate the found solution to others who were not initially part of the interaction. In this scenario, if they did not stick to using English, they would need to translate the whole thread of e-mails or the developed manual/instructions, which would be a very time-consuming activity.

> From production a developed system for offshore vessel comes to us for testing. We will write our comments in a file called 'test record,' and all of it will be in English even if all the engineers are Norwegian. Most likely we have to contact colleagues in the Netherlands because of the software or hardware problems that we have to discuss with them, therefore it's better to keep these remarks in English.

Besides language choice and code switching, another language adjustment was extensive use of technical language in non-native knowledge sharing. The use of technical language makes non-native knowledge sharing a relatively easier task provided that both parties share the same professional background. These technical terms do a good job reducing the volume of the conversation as well as any misunderstandings and excessive explanations.

> With the use of the technical terms even the non-fluent English speakers can share their knowledge with each other because to some extent technical language proficiency overrides English language proficiency.

Therefore, many respondents acknowledged the intentional and extensive use of technical language loaded with terminologies in non-native knowledge-sharing interactions. However, this strategy was more useful in some areas of expertise than others. For example, in engineering and software development fields—rich in technical vocabulary—employees stand to benefit from this adjustment much more than those in marketing and communication departments do.

5. Discussion

Language plays a critical role in articulating, exchanging, and assimilating knowledge among knowledge-sharing participants [62]. More than 80 percent of English speakers—the most commonly used official language in

organizations—are non-native speakers [20]. This study made an attempt to shed light on common challenges faced during knowledge sharing processes in a non-native language. Moreover, how employees deal with such challenges and what kind of strategies they adopt to ensure smooth knowledge sharing in a non-native language were also discussed.

In terms of challenges, the findings of this study show that the experience of knowledge sharing in a non-native language is not only a distinct but also demanding one. Although employing a common language allows individuals from various linguistic backgrounds to engage in knowledge exchange, it also complicates the actual exchange of knowledge. The use of a non-native language creates ambiguity in the knowledge-sharing process—which is per se a process prone to communication problems—thus, identifying and solving such problems is necessary to make a knowledge-sharing interaction a successful one [61, 68]. Moreover, the use of a non-native language can make it difficult to identify and adjust the knowledge-sharing process' problems accordingly, since problems can originate from either linguistic lack of proficiency or knowledge deficiency (lack of expertise). Furthermore, dual translation also adds ambiguity to the process as it brings an extra layer of translation to it, making it prone to message loss.

One of the major findings in this study was the perception among organizational employees that knowledge sharing in a non-native language is a costly activity. Although the benefits of engaging in knowledge sharing with people from diverse backgrounds are well recognized [74], many respondents posited that time and expert-opinion loss caused by the use of a non-native language actually erode such benefits. This could have consequences for multilingual teams' performance. These costs are the result of linguistic deficiencies among one or several of the knowledge-sharing process participants, which makes non-native knowledge sharing very much an interdependent activity where participants depend not only on each other's knowledge and expertise but also on each other's capacity to engage in a common non-native language. This may explain why individuals usually prefer to engage in knowledge sharing in their own language groups within organizations, as has been found in previous studies [e.g. 36, 47]. By engaging in knowledge sharing with people from similar linguistic backgrounds, participants can use their native language, enjoying more control over the process and having to worry less about their own or other people's linguistic ability.

This study also shows how employees try to manage their linguistic differences when sharing knowledge in a non-native language. Three different kinds of adjustment strategies are used, here termed discourse adjustment, media adjustment, and language adjustment. The use of these strategies in non-native knowledge sharing underlines two important points. First, even though it is challenging and complex, individuals do engage in non-native knowledge sharing on a daily basis. The reason for knowledge sharing in a non-native language could be both voluntary—for example, when asking for advice from someone who is a non-native speaker but is the most suitable source for the relevant expertise—and involuntary, for instance, when it is necessary in management-tailored project teams. Second, successful exchange of knowledge in a non-native language is bound to the successful usage of that language. Moreover, commitment to respecting and accommodating each other's linguistic abilities in a non-native language play a decisive role in successful knowledge exchange among employees [18, 62]. Therefore, employees consciously make adjustments in their discourse, medium of interaction, and language of choice for knowledge sharing.

5.1. Dual translation

The relevance of language for knowledge sharing has been well established in recent literature. Piekkari et al. created the term linguistic absorptive capacity [52] and Tan and Gartland coined the term eloquent capacity to describe the relationship between language and knowledge sharing [62]. Both of these concepts represent the capability of an individual to speak one or more languages in an organization. Although these concepts underline the importance of language for knowledge sharing, how language actually alters the complexity of the knowledge-sharing process between individuals with diverse linguistic backgrounds is still unknown. The concept of dual translation discussed in this case study captures some of this complexity. Figure 1 shows that the use of a non-native language adds an extra layer of complexity to the knowledge-sharing process. The first layer comprises contextualization translation, which involves modification of knowledge so that it can be understood and applied in a specific context. This kind of contextualization has been discussed in previous literature [65, 66] and therefore does not require further discussion here. More important and relevant here is the interlingual translation layer that represents the reproduction of the meaning of a message in a language that is understood by others. According to translation literature, translators use different strategies that are goal oriented and intended to improve the quality of translation [75]. In this light, adjustment strategies can be seen as translation activities (shown in the interlingual translation layer in Figure 1) that knowledge-sharing participants perform during interlingual translation to deal with the extra layer of ambiguity added by the non-native language.
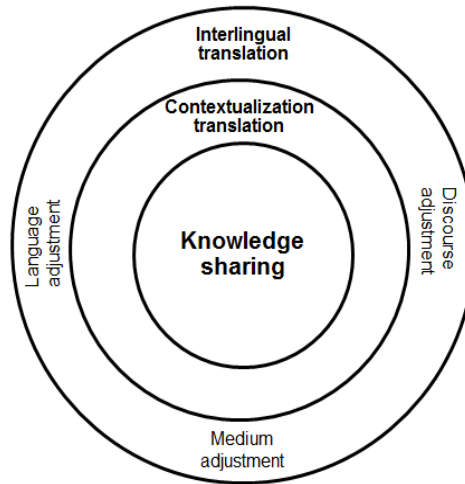
Figure 1. Dual translation in non-native knowledge sharing.

The concept of the dual translation underlines that organizational employees differentiate between knowledge sharing in a native language and that in a non-native language. We rarely see such recognition in previous literature, which means language is usually seen as just another external factor that can be dealt with by improving employees' language competency. However, the findings of this case study show that language is not just another external factor, but rather another layer of complexity entangled in the knowledge-sharing process as employees adopt different adjustment strategies that represent many more skills and much more effort and complexity than simply a capability to speak a particular language.

5.2. Contributions and limitations

This study is a contribution to the research on language and knowledge sharing that has attracted attention in recent years in the knowledge management field [7, 11, 46, 76]. We are aware of the social implications of language diversity that sometimes lead to segregation and restrict knowledge flows across language groups [36, 47]. This research attempted to take one step further by trying to deepen the analysis of language and knowledge sharing by specifically focusing on the use of a non-native language for knowledge sharing. This focus was intended to allow the analysis of the functional and pragmatic rather than the symbolic and social roles of language in knowledge sharing processes. It squares well with the suggestion made by Schomaker and Zaheer that analysis of the relationship between language and knowledge sharing requires an understanding of the difference between the socially (such as language identity and power) and functionally (such as competency and language use) related influence of language on knowledge sharing [11]. This perspective allowed us to see what kinds of challenges are faced at the interactional level and what kinds of strategies individuals adopt in their non-native knowledge-sharing interactions.

Linguistic diversity among knowledge-sharing participants can also be beneficial in enhancing the success possibilities of the process. According to a study by Schomaker and Zaheer, during knowledge transfer, knowledge-sharing participants who have high linguistic distance develop better knowledge understanding as compared to those who have low or no distance at all [11]. A logical explanation is that when there are obvious linguistic differences, knowledge-sharing participants are more likely to be vigilant about the knowledge-sharing process. However, what those specific practices that lead to positive outcomes in knowledge sharing are, is not known. Different strategies found in this case study such as asking confirmatory questions can be considered as such practices. For example, confirmatory questions, posed due to language differences, can be very beneficial in reducing superficial understanding during knowledge sharing in normal circumstances.[1] In some way, language differences between knowledge-sharing participants can also be helpful in successful knowledge sharing. However, this is a preliminary interpretation. This case

study's data do not allow any claim that knowledge sharing in a non-native language leads to better outcomes than one conducted in a native language. The focus here was not to compare the success of knowledge sharing in a native language with that in a non-native language. Therefore, it is strongly recommended that further research looks into knowledge sharing in native versus non-native language, particularly in terms of benefits of knowledge sharing.

This case study outlines the challenges that employees face in non-native knowledge sharing. We do not know much about the longitudinal aspect of these challenges. Do these challenges disappear with continued interaction with the same individuals and make future knowledge sharing easier or do they keep coming back in different forms and contexts? Moreover, do the execution and success of the adjustments made in knowledge sharing improve over time? These questions are not addressed in this study and require further investigation. A longitudinal study would be helpful to shed light on how challenges and accommodating strategies relating to non-native language use evolve, and what consequences they have for an individual's future knowledge-sharing transactions and intentions. Such longitudinal studies could focus on knowledge sharing in specific contexts, such as technology transfer between two units, problem-solving in a new product development team, etc. This would provide a more nuanced understanding of language-related issues in knowledge sharing processes.

The absence of observational data in this study is seen as a limitation. The organization under study was very sensitive about its privacy, so data gathering through observations of knowledge-sharing interactions in project meetings was not possible. It is strongly recommended to do observations along with interviews in future research. Moreover, an ethnographic approach is also recommended. Ethnography is a useful methodology for bringing to light language-use-related challenges and strategies operating at a subconscious level [77].

6. Practical implications

This study has some clear practical implications. When a common language such as English is used for knowledge sharing between multilingual individuals, the most frequently recommended solution is to hire or involve individuals who are proficient in that language [18]. Some of the challenges in non-native knowledge sharing are likely to prevail even if knowledge-sharing participants are proficient in the non-native common language. For example, problems of knowledge awareness and dual translation are likely to exist in non-native knowledge sharing. These challenges are perceptual and cognitive in nature, respectively. They emerge due to the non-native character of the language rather than the lack of proficiency in it. Consequently, even linguistically proficient employees are likely to find non-native knowledge sharing a cognitively difficult activity. Organizations can use incentives to compensate for some of the challenges employees face in non-native knowledge-sharing processes. Incentives have always been considered a potent tool in the knowledge-management strategy of organizations [78]. Incentives related to non-native knowledge sharing can be easily integrated into the existing knowledge-management policy of the organization. They would be helpful not only in promoting interlinguistic knowledge sharing, but also in restricting language-based grouping.

Execution of such reward polices or systems cannot be applied directly to all forms of knowledge sharing, particularly to informal knowledge sharing [79]. As individuals engage in knowledge sharing with their colleagues on a daily basis and quite often informally, such knowledge sharing does not always come under management's radar [80]. For such knowledge sharing processes, organizations should choose a general technique rather than a specific one (such as compensation) [79]. A useful strategy would be hiring employees with exposure to multilingualism, such as experience of working and living abroad. Such people, based on their personal experience, are usually aware of the challenges of interactions in a non-native language and consequently are better prepared to deal with it. It is well known that soft skills learned outside work are quite useful in the execution of work tasks [81]. Similarly, the experience of non-native language use gained outside the organization could be helpful in knowledge sharing in a non-native language within the organization.

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Appendix 1.

Interview guide

Background of the interviewee

- Name
- Job title
- Length of tenure with the company
- Native language and other languages spoken
- Experience of living and working abroad (both personal and professional)

Job profile

- What are your job responsibilities?
- Are you part of a team and what kinds of projects are you working on?
- Who are other team members, where are they from and what is their native language (if known)?

Knowledge sharing activities and situations

- Kindly tell me about the activities in your work that involved sharing experiences and knowhow both formally and informally (examples)?
- What kind of problems do you face at work and who do you go to for advice and suggestions?
- Does anyone else contact you for advice, or information? Describe some specific situations.
- How and with whom do you share your innovative ideas?

Role of language in knowledge sharing

- What language(s) do you usually use for such knowledge-sharing discussions (specific situations are mentioned based on the answers given to above questions) and why?
- How important is the language (being used) in knowledge-sharing situations or problem-solving discussions?
- Do you have any preference regarding language for discussing complex issues with your colleagues?
- Have you ever experienced that you would have been able to explain things better to your colleague(s) if information communication was in some specific language?

- Has there been any incident where the use of English has caused any problems in knowledge-sharing discussions such as problem-solving in project meeting (examples)? Would that have been avoided if it was in your native language?
- How do you know that it is the use of English that causes issues?
- How much do these problems influence your problem-solving discussions?
- What is the difference between using native and non-native language for information and knowledge sharing?

Language variations in knowledge sharing

- How do you try to deal with these problems caused by language in the above-mentioned knowledge-sharing situations?
- What kinds of strategies are most effective when sharing knowledge in English language?
- Do you make any kind of variations in your knowledge-sharing discussion (examples from previously mentioned scenarios) due to the use of English language?
- When you use English, in your view, what things should be considered for successful exchange of information with your colleagues or in a project meeting?
- Is your personal or professional experience of working abroad helpful in anyway?

Narrative

- Think about a most recent event that involved sharing of knowhow, skills, information. Please describe one such event that according to your view was unsuccessful or did not go very well because of the use of English. Then also describe a successful one.