MASTERARBEIT / MASTER'S THESIS

Titel der Masterarbeit / Title of the Master's Thesis

"Intercultural team working in virtual environments – The Influence of the different Language layers on Information sharing in Virtual Teams: A Case Study of a Multinational Company"

verfasst von / submitted by

Julia Angi, BSc

angestrebter akademischer Grad / in partial fulfilment of the requirements for the degree of

Master of Science (MSc)

Wien, 2022 / Vienna, 2022

Studienkennzahl lt. Studienblatt / degree programme code as it appears on the student record sheet:	UA 066 914
Studienrichtung lt. Studienblatt / degree programme as it appears on the student record sheet:	Masterstudium Internationale Betriebswirtschaft UG2002
Betreut von / Supervisor:	Univ.-Prof. Dr. Maria Emmanuella Plakoyiannaki

Acknowledgement

First of all, I would like to express my gratitude to my supervisor, Univ.-Prof. Dr. Maria Emmanuella Plakoyiannaki, Chair of International Business, who gave me the opportunity to write my master´s thesis under her supervision. Her unlimited support, encouragement, and advice guided me throughout the whole process and beyond, preventing me from stopping when I didn`t know in which direction to go. Her confidence in my research gave me faith even when I doubted myself. She provided me valuable feedback during all stages of my work and her quick responses kept me going. Thank you for motivating me to keep up the good work!

Secondly, it could have never been accomplished without the participants of the case study organization. Thank you all for your permission to work with you, for your time and kindness. The pleasant conversations with you made my day and pushed me to continue working. I also appreciate that your help didn’t finish with the end of the interview, but I could also contact you with my questions afterwards. I am very grateful for that!

Moreover, I am grateful to my family, mom, dad, my brother, grandma, for helping me directly or indirectly, not only during these years of my Master studies, but also earlier on, accompanying me on my way. All the little things, words, a hug when I felt alone, a nice smile strengthened me on my way. At this point I would like to name my grandpa, who kept asking me when I will finish, even in the last months, but he was not given the opportunity to live to see it anymore. This is for you! Furthermore, thank you to all my family members, who helped me and kept strength in me without even knowing it. I love you all!

Last but not least, my appreciation goes to my colleagues and friends, Naida, and Caroline. We´ve been working together, writing next to each other and motivating each other. Likewise, Amin and Janko who would help me in a way unknown to them, even before the beginning, with advice, a hug, the right word at the right time. Not to forget Michelle and Ali, who have been with me all the time lately. Additionally, I would like to acknowledge my best friend, Cristina, for empowering me through phone calls from a distance. Finally, special thanks to Paula, Mina, Boróka, and Adrienn for walking the road with me by giving me advice, or even just listening to me to give me the feeling of being heard.

To all of you, my deepest thanks!

Abstract

This qualitative study shows the importance of language on information sharing in virtual teams. Multinational companies operate across time zones without borders. Given this “freedom”, team members should build a connection in order to guarantee smooth work. Prior research has shown the importance of language in International Business. Language barriers lower the involvement in team communication, thus hindering information sharing and the working process. Including emotions brings us a step further. Language-induced emotion is the driving force when building groups based on specific characteristics, which team members hold on to. This master´s thesis extends on the existing literature by combining the concepts of language and information sharing in the context of the virtual environment. The Social Identity Theory is used to explain the behavioral processes that take place when groups are formed. Through the qualitative interviews and netnography applied together in one single study, the opportunity to investigate the topic from all sides opens up. By examining the effect of language on information sharing on two units of analysis, the individual level and the team level, one can get a realistic insight into the subject of several prior research projects. Interview-based results of the study show the individual perception of language as the media for information sharing. That individual perception of language is more significant than any tool of the virtual environment. Observation-based findings give an overall picture of the team operation, of conflicts due to language barriers and misunderstandings, and indicate an approach to cope with these conflicts. Finally, the explanation of the progress of building social identity from personal identity based on the case study organization due to the language contributes not only to International Business studies, but in a way also to Psychology. Thus, it connects the two sciences and opens up the door for further research in this field.

Keywords: Social identity, Personal identity, SIT, Language diversity, Mother tongue, Lingua franca, Jargon, Linguistic identity, Code-switching, Information sharing, Virtual teams, International Business

Kurzfassung

Diese qualitative Studie zeigt die Wichtigkeit der Sprache für den Informationsaustausch in virtuellen Teams. Multinationale Unternehmen operieren über Zeitzonen hinweg ohne Grenzen. Angesichts dieser „Freiheit“ sollten Teammitglieder eine starke Verbindung aufbauen, um ein reibungsloses Arbeiten zu gewährleisten. Frühere Forschungen haben die Bedeutung der Sprache im internationalen Umfeld gezeigt. Sprachbarrieren verringern die Teilnahme an der Kommunikation im Team und behindern somit den Informationsaustausch und den Arbeitsprozess. Das Einbeziehen von Emotionen bringt uns ein Stück weiter. Sprachinduzierte Emotionen sind die treibende Kraft bei der Bildung von Gruppen, basierend auf bestimmten Eigenschaften, an denen die Teammitglieder festhalten. Diese Masterarbeit erweitert die vorhandene Literatur, indem sie die Konzepte der Sprache und des Informationsaustausches im Kontext der virtuellen Umgebung kombiniert. Die Soziale Identitätstheorie wird verwendet, um die Verhaltensprozesse, die bei der Bildung von Gruppen sichtbar sind, zu erklären. Die qualitativen Interviews und Netnographie, die in einer einzigen Studie zusammengeführt werden, eröffneten die Möglichkeit das Thema von allen Seiten zu untersuchen. Durch die Erforschung des Einflusses der Sprache auf den Informationsaustausch auf zwei Analyseeinheiten, der individuellen Ebene und der Teamebene, kann man einen realistischen Einblick in das Thema gewinnen, welches Gegenstand früherer Forschungen war. Die interviewbasierten Ergebnisse der Studie zeigen die individuelle Wahrnehmung der Sprache, die als ein Medium des Informationsaustausches verwendet wird. Diese individuelle Wahrnehmung der Sprache ist wichtiger als jedes Werkzeug der virtuellen Umgebung. Beobachtungsbasierte Erkenntnisse geben ein Gesamtbild der Teamarbeit, der Konflikte aufgrund von Sprachbarrieren und Missverständnisse und zeigen die Vorgehensweise, um diese Konflikte zu bewältigen. Abschließend trägt die Erläuterung des Fortschritts der sozialen Identitätsbildung aus der persönlichen Identität anhand der Fallstudienorganisation aufgrund der Sprache nicht nur zur Internationalen Betriebswirtschaftslehre, sondern in gewisser Weise auch zur Psychologie bei. Damit verbindet sie die beiden Wissenschaften und öffnet die Türe für weitere Forschungen in diesem Bereich.

Table of Contents

List of Tables

List of Figures

List of Acronyms

Hint: the page number reflects on the first appearance

<u>FÄLLE</u>

1. Introduction

"If our world is to become a global village, the need for better understanding and communication among people from different cultures is crucial". This was said by the researcher, Paul R. Kimmel, who emphasizes the importance of social understanding that affects the interpersonal processes of international communication (Kimmel, 1994). The emergence of the international connection between people started in the early 90´s, when technology increased in importance. Globalization is unstoppable, since people noticed that building social groups can decrease the knowledge gap and increase information sharing. For doing so, the most important component is language.

This paper investigates how different languages influence information sharing in virtual teams. Virtual environments arise due to globalization, since given the huge distances between international partners, being in the same place is impossible. Several studies are trying to explore this phenomenon. After identifying the research gap and showing the importance of this study (chapter 1), I explore the notion of language. One can identify three types of languages: Mother tongue, Lingua franca, the company's corporate language, and Jargon within a group of individuals. As a main theoretical framework Social Identity Theory will be chosen, which helps to understand these different types of languages rooted in language diversity (Chapter 2). On the basis of an ethnographic approach, netnography and qualitative research will be conducted using different qualitative methods (Chapter 3). I am going to interview the members but at the same time observe virtual meetings using an ethnographic lens. Finally, in chapter 4 the findings will be presented followed by the conclusions drawn in chapter 5 in order to outline the theoretical and managerial contributions and cover the limitations of this paper, giving a direction for future research.

1.1 Research gap

Since the main goal of this thesis is to investigate information sharing by looking at the language/ type of language as a factor that can form the whole process, the aim at the beginning was to find a theory that can be used to support the research. There are several studies on these terms, which are searching for an answer by looking at information sharing and languages separately, but almost no research that binds these two concepts. As a starting point, gaining a deeper understanding of information sharing while giving the language a function as a "bridge" helps to find the existing problem, and therefore a suitable theory to find a solution.

When looking at information sharing, the first thing that stands out is that this is not only investigated in the field of international business. It often appears in the literature of supply chain management (Kembro, et al., 2014), or information sciences and technology (Pilerot & Limberg, 2011) and almost all business units. This process is also facilitated by the improvement of technology. Information sharing not only includes the communication process, but also the exchange of technical work and expertise in an organization (Constant, et al., 1994). Investigating in a virtual environment requires information technology. In this sense, virtuality is something that cannot be limited to only one area, but the different fields working together, since it has a strong dependency on technology (for instance the electronic field) and the geographical dispersion. Given this factor, it follows that the degree of difference is another aspect that must be taken into consideration. This includes the culture, the organization as such, the function (role) that a person fulfills in this organization, and finally the language (Gibson & Cohen, 2003, p. 37). The latter is the concept this master thesis is built around. It might influence not only the communication between people but also the team identification (Krawczyk-Bryłka, 2016). Team identification is derived from group membership (Brown & Capozza, 2000, p. xv). The theory that best describes and explains this phenomenon is SIT (Social Identity Theory).

Social Identity Theory looks at the interaction between personal and social identities. According to Tajfel (1974), people evaluate group members more favorably than outsider given the individual's self-interest (p. 65). This theory connects cognitive processes to behavioral motivation to avoid misunderstandings. This self-interest, however, can cause intergroup conflicts. And this brings us back to the language (language identity), which is a reason for this conflict. Tenzer (2017) sees this connection between social identity and linguistic identities. Language identity is a key factor in putting people into categories. Being in the same language group can facilitate social integration, since communication is the basis for human interaction. The result is knowledge and information sharing (Maloney & Zellmer-Bruhn, 2006). Therefore, social identity influences the contribution to an information pool. However, it was also proven that the willingness to share information among people outside the group, which are told to be unlike them, is much lower, even when using the same language. Therefore, social and group identity in engaging in information sharing is important (Flanagin, et al., 2014). The effect is, however, not known.

So, moving to another level, the next step is to look at the connection between information sharing and language diversity. But what is the connection between these two terms? Previous research has connected language diversity and knowledge sharing, whereas knowledge and information were tightly connected (Tenzer, et al., 2017). In her work, Tenzer (2021) also highlighted the importance of experimental studies within multilingual participants. However, this research was conducted in German-owned corporations, with german native speakers. It does not refer to conducting research in a virtual environment with the new group phenomena, virtual teams through observations. Given our global environment, this is an important aspect that cannot be ignored, yet is under-researched. She has also noticed a connection between the language and the choice of communication media in virtual teams, but its effect on information sharing remains unclear (Tenzer & Pudelko, 2016). It is suggested to develop relationships through virtual collaboration like Skype or WebEx for future research (Tenzer, et al., 2017).

As shown in the examples mentioned above, there is scarce literature on the topic of how languages influence information sharing, and almost no literature about teams in virtual environments in this context (Tenzer, et al., 2014), especially when looking at the term language. Language diversity is present in the everyday interactions, but there is limited research and little attention on this topic. Consequently, the research gap is addressed: in this paper the aspects of language diversity are going to be investigated separately: Mother tongue, Lingua franca, and Jargon, and how this diversity influences the work process of a virtual team (Tenzer, et al., 2021; Piekkari, et al., 2015).

1.2 Research question

There have been studies connecting language with multinational corporations. There is no doubt that language knowledge is one of the most important tools a person can have. But one needs to take a look at it from different perspectives. In her paper, Tenzer (2017) carried out a five-level analysis from different viewpoints: individual, group, firm, country, and last but not least multi-level. On each level, she analyzed language connected with skills, free-riding problems, emotions, team conflicts etc. She showed that language diversity influences almost all management decisions. In this study, language diversity not only relates to the layers of language discussed in the next chapters, but since it is a cross-linguistic contact between team members, the way how they interpret and think depends on their diverse linguistic background (Lauring & Selmer, 2012; Piekkari, et al., 2015; Henderson, 2005). In consequence, the layers of SIT are included in this research and help to justify the findings. In my thesis, I would like to approach language as a multi-layered concept. The best way to do so is under the lenses of the Social Identity Theory, since language can be best captured by observing social interactions. In view of the connection of linguistic identity and social identity, the first question to ask is regarding the information sharing, that is shaped by social identity given the language use. Afterwards it is important to clarify what the use of language exactly is, therefore, the language diversity and its influence on information sharing in virtual teams. Thirdly, in the light of language diversity, since code-switching happens between the language layers, its influence on information sharing will be investigated.

Having identified the research gap, the lack of knowledge regarding the connection between language diversity and information sharing under the lenses of Social Identity Theory, this section will address the research questions:

“*How does social identity shape information sharing given the language use?”*

“How does language diversity influence information sharing in virtual teams?”

“How does code-switching influence information sharing in virtual teams?”

1.3 Key Terms

Language diversity

MNC's face challenges given the composition of their members, the different languages. Language diversity is unavoidable in corporations that are present worldwide. Leading scholars define it as the cross-linguistic contact between individuals through a shared language, that helps to "interpret, understand, and respond to information", improving possibilities for communication. (Lauring & Selmer, 2012, p. 158). According to Henderson (2005), who has conducted several research projects in the field of social-linguistic studies and the use of English as a working language in International Business, language diversity has a great influence on social processes, team building, and communication outcome. She found that it is a valuable resource and along this, challenges can be identified (Henderson, 2005). It can be seen either as a barrier (Jonsen, et al., 2011; Harzing, et al., 2011; Chen, et al., 2006) or an opportunity (Hurmerinta, et al., 2015; Pavlenko, 2014; Brannen, et al., 2014, p. 495). One thing is certain: its importance is huge, since it is crucial for the functioning of multinational corporations (Piekkari & Tietze, 2011). Managing language diversity effectively contributes to information sharing and developing acceptance between individuals (Lauring & Klitmøller, 2014; Lauring & Selmer, 2012). (Read more in Chapter 2.2)

Social Identity Theory

Social Identity Theory refers to the interaction between personal and social identities. According to Tajfel (Tajfel, 1974), the world is divided into "them" and "us" through the process of social categorization. He distinguishes between three categories (Chapter 2.1) by identifying objects (including ourselves), groups, where one belongs to, and compare those groups with each other. Each and every person is different, language might mean the group identity, that shows that difference (Heller, 1982, p. 3). An individual chooses a certain group that he/she wants to belong to according to the emotional and valuational significance of the group´s membership (Ellemers, 2020). The language is a choice (Heller, 1982, p. 5). Social identity is largely maintained through language (Gumperz & Cook-Gumperz, 1983, p. 7). Previous research has shown a link between the choice of language and the social situation of the individuals (Blom & Gumperz, 2000, p. 116 f.). It follows that language can be explained by the Social Identity Theory, which is discussed in Chapter 2.1.

Code-switching

Code-switching is the use of more than one language or style within a conversation, while moving back and forth between languages (Lauring & Klitmøller, 2014). It makes the communication easier by avoiding translations. It is also known as a code for communication, that can show the family background, group- and local identities (Hansen & Liu, 1997). Consequently, it is connected to the Social Identity Theory (Gumperz, 1982, p. 66). A more detailed explanation on Code-switching can be found in Chapter 2.3.

Information sharing

Information sharing is the process by which information is provided to others in a way that affects the other person. It is a resource which is important in decision making (Mesmer-Magnus & DeChurch, 2009). The emergence of communication technologies has made information sharing easier. This can be a question of success or failure especially in multinational corporations, where team members cannot be in the same place at the same time. Therefore, the exchange of work-related information to keep everybody up-to-date and have access to key developments is crucial (Bunderson & Sutcliffe, 2002, p. 881). A focal point of information sharing is virtual teams (Marschan-Piekkari, et al., 1999). (For more information read Chapter 2.4).

Virtual team

A virtual team is a group of people dispersed across multiple geographic locations in different parts of the world who work together. This also includes them that they are working from different time zones and in different languages, which can make communication much more difficult. However, it is much cheaper and faster than travelling across countries and given the developed communication technology and media channels of our time, most, if not all multinational companies use them (Maloney & Zellmer-Bruhn, 2006). Chapter 3.2.3.1 deals with this topic.

Media Richness Theory

The Media Richness Theory, also called Information Richness Theory claims that media is an information sharing tool (Chapter 3.2.2.1). Rich media reduces the complexity of a task and makes collaboration easier (Klitmøller & Lauring, 2013). It goes from face-to-face communication (the richest media) to phone calls. The main goal is to achieve simultaneous information exchange, even though the parties are far apart. The more information is exchanged, the less the uncertainty is (El-Shinnawy & Markus, 1997).

Key terms of the case study organization

Certification creation

Depending on what domain it is about, a firm should launch certification programs to train its professionals, for example for the engineers to gain knowledge and a greater understanding in the application of new technologies in order to gain a competitive advantage, since technology is the domain that undergoes developmental changes the most (Indeed Editorial Team, 2021).

KPI

KPI is the key performance indicator. This helps to understand how the plan is going to be executed in the case study organization and what to do, which indications to pay attention to and if something does not go the way it should. The company uses it to analyze software source to gain information about critical aspects of developing a software system, like team-performance, time-to-market, risk management and failure prediction (Kermorgant & Manninen, n.d., p. 7 f.; Kranzlmüller, et al., 2002, p. 48 ff.).

CoP

Community of Practice is a group of people who share a common topic or problems and come together to fulfill individual or mutual goals. The way of fulfilling things, the way someone behaves is defined by the membership and the practice in engagement where this mutual endeavor manifests. It is a social theory of learning along which members unintentionally acquire language skills. The activities (practice) they do show the belonging to the group through characteristics like the specific language they talk and the typical interaction between the members (Holmes & Meyerhoff, 1999). Regarding the work of teams in virtual environments where personal offline contact is missing, CoP might be a pillar to foster team cooperation. Research has shown that it is particularly important in the online environment, since it not only helps to develop group identity, but also individual identity, by creating a social and professional connection resulting in the decrease of isolation (Gray, 2004).

Outage prevention

The main motive is to avoid the period when a service is not available or fully closed. The case study organization provides a software support service that helps to optimize performance and plan for growth. The skills required are developed through customized trainings (Interviews).

1.4 Theoretical contribution

This Master thesis establishes a link between language diversity, code-switching, and information sharing in virtual teams under the lenses of Social Identity Theory.

The study contributes to the knowledge of language in use given the virtual environment. Since multinational corporations exist, the language is essential to respond to the changing environment (Lauring & Klitmøller, 2014). Previous research has shown the negative influence of language on the relations between team members if language is not used properly. However, if it is managed effectively, it contributes to team building (Henderson, 2005). In this research I am targeting project teams by conducting interviews with their managers and monitoring their everyday work to see how language shapes their communication. These teams are not specialized in languages but consist of engineers and different professionals, who use language only as a source to connect to their foreign environment. The fluency in the corporate speech, the vocabulary use affects interpersonal interaction (Lauring & Klitmøller, 2014). This research is extending previous research by providing an additional factor: virtual team members.

2. Theoretical Background

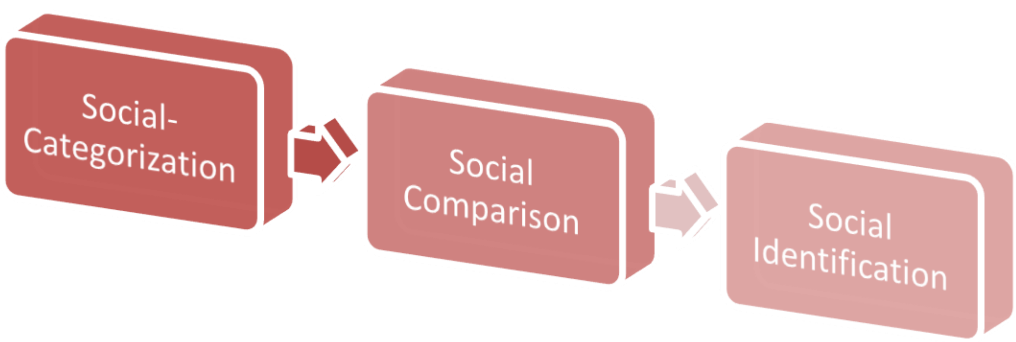
This chapter gives a theoretical outline of the key concepts and theory used in order to have a starting point and a strong foundation to rely on. The basic theory is the Social Identity Theory supported by Tajfel, which describes the process of belonging to a social group to achieve fulfillment. The first part (chapter 2.1) guides the reader through the steps from self-categorization to social comparison in order to arrive at social identification, which is the tip of the iceberg where people can identify with the group they belong to, and where personal and social identity meet. Among other researchers, Tenzer went further with this thought and connected social identity with linguistic identity. Therefore, it is important as a next step to clarify what language and language diversity is (chapter 2.2). It is said that language plays an important role in International Business and it has been subject of several studies. In today´s globalized world having a lingua franca, a corporate language is inevitable, given that people work across time zones. This chapter goes through the layers of languages the Mother tongue, Lingua franca, and finally Jargon. These three concepts, however, cannot be separated and have to be investigated together, because people might switch unconsciously between these layers facilitating communication, or on the contrary, making it even more difficult (chapter 2.3). In any case, it contributes to the exchange of information (chapter 2.4).

2.1 Social Identity Theory

Since the beginning of human existence, society has played an important role in a person's life. The human is a social being, who feels fulfillment only by belonging to groups. The first person who began to deal with this topic was Henri Tajfel, a polish social psychologist, whose contribution made a huge impact on what we know about social identity today. In his book, `An integrative theory of intergroup conflict` published in 1979 together with John Turner, he introduced and refined the concepts of social categorization, social comparison and social identity, which led to the 1986 republished work, `The social identity theory of intergroup behavior` and presented the term "Social Identity Theory" (Dumont & Louw, 2009, p. 48). Intergroup relations and behavior are based on people's identity. This means that it has an enormous influence on the whole domain of group processes (Brown & Capozza, 2000, p. vii).

Social identity, described as an individual's knowledge of belonging to certain social groups, is the study of the interaction between personal and social identities. It highlights important questions, such as "the relationship of the individual to the group and the origins of intergroup conflict" (Brown & Capozza, 2000, p. viii). This is affected by the personal aspect on one hand, like sense of self-worth, behavior, performance expectancy, experience, and the social aspect such as social presence, or sense of belonging on the other hand (Cheng & Guo, 2015). Tajfel (1978) defines it as "that part of an individual's self-concept which derives from his knowledge of his membership in a social group (or groups) together with the value or emotional significance attached to that membership" (Scheepers & Ellemers, 2019, p. 131). This means it is the cognitive process of an individual that evokes motivation and a positive social identity, which at the same time helps to deal with its opposite, the negative social identity. This cognitive subconscious process was tested, and it was shown that people favor their own group over other groups and connect them with either positive or negative social identity (Scheepers & Ellemers, 2019, p. 134 ff.).

There are three psychological processes that are important with regards to social identity: Self-categorization, Social identification, and Social comparison. Figure 1 shows the steps to reaching self-esteem.



1. Figure SIT Process (own illustration based on (Scheepers & Ellemers, 2019, p. 136)

.

Self-categorization (social categorization) was the first process that gave a definition for social identity (Brown & Capozza, 2000, p. ix). It refers to the people's perception of themselves and others with social categories based on criteria that might be external or internal. For instance, thinking of a certain person, such as a person with a title, like lawyer (Ellemers, 2020). This type of process is used to describe intergroup phenomena, such as social judgements, cooperation, or linguistic behavior (Brown & Capozza, 2000, p. ix). The latter is what this thesis is going to investigate, the linguistic perspective and its effect on inter-group information sharing within the team. To sum up, the idea behind this step of the process is that people need to belong to a group (this group might also be an outsider group), to which they assign certain properties. This gives the basis of social identity (Scheepers & Ellemers, 2019, p. 136).

Social comparison refers to people determining the relative value or social standing of a group and its members. For example, a professor has a higher social position compared to a student (Ellemers, 2020). People identify with the group and define themselves through its characteristics. This leads to a process where social comparison is no longer avoidable. It will get to the state where self-comparison and group-comparison show a sharp boundary between in-group and out-group, leading to "competition for positive identity" (Islam, 2014, p. 1782). This results in a certain homogeneity being created within the group (Edwards & Liu, 1997).

Social identification denotes people sensing who they are and what kind of connection they have with others. It is "an individual's knowledge of belonging to certain social groups, together with someone emotional and valuational significance of that group membership" (Ellemers, 2020). Reaching a positive social identity helps the individual to improve their self-esteem and its position given in the society they belong to. It not only has implications in the teamwork of the organization, organization psychology, but it also has a deep impact on health, wealth, headquarters' decisions and workplace commitment of the individual (Scheepers & Ellemers, 2019, p. 136 ff.). Social Identity Theory is a great tool when dealing with different groups, especially if it happens in a virtual environment where personal contact is not possible. However, if not used correctly, it can foster rivalry between the team members, instead of helping them working as a team (Scheepers & Ellemers, 2019, p. 144).

Positive social identity means enhancing the positive characteristics of the group, while rating other groups rather negatively (Giles & Johnson, 1987, as cited in Edwards & Liu, 1997). The language choice and the actual language use indicate social relationships based on shared or unshared group memberships, and thus help to construct social identity in specific contexts (Heller, 1982, p. 5, as cited in Edwards & Liu, 1997).

In conclusion, it shows who a person is in the group to which he/she belongs to. Social Identity Theory has also implications in terms of how we use languages and code-switching (Heller, 1982, p. 5, as cited in Edwards & Liu, 1997), as it is tightly connected to the belonging. They work together and each of them lacks something if one of those is missing. Any social identity is suitable for the current study: categorizing people based on the language they speak, comparing the previously created groups based on language, and finally identifying themselves within the group with other members thus reaching a positive social identity and a belonging in the society. Language reflects group identity in other words "being different" from other groups (Heller, 1982, p.3, as cited in Edwards & Liu, 1997). This paper investigates how language diversity, within that the different layers of languages and the different languages, influence information sharing in the virtual environment. Information sharing takes place between groups and on a micro level between individuals. Social Identity Theory aims to explain inter-group conflicts given a person's social belonging, due to the fact that he/she identifies with the group he/she belongs to and makes a comparison with other groups/members of the group (Islam, 2014). Therefore, SIT is the best theory to use to approach this study.

This topic of the connection between social identity and language has long been of interest to researchers. In her paper, Tenzer (2017) connects social identity with linguistic identity. Social identity is mainly maintained through language (Gumperz & Cook-Gumperz, 1983, p. 7), while linking the choice of language and the social situation (Blom & Gumperz, 2000, p. 125). Social Identity Theory has implications in terms of how one uses languages, and also in terms of code-switching, enabling communication and information sharing (Heller, 1982, p. 5, as cited in Edwards & Liu, 1997). Social identification and language as an instrument for communication always go hand in hand since language might be a signal of social identity.

In this thesis Social Identity Theory as a basic concept is going to be used to see what kind of influence identity has on the formation of language in virtual teams and how this is essentially reflected in information sharing (code-switching). For this purpose, it is important to understand what language diversity is and how it works.

2.2 Language diversity

A very interesting component is language. It seems to be simple since everyone knows the term when talking about it. But how can it be defined? Table 1 shows an overview of the relevant literature in this topic. The chronological order is according to its sequence in the text.

Language is "the essence of human life", that produces meaning (Chidlow, et al., 2014, p. 1). Piekkari (2011) was looking at language-sensitive investigations in the field of International Business. She claims language to be difficult to define. She takes a definition from the paper of Tietze, Cohen and Musson (2003) describing language as "systems of meanings which are central to the process of constructing organizational, social and global realities [...] source through which the 'connecting' of different socio-cultural, institutional and individual worlds occurs" (p. 267). Giles and Johnson go one step further and connect language with identity, describing language "as a salient marker of group membership and social identity" (Giles and Johnson, 1981, as cited in Hansen & Liu, 1997, p. 568; Giles & Johnson, 1987). The variety of languages, the separation of people based on values, behavior, and beliefs given the learned language, and the differences in proficiency between individuals can be formulated as language diversity (Taylor, 2020).

Language diversity is defined as the cross-linguistic contact between individuals through a shared language, that helps to "interpret, understand, and respond to information", improving possibilities for communication (Lauring & Selmer, 2012, p. 158). Most often it is considered as a part of cultural diversity and therefore not worthy of further investigation. However, given unforeseen problems, such as mutual understanding and information sharing, the importance of the term has increased over the years thus raising new questions in this area (Henderson, 2005). Language diversity is important when regarding International Business. It can be seen as a medium of thought, where organizational, social, and global realities can be constructed. Since today´s life takes place in a global environment, language is unavoidable (Marschan, et al., 1997). This global world not only calls for the need for language but also for the use of multiple languages, sometimes even at the same time. Intensive communication is required. Its effectiveness, however, depends on the language they share (Harzing & Pudelko, 2014). Brannen, Piekkari, and Tietze (2014) emphasized the importance of language in multinational corporations and defined language as a key concept, however not adequately theorized. For that reason, they have collected language-relevant literature and the process of development of this new domain with the focus of language and languages. The layers of language, either they are the national, corporate or the technical, are defining not only the integration, but also human interactions. In this research, when talking about the phenomenon of language diversity, it is about these 3 layers.

Foreign language skills have an influence on international opportunity recognition (Tenzer, et al., 2017). Since it has a huge impact on organizational communication, its importance has grown. Multinational companies carry out their workplace practices in a second or third language with people with different mother tongues. Advances in communication technology have changed the way people speak at work. In addition to this there is the fact that work is no longer executed in a single place but requires people to travel. Even if they are working from their home country, constant communication with colleagues from different countries is necessary. MNCs, operating in foreign countries need to bridge over the difficulties that arise through language, institutional differences, and language boundaries.

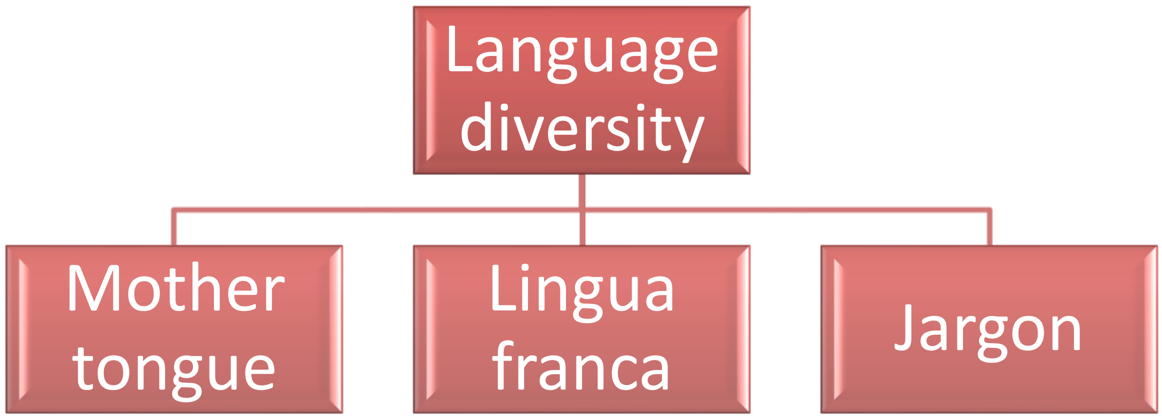
Researcher	Year	Title	Source	Focus	Findings
Chidlow, Plakoyiannaki & Welch	2014	Translation in cross-language international business research: Beyond equivalence	Journal of International Business Studies	Problem with translation in International Business	There is an equivalence of meaning between languages. Translation is data and source.
Piekkari & Tietze	2011	A world of languages: Implications for international management research and practice	Journal of World Business	Language-sensitive research in international business and management	Collection of articles for to undertake language-sensitive research
Giles & Johnson	1987	Ethnolinguistic identity: a social psychological approach to language maintenance	International Journal of the Sociology of Language	Investigation of cognitive processes relating to social categorization, identity, comparison, second-language acquisition in the context of language maintenance	People give meaning to their group by comparing themselves with other groups. There is a relationship between social psychology, language, and identity.
Marschan, Welch & Welch	1997	Language: The Forgotten Factor in Multinational Management	European Management Journal	Language as an important element in management due to the increasing demand of operation in foreign language environment	In the Finnish multinational company, they are using rather English as the company language the Finnish, meaning, not letting be language a forgotten issue

Researcher	Year	Title	Source	Focus	Findings
Brannen, Piekkari & Tietze	**2014**	The multifaceted role of language in international business: Unpacking the forms, functions and features of a critical challenge to MNC theory and performance	Journal of International Business Studies	Understanding the interplay between the multiple facets of language its day-to-day effect on business	-
Tenzer, Pudelko & Zellmer-Bruhn	2021	The impact of language barriers on knowledge processing in multinational teams	Journal of World Business	Effect of language diversity on communication, thus affecting knowledge processing	Language barriers influence team communication, thus reducing participation in team
Tenzer, Terjesen & Harzing	2017	Language in International Business: A Review and Agenda for Future Research	Management International Review	Summary of literature about the influence of language diversity in almost all management decisions	Summary of core findings of articles on language in IB by individual, group, firm, and country level
Tenzer & Pudelko	2015	Leading across language barriers: Managing language-induced emotions in multinational teams	The Leadership Quarterly	Negative emotion caused by language barriers and solution for MNT leaders to diminish it	There are strategies that can prevent job anxiety caused by language by helping team members to overcome language diversity.
Tenzer, Pudelko & Harzing	2014	The impact of language barriers on trust formation in multinational teams	Journal of International Business Studies	The influence of language barriers on trust formation in MNTs	Surface-level diversity creates insights to deep-level diversity. Language is an important mediator between teamwork and success
Harzing & Pudelko	2014	Hablas vielleicht un peu la mia language? A comprehensive overview of the role of language differences in headquarters-subsidiary communication	The International Journal of Human Resource Management	Language differences are a danger to effective communication, because it often depends on a common language	Language differences are separated from cultural differences. Furthermore, the lack of a common language is connected to misunderstandings, and the cause of less face-to-face communication
Lauring & Klitmøller	2014	Creativity and Performance in MNC	Academy of Management Proceedings	Job anxiety because of the second language in multicultural teams Language management	A team member´s job anxiety is affected by foreign language, but can be reduced by the team leader
Hinds, Neeley, Cramton	2014	Language as a lightning rod: Power contests, emotion regulation, and subgroup dynamics in global teams	Journal of International Business Studies	Asymmetries in the spoken language	„Us vs them " Influence of sub-grouping on emotion processes through language-related choices and attitudes
Henderson	2005	Language Diversity in International Management Teams	International Studies of Management & Organization	Interaction between members of international management teams in multinational companies	Language diversity impacts team building, and communication. English as the corporate language might cause difficulties

1. Table Key studies (own illustration)

There are language constraints, especially between people who do not share the same language as their mother tongue. Whereas scholars often consider language diversity as a barrier (Jonsen, et al., 2011; Harzing, et al., 2011), some others see it as an opportunity (Hurmerinta, et al., 2015; Pavlenko, 2014, p. 311; Brannen, et al., 2014). Given the fact that it is a fundamental step in the direction of success, a deeper observation of this diversity and its possible consequences is inevitable. It was recognized that there was a need for nearer investigation of the language in the international environment. For that reason, language diversity came into the spotlight, considering it as a "barrier to effectiveness and to doing International Business due to communication problems" (Jonsen, et al., 2011, p. 48; Tenzer, et al., 2014). So, language can be a fundamental hurdle that can hinder the communication flow if it is not mastered. In their work Tietze and Dick look at English as the corporate language as something to be overcome, rather than an instrument to use (Brannen, et al., 2014; Dick & Tietze, 2013). At any rate, it depends on the speaker's proficiency (Lauring & Klitmøller, 2014). In case it is managed effectively, it can be an opportunity leading to team building and information sharing (Lauring & Klitmøller, 2014). Being an opportunity or a barrier, however, language cannot be avoided. Building on this line of thought, scientists have recognized the importance of languages, whether it is in the field of Business or Law, as an essential tool. A great resource that is learned naturally, without even thinking about its significance, since people grow up with it. Language only comes into focus, when another foreign language and the difficulty of that language appears, drawing attention, and as a result language as a skill is accepted.

In this master´s thesis talking about language diversity refers to the different layers of language showed in figure 2. These layers, based on the relevant literature of the study, can reflect the way that people communicate.



2. Figure Language diversity and its layers (own illustration)

Its importance is proven, its difficulty lies in its layers and its complexity. There is a difference between the actual language use within the same language. The different layers of language that this paper discusses are the Mother tongue, Lingua franca (the corporate language of the company), and Jargon (the individual´s language) shown in figure 2 (Lauring & Klitmøller, 2014). I will divide these layers in two parts, the mother tongue (personal field) as a basic knowledge everyone acquires as a subjective right, depending on the origin, and the company's language (business field) and the Jargon respectively, that must be learned later on.

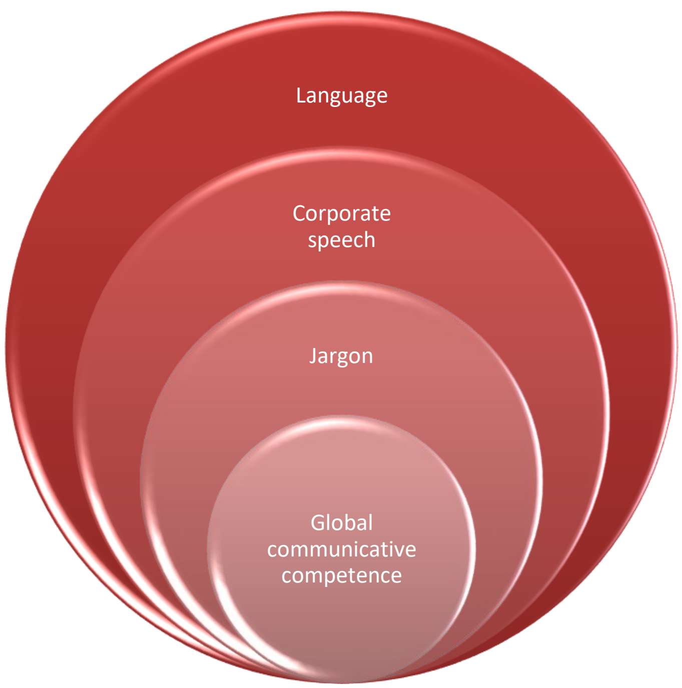
Mother tongue is the basic layer, it is the spoken language that a person grows up with. A person usually has one mother tongue, but in today´s globalized world where national boundaries are diminishing, bilingualism has gained importance. In the case of multinational organizations, it can affect the use of different foreign languages due to the belonging to a specific language family. Because of this difference, these kinds of teams are "language-diverse" (Henderson, 2005, p. 69; Lauring & Klitmøller, 2017). It plays an important part in the self-image of the person. It was proven that rhetorical skills and the ability to convince is the most advanced in the mother tongue (Henderson, 2005).

In the century of multinational companies, like the case study organization, a shared company language, the Lingua franca, is necessary for making communication easier. Nevertheless, this is something hard to fulfill. However, company language does not always ensure good communication. But what does corporate language mean? Lingua franca, or with other words the corporate language of a company, is a language type adopted by two or more communication partners with different mother tongues. It can provide economic advantage by facilitating communication. The globally accepted lingua franca has become English as the lingua franca of International Business through "language standardization" (Anglemark & John, 2018; Brannen, et al., 2014; Marschan, et al., 1997, p. 591; Hinds, et al., 2014). This phenomenon is, however, complex. It has different layers building on each other to make the whole concept existent. The first layer, the language is a fundamental element, the knowhow of global communication. It refers to the business-specific understanding and expertise a person has in his field, followed by the competence of the Lingua franca, the corporate speech, which creates trust among people and facilitates task management, given the common language in the business world: English.

The layer of Jargon takes communication to another level. It is an often neglected and taken for granted type of language, which can have an influence on the communication fluency. It is considered as language used within a specific group that is not identity-driven but rather specialization-driven. This means that regardless of nationality or mother tongue, it is used for a particular circumstance within a group of trade, be it in the circle of scientists, lawyers, or engineers. Given this feature, it is difficult to comprehend whether it is understandable at all by outsiders (Bullock, et al., 2019). In this context, native speakers within a team no longer have the advantage of having the Lingua franca as their Mother tongue, they also must master the language terms, abbreviations used and the expressions. All in all, it is about communication in the common corporate language, given the difficulties of the globalized world, different nations, organizations, fields (Kankaanranta & Louhiala-Salminen, 2013). Considering that an organization is no longer limited to a specific region but must have contact with other organizations (e.g., customers) on a daily basis, Jargon is tacit knowledge that must be mastered.

These layers might be embedded in one another as shown in figure 3. The language / Mother tongue is embracing all the other layers, being the easiest layer to speak. A smaller part is the corporate language, following by the Jargon that shows the specific language. Global Communicative Competence is the "bull's eye", the right use of all layers, which makes people able to communicate using the right words in the right situation (Kankaanranta & Louhiala-Salminen, 2013, p. 28). Consequently, the social content also plays an important role, even in the case of Lingua franca.

There is literature investigating the effect of the use of Jargon on communication (Mellor, 2018 as cited in (Bullock, et al., 2019; Sharon & Baram-Tsabari, 2013). They have found an adverse effect of Jargon on information processing due to lack of comprehension. On the other hand, the very opposite may also occur, namely speaking the Jargon better than the Lingua franca. Therefore, to achieve the balance, integration and continuous support is needed in such groups in order to overcome those difficulties (Lauring & Klitmøller, 2014).



3. Figure Model of Global Communicative Competence (Kankaanranta & Louhiala-Salminen, 2013, p. 28)

In conclusion, all these layers listed above play an important role in the study, being the layers of language, which is the phenomenon being investigated in the research. It might shape information sharing in all steps of the workflow. Language diversity is not only about speaking several languages at the same time but also a way of how the individual thinks, given its socio-linguistic background. This can be shown by the different interpretations, which are similar in a similar language family, and can be totally different if there is a gap between the languages. The observed diversity is also present at the listener's side, since speaking and listening requires the same understanding. While further investigating the language as such, it must be divided into its layers. At this point the significance of Jargon and the interaction of Jargon and Lingua franca in addition to using the native language connected to the identity one has brought with becomes apparent. As one could see in this chapter, language is a principal factor that must be taken into consideration, but it does not work alone. The social perspective is always a key point it depends on the speakers/ listeners social background and feelings. That is where my research fits in, showing why language diversity and social identity (Chapter 2.1) is worth being explored together. Therefore, this research is investigating language diversity under the lenses of the Social Identity Theory with an additional unit of analysis and virtuality, since there is a gap in the literature that connects the social identity issue, language diversity and virtuality. To do so, however, another term is important to understand; code switching.

2.3 Code-switching

In this paper, language is going to be approached as a multilayer concept. The three pillars are: the Mother tongue, Lingua franca, the corporate language of the company, and Jargon, the specialized code of a certain team, as discussed in the previous chapter. This is crucial since code-switching happens not only between the different languages but also between these layers. This phenomenon can be explained through the difference in linguistic competence between members of a community (Ahmad & Barner-Rasmussen, 2019).

Code-switching is defined as moving back and forth between languages and dialects (Lauring & Klitmøller, 2014). The term code does not refer to the language itself, but to a system that is used for communication. Today, it is accepted as "switching from one language to another in the same discourse" (Nunan & Carter, 2001, as cited in Ahmad & Barner-Rasmussen, 2019). It is a clear and easy notion and its existence is unquestionable. However, as a negative consequence, it misleads people's concept of importance. But how does this work and how does it affect teamwork?

According to the previous literature in the field, code-switching makes communication easer through avoiding translation and reducing the linguistic gap between conversation partners by clarifying the message and enhancing the interaction (Hansen & Liu, 1997; Ahmad & Barner-Rasmussen, 2019). However, in addition to its advantage, it also has disadvantages that few people consider. Code-switching incorporates some codes, which might be words or phrases, that constantly change for some reason during the communication process. In their research Tenzer, Pudelko and Harzing (2014) showed this negative effect among team members, however also the willingness of overcoming this outcome. Managers play a huge role in helping team members to integrate and familiarize them with this type of communication (Tenzer, et al., 2014; Lauring & Klitmøller, 2014).

Codes for communication are the local dialect and the Jargon. Local dialect carries prestige and shows the background where a person is coming from. Therefore, language (code) is a sign of the local identity (Hansen & Liu, 1997). Team members own the key to this code system. Its usage is a matter of habit that facilitates in-group synergy, but at the same time it might make communication more difficult. Matter of habit in this context means, a given time period for adaptation, insomuch as (new) team members might feel excluded from the conversation at first. If managers do not handle the situation well, it can lead to anxiety, the feeling of incompetence, and finally unwillingness to collaborate (Lauring & Klitmøller, 2014). In the internationalized environment, the leader must give support by providing a psychologically safe environment, thus reducing its negative effects (Tenzer, et al., 2014). This means not penalizing team members for their failures but rewarding them for their success.

So, code-switching does not end with defining the term by the language. It includes everything surrounding it; emotions, collaboration, a sign of identity (Hansen & Liu, 1997; Tenzer & Pudelko, 2015). Jargon uses this code system, and it goes one step further. It does not show the local identity, but the group identity. It is the group defined by its language, how team members are using the language to express their feelings, needs and will. It helps to convey their opinions in a way that shapes the international environment (Lauring & Klitmøller, 2014). This is a continuous interaction of the language layers during communication. Reasons for using these codes besides ethnic identity are requirements of a given situation or environment, lexical borrowing or even being unaware of using it, with practice. Whatever the reason might be, its understanding influences information sharing, therefore it is a topic to be further researched in International Business (Brannen, et al., 2014; Piekkari & Tietze, 2011; Tenzer, et al., 2017).

2.4 Information sharing

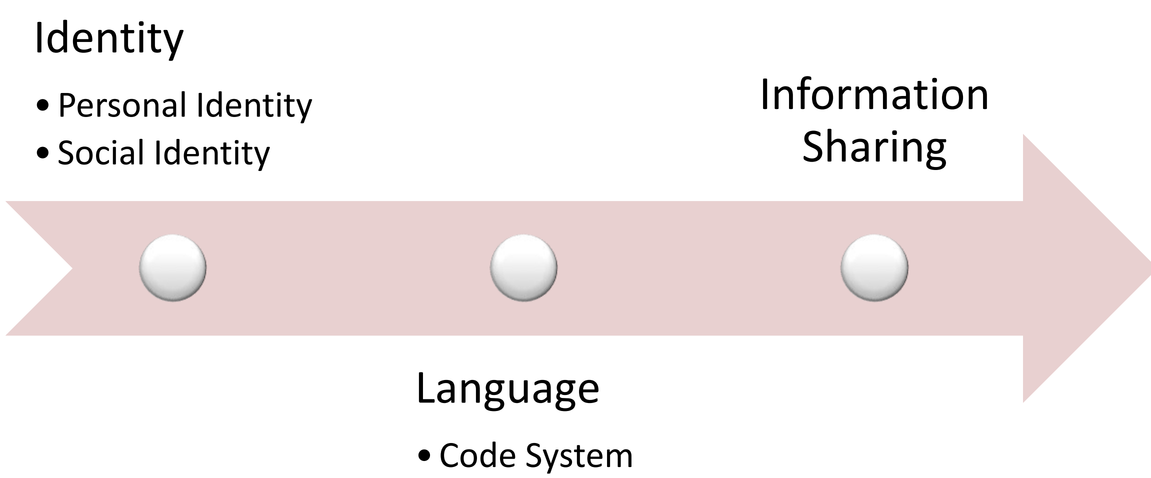
In the technologically developed world, information, especially the quick access of information, is the most important. "Information is the data that have been analyzed and/or contextualized, carries a message and makes a difference as perceived by the receiver (Ahituiv and Neumann, 1986 as cited in Rafaeli & Raban, 2005, p. 63). Information sharing is a process where team members use their available information resources proactively or upon request for the purpose of a shared or mutually compatible working. This has an influence on a person's picture of the world, thus is important in decision making (Mesmer-Magnus & DeChurch, 2009). Information sharing between team members depends on the language used (Brannen, et al., 2014; Pilerot & Limberg, 2011). In their paper Brannen, Piekkari, and Tietze (2014) mention researchers highlighting the negative effects of language on information sharing. They argue that language might increase the psychic distance between team members, thus preventing information sharing from reaching organizational decision makers. Being able to communicate with customers might also be an important issue, because consequently, besides its influence on information exchange, establishing strong relationships can base on that, and living in a world of a "multilingual community" it can "increase foreign market share and create a source of competitive advantage" (p. 498 ff.)

For that reason, this remains a critical challenge in IB (Welch, et al., 2005; Gibson & Cohen, 2003, p. 8). The interchange between daily affairs and language happens within the team during the shared experience. Team members give meanings to the information that has been shared, something an outsider might not understand given the lack of this shared experience (Brannen, et al., 2014). A mutual understanding and common code system are essential to prosperous discussions (Pilerot & Limberg, 2011). If this is missing, intentional communication and a meaningful information exchange is hindered. This means that language should be investigated on the team level when it comes to information sharing, since at this level it goes beyond the independent pitch of the individual (Brannen, et al., 2014).

In the case of multinational companies, its significance increases even more given the fact that communication does not only take place within the team, but also across units in international networks. This process is difficult to control, that is why a common corporate language might be a useful tool to handle it (Ahmad & Barner-Rasmussen, 2019). And this is the point where the corporate language, its code system and information sharing cross each other's paths. Examining information sharing in more depth, the exchange of information data is only a result. In order to understand the process and its success, one needs to ask why and how information is shared. Firstly, it must be understood as a collective practice approached from a social side. It builds a collective understanding (Pilerot & Limberg, 2011; Welch, et al., 2005), that can foster teamwork in the future. But what is it based on? Tenzer, Pudelko, and Harzing (2014) approach this from an emotional perspective. Based on their qualitative research in which they have interviewed several multinational teams, they argue that language (as a basis for information sharing) causes emotional reactions between team members, thus influencing trust formation. The existence or non-existence of trust has implications on performance. Secondly, the linguistic part as earlier discussed, the company language, is a key resource. This encourages people to communicate through reducing this distance, be it on the multinational level (dialogue between multinational companies), or between a company and its customers. The information flow is ensured by the members as gatekeepers, that would not have come without the knowledge of the language (Welch, et al., 2005).

Being aware of its importance, language as a crucial factor for information sharing has been given little attentiveness in previous research, which is strange given the fact that language is "central to information and knowledge transfer" (Welch, et al., 2005, p. 23). Following this line of thought, one must ask what the consequences for the correct exchange of information are. The paper \`Information Sharing and Team Performance: A Meta-Analysis\` discusses information sharing as a central process in using the information resources. It has been shown that the sharing of information can lead to team performance, satisfaction and knowledge integration, given among others the cooperation factor (Mesmer-Magnus & DeChurch, 2009). This leads back to Chapter 2.2, where the connection of language and building a team identity is discussed. This means that its absence can cause the loss of network access. For that reason, future research in the field of the connection of language and information sharing is needed, most importantly into how companies use language diversity to gain information internationally (Welch, et al., 2005). Figure 4 shows this connection, visualizing the important terms as a chain. Every link is important in the process to give the whole picture.

There are several ways of sharing information through emails, phone calls, or face-to-face (Rafaeli & Raban, 2005). Communication technologies facilitate information sharing and help in the creation of virtual teams (chapter 3.2.3.1). They communicate because they have a common goal; speeding up the progress and the coordination, since keeping everything coordinated is essential. They share "work-related information" on purpose regarding this to be a win-win situation (Bunderson & Sutcliffe, 2002, p. 881; Pilerot & Limberg, 2011). Therefore, keeping team members up-to-date and sharing information about key developments is a focal point of information exchange in virtual teams (Marschan-Piekkari, et al., 1999).



4. Figure Connection between SIT, Language, and Information Sharing (own illustration based on Theoretical Background)

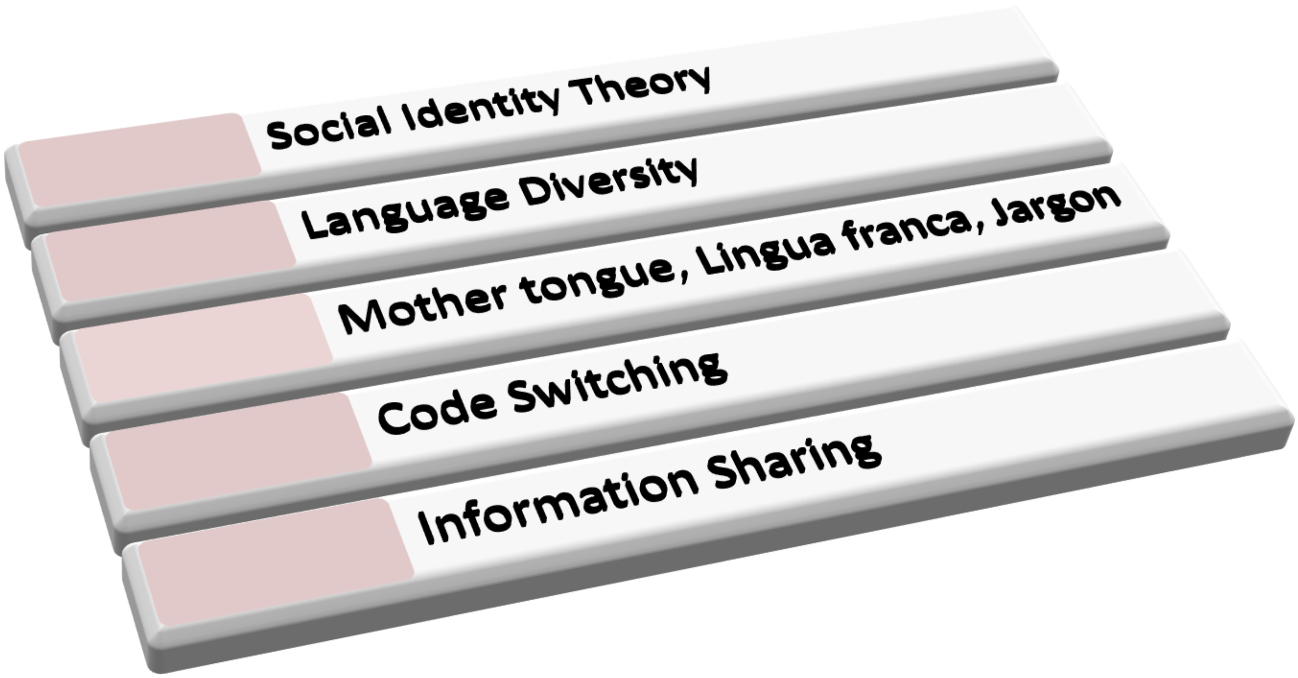
2.5 Synthesis

Chapter 2 gives a theoretical overview of the key terms which will be included in the study. Figure 5 shows these key concepts that are integrated in my study. The first part discusses the SIT. It is a well-established topic and widely used among researchers. It is based on people's natural behavior of identifying with their group identity. Individuals choose a group to belong to, dependent on their emotional and valuational preferences. The first researcher who has started to investigate the cognitive process of an individual was Tajfel. It was known, that for some reason people feel a belonging to a group, to other groups they don't. The finding of this issue, which might be a problem in the case, they should, but they don't, can mean a company´s success since efficient team-working means human capital. This process was experimented and divided into three phases: Self-categorization, social comparison, and social identification. This means that beginning with the step of grouping people into social categories while assigning them certain properties through defining itself as the characteristics of that group assigned and comparing it with others, to the point of identifying themselves with that certain group. According to Giles and Johnson (1987), this enforcing effect of social identity, positive social identity, creates the team spirit. Tenzer (2015) goes deeper by adding language and connecting it with social identity (language identity). She claims that language is a sign of people´s identity, since language can be a clamp that makes it attractive to others.

Following this, its description is continued in section 2.2, where language diversity and its connection to social identity is presented. The language choice and its usage are explained by the identity that a person feels close to. Brannen, Piekkari and Tietze (2014) gave language a key role. Harzing and Pudelko (2014) connected it with communication, looking at language diversity as a barrier due to communication problems it might cause. However, given a common language, according to Tietze and Dick this hurdle can be mastered. This thesis discusses the different layers of languages, as well as the switching behavior between these layers (e.g., code-switching).

The way in which individuals speak and which codes they use is also a sign of identification. Code-switching (chapter 2.3) can show a person's family background, social, or group affiliation. The interesting component lies in its term. Code doesn't necessarily have to be the language itself. It is the system used for communication. Team members own the key to this code. Ahmad and Barner-Rasmussen (2019) explain its use with the reduction of the linguistic gap caused by language diversity. Tenzer, Pudelko and Harzing (2014) specifically address this topic from a different perspective: they highlight its negative effect but do not dispute its importance. A code might be a layer of language, for example Jargon, therefore a sign of identity be it the local or the group identity.

The very end of it all is information sharing (chapter 2.4), in which information provided affects the other party. It is a key factor in the decision-making process of multinational companies. Brannen, Piekkari and Tietze (2014) also expressed their position on the topic regarding information sharing. They argue that language is a barrier since it increases the psychic distance between people who don't share the same code system, thus hindering the creation of strong relationships. In her research with Welch (2017) she extends it to international level, claiming that IB is affected by this and is still a critical challenge. Constant interchange between daily work and language happens in teams; team members understand it, whereas outsiders might not. Shared understanding and code system is for meaningful information exchange crucial, not only on the team level, but also on the level of multinational companies. Tenzer, Pudelko and Harzing (2014) approach language in international environment from an emotional perspective on the other hand. According to them, first of all a shared language (code system) influences team members emotionally, leading to trust formation. Second of all, it induces the communication between members of multinational corporations, thus being central to information and knowledge transfer. Nowadays, since technology is a basis of everyday activity, and team members can often not be in the same place at the same time while working in virtual environments, its access has become easier, and its usage crucial for key developments. It has facilitated the formation of virtual teams. Reading about the main terms above, the absence of virtuality is becoming more conspicuous. Language has been investigated in a so to say safe environment, where the components were constant. But what happens when language, as a multi-layered concept, becomes the phenomenon, an instrument for information sharing? In addition, virtuality is taken into account. Investigating information sharing between teams and individuals as the units of analysis in a multinational corporation, surrounded by the context of virtuality, might show new connections, like the term virtual teams, the interlacement of the unit of analysis with the context. What virtual teams are and how they work is going to be discussed in the chapters later on contributing to research on language, information sharing, and SIT in IB.



5. Figure Key concepts of the study (own illustration)

3. Methodology

3.1 Qualitative Research

Qualitative research is a naturalistic inquiry, that tries to give an in-depth understanding of a social phenomenon given its natural setting (Research methodologies: an introduction to qualitative research, 2014). It seeks to "preserve and analyze the situated form, content, and experience of social action, rather than subject it to mathematical or other formal transformations"(Lindlof & Taylor, 2002, as cited in Chesebro & Borisoff, 2007, p. 6) It starts with words (text), that a meaning is given to, embracing a context (Plakoyiannaki, et al., 2019). It permits the researcher to be completely involved in the research and gives them the freedom to interpret it. "Quality" refers to the way the researcher approaches the subject of the investigation (Jonker & Pennink, 2010, p. 77). There is not one theory that is going to be tested, but several concepts that are helping further observations. Consequently, the phenomenon is not fully complete and needs further research (Jonker & Pennink, 2010, p. 78f.).

Using the concepts, he/she starts from zero and searches for the unknown, taking part in the activities as an observer, talking to the team members, although only for a while, but somehow becoming integrated (Jonker & Pennink, 2010, p. 81ff.). The researcher is engaging in contact with the participant, having a physical and psychological connection with the setting of the study to catch subjective behaviors and relations.

To see whether this type of method is suitable for this master thesis, one must check the key features of the qualitative research. The following characteristics are important when regarding the research type: the goal, level of control, type of questions, data collection, sample size, and the risks taken when conducting qualitative research. Qualitative research is characterized by a descriptive goal. The study tells a story where each story is unique given the different circumstances and the context. Therefore, it might be expensive and time-consuming, but it gives the opportunity to have a complex description and interpretation of the problem and the solution at the end. Another important aspect is flexibility. Rather than being controlled by the researcher, qualitative research is looking at the meaning in the context and interpreting the context. The instrument of data collection is the researcher himself/herself, which makes the research due to its nature subjective through interviewing and observing (Research methodologies: an introduction to qualitative research, 2014), however in an objective manner, so that the target remains verifiable regardless of who is observing it (Bhattacharya, 2017, p. 2). The open-ended questions allow gathering multiple forms of data. Semi-structured interviews for instance, involve the participant and allow them to shape the questions with the interviewer, by getting the power of steering the questions in a preferred direction. The sample size is small, but the risk of distorting the data unintentionally given that the primary source of data is going to be interpreted through the eyes of the researcher, through his/her subjective view, is high. So summed up, qualitative research is driven by the study investigated, which is a unique piece of work given the different situation in which the researcher finds himself/herself and the context, which in this case are the company, the virtual teams, and the individual embedded in the team (Research methodologies: an introduction to qualitative research, 2014). In order to gain an overview, table 2 provides a summary of the reasons for engaging in qualitative research at the end of this chapter. Keeping these features in mind the question arises, why is qualitative research relevant for this study. To answer this question, one has to circumscribe and define the unit of analysis and the context where this study takes place. The complex phenomenon of language diversity is investigated within the context of the company, team, and individual, creating the units of analysis, the individual and the team level, the virtual teams.

Virtual teams are a group of people working interdependently from different parts of the world via technology, often in different time zones and with the need to overcome language difficulties (Maloney & Zellmer-Bruhn, 2006). Multilingual virtual teams are a complex phenomenon, which can be best analyzed and interpreted through qualitative research (Tenzer, et al., 2014), given its naturalistic phenomenon-driven character. Although it is an interesting topic and there are several sources of literature regarding the language (Jonsen, et al., 2011; Harzing, et al., 2011), code-switching (Lauring & Klitmøller, 2014; Anglemark & John, 2018), information sharing and virtual environment (Marschan-Piekkari, et al., 1999), there is barely nothing that puts these concepts together. This type of research allows the researcher to look for relations between the concepts.

There is a clear relationship between language diversity, like code-switching, and information sharing, referring to the Social Identity Theory as a basis for the research. This research is going to investigate this relationship, since there are not many studies in the literature that consider all these layers of language (Jonker & Pennink, 2010, p. 13; Hansen & Liu, 1997). The essence is to try to understand and explain how people act in their work situation. Regarding the qualitative character of the research, a special phenomenon is going to be examined in its natural context. The virtual environment is an important aspect regarding the context. The main reason of choosing this type of research is to gain a deep understanding of how things work in reality (Jonker & Pennink, 2010, p. 4). This study is going to be examined under the lenses of Social Identity Theory. This theory is being taken from outside the study and is going to be confronted with the data collected through observation and then redirected to the theory. It offers a "vocabulary to articulate how they iterate between theory and data" (Plakoyiannaki & Budhwar, 2021).

This investigation does not focus on numbers but seeks to tell a story about a particular group's working environment. Taking part at meetings as an observer, talking to team members and blending into this environment during these weeks/months is the basis of the research. The open character of this research type gives the freedom of conducting the research without strict rules but given this free nature it is difficult to delimit in time. The observer of this type of research must not be an expert, rather an actor who is examining the phenomenon based on what other actors attach within a certain social context (Welch, et al., 2010). The context is the primary data source of the study, described through the eyes of the researcher (Jonker & Pennink, 2010, p. 99ff.). Through that, the researcher gains knowledge about the reality. Given the key features of qualitative research and the goal of the study, it becomes evident that this type of research is best suitable for this master thesis.

My aim is to conduct a qualitative study based on observation of virtual teams (netnographic observation) (Kozinets, 2010, p. 4; Bowler, 2010), in-depth interviews with the team members and presence among meetings. For this reason, and those mentioned above, qualitative research is the most appropriate, and therefore relevant in this study.

Features of a qualitative study	Why is it important?	How does it relate to the study?
Naturalistic inquiry	In-depth understanding of a social phenomenon given its natural setting	Influence of language diversity on information sharing in the virtual environment
Descriptive goal	Tells a story given the different circumstances and the context	How do teams operate in the virtual environment? How does information sharing take place?
Concepts are interpreted	Cannot be measured in numbers	The phenomenon of language diversity is tested. The researcher is engaging in contact with the participant
Subjectivity in an objective manner/ honest reflection	Data collection through the researcher Identify, describe, report, and use subjective biases and assumptions	Gathering data through interviewing and observing
Flexibility	Looking at the meaning in the context that is not necessarily constant	Different layers of context: ➢ Virtual team → task ➢ Individual →embedded in the team ➢ Company
Open-ended questions	Allow gathering multiple forms of data	Semi-structured interviews allowing the participant to shape the questions
Small sample size	Looking at a particular story in details	Single case study with 10 interview participants
High risk	Distorting data unintentionally	Interpretation of the interview and observation through the eyes of the researcher

2. Table Features of qualitative research (own table)

3.2 Qualitative case study research

Qualitative case study is the most favored research strategy used in International Business (Welch, et al., 2010). Yin describes it as a research strategy used to investigate situations with respect to individual, group, or organization connected with a phenomenon. It allows the researcher "to retain the holistic and meaningful characteristics of real-life events – individual life cycles, organizational and managerial processes […]" (Yin, 2003, p. 1f.). "It tries to illuminate a decision or set of decisions: why they were taken, how they were implemented, and with what result." (Yin, 2009, p. 17) It is a very strong initiative, because it gives the opportunity to gain rich theoretical insights of the cases and generate the theory by experiencing (Dyer & Wilkins, 1991; Welch, et al., 2010). It is important, however, not to neglect the context by focusing on the developed theory (Welch, et al., 2010).

In their paper, Welch (2010) and her colleagues explore different methods of theorizing from case studies. They differentiate between four types: inductive theory building, natural experiment, interpretive sensemaking and contextualized explanation. This research has similarities with the natural experiment, supported by Yin. To see whether this is the case, it must be investigated step by step along its main features. These characteristics are the nature of the research process, the strength of the case study and its outcome, and the role of the context. I am using a single case study, but this paper has influenced me the most in paying more attention to the context. He argues that case study research is the best way to answer "why and how" questions, like the research question of the study, while it is suitable for explanatory purposes (Yin, 2009, p. 9; Welch, et al., 2010, p. 6f.). As a reminder, while looking for a connection between language diversity and information sharing under the lenses of Social Identity Theory, the research questions are addressed:

"*How does social identity shape information sharing given the language use?"*

"How does language diversity influence information sharing in virtual teams?"

Given language diversity, since code-switching appears between the language layers, one must ask

"How does code-switching influence information sharing in virtual teams?"

It tells a story, collecting information through in-depth interviews and case analysis, examining propositions with existing theories, and creating causal relationships as an outcome. These relationships are isolated from the context, it is, however, linked with it. Summed up this is the best way to verify the theory with the case. Its strength lies in its internal validity, reliability, and it generalizes to theoretical propositions (see Chapter 3.4). Therefore, case study plays an important role in verifying and testing existing theories, thus generating causal explanations (Welch, et al., 2010, p. 6f.).

After taking a look at the importance of qualitative case study research it is crucial to see why it is relevant to this work. The case is a multinational corporation in the telecommunication sector, operating in more than 130 countries worldwide. Its core activity covers 4 business groups, what the exact groups are, however, remains secret. The company intends to build a bridge between people (see Appendix). Given the fact that it is present worldwide, first, language plays an important role in its members life, second, virtuality is the only way for the members to keep contact with each other and share knowledge and information during work.

This paper aims to understand the relation between the use of language, code-switching and information sharing by approaching language as a multi-layered concept. This is a dynamic approach, which can be best brought closer by a qualitative case study research. Choosing a case study organization helps to understand the specific organizational context and the reality of those involved conceiving it from the inside out (Jonker & Pennink, 2010, p. 83; Eisenhardt & Graebner, 2007). Choosing cases are important, because they are appropriate to widen and throw light on yet undiscovered relationships and give an insight into the investigated phenomenon. Consequently, it gives a rich setting of the world in which the phenomenon takes place (Yin, 2009, p. 18).

Since the basic theoretical concept of the study is the Social Identity Theory, which is considered to be dynamic, and given the dynamic characteristic of the qualitative case study research, not to mention the dynamism of the virtual environment, this type of research would match perfectly with the subject of the investigation. Onetime research would not be adequate to study social identity, since social identity is tightly connected with the context (Hansen & Liu, 1997). It influences the contribution to an information pool, sometimes signaled through limited cues, like Jargon, and, therefore, it is present in the everyday interactions, also through language diversity. There is limited study on how language diversity influences the communication process in work and on what importance group identity in information sharing has. Further research is needed in this field (Flanagin, et al., 2014; Piekkari, et al., 2015). Reading this and connecting the concepts raises the question how members of a virtual team switch among languages, since this is what language diversity might imply. During this process, how do they share information? Therefore, I would extend SIT and use it for collecting qualitative data to explain this social process. After addressing the research gap, and the research questions, this thesis will give an overall answer on: *How does language diversity influence information sharing in virtual teams under the lenses of Social Identity Theory?* In order to being able to answer the question, one has to take a look at the actual context first.

3.2.1 Context

As mentioned above, this type of research is suitable for this study, since qualitative research is context sensitive (Poulis, et al., 2013), which means that taking part in the research as an observer looking from the lenses of other members (from their perspective) is essential. This is especially true in the case of the boundaries between the context and the phenomenon not being clear (Yin, 2003, p. 13). Not the quantified data is important, but the way of collecting high-quality data. This is something that can be appreciated by choosing a case study, which would fit the best and helps to understand the phenomenon. Context is a multi-faceted element, the relation of multiple concepts (Poulis, et al., 2013). Its name implies its meaning ´to make a connection´ (Plakoyiannaki, et al., 2019, p. 221). There are several research projects highlighting the importance of context. Beginning with the study about macro-economic context (Prime, et al., 2009; Poulis, et al., 2013) through the study of the cultural and organizational context (Geppert, et al., 2003; Poulis, et al., 2013) to this, where the multi-layered language concept in the context of virtuality is going to be examined. Contextualizing is the process of connecting the observations done by the researcher to facts (Plakoyiannaki, et al., 2019).

This investigation examines the phenomenon of language, and within the language layer the context of virtual teams, the individual, and the company. These are the surrounding factors that need to be identified in order to look beyond this and give the phenomenon a meaning (Plakoyiannaki, et al., 2019). This also gives the shape of the research question and helps to embrace it. Language/ language diversity is the factor that the center of the research is surrounded by; therefore, this is a good starting point to delimit the research question around the concepts. It shows a problem for what the theory can be used and gives an explanation to solve it. My inspiration was Yin´s work highlighting the importance of context. I am trying to pay attention to the context and use it to explain the findings. This explanation is conditional, since it is bound by the context (Plakoyiannaki, et al., 2019). Regarding the findings in the current study, they are embedded in it. In this study, there are different layers of the context. First of all, the context of the virtual team, which is related to the task that the team fulfills and is responsible for in the company. This task is performed in the virtual environment that is an important aspect of the findings, therefore, it is an important part of the context. Furthermore, looking at the individual level, the context of the individual is existent as well, which is embedded in the team. Consequently, it is important to mention that the emphasis of the study is the context, which is driving the research to the aspect of the virtual team.

Finally, qualitative research is going to be reported as a story that "describes who, what, when, where, and why" (Plakoyiannaki, et al., 2019, p. 223) happens within the context. Referring back to this study, given the phenomenon of language and the company context and the context of the teams and the individual, linking it with Social Identity Theory, answers the question how this shapes the center of analysis.

Qualitative case study research would give the possibility to gather high quality information of importance and to show the complex nature of languages, code-switching and information sharing (Hansen & Liu, 1997; Yin, 2003, p. 42f.). In conclusion, the influence of language diversity on information sharing, on code-switching in virtual teams based on the SIT will be discussed. Doing so a single case study design will be of help.

3.2.2 Sampling for Single Case Study Design

A case study is „an empirical inquiry that investigates a contemporary phenomenon within its real-life context, especially when the boundaries between the phenomenon and context are not evident " (Yin, 2003, p. 13). The phases are as followed: specifying the research purpose, developing a theory using a given theory before the data collection, deciding whether it is a single or a multiple case study, and last but not least using sources of evidence (Yin, 2009, p. 2; Piekkari, et al., 2009). This way the choice of selection can be explained (Plakoyiannaki & Budhwar, 2021).

The easiest way to follow is along a certain path. First of all, the most important question to ask is what to select. A single case study has been chosen so far. An advantage is that through a single case a critical test of a significant theory can be represented, in this case the Social Identity Theory. The goal of the analysis is to see the influence of language diversity on information sharing in virtual teams, elaborating a unique case (Yin, 2003, p. 23) and investigating the information sharing given the contexts of virtuality and the indivual. For that reason, I have chosen a company that fits perfectly with the goal of the research. The methodology I would use is the single case study with theory-testing research. It is important to outline what to select: the case study organization is a multinational corporation, and the unit of analysis, which is the entity being investigated in the study as a whole, "the immediate topic of the case study", where the actual cause-effect relation happens (Yin, 2003, p. 24), is the team member level. In this study, the cause-effect is accompanied by a strong theory-testing explanatory aspect. It is carried out on two levels: the team level and the individual level. To differentiate between the unit of analysis and the context is therefore of great significance. The context shows the outside of the study, the surrounding, whereas the unit of analysis the inside. For that reason, the research question is also designed to define the unit of analysis (Yin, 2003, p. 24ff.).

Furthermore, how the selection took place was based on what represents a critical test of the theory the most (Yin, 2003, p. 41), and which one can connect the context to the phenomenon that must be investigated. SIT is someone´s self-concept, which depends on the person´s knowledge of their environment and the social group, whom the person can identify with (Tajfel, 1978, p. 63 as cited in Scheepers & Ellemers, 2019, p. 131). This can´t be separated from the language of the communication, since it is communication that keeps the members together (Tajfel & Turner, 2004, p. 284). The use of language, in this case the three layers of the language, is reflected on information sharing. The case is linked to the chosen theory, SIT. Through this theory, language diversity, code-switching, and information sharing of virtual teams are going to be investigated and analyzed (Piekkari, et al., 2009). Using a case study organization can point out on deficiencies if a theory does not completely justify the concept, but also gain insight into real-life situations that can motivate the research question and inspire new ideas (Siggelkow, 2007). This used as an innovative practice. A theory-testing case study, where a given theory is applied for the case and it is based on empirical research. In this case, high-quality data is collected by in-depth interviews and observations on meetings. Critical incidence is analyzed. The difference is that the paper is not about combining qualitative and quantitative data, only qualitative data is going to be used. Follow-up interviews can be conducted to better evaluate the findings (Piekkari, et al., 2009). As mentioned above, while selecting the case study organization, the context is crucial (Poulis, et al., 2013). It is, however, not easy to conduct as being a soft approach. Combining the different types of investigations might help to overcome these difficulties (Dubois & Gadde, 2002). First interviews with people at multiple levels are conducted. Taking part in the discussions and negotiations as an observer on how the focus team functions, the presence among the project teams and attendance on meetings will provide enough information for the research. Furthermore, printed sources of information, such as meeting notes and project descriptions (written in Jargon or Lingua franca) are going to be used. All these by gaining insight into the everyday life of the case study organization.

The timing is also important. The decision of the case study was made at an early phase of the study. To be able to reach the goal, this must happen before the observation starts. At this stage there is a very limited information about the phenomenon and the context. This allows to capture the whole way down the process, until the phenomenon crystallizes and the connection between the theory and the empirical analysis becomes visible. In other words, the phenomenon is yet not known and is being studied throughout the whole process (Plakoyiannaki & Budhwar, 2021). In this regard, the time frame in which the research is going to be conducted is important to mention. This is a longitudinal study but given the time frame of a few months instead of years, not the changes are going to gain relevance, instead the actual process of working (Yin, 2003, p. 42). In this case the observation of the information sharing process.

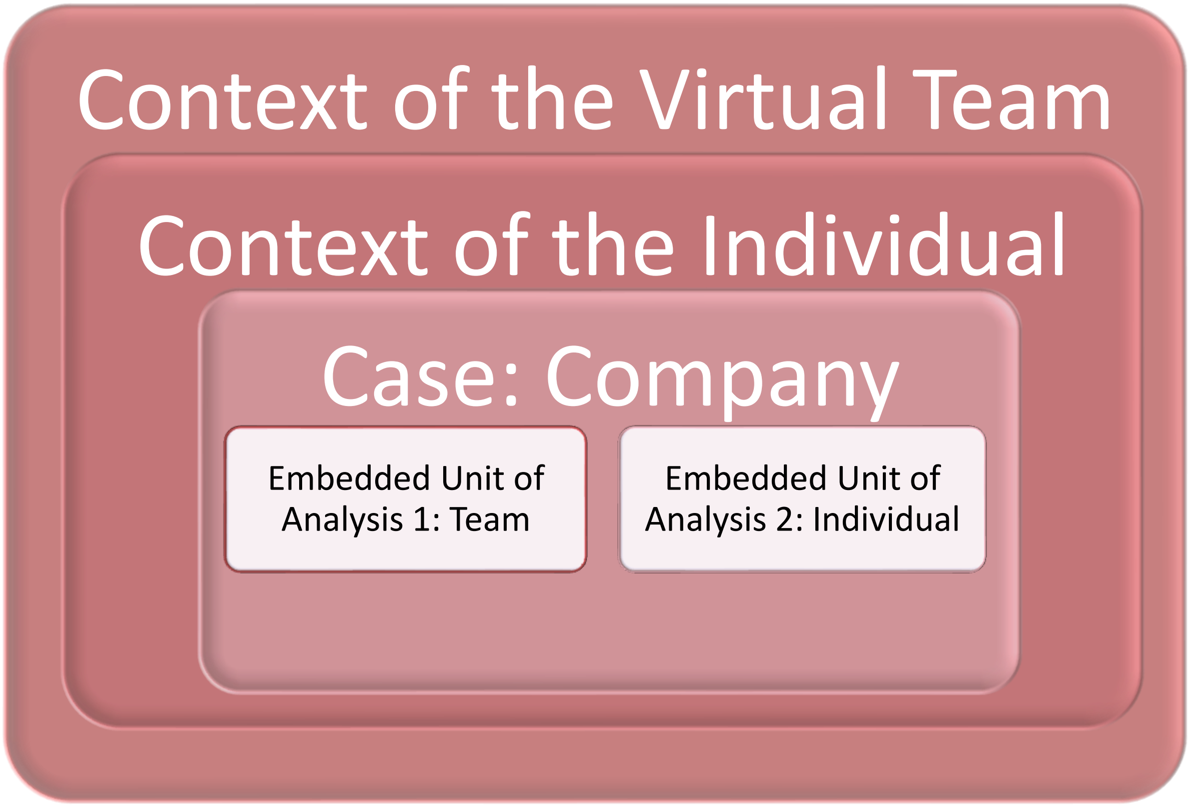
Choosing one case or multiple cases depends in each situation on the purpose of the research. It is a tradeoff between gaining a deep understanding of a particular context or having a general knowledge of a context by investigating several cases (Eisenhardt & Graebner, 2007). Unlike Eisenhardt (2007), who highlights the importance of more cases over a single case to have something to compare, I would approach it as claimed by Dyer & Wilkins (1991), who emphasize the essence of a case study given by a single case. According to them, taking a single case can allow the researcher to see the relationship between the theory and the questions that arise, getting a deeper understanding of the social setting. It goes deeper into the dynamics, thus showing the ongoing process and becoming more credible. Therefore, the single case study is optimal for the case study research (Dyer & Wilkins, 1991). Siggelkow (2007) explains its importance based on real-life examples in a more informative manner in his paper. Even though it is a single case study, it can be just as persuasive as the combination of multiple case studies. „A single case can be a very powerful example" (p. 20). It is a typical case (Yin, 2003, p. 23), not selected randomly, but chosen because it is special in the field and allows to gain information that other organizations would not be able to give on how the organization operates through information sharing. However, the question of why only choose one organization in this field instead of several to gain more data arises. Studying a special organization, which is representative for the research, needs more attention and care, as mentioned above, with reference to the conclusion that the researcher might draw, giving deep insights to the field (Siggelkow, 2007).

Reflecting on this research, the use of language in virtuality and its connection is the critical incidence in this research, for that reason the representation of the critical test of the theory is important. Then the theory consists of propositions which then are going to be tested by the single case. This way it can be shown whether a theory's propositions are correct. This is a unique case, where the employees are working virtually due to the global environment. The objective is to see the circumstances and conditions of the firm's day-to-day. This represents a project that makes the firm unique amongst other firms. It allows observing and analyzing a typical phenomenon, that has not been investigated so far. Gumperz and Cook-Gumperz (1983, p. 7) explore code-switching between languages and varieties of the same language to see when code-switching occurs (Hansen & Liu, 1997). The aim of using a single case study is the same, only with the difference of looking at people´s code-switching behavior in virtual environment, where the facilitating factor of reading of someone’s face expressions might not always be available. It is about the way how these employees share information given language diversity and code-switching.

3.2.3 Single Embedded Case Study

The single embedded case study looks at a particular case from different perspectives, dividing the research into several units. The main unit might be the team, or the individual member (Yin, 2003, p. 24).

In selecting the case study, as mentioned in section 3.2.2, the first question one must pose is what to select. It is important to define the unit of analysis to see what unit is going to be investigated and might tell something about the outcome of the research. It is tightly connected with the research question and its formulation, but it does not necessarily need to be defined in the same way the phenomenon is defined (Yin, 2003, p. 15). A unit of analysis can be a social, temporal, geographical, or artefacts, depending on whether one analyzes people, a time frame, locations, or objects (Plakoyiannaki, n.d., p. 8). Each of them suggests a different focus. In this case study the social units (units and subunits) are gaining importance. For a better understanding, figure 6 shows a visual representation of the single embedded case study that this thesis uses. Information sharing needs to be considered in the context layers of the virtual team and the individual. The main units of analysis are the team unit and the individual unit embedded in the case, the company. At each unit of analysis a different data collection technique might be useful (Yin, 2003, p. 24). Through investigating the case on two units, a more complex, more embedded design can be developed, giving the single case study the opportunity to further extend and gain greater insights.



6. Figure Single embedded case study design (own illustration based on Yin, 2003, p. 40)

The qualitative research with a single embedded case study is particularly useful in investigations within organizations (Jonker & Pennink, 2010). The chosen company (case) is a multinational telecommunication company, going from being one of the world's largest manufacturers of mobile phones in the past to developing networks today, and is present worldwide. The method is particularly suitable for this case because of the opportunity of focusing on the units. The analysis is going to take place at the team level, where managers are going to be observed during meetings, thus making the context able to be related to the task, and on the individual level, where they talk about their personal experiences during their interviews. Different teams are dependent on the topic. These teams give costumer support to solve problems. The tasks are divided into low complexity (forwarding an email) and high complexity tasks (development of projects). The goal is to investigate these virtual teams on the two units, the team level and the individual level. Having more than one unit can allow further analysis taking a deeper look into the insights of the case

(Yin, 2003, p. 25). To see how these units operate in real-life, and to understand them, one must define the unit of analysis of this study exactly.

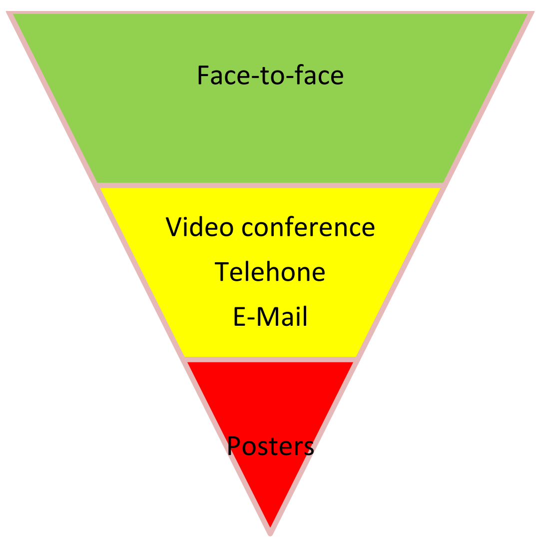
3.2.3.1 Units of analysis: Virtual teams and the Individual

Virtual teams have explosively emerged in the last decades. Globally dispersed virtual teams not only include people from the same language, language group, or culture, working from different parts of the world, but also cross-language teams, which do not have the same cultural background and have the disadvantage (or advantage) of working dispersed.

There are a wide range of definitions of virtual teams in the literature (Maloney & Zellmer-Bruhn, 2006), but every paper highlights the same characteristics: it is a group of people who work interdependently in globally dispersed groups across multiple geographic locations (different time zones) communicating through different media channels to reach a shared goal (Gibson & Cohen, 2003, p. 4f.; Ebrahim, et al., 2009; Zakaria, 2017; Maloney & Zellmer-Bruhn, 2006). Multinational refers to a virtual team that represents different languages and cultures. In this thesis, the language part of the term "multinational" is important and therefore it receives more attention. Team is characterized by a group of any size which can consist of internal members (in-group) and external members (out-group). In-group refers to employees of the company, whereas out-group members are customers or other business partners (Goettsch, 2014, p. 13). It is measured by the degree of "virtualness", which is the distance, the proportion of virtual team members, and the time team members work separately (Ortiz de Guinea, et al., 2012, p. 301). The degree of virtualness might differ from team to team (e.g.,100% virtual vs. 50%) (Gibson & Cohen, 2003, p. 5). This study focuses on the multinational team, investigating the influence of language on information sharing as a result of the virtual environment. Therefore, the multinational team is the unit of analysis, whereas the research focuses on both the team level and the individual level.

Globally dispersed teams work in virtual environments, which are dependent on technology for conversational interactions. It happens in a reach media environment. They communicate through media using technology, which lowers the cost, speeds up the process, and allows to gain information while adapting easily. Communication technology has made this emergence even more inevitable. Companies, like the case study organization, have turned to this type of team working to lower cost, speed up and adapt easily, and gain extra knowledge. These teams operate dispersed across multiple geographic locations and communicate through media, with less face-to-face meetings in different time zones, despite the challenges and benefits it can entail (Maloney & Zellmer-Bruhn, 2006).

Team members communicate to reduce the complexity of a task and facilitate collaboration (Klitmøller & Lauring, 2013). But how does this communication take place?



7. Figure Effectiveness of communication (own illustration based on (El-Shinnawy & Markus, 1997)

In figure 7 the pyramid shows the effectiveness of communication based on what type of communication is chosen. Face-to-face communication is the richest media, but sometimes given the environmental circumstances, like virtuality, this type of communication is impossible. “Face-to-face” is the top of the mountain, meaning that the largest transfer of information from one person to another takes place at this stage. The aim is to make the simultaneous information exchange possible, even if it is through a media tool. Its significance lies in the delivering of information in order to achieve performance and to reduce uncertainty, while fostering learning and communication (Ortiz de Guinea, et al., 2012; El-Shinnawy & Markus, 1997).

The greater the communication channels and the language use, the faster the feedback, and more personalized the message is. It promotes a rapid common understanding (Daft & Lengel, 1986 as cited in Kahai, et al., 2007). Virtual teams are dependent on "electronically mediated communication and the degree of geographical dispersion" (Gibson & Cohen, 2003, p. 5). This computer mediated communication can however cause delays, misunderstandings or barriers to creating social integration, thus affecting trust building (Gibson & Cohen, 2003, p. 9). Language proficiency is also a factor that must be considered when choosing the communication tool. The lower the language fluency is, the more effective a rather asynchronous way of speaking, like texting, will be. In the case of virtual teams, the decision of how to communicate and which channel to use is decisive (Krawczyk-Bryłka, 2016).

3.2.4 Sources of evidence in the Single Case Study

The aim is to get as close as possible to the managers and to see their world and the problems from the inside. Taking a look into the everyday life of the firm, collecting and analyzing present data gives a contribution to the research (Yin, 2003, p. 83).

In his book Yin (2003) devotes a whole chapter to introduce the basics of the research, the data collection. According to him, case study research needs to rely on different sources of data. The evidence originates from six sources based on the methodological procedure that was chosen at the beginning: documents, archival records, interviews, direct observation, participant-observation, and physical artifacts (p. 84). This thesis uses two out of the six sources: interviews and direct observation. Table 3 describes their strengths and weaknesses, and each of them will be discussed in the next chapters (chapter 3.2.4.1 and chapter 3.2.4.2).

The data collection is going to take place through interviews and presence among the project teams through ethnographic observations. This whole process is within a virtual environment.

Source of Evidence	Strengths	Weaknesses
Interviews	• Targeted- focuses directly on case study topic • Insightful- provides perceived causal inferences	• Bias due to poorly constructed questions • Response bias • Inaccuracies due to poor recall • Reflexivity- interviewee gives what interviewer wants to hear
Direct Observations	• Reality- covers events in real time • Contextual- covers context of event	• Time-consuming • Selectivity- unless broad coverage • Reflexivity-event may proceed differently because it is being observed • Cost- hours needed by human observers

3. Table Sources of Evidence: Strengths and Weaknesses (Yin, 2003, p. 86)

According to Yin (2003) table 3 describes the strengths and weaknesses of the chosen methods. The interviews made it possible to collect the data needed through the eyes of the interviewee. It gave an insightful picture of causality because the questions were divided systematically, directed on the case topic. It directly illuminates the unit of analysis of the study. The relevance of information sharing in the context of the virtual team, given the different time zones and languages, could be felt during the conversation at the individual level. So, it was a source that was targeted. Given the fact that team members were talking about their story in the organization, it is insightful but is also inclinable to response bias. Even though the company's identity remains obscured, one must be very careful when analyzing the interviews, because the participants might feel the need to answer that what interviewer wants to hear. On the other hand, sometimes the answer, instead of "yes" or "no", might be "I don't know". Not because of a hidden intention to falsify the data, but due to a recall issue. That's why conducting interviews is a powerful data source. So that it can be thoroughly examined from all sides, another research method is going to be utilized, direct observation.

Direct observation allows taking part in real-time events. People are monitored during work. This way the researcher can collect precious data about the context they are working in, namely the virtual teams. So not only the unit of analysis is being investigated, but also the context in which the unit of analysis is embedded, until the center of investigation is completely outlined from its surrounding, the phenomenon of language diversity. This type of research was, nonetheless, time-consuming. The first observation note was documented in July 2020, the last one at the end of February 2021. The whole process took 8 months, which then was followed by the interviews. The received data must be selected properly, since through observation one gets a huge amount of evidence.

So, summed up, these two types of research allow the collection of enough information to conduct the research. They "focus on naturally occurring, ordinary events in natural settings, so that we have a strong handle on what ´real life´ is like" (Miles & Huberman, 1994, p. 10). What these types are will be discussed in detail in the next sections.

3.2.4.1 Qualitative Interviews

First, it is important to define what qualitative interviews are. Yin (2003) describes it as "one of the most important sources of case study information" (p. 89). It is a guided conversation which gives the case study a rather flexible than fixed setting, with open-ended questions, which have to be answered with the participants´ own words. It is carried out according to the interviewer´s "line of inquiry", but at the same time giving a friendly impression and comfortable feeling. Qualitative interviews are a more personal way of collecting data for research, and it helps to get a better understanding of the investigated phenomenon by receiving access to opinions, behaviors or experiences (Yin, 2003, p. 89 f.). As a result of that it is targeted and insightful. It investigates the topic directly while delivering perceived causal conclusions. Interviews are a powerful tool to gather all the relevant information, however, they must be used carefully. The hidden danger lies in its effectiveness. If the questions are not well-selected, the answers do not correspond to reality on the one hand, and on the other hand leading questions may guide the interviewee in a way that their answers become equal to what the interviewer wants to hear (p. 86).

This thesis uses in-depth interviews with managers and employees as the main information source. I am gathering my data through semi-structured interviews. The interviews are going to be conducted in English, German and Hungarian. The interviewees are 10 employees- managers and engineers from different countries and with different linguistic backgrounds. These countries are China, India, Hungary, Germany/Spain, England, Finland, France and Portugal. The managers are leading the teams. Since the interview is the primary source of data, the process is going to take place at the beginning of the research when gathering information, and at the end, in case some questions remained unanswered, the interviewees have offered me to ask them anytime.

To prepare for the semi-structured interview, Kvale´s seven stages will be of help (Plakoyiannaki, n.d., p. 14 ff.).

1. Themazing. In a first step the highlight is on the theme of the interview. In doing so, the research questions are addressed: *"How does social identity shape information sharing given the language use?", "How does language diversity influence information sharing in virtual teams?", "How does code-switching influence information sharing in virtual teams?"* So, the main focus is on the influence of language diversity, code-switching and information sharing under the lenses of Social Identity Theory, not forgetting the context: virtual teams, and the core of the investigation, the individual.
2. Designing the interview questions is the second step. I will start with some introductory questions, like direct questions about their job description, what do they do, and how do they do it. After that continue with the follow-up questions about the team composition.
3. The third step is the actual interviewing process. The plan is to conduct a semi-structured interview. Since the company mostly uses MS Teams for meetings, this is the tool I am going to use. Some of the questions will pop-up as a reaction. Participants will be asked to give their consent to record the interview. On the other hand, notes will also be taken.
4. As a next step I am going to convert the interview (records) into written text.
5. To analyze the text, further investigations are going to be needed. At this point, the second information source, observation will be used parallelly. After having it, it needs to be systematized.
6. After gaining information from the source, this information needs to be verified. It has to be checked at three stages. Firstly, the validity, checking the truth of the statements.

Controlling, whether the variables are the truth. Secondly, to see whether it is reliable without any contradictions. Thirdly whether it is generalizable, do the interview answers agree with broader research?

7. The last step is to report the findings in a scientific way in chapter 4.

Another way to make the managers more comfortable with the interview is to offer them the opportunity to speak their mother tongue/ a language that the interviewer also masters, because that way it provides “more subtle nuances”. Using a language that the interviewee is familiar with is “important in opening doors and establishing trust” (Andrews, 1995, as cited in Welch & Piekkari, 2006, p. 425). All this should be conducted in a neopositivist position, this is a neutral way where goal is to gather qualitative information from interviewees. The aim is to minimize prejudice and malformation of the responses based on objectivity, reliability, repeatability and validity. Language is an important component for moving information between interviewer and interviewee. The interviewer has, however, to pay attention to the precise formulation of the questions to reduce misunderstandings (Welch & Piekkari, 2006). This is an efficient source of collecting information (Eisenhardt & Graebner, 2007). Language plays an important role, it is viewed “instrumentally” to transfer information between the parties. The challenge is to remain precise to avoid misunderstandings (Welch & Piekkari, 2006). Given the problem of bias, it is appropriate to combine it with a secondary data source (Yin, 2003, p. 92). Generally, most of the interviews were conducted in English, as English is the Lingua franca of the company. However, to make sure the participants feel completely comfortable with the choice of language, “the natural choice” (Welch & Piekkari, 2006, p. 425), they have been given the opportunity of choosing whichever language they want that the interviewer also speaks. English, German and Hungarian were chosen. During the interview code-switching appeared. It was mainly the Lingua franca while speaking the Mother tongue, and not the other way around.

3.2.4.2 Netnography

Kozinets (2010) has written about ethnographic observation. The used observation form is called netnography. Netnography originates from the term Ethnography, which is the study of a culture that is shared by a group of people through observation within a long time period (Schutt, 2012, p. 333). It is the process of attending meetings that take place in the virtual environment, using ethnographic methods to study online communities (Schutt, 2012, p. 335). Its members are dispersed.

Nowadays, since people are working in online communities, this type of research has become important. This method is used specifically to study cultures and communities online. This is excellent for qualitative research (Bowler, 2010). The selected community must be relevant for the research question of the study. The members are engaged in the teamwork and the main source of data are the people, the members of the community. This is "live" field work, since the data is not historical, but behaviors and environmental circumstances of today are shown. For example, the way a person acts is an indicator of that person´s position in the organization. This information is necessary to gather additional information that might not be obvious after the interview. It opens up new dimensions of understanding language diversity, the phenomenon being investigated (Yin, 2003, p. 91 f.). The main purpose is to observe the teamwork and the exchange of information, but it also allows the researcher to gain extra knowledge about the tools they are using, given the fact that they are working in a virtual environment. Even though the term media richness choice does not stay in the focus of this study, it is worth noting how important the proper selection of the media tool is (see Chapter 3.1) (Maloney & Zellmer-Bruhn, 2006; Lauring & Klitmøller, 2014).

Kozinets (2010) recommends methodological stages for netnographic studies:

1. Formulation of the research question and identification of the case study organization: The research questions are: *"How does social identity shape information sharing given the language use?", "How does language diversity influence information sharing in virtual teams?", "How does code-switching influence information sharing in virtual teams?"*
   The case study organization is a finish multinational company in the telecommunication sector. Given the sensitiveness of the topic, the organization asked me not to mention its name, so that participants can share their thoughts as honestly as possible.

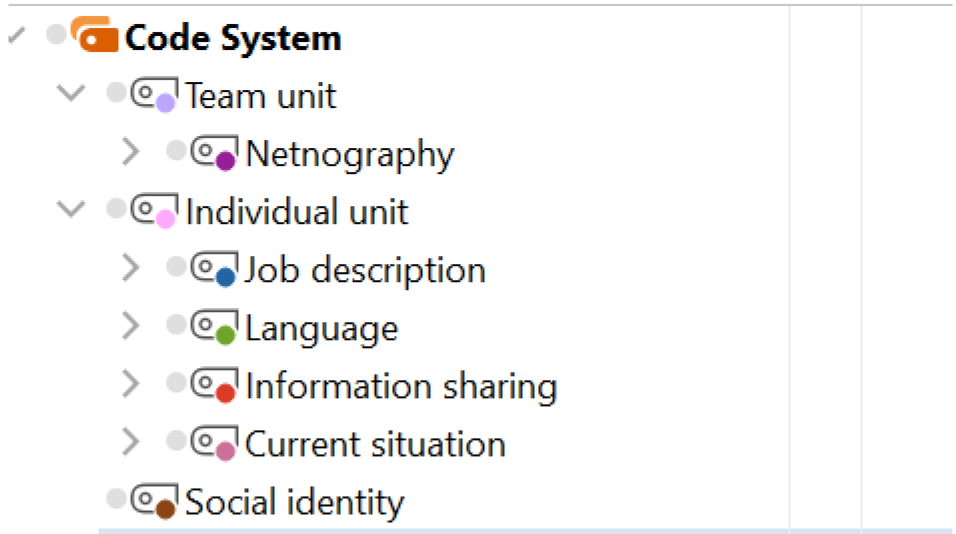
2. Data collection by communication and observation of the community. In this case data is collected by attendance at meetings, in-depth interviews, presence among the team members, and direct observations, concentrating on the code-switching behavior of the individuals, and what is triggering that. Direct observation helps to understand the dimension of context, and also enables the context-sensitive case selection at an early stage of the work (Poulis, et al., 2013), that´s why I have chosen this way of investigation. In the virtual field there is a lot of potential given the access to media technologies, designs and digital technologies. Social media can facilitate the research and involve the participants in the process, as it is a source of data and a platform for keeping in touch with the subject of the research (Fielding, et al., 2016, p. 402 f.). The case study organization also uses different tools from online ethnography WebEx, MS Teams, and Jabber, where a tiny community is created. Besides that, they do phone calls, video calls, and work with shared screens. This also shows that their daily work is based on social media.
3. Analysis and interpretation of the results (Bowler, 2010).
   The analysis is going to be made with MAXQDA, an ideal analysis software for qualitative investigations. The findings are going to be presented in the chapters 4.1.1 (The influence of social identity on information sharing), 4.1.2 (The influence of the language layers on information sharing), and 4.1.3 (The influence of code-switching on information sharing). Thenceforward I will conclude the chapter of findings with the discussion.

Although these two methods are being considered separately, it is inevitable to mix them. Observation fills in the gap left by interview questions. On the other hand, it gives an overall view about the whole team leading by the managers. I have the opportunity to observe the discussions that take place online, monitoring how actors are behaving, participating, and most importantly, I can observe the different languages spoken, and the options of code-switching. It in fact goes a lot deeper than that. At the end of the day, I will also be able to answer the question of how comfortable they are with using different languages.

3.3 Qualitative Data Analysis

Qualitative data analysis is the process in which the qualitative data that have been collected will be interpreted, understood and explained. There are several types of data, like oral data, written data, visual data, and embodiment data (based on observation) (Welch & Piekkari, 2006). In this work, oral data and visual data transformed into written data is going to be used to help the research. The oral data is in the form of an interview, from which afterwards transcription will be done. These interviews last from 40 minutes to 2 hours. This gives a transcript of 10 to 15 pages each. At the end sensitive data must be deleted, thence, the remaining pages that can be used are approximately 10 pages in each interview. Netnography data is collected by typing all the observations I see and hear during the attendance at meetings.

After having collected the sources of evidence, one has to get familiar with it. Categorizing the data helps to have a clear picture. Coding (using colors) allows to demonstrate the construct and to build the concepts, which then lead to the theory (Welch & Piekkari, 2006). I am using different colors to make my coding visible. The used tool is MaxQDA, which is a software for qualitative data analysis. Coding means assigning that data to a category, in other words, to a code. It allows to use different colors to these segments to easily identify the codes. In this thesis, these colors are also associated with names, the name of the code, and subcodes, that shows in which code group the segment belongs to. Figure 8 illustrates this in practice. What the system is behind it, how these team and individual unit is divided, will be explained later in this paper.

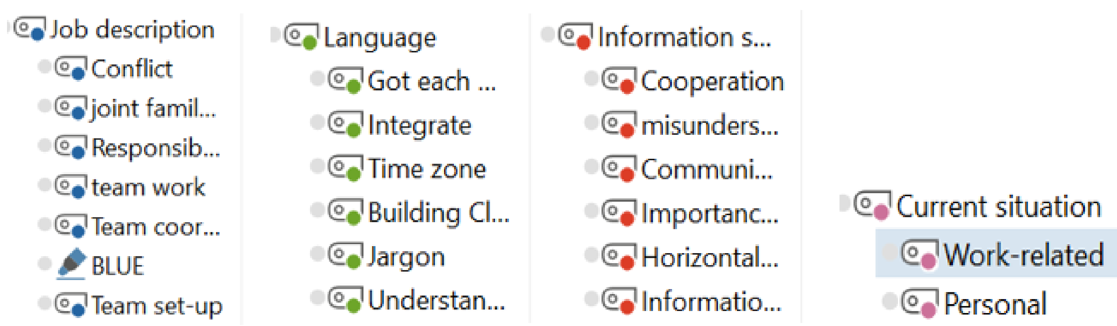


8. Figure Code system (own illustration)

Besides these codes, one can search for specific words or phrases in the text. I use not only coding, but also markers to highlight the most important information within the codes.

Spiggle (1994) discusses in her paper the way how to analyze the coded data of a qualitative research in her paper. She suggests different phases, along which this investigation works, indicating how one can examine the text data collected. These eight phases are: categorization, abstraction, comparison, dimensionalization, integration, iteration, refutation, and interpretation.

<u>Categorization</u> means classifying the data into units. A unit of data might be a gateway of some words, or a text for instance, that belong together. The researcher must identify the categories that allow him/her to move between the themes. All that comes afterwards depends on that identification. To mention just a few of them, “conflict”, “teamwork”, “jargon”, “lingua franca”, “horizontal vs vertical information sharing”. Each of the parts contains different subunits, categories, which are important words or texts taken out of the context of the data collected, as demonstrated below (figure 9). At this part I am coding “in vivo”, which means using codes based on the participant´s own words to be able to stay as close to their spoken language as possible. All these are important pillars of the research. It is, however, to mention, that not all the subunits are listed above, as it is used as to illustrate the structure.

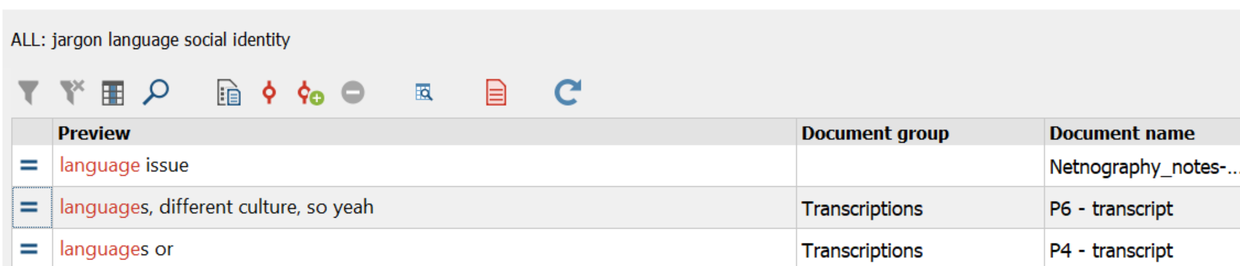


9. Figure Parts of the interview (own illustration)

This is already connected with the next step, abstraction. It builds on categorization, by collapsing "more empirically grounded categories into higher-order conceptual constructs" (Spiggle, 1994, p. 493). This means the previously identified categories need to be set in more general groups in a way that they refer to the same topics or concept. To demonstrate this, the interview guide (see appendix) can be of help. It is divided in four parts, depending on the subject of the interview. These are shown in figure 8: "job description", "language", "information sharing", and "current situation". On top of that they are set in more general groups, which are the units of analysis, the team level, and the individual level. Nevertheless, it is important to point out that there is no clear structure at the stage of units of analysis, given the fact that investigating them knowing the context, there will be always overlaps. For instance, the code system in figure 8 presents the structure. The part netnography gives an insight on how the team operates. However, the interviews, although they are designed to explore individual´s side, also ask questions regarding the teamwork. So even though the structure looks the way shown in figure 9, it cannot be ignored how tightly they intertwine.

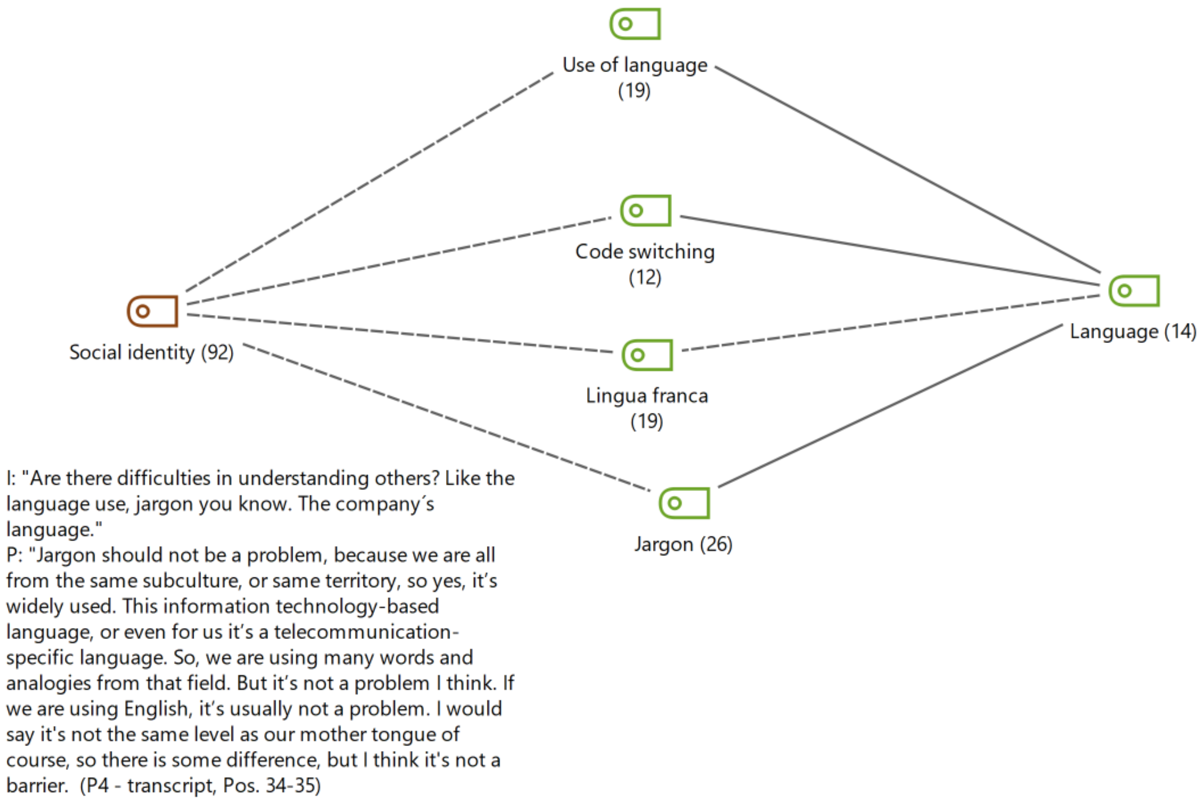
On the next step, the theoretical significance has the spotlight. At the stage of comparison, the differences and similarities between the collected data need to be investigated such that systematic comparisons can be made. The compared data is investigated through its properties as a next step. These properties are conceptual dimensions that vary based on its occurrence. That way relationships between the categories and constructs can be discovered. These defined categories and constructs will be evaluated given a context, which they will be embedded in. In this case it is noticeable, that the given text or word highlighted does not belong only to one certain category but might be applied to several categories. This reveals the differences and similarities in the data analyzed. The data will first be observed in the context of the virtual team, then with the phenomenon of language.

The goal of integration is to "build a theory that is grounded in data […] theory which is discovered and formulated developmentally in close conjunction with intensive analysis of data" (Strauss, 1987, p. 23, as cited in Spiggle, 1994, p. 494). The theory used that confirms the research is the Social Identity Theory. The relationship between the theory and the data analyzed can be detected. In order to recognize this connection, I have used the lexical search tool of MaxQDA with the given word examples: "jargon", "language", "social identity". This can be seen in figure 10. The aim was to see what the connection is between Social Identity Theory and Jargon as a language layer. Yet notice that given the semi-structured interview design, where participants may lead the direction of the conversation, and netnography, which sets even less limit on the gaining of data, this combination of codes might not appear as such in the documents, even though it is existent. The words are not always spoken, in which case the content must be prioritized.



10. Figure MaxQDA search engine (own picture)

To be visually readable, figure 11 will be of help. It shows the connection of social identity and language through the subcodes substantiated by a sneak peek of the interview. The number in brackets demonstrate the connection.



11. Figure Connection between social identity and language (own illustration)

After developing the concepts and their relationships during the phase of iteration, the researcher interrupts the specific stage by moving back and forth between different stages, while making references to the analysis. It takes place between data gathering and data conclusion. This means that throughout this process, even though once a category relates to the theory, in this sense SIT with the language, the researcher jumps back to the beginning, in this interrelation to Jargon, and once again tests the connection between Jargon and language in the perception of SIT.

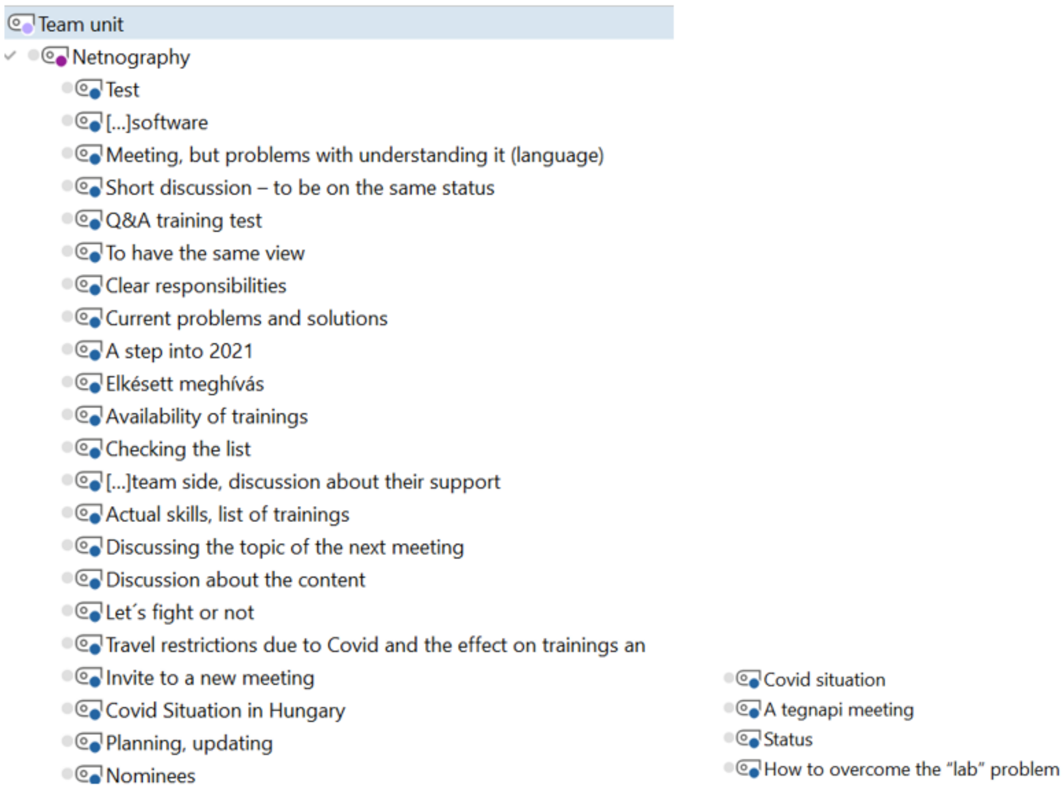
Continuing the study, during the stage of refutation, the categories, constructs, and propositions will be empirically examined. This will then be part of the conclusion (Spiggle, 1994, p. 493 ff.). To analyze the results, two types of analysis might be suitable. Narrative analysis is used with interviews and observations to follow participants in their everyday life. This type of analysis tries to put together a story based on participant's experiences, goals, and actions. The interpretation is basically reading the story and classifying them (Schutt, 2012, p. 339). That is the goal of this writing, to see the whole story and understand how the different language layers interact and shape information sharing. The second method is the case-oriented understanding, which seeks to understand a particular phenomenon from the viewpoint of the participants. The social process in the group is important, as well as the information sharing (Schutt, 2012, p. 345). Comparing the different incidents from the data collected so far helps to gain further data that is needed.

Interpretation is the last step. It does not belong to the stages as such, but its importance is undeniable since this is where the collected data makes sense. This process lies in translating a distant topic into one that is closer to the researcher and for the receiver (Spiggle, 1994, p. 497 f.).

3.3.1 Data processing and coding

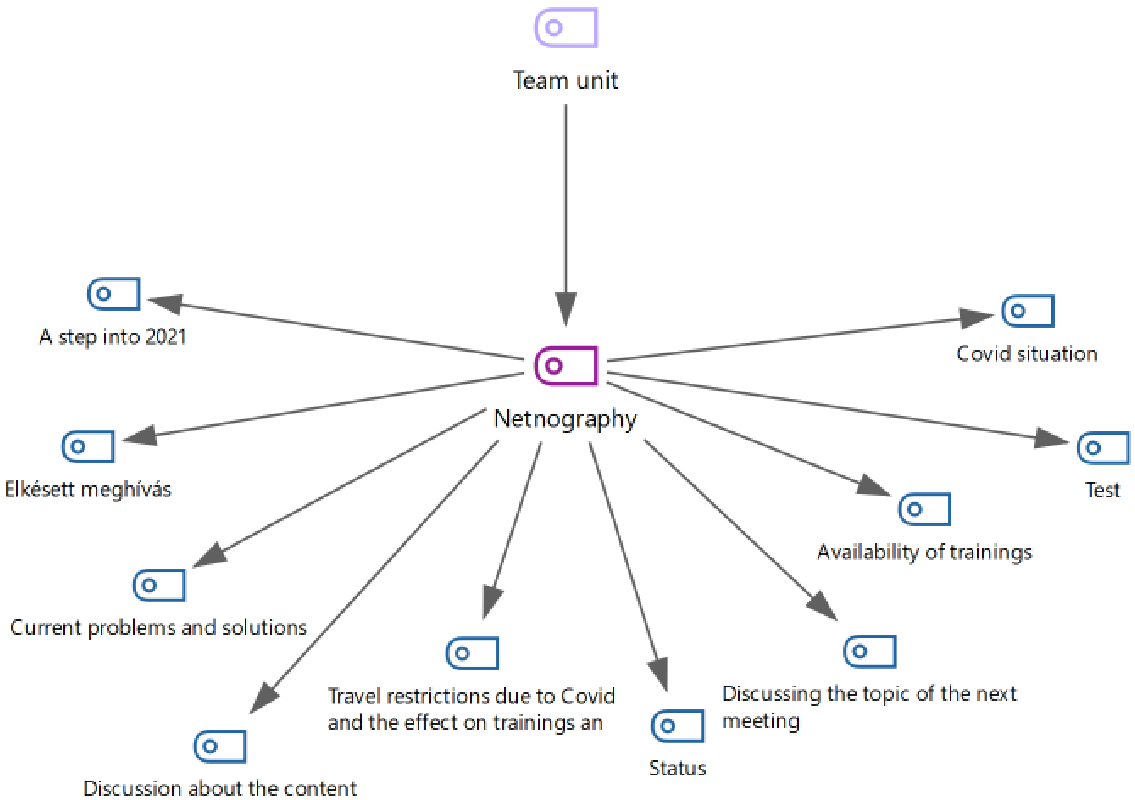
As mentioned before, the adequate ways of gaining data are through netnography in order to see how the team operates and qualitative interviews, to gain an insight in the individual´s perception.

Regarding netnography, team members were being observed during a certain period, while having meetings. The individual is not snatched out from its environment as in the interviews is the case. On the contrary, it is investigated within the person´s natural surroundings. It is important to watch team members in their live field work, thus helping to understand the phenomenon of language. The aim was to see the teamwork and the information exchange during an observation period of 8 months. At this part, the coding was done exclusively by vivo coding. This is shown by figure 12. The codes correspond to the topic of each meeting.



12. Figure Team unit vivo codes (own illustration)

The 10 most frequent codes are highlighted and displayed with their subcodes in figure 13. The code size reflects on this code frequency, and the most repeated topics.



13. Figure Netnography and its subcodes (own illustration)

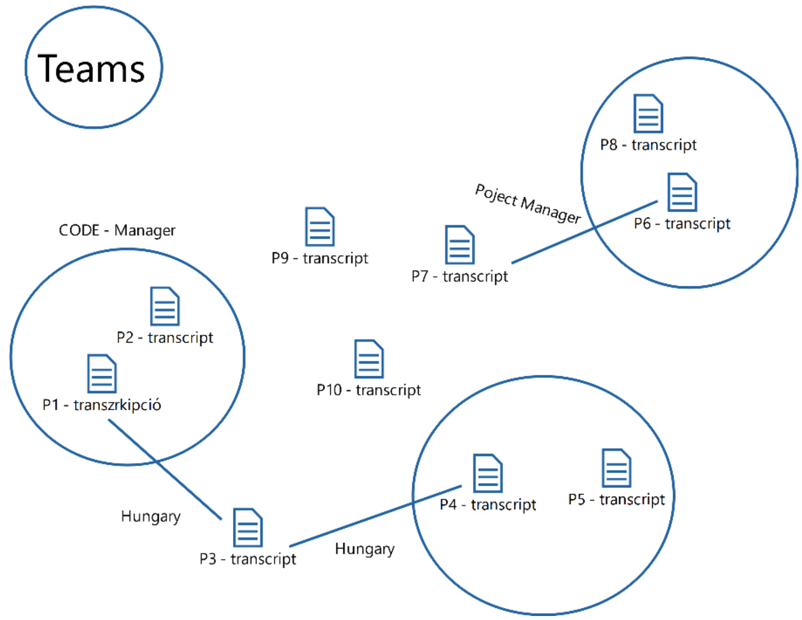
Regarding to the interview data, it is a data gaining process from an individual perspective, since the participants form their answers according to their own experiences, even though some questions refer to the team unit, and there are overlaps. Therefore, a clear distinction between team and individual as such, concerning the data analysis method, cannot be done. As a result of this, they are going to be merged and presented together later on in chapter 4. The interview data includes 10 interviews with 10 team members around the globe, who are line managers, project managers and also engineers. Table 4 shows the composition of the participants highlighting the important topics covered by the interview. The participants are marked according to the interview conducted. This goes from 1 to 10, from P1 to P10 accordingly. During the interviews it was clear that depending on which role the participants have in the organization, the answers vary. It is important to know the people´s background as it is discernible that if affects the viewpoint of the interviewee. 10 participants from 8 different countries Hungary, India, China, Portugal, Finland, Germany, England, and France. They come from different departments and have different positions in the organization. The proportion is as followed: 2 of them are CODE Managers (P1, P2), 2 Line Managers (P4, P5), 2 Project Managers (P6, P7), 1 Engineer (P8), 1 Global Change Program Manager (P3), 1 Operation Manager (P9), and last of all 1 Global Care Manager (P10). The job as such varies depending on the certain position the participants have. Some of them are responsible for trainings (Project Manager, CODE Manager) (P2 - transcript, Pos. 6; P7 – transcript, Pos. 5), others deal with change programs supporting the process (Global Change Program Manager) (P3 - transcript, Pos. 5), supporting people *"Line Manager, people Manager in the company"* (P4 - transcript, Pos. 8), looking *„after customer and the customer support"* (P9 - transcript, Pos. 10), programs (P6 - transcript, Pos. 13).). In order to understand the job environment, the questions referred to the whole business process. Table 4 gives a more detailed overview on what has been discussed above, enhanced by where they come from, how they work, but most importantly what relevance they attach to language. It was interesting to notice how they interpret, for instance Jargon. Even participants from the same department sometimes gave different answers to a specific question, although they work in exactly the same environment and have contact with almost all the same people. Lingua franca is given, virtual environment is given. The only difference in this example is the place of origin.

NAME	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10
ROLE	CODE-Manager	CODE-Manager	Global Change Program Manager	Line Manager	Line Manager	Project Manager	Project Manager	Engineer	Operation Manager	Global care team - Manager
TIME ZONE	Hungary	India	Hungary	Hungary	China	Portugal	Finland	Germany	England	France
TEAM SET-UP	Depends on the project, global group	Depends on the project, global group	Focus on business units – skills and abilities of importance, global team	Ticket-based work, customer support (troubleshooting), strong cooperation with other business units. Global team	Several people working together for multiple products. Different people specializations inside the team. Global team	People from different domains, countries, with different languages. Program-based work. Global team	A team (7 of them) within the team, product-based work. Global team	Around 15 people, different specializations, expertise.	People around the world. Engineers, or people that used to be engineers and now they are managers. 30-40 people all around the world.	Sometimes from a mini team of 2 at the end a team of 2 people. All together around 800 people working in global care around the world in the company. The type of project gives the number of people working on it.
LANGUAGE	English as lingua franca	English as lingua franca	English as lingua franca	English as lingua franca	English as lingua franca	English as lingua franca	English as lingua franca	English as lingua franca	English as lingua franca	English as lingua franca
	Mother tongue Hungarian	Many national languages in India	Hungarian if everyone understands	If only Hungarians participating at the meeting, then Hungarian	Mother tongue Chinese but not understandable for everybody (province differences)	Mother tongue sometimes, but not usually	Finnish with colleagues within the country	Special case because his mother tongue is Spanish	Mother tongue is also the lingua franca	In some particular case at meeting with French people
	No Jargon	At the beginning difficult to understand the slang	HR abbreviations	Usage of specific words and expressions (at the beginning: Jargon dictionary)	Nothing about Jargon as such	Jargon happens often, sometimes difficult to understand.	A lot of Jargon, at the beginning she didn’t recognize the spoken language	Jargon at the beginning, when people don´t know the expressions of the firm	Jargon comes with the technology, changing too fast	Jargon of acronyms
	No code switching	It happened earlier, but she is very keen on the language	Unconsciously if they don’t notice that foreign people don’t understand	Code switching happens	Happens without surprise	Code switching happens, and also anglicized Portuguese unconsciously	A lot of code switching which they call funny	The reverse case, even though everyone of the addressee speaks Spanish, he writes in the corporate language	No code switching from his side	Code switching happens but with the appropriate word

	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10
INFORMATION SHARING	Influence of language Difference between horizontal and vertical information sharing Inter-group communication as a source of challenge Information breakdown through postponement of a meeting	Influence of language Difference between horizontal and vertical information sharing Delay if information exchange	Influence of language Difference based on the time they have spent together	Importance of language No noticeable difference between vertical and horizontal information sharing Formal out-group communication	Influence of language but also clear talk and culture Difference in content between horizontal and vertical information sharing Mandatory	Influence of language Difference between horizontal and vertical information sharing based on the concerns Misunderstandings given different interpretations Common understanding	No influence of language (The same as it would be Finnish) Misunderstandings, but only minor things	Information sharing carefully because information is power (competitive) Difference between horizontal and vertical information sharing Sense of ownership	Influence of language (use of Jargon) Information breakdown caused by the written language	No influence of language No difference between horizontal and vertical information sharing Common understanding Information breakdown caused by the written language
COVID-19	Didn't change that much The work is the same. More virtual meetings Missing the face-to-face meetings No change int the personal perspective	No before-after difference besides traveling issue Missing the face-to-face meetings Behavioral changes given the different working environment	No or very slow change Lack of information about other units (corridor coffee meetings) Loss of connections with others (private)	It has changed: lack of personal meetings and communication Cohesion between the team has weakened	No change The same information sharing People moved away from the company level (increased distance)	People have become more open to share information Mindset change Governmental restrictions affect people behavior	No change in communication and information exchange People are comfortable with doing home office Personally comfortable with the changes	No change in his team Work virtually People tend to begin earlier and finish later given the family as a factor	Workwise it didn't change given the global team Missing the people, he met in the office. Private communication disappeared No behavioral changes	No change due to virtual work Given the global team set-up, people might be affected based on the country they live. Behavioral changes happen accordingly

4. Table Interview summary (own table)

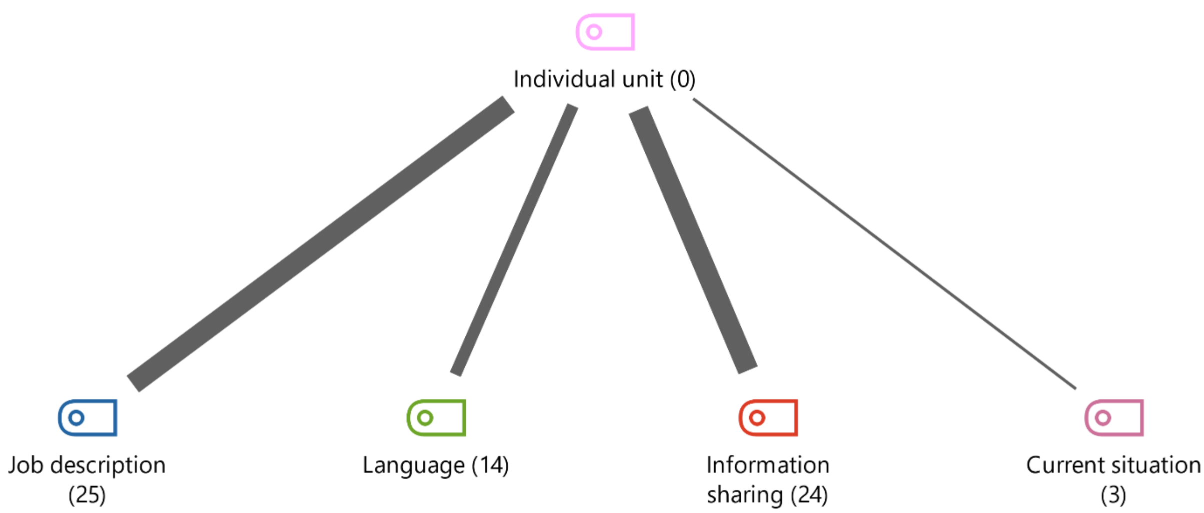
With the intention of finding out what the interaction between people is, a clear understanding of the basis of the work was necessary. In the case of a Global Care Team Manager, this involves a ticked-based global work, which P10 described as *„global care, taking care of [...] the ticket of issue raised by our customers. So, from this core network products we are […] 8 or 10 people and I am taking care of [...] some tools for people you know, dealing with this ticket"* (P10 - transcript, Pos. 12). Furthermore, an interesting overview I got from P8, who defined his responsibility field as consulting, internal communication, business operation, and of course problems resulting from information breakdowns and inefficiency (P8 - transcript, Pos. 18). This can be attributed to the fact that this introduction comes from an engineer, who from the beginning speaks directly about communication issues while introducing the work set-up. This is a difference between the information which appears at the initial stage from the manager´s side, and therefore, stands out. At this phase, a comparison between managers and engineers can be drawn. With the aim of understanding the relations, one must begin with the projects and teamwork. As mentioned earlier, this highly depends on the job (see appendix). Figure 14 shows the connections between the people through their transcriptions. The name of the transcript reflects on the person I had the interview with. For instance, in the case of „P1 – transzkripció", this implies having the interview with participant 1.



14. Figure Team set-up (own illustration)

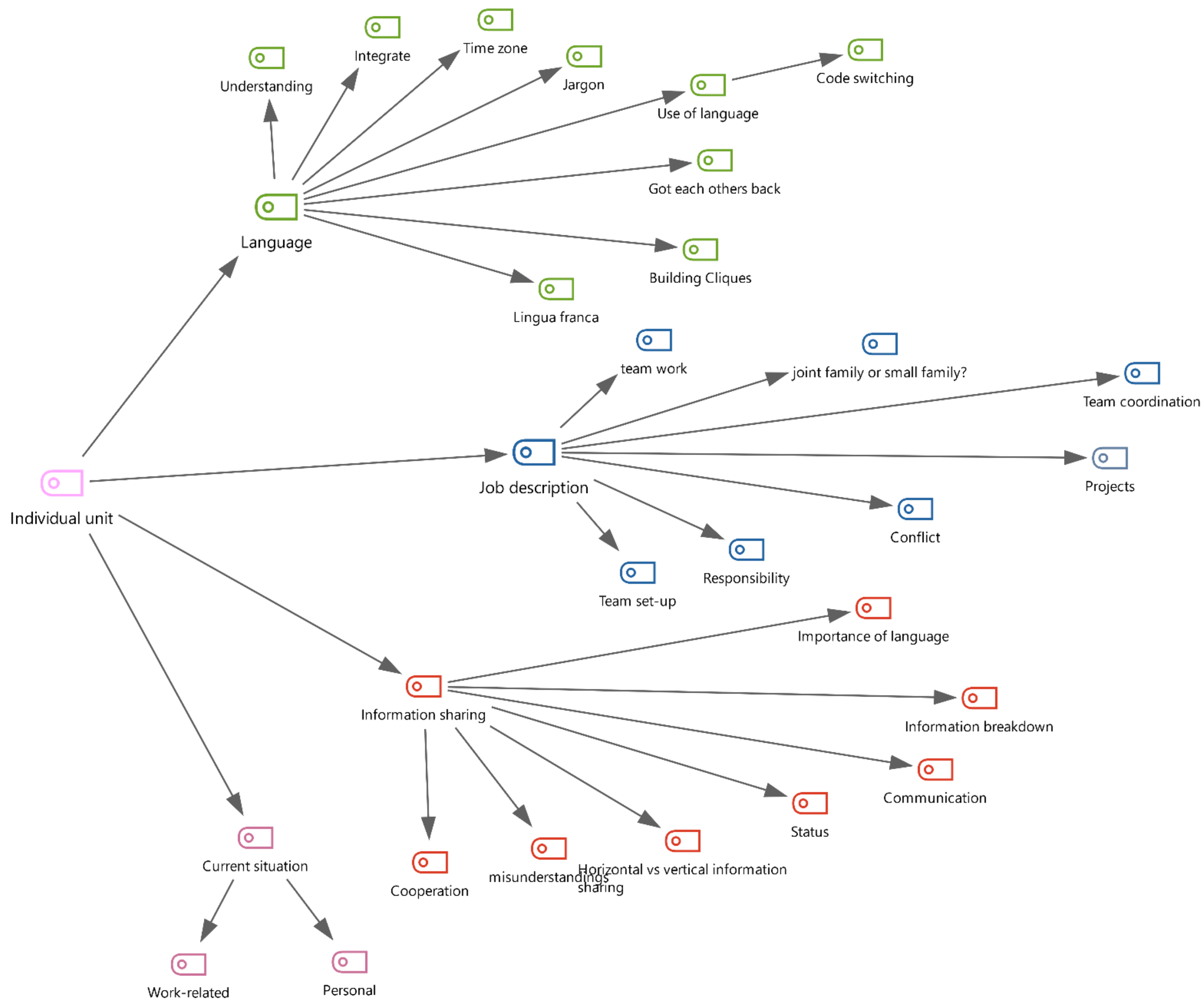
As a reminder, all the participants work at the case study organization, which is a multinational company, and therefore globally dispersed. This denotes the big team. Earlier on, table 4 showed the distribution of the countries. Now, it´s time to see the team set-up, the small teams within the bigger team. The circles in figure 14 give an overview on how these relations can be imagined. P1 and P2 are from different countries but work together virtually. P1, P3, and P4 play a different role in the organization, but are connected, since they have the same country base, Hungary. P4 and P5 build a team having the same position, however, they work virtually given the time zone distance, China and Hungary. P6 and P8 fulfill diverse roles and also work virtually given the fact that their work is performed from Portugal and Germany but work within the same team unit. P7 and P6 have the same occupation. I didn't have the opportunity to conduct interview with the close team members of P7, P9, and P10, but luckily, I got the chance to ask them about it. Team members who have the same country base work with each other partly virtually. But since in almost all teams there is at least one person who has a different national background, their work can be considered completely virtual. It is significant to highlight that these 10 participants are not the whole team, not even in the smaller teams. They honored me to give an insight in their working environment through their eyes.

The analysis of the interviews follows the process described earlier on in Chapter 3.2.4.1. That chapter also explains how the coding comes to life. Figure 15 shows the construction of the interview guide in codes. Approaching as a first step in a deductive way creates the bigger structure, which is divided into subcodes in an inductive way following the train of thought of the conversation in the interview. This is the so-called hybrid approach of deductive and inductive reasoning (Swain, 2018). The numbers in brackets display the amount how often the codes occur in the interview texts. The thickness of the line that connects the code to the individual unit indicates this incidence.



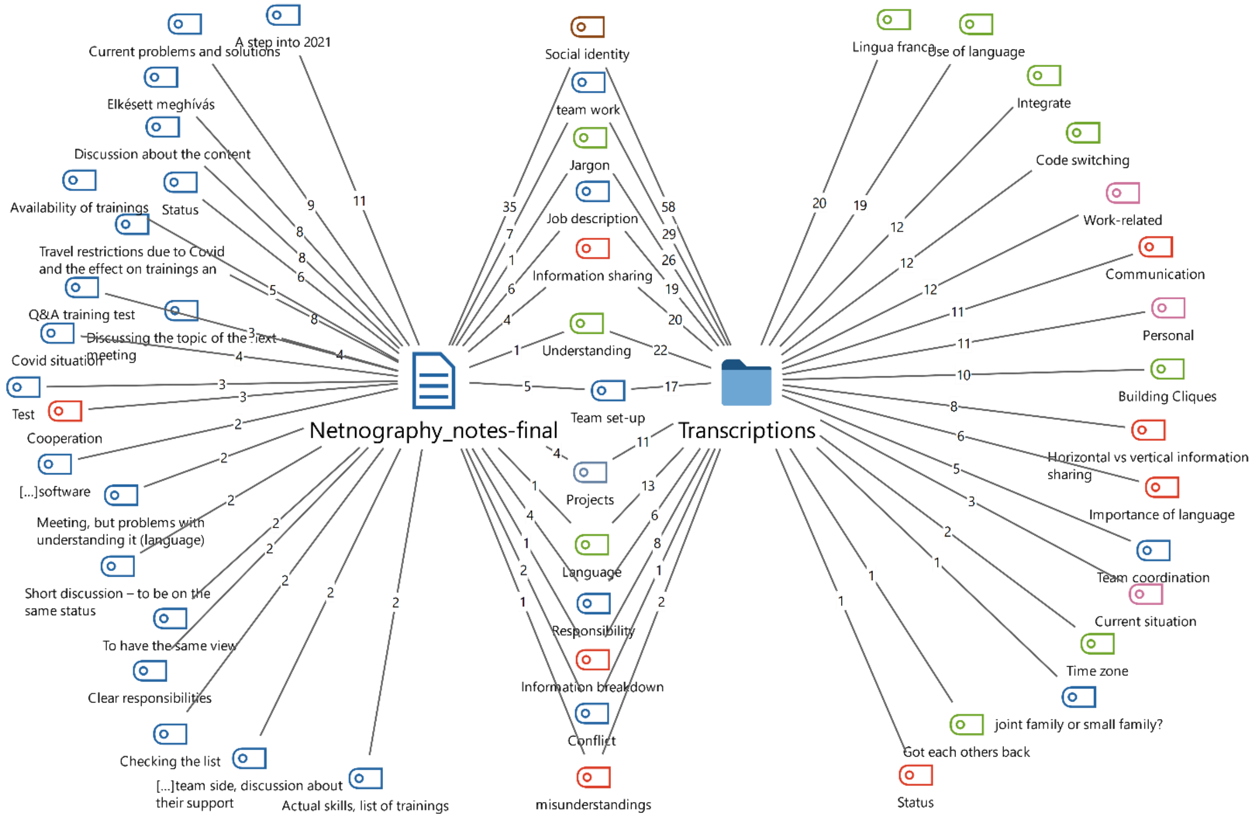
15. Figure Structure of the individual unit (own illustration)

The interview guide, as mentioned before, divides the whole interview in 4 parts depending on what kind of topic the conversation is about. As indicated in the previous chapter, the analysis of the interview is carried out by coding the different segments. To not only have an overview, but a clear knowledge of the data, these happen several times. Earlier on, the overall code system can be found in figure 8 of chapter 3 (code system). The hierarchical code system what the individual unit is based on, is shown in figure 16.



16. Figure Hierarchical code system (own illustration)

The way in which I have structured the codes and its subcodes, connecting them from the data source which they originate from, are seen in the next figure. Since the data sources need to be seen together during the analysis, the next figure highlights the codes in common for the presentation of the findings. Figure 17 shows a two-source model, with the 20 most frequent codes used. “Transcriptions” refers to the interviews being conducted, whereas “Netnography_notes-final” refers to the observation data. That way a comparison can be made between them.



17. Figure Two-source model_20 (own illustration)

After analyzing the common codes, they are going to be clustered according to the frequency on the one hand, on the other hand in a way that the research question can be addressed. An elaboration of the findings is presented in Chapter 4.

3.4 Qualitative Criteria for Single Case Study Research

Since almost everyone has access to the internet, this is the biggest data-gaining platform nowadays. It has a great influence on the research. The more information can be found on the internet, given that one has to select between what is true and what is false, the more risk occurs when deciding it and using it as a source.

Qualitative research method always involves the question of validity, generalizability, objectivity, and reliability of the data. But given the dynamic characteristic of the research, these dimensions are blurred (Sinkovics, et al., 2008). There are, however, alternative ways of evaluating a qualitative study. In their work – Naturalistic Inquiry, 1985 - Lincoln and Guba further developed Yin´s work into a third-generation criteria and observed that the criteria purely depend on the beliefs of the investigated layer (Welch & Piekkari, 2017). They claim that this is the most effective way of capturing the reality by monitoring the participant, while bringing trustworthiness to the forefront. This includes credibility, dependability, transferability, and confirmability (Sinkovics, et al., 2008). Trust also evolves also during the interview. Nevertheless, the process of building trust is a long-term activity (Tenzer, et al., 2014).

To evaluate the trustworthiness of the qualitative research, one must check whether it matches the criteria mentioned above. Table 5 shows a summary of these criteria.

CRITERIA	CHARACTERISTIC
CREDIBILITY	While isomorphism between reality and findings is not possible, researchers faithfully represent the multiple constructions held by research participants
TRANSFERABILITY	Given variation in contexts, researchers need to show familiarity with both the “sending” and “receiving” contexts to be confident that their conclusions will hold in both
DEPENDABILITY	Replicability not achievable given changes in the researcher and the researched. However, changes can be documented and explained
CONFIRMABILITY	While objectivity is not attainable, conclusions can be shown to be internally consistent and supported by the data

5. Table Naturalist paradigm (Welch & Piekkari, 2017, p. 719)

Given the fact that this study is looking at teams in their natural setting, the first criteria to go through is the criteria of <u>credibility</u> (Welch & Piekkari, 2017). This means that the case study is only interpretable if it is associated with its context, so that other entities, who experience the same setting are able to recognize it. This study gives an overview of how the team operates, making it possible to analyze the unit of analysis, teams/ individuals in their natural context, and the virtual team within the company. This "reality is socially constructed" (Welch & Piekkari, 2017, p. 719). The main focus is on the team on the one hand, and on the other hand on the individual level. The information sharing process is monitored during the research. That is to say, the social interaction on team level and on individual level is the subject of the research. Reading about this research allows the reader to identify with the subject of the study.

The second criteria is that the research study must be <u>transferable</u>, meaning that "researchers need to show familiarity with the […] context" (Welch & Piekkari, 2017, p. 719). Being able to conduct the research in its natural environment allows the researcher to get completely involved in the study, giving value. The researcher is engaged in the field as a result of netnography, which will result in the dependency from the social world he/she is studying (Welch & Piekkari, 2017). This means that not only the core of the study is important, in this case the team and individual level as the unit of analysis of the study, but it must be investigated together with the context. Therefore, this study uses multiple sources: interviews to see the core of analysis from the inside, and participant observation to connect it with the context. The interpretation of the analysis of these teams and individuals can only be described by connecting them. As an example, team members might behave completely different when being in the office, while developing other habits when working virtually. This truth also stands when they are monitored vs. not monitored. Along this line of thought, it only makes sense, if each level is investigated separately, but at the same time at the end interpreting it together, given the phenomenon investigated. In conclusion, the outcome of the investigation of language diversity regarding the teams and individuals in their virtual environment need to be suitable for other teams and individuals with a similar background.

After setting the background, the next criteria is <u>dependability</u>. They argue that repeatability is not obtainable given the environmental changes and the change in the thinking of the researcher due to knowledge he/she acquires during the process (Welch & Piekkari, 2017). Although this change is present, the data collected is stable over time and is documented. A later researcher must come to the same conclusion (Yin, 2003, p. 37). This paper contains a theoretical background (chapter 2), which gives the basis of the study, and afterwards the methodology part (chapter 3), where all information documented is available on how the data was collected, and what steps the researcher has made in their analysis to get the results. In this respect the chosen theory is the SIT discussed in chapter 2. At this step this theory will help to later identify other examples to which the results can be deducted (Yin, 2003, p. 37).

Finally, the confirmability criteria must be met (Welch & Piekkari, 2017). Netnography helps to investigate the context, while personal interviews show the core of the study, the units. Interviews are perfect to help with the analysis of the unit, since they show the personal view of the participants. Huberman and Saldana claim in their paper, that “the words we choose to document what we see and hear in the field can never truly be objective, they can only be our interpretations of what we experience” (Miles et al., 2020, p. 7, as cited in Zahle, 2020, p. 1), meaning that it is not completely objective, it is distorted by the eye of the participant. People from the team talk about their way of work, giving involuntarily subjective opinions. This infers that neutrality is not given but in the light of the data, conclusions can be drawn that are supported by the data collected (Welch & Piekkari, 2017). Therefore, documentation is also crucial at this stage. Transcriptions are done in approximately 100 pages. Furthermore, complete descriptions of situations, participant´s ethnicity, or the social role in the community can be found in almost 50 pages. The time frame during which the researcher was involved and got the opportunity to take a look at the everyday life of the team was all together 17 months. During this whole year, participants were interviewed and observed. From these 17 months netnography took 8 months, whereas the 10 interviews, including the preparation for the interviews, took 12 months.

After setting the criteria along which the study can be conducted, I wanted to make sure that the data that the participants are willing to share represents the truth, not what the researcher might want to hear. To avoid the unconscious falsification of the data by the participant, I wanted to assure them that their evidence is going to be kept confidentially. Since it is about sensitive data, the company´s name is not mentioned in the research. For the purpose of finding out how information takes place given the different layers of languages and the virtual environment, this detail about the company´s name is negligible. It is only known that the chosen company is a multinational firm operating in the telecommunication sector. However, true data can be also problematic if it is not filtered. Only data which is relevant for the study can be used. Relevant means focusing on people, activities, settings, events that satisfy the research question (Zahle, 2020). Identifying and selecting the teams is therefore crucial (Yin, 2003, p. 37).

With the expansion of the internet and online world, the data that one has access to has also expanded. Data also means information, thus knowledge. There are several ways to get access to data, such as Web Surveys, Email Surveys, Internet Surveys, nonreactive data, Web Log analysis, Blog analysis, and last but not least social networks. In this study firsthand data will be taken through observation and interviews. This nonreactive data looks at the behavior of people (Rasmussen, 2017, p. 39). All this type of collected data is of higher quality. More comprehensive research can be obtained by connecting these traces with in-depth investigations and looking at the behavior (Rasmussen, 2017, p. 53). In this study data will be collected this way to get information which corresponds the criteria mentioned above.

3.5 Ethical considerations

After discussing some issues in qualitative research, the ethical side of the story is not to be forgotten. There are some guidelines that a researcher must stick to, in order to avoid ethical conflicts.

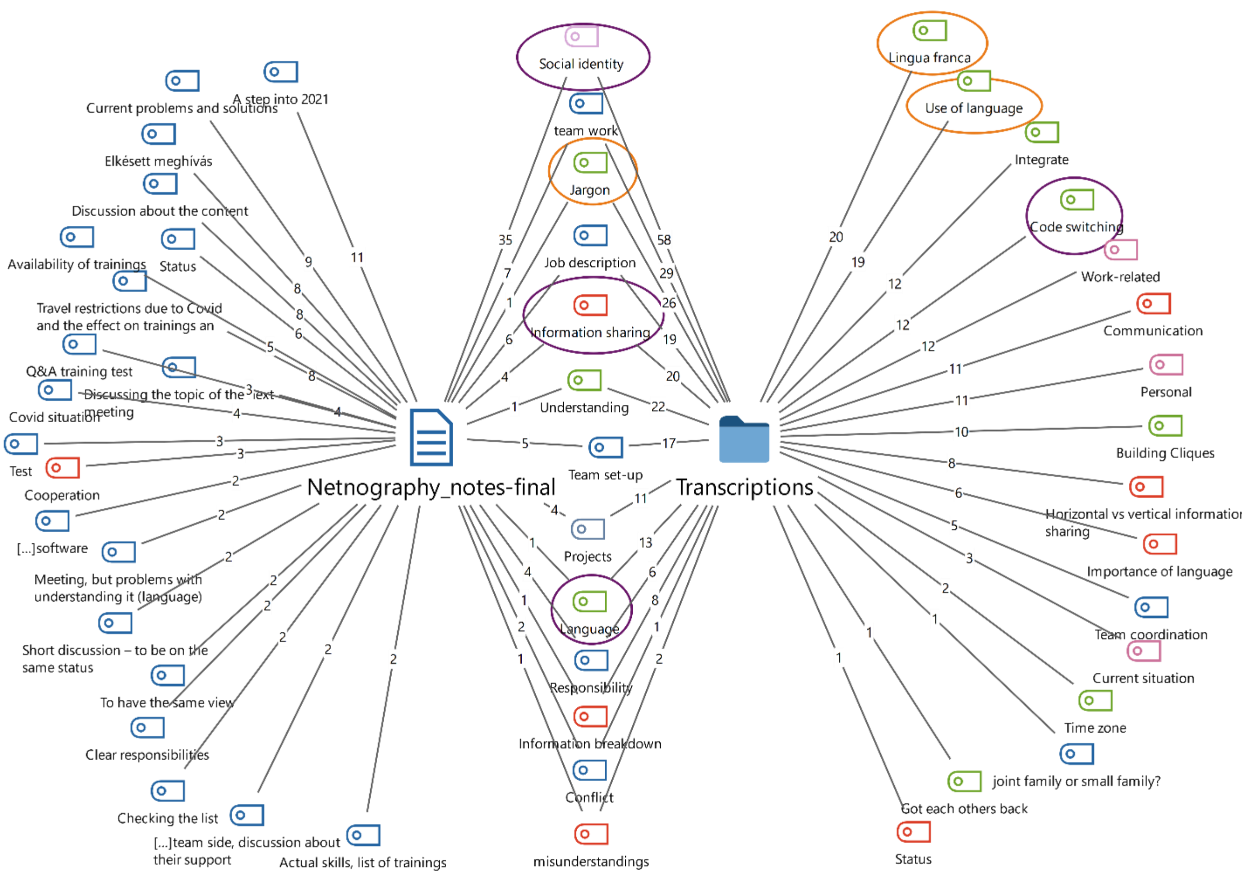
<u>Starting point:</u> Information sharing is investigated based on language diversity. <u>Voluntary participation</u>: researchers have different relationship with the participants. The rights of the participants are as precious as others. No one can be pushed into taking part. It must be voluntary in all cases, they must agree. <u>Sampling</u>: This research is going to investigate managers who work in virtual environments. Not only managers are going to be asked, but as a subunit also employees. These two groups might overcome language barriers differently, thus affecting the information sharing within the group of the units, and the group of the teams (a manager leading a team). <u>Do not harm</u>: taking part at a study must not harm the participant. Harming not only means during the process, but also after the research finishes. The researcher must be careful while conducting interviews to respect the rights of the person. <u>Confidentiality</u>: harm can also occur through neglecting down a person’s confidentiality. Researchers are responsible for avoiding any situation that might result in damage to the person. <u>Anonymity</u>: anonymity must be kept. This is derived

from the basic human rights of privacy but is interpreted differently depending on the country and law. Only assess relevant components: only what is relevant needs to be taken into the research and thus made public. For example, making someone's email address public acts against the principle not to harm a person (Eynon, et al., 2017, p. 23 ff.). Ethical approval is necessary to get ethical clearance. Participants must have all the information needed to participate at the study. No hidden small hint possible. All data that can be published will be published, in case one of the participants vetoes something, this will be deleted.

This study will contribute to the field of virtuality, it connects the different layers of language, not only between languages, but also within a language with information sharing under the lenses of Social Identity Theory in a completely virtual environment. A great emphasis will be placed on the quality, the appropriate methodology and transparency. A researcher always has to ask whether his action is ethical. He is responsible for carrying out a high quality, ethical, and reliable study, based on true data. Reporting the findings must stick to the basic principles mentioned above (Eynon, et al., 2017, p. 35).

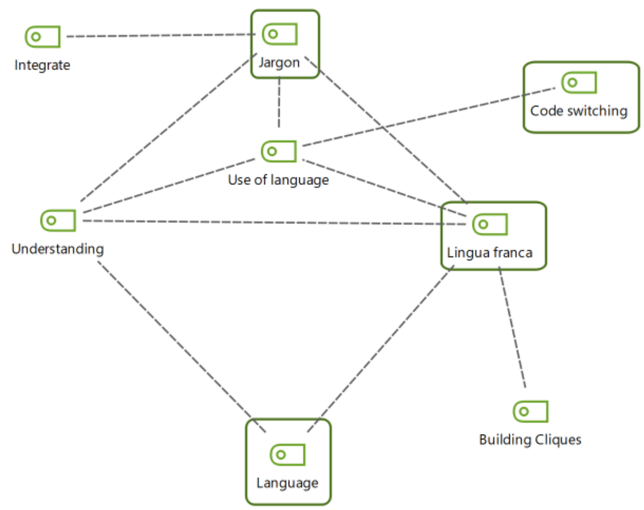
4. Findings

Chapter 4 guides through the presentation of the findings. It introduces the results of two research methods, interviews, and online observations, thus two units of analysis, the individual and the team level, and gives a justification of the results with reference to SIT. Thereafter, the results will be put together to discuss them, and draw a conclusion by comparing the results of the investigation with the findings of previous research. In order to have a recap about the theoretical background, the key terms are recalled, namely language diversity, code-switching, and information sharing in connection with Social Identity Theory, and the questions arisen in chapter 1.2. It is important referring back, since they are the basics of the theoretical background, on which the discussion will rely on. Based on the combination of the questions, the key terms, and the results of the coding described in figure 17 of chapter 3, figure 18 shows the important codes highlighted.



18. Figure Two-source model - highlighted codes (own illustration)

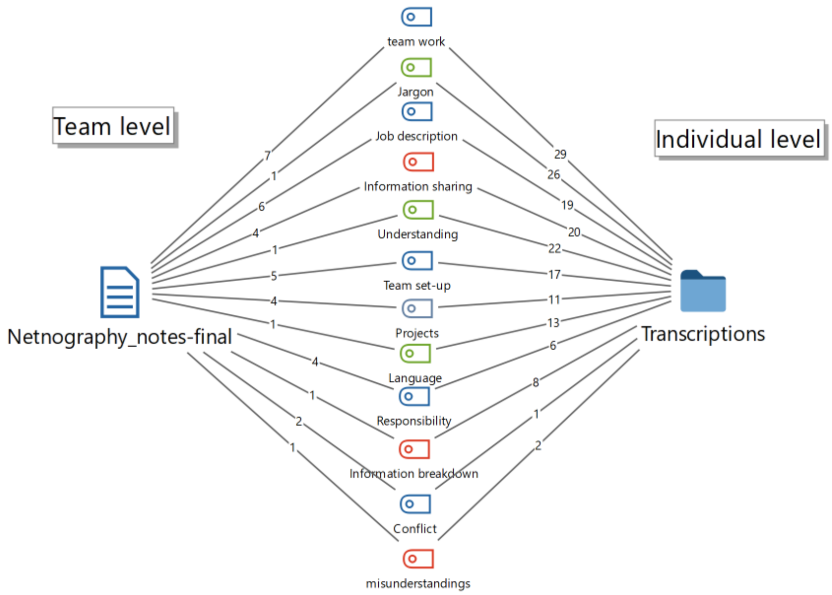
Since only the first 20 most important codes are shown in the figure, some of them might not be visible, even though an important connection can be drawn. This can be traced back to the language layers. Although they break down to the layers and they appear separately, they need to be seen together (see figure 19). The connection between the codes and subcodes is for the purpose of the study relevant.



19. Figure Language layers connection (own illustration)

4.1 Presentation of the Findings

Chapter 4 is very tightly connected to the methodology part, since it describes the study in detail: the steps in practice, which was demonstrated by examples in the previous chapter. The aim of the study is to see how information sharing takes place under the influence of language diversity in virtual teams. The analysis is very complex. The unit of analysis, the core of the research happens on 2 levels: the individual level, that is to discover by conducting, transcribing, and examining the interviews, and the team level, which can be investigated by reading between the lines in the netnography notes. The borders between them are, however, blurred. This can also be seen in figure 20. Therefore, this subchapter is going to be divided according to the key terms in connection with the questions arisen in chapter 2.1 and addresses them directly to answer the research question.



20. Figure Netnography - Interviews: connection between the team unit and the individual unit (own illustration)

The key terms are Social Identity Theory, Language diversity, Code-switching, and Information sharing. Looking at these two data sources and combining them allows the researcher to address the findings directly to the research question. For that reason, I recall the research questions in the same order as introduced in chapter 1.2 and structure the presentation of the findings as follows:

1. *How does social identity shape information sharing given the language use?*

2. *How does language diversity influence information sharing in virtual teams?*

3. *How does code-switching influence information sharing in virtual teams?*

Given the feature of a theory-testing study, I would approach language diversity under the lenses of Social Identity Theory. All these are based on SIT, which is a compound noun. It consists of self-categorization, social comparison, and social identification (see chapter 2.1). These concepts help to justify the suitability of the study and show the influence of the identity issue on information sharing within these teams.

4.1.1 How does social identity shape information sharing given the language use?

The aim of the research is to find out how the use of language is influenced by peoples´ social identity. Therefore, this section will address the research question:

“How does social identity shape information sharing given the language use?”

In order to find an answer to this question, first of all, it must be examined how social identity is related to the case study and the work within the organization. Intergroup relations are based on people´s identity, to which characteristics or group they approach to. This is reflected on the social belonging that is affected by the self-worth, behavior, or experience (Brown & Capozza, 2000, p. vii f.; Cheng & Guo, 2015). Regarding the team, to ensure smooth teamwork, everything has to be given at the individual level first. People must have their personal objective, which must be more or less on the same belief as the group objective (Netnography_notes-final, Pos. 11, 82). The teamwork within and between the teams is clear, supported by a system. Each team is involved in the process. P4 explains it as shown:

> „*We have a care model between different layers [...] So, if the customer has a trouble, has any problem with the product, it's not working like it's expected, or there is a suspected fault in the working, then they create a ticket, and this ticket is going through the whole care chain. So, the first is going from the first level to the second, to the customer support team, they try to provide some support based on the document. If they cannot solve the problem, because it needs deeper technical expertise for example, or if they are simply not aware how to solve it, then they escalate this ticket to us, to level 3. And this ticket is assigned to one of my engineers and engineers are working on the ticket*” (P4 - transcript, Pos. 16).

In this sense, they share human resource. From this, nevertheless, it can be deduced that if this chain at any steps listed above breaks, be it because of delay or misunderstandings, the information chain ends. The collaboration is fragile:

> “*Who should be blamed because of the delay? Is this cooperation strong enough to overcome this?*” (Netnography_notes-final, Pos. 20).

All these are questions that arise in the mind and can weaken the stable relation between smaller teams thus hindering the data flow. For this reason, a clear formulation of the responsibilities is necessary.

> "*The responsibility must be divided and fixed. It must be crystal clear, who is responsible for what, and not to involve everybody in everything*" (Netnography_notes-final, Pos. 88).

The engineer´s and manager´s job is tightly connected. Managers are responsible for ensuring that the right information goes to the right person. This process is not only providing help, but it contains the information sharing itself. So, they not only have a role of coordination, but also delivery of information. Engineers get feedback from the line managers, who also get feedback from their managers (Netnography_notes-final, Pos. 69, 14, 82). Since technology undergoes rapid change, these human resources need to be trained. Therefore, team members have multiple competences, they can give support with multiple products to „*backup each other*" (P5 - transcript, Pos. 21). The division of the responsibility is a way to keep up with deadlines (Netnography_notes-final, Pos. 29). There are specific teams, CODE Managers set-up, who are responsible for trained and competent engineers. These trainings are not only task-specific trainings, but also trainings associated with language skills. They are

> "*facilitating the team with the trainings to develop their competence level in terms of the trainings, certification, to increase their levels, level of competence and skill levels*" (P2 - transcript, Pos. 6).

They work virtually, but some trainings demand presence in order to be more effective. The whole teamwork is better when people are allowed to meet and build a personal contact with one another. The information flow is smoother that way. It is observable and was also supported by the case study participants that especially in case of virtuality, personal ties are corner stone for effective communication (Netnography_notes-final, Pos. 51, 78). Given the fact the teams work so close to each other, having that competence level is the driver of information sharing from a personal perspective. To quote P8 this is called the "*Arbeitskultur*", the work culture of the company (P8 – transcript, Pos. 44).

The role they fulfil in the organization is a sign of their identity. Managers try to fulfill a target which is focal to the company´s success. Engineers have the knowledge to realize it. "*We know* *something*" (P10 – transcript, Pos, 88; P8 – transcript, Pos. 122f.) was highlighted by a participant. Thereby, to share information is the basic step. This study shows that "*building trust between colleagues*" is essential and can contribute to the exchange of information. (Netnography_notes-final, Pos. 99). This is also supported by Scheepers and Ellemers (2019), who associate it with the knowledge of the membership in a social group complemented with the value of emotion. Accordingly, people not only can establish its positive identity, but also a negative identity towards a group or a group of people. While observing the teamwork, I became aware of something:

> "*He is interrupting him. He is one head of the firm and wants to have everything under control. I feel misunderstandings between the two parties communicating. This is caused by the language.*" (Netnography_notes-final, Pos. 82)

According to this statement and based on the study, people with different positions might have different opinions. The bigger the social distance between individuals, meaning the common ground based on characteristics between the groups, the bigger the probability of having conflicts, since the negative attributes come to the foreground. It always depends on the personality. Team members look at the <u>interest</u> of their own small group and want to carry their point. This also includes information retention. As an example, during observation, one of the problems at a meeting was, that not everybody has received the invitation link, although they should have been attending. Those who received it, received it overnight. (Netnography_notes-final, Pos. 55, 49, 78). So, the question is, how much to stand up for self-interest and when to put the interest of the bigger team or other teams in first place. This always depends on the importance of the task. As an example, let´s have a look at the negative information sharing. Teams highlight their own preferences. As a consequence, the importance of the issues slips:

> „*Let's discuss should we fight for it or not? How important is it*?" (Netnography_notes-final, Pos. 53).

> "*Who says this is important at all?*" (Netnography_notes-final, Pos. 29).

This leads us to the next step, <u>the sense of belonging.</u> Belonging to a certain group might be a tricky thing, as it can unknowingly cause people to build cliques. But given the fact that teams must transmit information not only within its members, but also between the teams, clustering is a hazard and can influence the process negatively. One must figure out how each of the team members he works with is. And after understanding the person, one can see which communication method suits the best (P9 – transcript, Pos. 57, 24 ff.; P8 – transcript, Pos. 86). Team members of the case study organization are aware of the importance of being part of the bigger team. They feel responsible for one another (Netnography_notes-final, Pos. 11). This can also affect the way they communicate. And since teams have to work with each other, if it is not handled in the correct way, it can cause serious information breakdowns (P8 – transcript, Pos. 45-48). "*People work over their effort*" to carry out the goal, sometimes ending up in frustration (Netnography_notes-final, Pos. 105). This means, if someone needs something, one must give that information as soon as possible, according to P8. Constant interaction between the team members not only within the smaller, team, but also within the bigger team through MS Teams, Emails, sometimes phone calls is essential, as well as helping hand if someone needs it (P8 – transcript, Pos. 45 ff.). The main concept is

"*We are team*" (P5 – transcript, Pos. 69).

Understanding each other is the basis, especially because in most of the cases it is about collaboration (Netnography_notes-final, Pos. 72). Based on this perception, line managers encourage team members to "*to join, to jump in, to help*" (P5 – transcript, Pos. 69). One-on-one meetings are organized to help people´s integration in the team, which given the virtual environment, requires flexibility from all sides (P3 – transcript, Pos. 54; P2 – transcript, Pos. 73).

An important aspect which cannot be dispensed with, is the situation of today, the pandemic. This influences the personal perception, thus also information sharing. It affects people´s "work-life balance". From formal information sharing, it went into the direction of informal information sharing. Many were of the same opinion that

"*With Covid people tend to be more open*" (P7 – transcript, Pos. 104).

„*Sharing several things that not related to work, things, like showing this skill, like they would have like a team meeting with camera showing people that ´okay, this is what I like to do, I play guitar´ [...] These were things that we never did before Covid*" (P6 – transcript, Pos. 100).

Work and private life kind of merged and information sharing has expanded in an informal direction. The concept of working remotely has changed. This is connected with virtuality, since remote work is preferred. The company consisting of smaller teams have already been using this virtual set-up. It is important to ensure the same information flow (P6 – transcript, Pos. 100; P5 – transcript, Pos. 100).

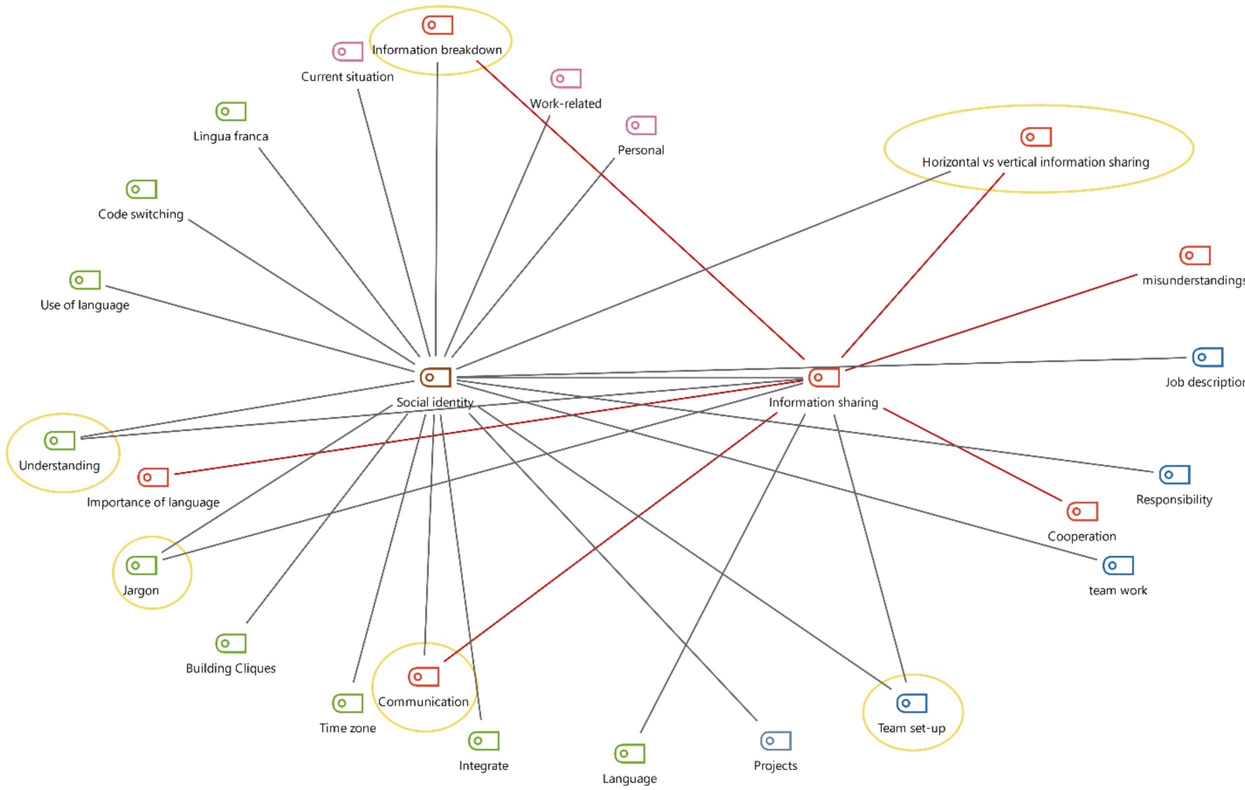
> *"It doesn't matter whether I sit at home in my office or whether I go to a, you know, a corporate building and work there*" (P9 – transcript, Pos. 89).

It is, nonetheless, strongly affected by the virtual set-up. Late replies due to time zone differences and lack of daily communication make collaboration difficult. Slow work is a consequence of information breakdowns (Netnograpy_notes-final, Pos. 4 ff.). Many people in the team, however, have left the team, leading to a weakened group cohesion (P4 – transcript, Pos. 109 ff.), especially areas which are affected by Covid. In order to restore the information flow, resources had to be restructured. This was also mentioned by one of the participants:

> "*Some workload has been transferred from India to some other countries [...] So, at the end the whole organization has been impacted by Covid*" (P10. – transcript, Pos. 105).

I argue that even though everything is given to ensure information sharing, the membership relates to emotional values. By restructuring human resources, the deficiency can be filled in the short run. In the long run, however, in case the personal ties are already formed, the deficiency might be perceptible. Consequently, in agreement with previous literature on the investigation of cognitive processes relating to social identity (Ellemers, 2020), situational and behavioral changes and the people´s perception of themselves and the other have a huge impact on the way how they share information. Nevertheless, since the main component of information sharing is communication, the most important pillar of communication, the language has to be examined next.

In the following, the figures demonstrate the connections between the terms. The line width reflects on the strength of the connection.



21. Figure Connection of social identity and information sharing (own illustration)

4.1.2 How does language diversity influence information sharing in virtual teams?

The research question that incorporates the research phenomenon is

> *"How does language diversity influence information sharing in virtual teams?"*

To answer the question, figure 22 will be of help.

According to Chidlow (2014, p. 1) is language is the principle of human life, and therefore also an important topic in International Business (Piekkari & Tietze, 2011). As a sign of membership, it also creates connections between people (Giles & Johnson, 1987 as cited in Hansen & Liu, 1997, p. 568). It is the basis of information sharing.

Information sharing is a very compound thing. It depends sometimes on small matters, but its existence is crucial. Information is power. In a firm, having the information is the question of survival. Citing Rafaeli and Raban (Ahituiv & Neumann, 1986 as cited in Rafaeli & Raban, 2005,

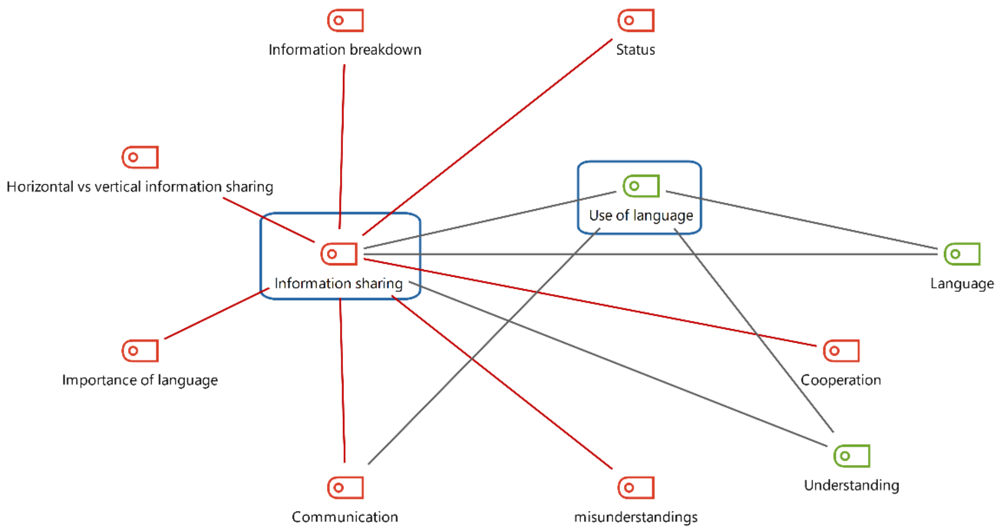
p. 63), information is the data in a context that carries a meaning. The language part is tightly connected to the information sharing part, given the fact that it is an instrument of communication that transmits meaning. Consequently, information sharing between team members depends on the language used (Brannen, et al., 2014; Pilerot & Limberg, 2011). While looking at this concept, I consider language as a multi-layered phenomenon. For this reason, it needs to be divided in its layers.

Mother tongue

Henderson (2005) showed the effect the mother tongue has on the use of the language, because it influences the image a person creates about themself and the other. People tend to approach those who have the same linguistic background. Regard the case study organization, the mother tongue differs in accordance with the country they come from. As mentioned earlier, there are 10 people from 8 countries. It is important to remember because it is influential in the study. Interviews show that team members with the same country background talk in their mother tongue (P7 – transcript, Pos. 18). This view was shared by all the participants. Mother tongue can facilitate communication and make it more efficient (P5 - transcript, Pos. 25). On the other hand, however, when observing the meetings, I have noticed that mastering a language can hinder other languages to come to the forefront. This can lead to obstacles when it comes to communication issues, because people might feel bounded when defending one´s opinion (Netnography_notes-final, Pos. 20).

> "*You can say exact words, you can be very precise …. and with people that have the same mother language, more easily you will understand each other, even though you can still have some misunderstandings*" (P6 – transcript, Pos. 85).

This demonstrates that mastering the language at a similar level to the mother tongue smoothens communication challenges, but it does not completely neutralize it.



22. Figure Connection of the use of language and information sharing (own illustration)

Lingua franca

Lingua franca, or the corporate language of a company, is the first step for establishing cooperation, especially in the international environment, when a multinational corporation is globally dispersed. Brannen and Piekkari (2014) call this usage of a common language, "language standardization" (Anglemark & John, 2018; Marschan, et al., 1997, p. 591; Hinds, et al., 2014).

First of all, an <u>accepted language</u> must be met. The globally accepted language according to scholars is English. This is also the case in the case study organization, where consent has been found on this subject. The company´s language is English. People give language a different meaning. Despite this, everyone gives the existence of the corporate language a great importance, they approach it, however, differently. Having a lingua franca, according to some opinions, is essential, *„normal and standard"* (P3 - transcript, Pos. 27). It shows belonging to the company, but that also implies that it is taken as something to be natural to master.

When looking at the <u>influence</u> on the information sharing, "*it's obviously making things much easier so that's the opportunity to get faster to the point*" (P3 - transcript, Pos. 38), speeding up the information flow. Meetings run in English (P1 - transzrkipció, Pos. 135; P8 – transcript, Pos. 4). *"It has to be in English most of the time [...] as we are getting people from several places in the world"* (P6 - transcript, Pos. 36; P9 – transcript, Pos. 35). There is no other option, adds another interview participant (P1 - transzrkipció, Pos. 38). Everyone should know the language well, as the company has people from Hungary to China, "*it´s just a must*" (P10 – transcript, Pos. 49; P7- transcript, Pos. 37).

Others not only attach great importance to language but claim that it is a vital reason why communication can fail. Even though there is a corporate language, a Lingua franca, it is not the same as the Mother tongue (P5 - transcript, Pos. 79 25; P6 – transcript, Pos. 36). It´s not so easy, not even for those who has been using English for years. This shows that depending on which language layer has been used, the information flow might vary, because it can cause a gap between participants.

> "*I can feel a difference, when I can talk in my mother tongue, and when I have to talk in English. [...] it´s a lot of time, lot of years talking in English […] so every day you are doing this work around, trying to explain when you do not find the words*" (P6 – transcript, Pos. 36).

In their paper Brannen, Piekkari, and Tietze (2014) mention researchers highlighting the negative effects of language on information sharing. They argue that the lack of the basic language knowledge might increase the psychic distance between team members thus preventing information sharing from contacting organizational decision makers. I argue that not only the lack of language knowledge or the absence of the specific words can be the reason for having difficulties. Misunderstandings can occur owing to pronunciation issues. A line manager working from China describes it as a "*tricky thing*" and relates this to the different countryside issue. He also demonstrates it with the "*R*" – "*H*" example, when not knowing which word has been used because of the different pronunciation (P5 – transcript, Pos. 54, 36; P10 – transcript, Pos. 51; P4 – transcript, Pos. 53). Pronunciation issues relate to the linguistic background the person has, meaning that people from the same or similar linguistic family might understand each other easier. This also implies the psychic distance that researchers refer to (Brannen, et al., 2014). For this reason, among others, even though Lingua franca exists and represents an essential part of the everyday´s life of team members, when they get the opportunity to switch to their mother tongue, they will do it (P1 - transzrkipció, Pos. 41). This illustrates the person´s affiliation, on which layer he feels the most comfortable to share information. This was also conspicuous while listening to the meetings, where accent seemed to be a constant struggle for an outsider, since it hinders the correct understanding and thus the exchange of information, fostering misunderstandings (Netnography_notes-final, Pos. 99). Therefore, pronunciation issues within the usage of lingua franca within the company can hinder the information flow.

However, the spoken language is not the only way of transmitting information. I claim that using a written communication channel, like email or chat, might help to solve the pronunciation problem. Teams within the company communicate through Lingua franca. Information sharing must be present at each and every step of the workflow, otherwise it can cause difficulties.

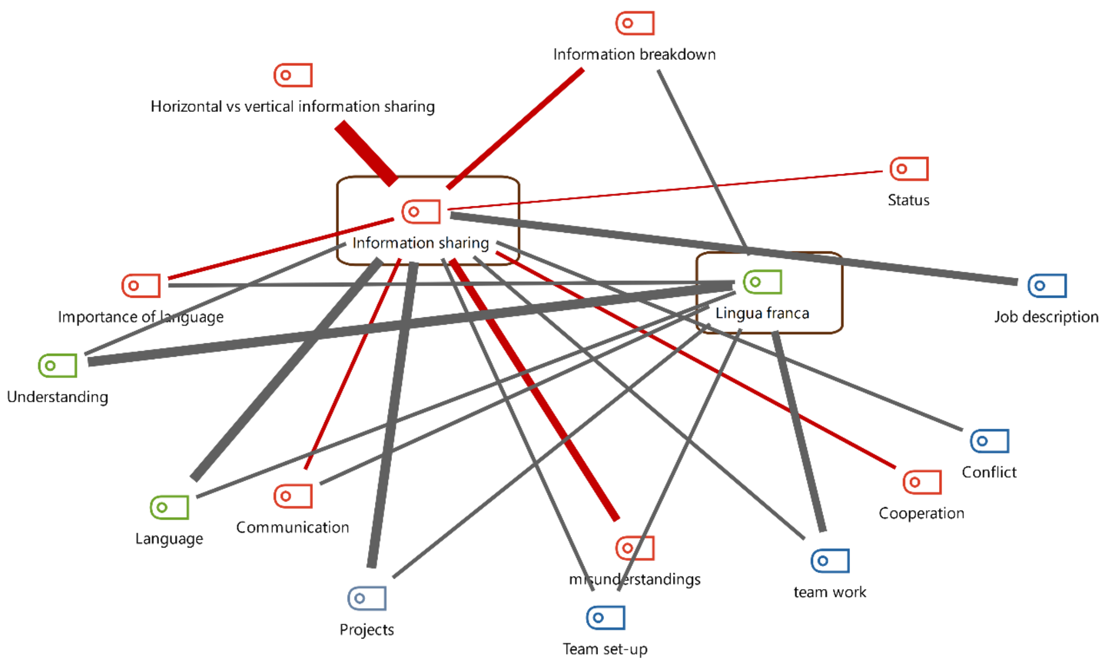
> "*For example, at the planning phase let's say at the selling phase or sales function sells the project, then they obviously are more optimistic, because they want to get that business. But then along the way R&D realizes that they cannot deliver for certain dependencies and then there is a lead delivery of the particular project, and this is, let´s say, a communication issue between the sales function and the R&D function*" (P3 – transcript, Pos. 88).

The quote of P3 above shows the teamwork within the departments. Whenever one has to share information between the team members, he/she has to communicate, thus has to use the language, be it in a written or oral form. Important is to bring people on a common understanding (P6 – transcript, Pos. 87, 95).

Summed up, the team´s day-to-day is surrounded by information exchange. Most of the time the source of misunderstandings is the inter-group communication. In order to not to go in the wrong direction, constant communication and information sharing is fundamental according to the participants. The most important tool for information sharing is language. It is crucial in all steps of the workflow (P3 - transcript, Pos. 88 ff.; P9 – transcript, Pos. 83; P7 – transcript, Pos. 88 ff.; P10 – transcript, Pos. 100). A company language that is accepted by all members smoothens the information flow, which can, however, be hindered by pronunciation issues. A way to overcome those difficulties is using written language. This can facilitate people to be on the same understanding.

> *"Language always has an important role and communication always has an important role. [...] the effect of language I think it's not neglectable. The only situation when language can be put aside is when working alone, which in this company rather does not exist*" (P3 – transcript, Pos. 98 ff.).

Consequently, Lingua franca, the corporate language of the company influences the information sharing in all steps of the workflow given the fact that it is a crucial factor for communication.



23. Figure Connection of Lingua franca and information sharing (own illustration)

Jargon

Jargon is the language, regardless of the nationality of a person, used within a group of trade. Bullock (2019) distinguishes it completely from the mother tongue, since it is a tacit knowledge that must be mastered. In this company, the information technology-based language, the telecommunication specific language is called Jargon. P4 explains it as being

> "*from the same subculture*" (P4 – transcript, Pos. 35).

Firstly, it is important to differentiate the information sharing in the different levels. In this case, sharing happens on 2 levels: managers and engineers, as they use a different Jargon. This implies that the communication and information sharing is different depending on whether it takes place between manager-manager, engineer-engineer, or on mixed level (P7 – transcript, Pos. 79). For that reason, it was essential to name the participants by the role they fulfill in the company, because the way in which they gave me the information I needed was different. There are 2 types of Jargon based on these levels: the managerial and the engineering language. In managerial language, HR-related Jargon is used. These might be words or expressions. P5 emphasizes the technical language, abbreviations like "*sw*", "*mr*", "*nf*", or "*vi*" (P8 – transcript, Pos. 71; P5 - transcript, Pos. 25; P3 – transcript, Pos. 48), completely incomprehensible for an outsider, sometimes even for a member. For instance, the Jargon word "*maintenance*", a common word in the company, also refers to a business unit, but it is not obvious to the team members what exactly belongs to it (Netnography_notes-final, Pos. 32). Jargon of acronyms is thus a challenge, and it affects inter-group communication. It´s a learning by doing thing, one picks up the knowledge with time during the technical discussions (P3 – transcript, Pos. 92; P10 - transcript, Pos. 67 ff.; P8 – transcript, Pos. 91). The way, however, how these groups communicate will always differ depending on the position they fulfill in the organization (Netnography_notes-final, Pos. 55). But there are people in the organization who have been working in several groups throughout the years. They are a sort of gatekeeper to ensure smooth information exchange. P4 is one of these people who fit into both groups:

> "*Many times, I feel that I need to translate between the two groups. Because the language is so different, even the thinking is so different. And it's very common that we have this company or organizational briefings for all hands meetings or something like that and we simply cannot understand what the leader is talking about*" (P4 – transcript, Pos. 90).

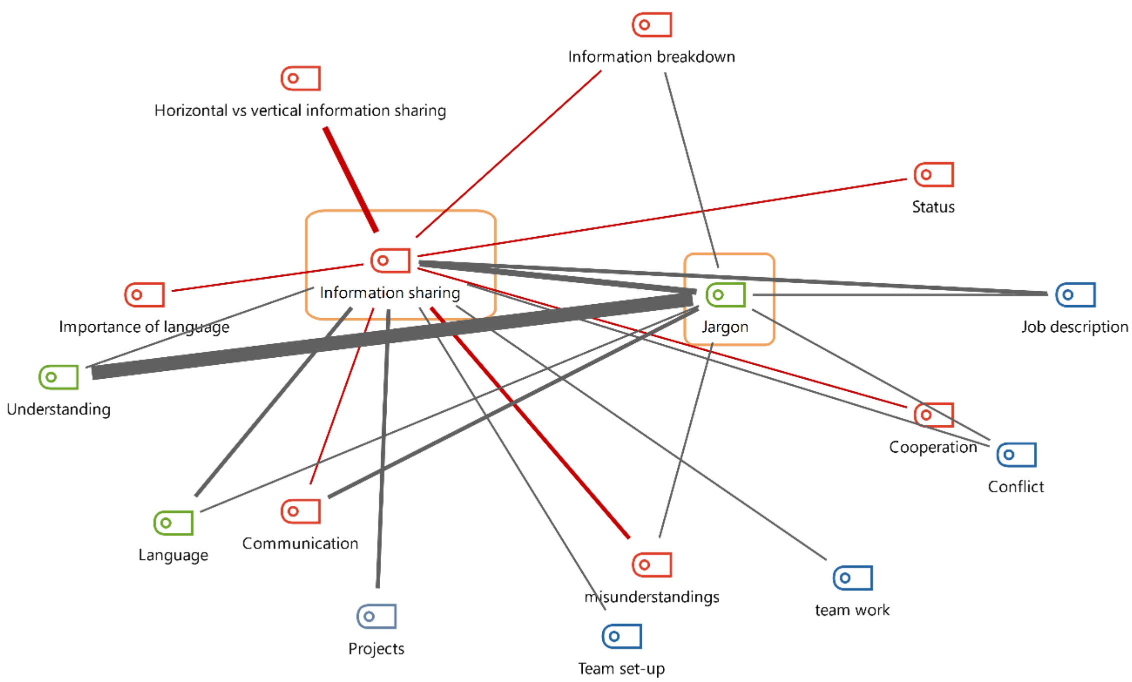
This also implies that having English as a Mother tongue doesn't necessarily mean having an advantage while speaking Jargon. But keeping in mind the previous example, it is something that has to be learned. Sharing information through Jargon can be seen as a journey,

> "*using the different languages, understanding the meaning of business expression, financial things, that was part of this learning*" (P4 – transcript, Pos. 95).

In order to get there, it is a way of constant struggle, since it can create misunderstandings, where people have to ask back right away if they don't understand something so as to not to hinder information sharing (P6 – transcript, Pos. 77; Netnography_notes-final, Pos. 99).

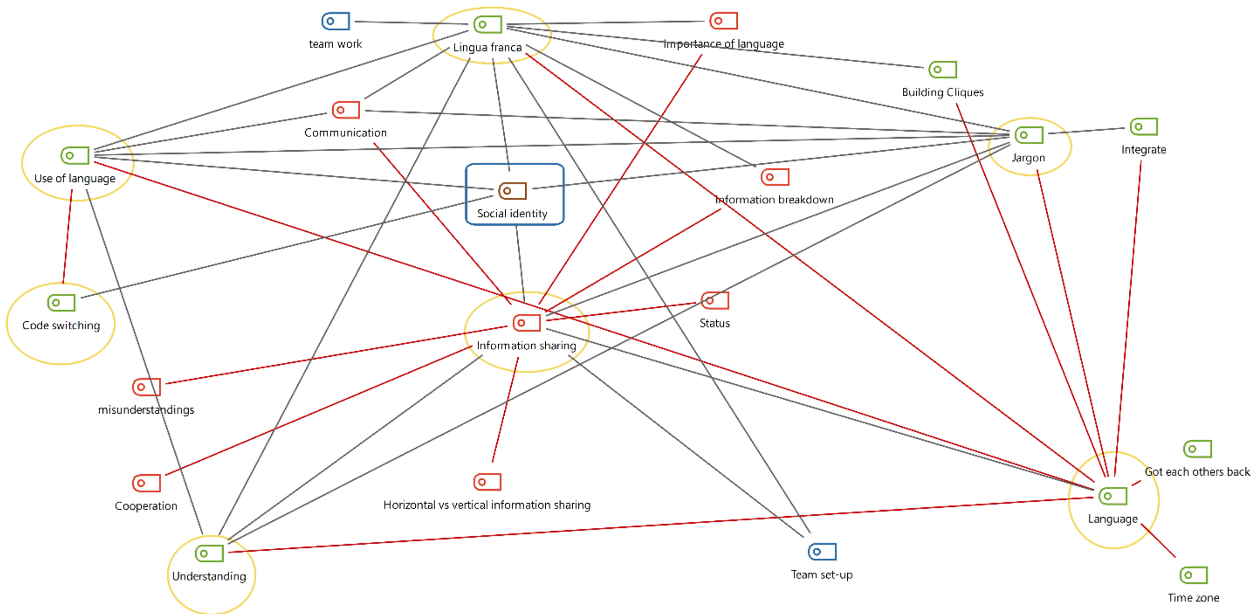
Beside all these, having a personal contact facilitates communication between team members.

> "*If there is a longstanding relationship with the line manager and the team it might be much easier than in a new situation*" (P3 – transcript, Pos. 83-85).



24. Figure Connection of Jargon and information sharing (own illustration)

The familiar usage of Jargon creates the common ground for information sharing. This is proven by the fact that taking part at a meeting for the first time causes difficulties associated with language, like in understanding (Netnography_notes-final, Pos. 8, 76). This feeling reduced with time, however, it didn't completely vanish. Therefore, I argue that more emphasis must be placed on the right usage of Jargon on both levels in multinational corporations.



25. Figure Connection between social identity, the language layers and information sharing (own illustration)

4.1.3 How does code-switching influence information sharing in virtual teams?

Code-switching is the system of usage of the language layers discussed earlier on. The next research question that brings the researcher closer to the result is:

> *"How does code-switching influence information sharing in virtual teams?"*

The term code-switching refers to the interaction of the language layers during communication. Lauring and Klitmøller (2014) define it as moving back and forth between the languages. Which language to use depends on the participants in the meeting. It is a system that is automatically used for communication in order to reduce the linguistic gap between conversation partners, thus fostering information sharing (Hansen & Liu, 1997; Ahmad & Barner-Rasmussen, 2019). They not only consider code-switching as switching between Lingua franca and Jargon, but also between the different languages spoken. To my question regarding the use of language, the Hungarian Line Manager answered as follows:

> *"If there are Hungarians, then we use Hungarian of course. If there is someone who doesn't speak Hungarian than we use English. So English is the official language within the company"* (P4 - transcript, Pos. 33),

but they can switch between them if it is comfortable. This improves the communication and information exchange between team members, since they no longer have to concentrate on the way they speak. It often occurs subconsciously. The virtual environment makes this even more complicated, because using MS Teams for instance, people might not observe that someone has entered the meeting,

"*Sorry I'm here I don't understand*" (P3 – transcript, Pos. 42).

P3 also demonstrates this by an example. Being a bit late for the meeting may lead to listening finish like

"*Hyvää huomenta miltä sinusta tuntuu?*", meaning "*Good morning, how do you feel?*" (P3 - transcript, Pos. 44-46).

P7 agrees on that:

„*People are kind of interested to learn each other's languages and I've noticed that Hungarian colleagues, they use finish words, and we try to,… well,… like to use some other languages, so people are interested in each other's languages*" (P7 - transcript, Pos. 63).

This is the case within smaller groups, where information sharing is rather informal and code-switching between the languages is common.

"*OK I don't know this word in English so let´s say it in Hungarian, do you understand already?*" (P4 – transcript, Pos. 65).

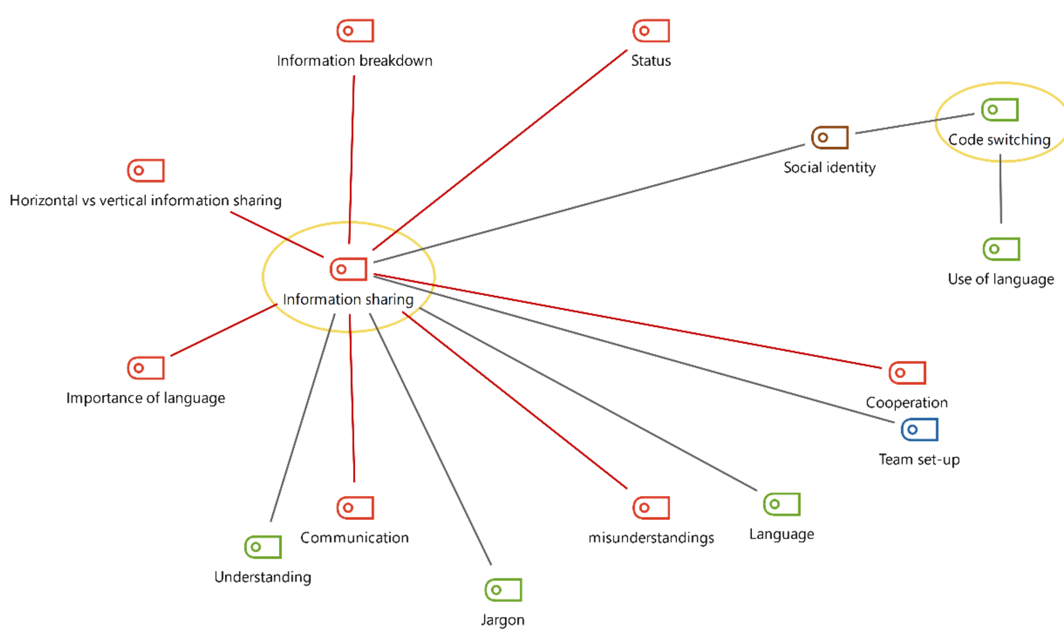
Besides all the positive effects code-switching might have, it also has a <u>negative side</u>. In their research, Tenzer, Pudelko and Harzing (2014) highlight the negative effect of code-switching on information sharing. Regarding the case study corporation, having a language that is similar to the Lingua franca, and the switching between the languages or the corporate language and Jargon with its technical aspects makes it even more confusing (P9 – transcript, Pos. 52). It happens that people switch between those languages, the lingua franca, and the mother tongue. Not on purpose, but because of the similarities between the two languages they might think that a word they know also exists in the other language. The situation is more dangerous when exactly the same word is used in both languages, but with a different accent and a completely different meaning. P6 provides an example:

> "*I used a word once that for me means that `I am a person that can easily forgive, I do not demand a lot from people` and for the other person: `I think I am superior`*" (P6 – transcript, Pos. 38).

It can, however, also be attributed to virtuality as another factor. According to P6, immediate clarification is necessary (P6 – transcript, Pos. 78-81). This proves how misunderstandings can occur during communication, hindering information trade. Personal contact helps to overcome the difficulties. How effective information is shared depends on the communication between team members and the way how they interpret words. This again shows a connection to the social background the team members have, just as it can be seen through the experience of P6.

P2 builds on this personal contact when she adds:

> "*If you don't understand something, you ask P1 […] so that's where information sharing begins you know*" (P2 – transcript, Pos. 103).



26. Figure Connection of Code-switching and information sharing (own illustration)

With information sharing, however, one must be careful. A multinational company, just like any company, has competitors. There is competition in the job market. Information is a useful thing, but at the same time it can cause harm if it gets to the wrong person (P8 – transcript, Pos. 103). Based on the findings, I claim that code-switching as being the interaction between the language layers is a gatekeeper in the information sharing process that can facilitate communication and make people feel comfortable when dealing with foreign languages. People´s interest in other languages also justifies its importance. Immediate clarification and personal contact can mitigate its negative effect caused by virtuality.

4.2 Discussion of the Findings

As mentioned earlier, Social Identity Theory can be divided in 3 phases: self-categorization, social comparison, and social identification. As a recap, self-categorization is the process of having a perception of ourselves and other categories (Ellemers, 2020; Brown & Capozza, 2000, p. ix; Scheepers & Ellemers, 2019, p. 136), social comparison is detecting the characteristics of a group and identifying with that specific group based on the characteristics (Ellemers, 2020; Islam, 2014; Edwards & Liu, 1997). This is the step where the terms in-group and out-group emerge. As a final step, social identification is about belonging to a specific group and feeling the connection between the people within it. This is called team membership and is the tip of the iceberg (Scheepers & Ellemers, 2019). The data analyzed will be justified according to these 3 steps and will be discussed based on the literature in chapter 2 at each unit.

Social Identity Theory

The aim of the study was to find out how language is connected to information sharing under the lenses of social identity and its phases. So, the justification of the gained data is based on the steps of the SIT. Social identity develops through work, it does not appear overnight (P1 - transzrkipció, Pos. 58-65). The basis of SIT is the belonging to a group. This divides the social world in different categories of people, the "we" and the "they" (Brown & Capozza, 2000, p. viii). The wording "*Our team*" draws attention and refers to the belonging (Netnography_notes-final, Pos. 85).

In order to justify the importance of language and information sharing, figure 27 will be of help. In the previous subchapter (chapter 4.1), the findings have been presented using the interviews and netnography notes made during observation. In this chapter, these findings will be supported by the SIT. Figure 27 shows the connection between the terms with the help of the codes. The line width reflects the incidence of the specific code in each segment. From the part of language ´code switching´, ´use of language´, ´lingua franca´, ´understanding´, and ´jargon´ were discussed in the previous chapter concerning ´the influence of the language layers´. Therefore, the latter code is highlighted in yellow. The subcodes, ´communication´, ´horizontal vs vertical information sharing´, and ´information breakdown´ were grouped and discussed under the code of ´information sharing´. Thereby, along these codes, the importance of social identity on information sharing given the language use is going to be discussed. Since in this research the phenomenon of language is taken as a multilayered concept, the layers of languages, language diversity is the next to examine. Finally code-switching explains the phenomenon between the layers. The connection between social identity, language diversity and code-switching will be justified under the lenses of SIT and compared with the findings described in the theoretical background chapter. This section will discuss the findings along the research questions mentioned in previous chapters:

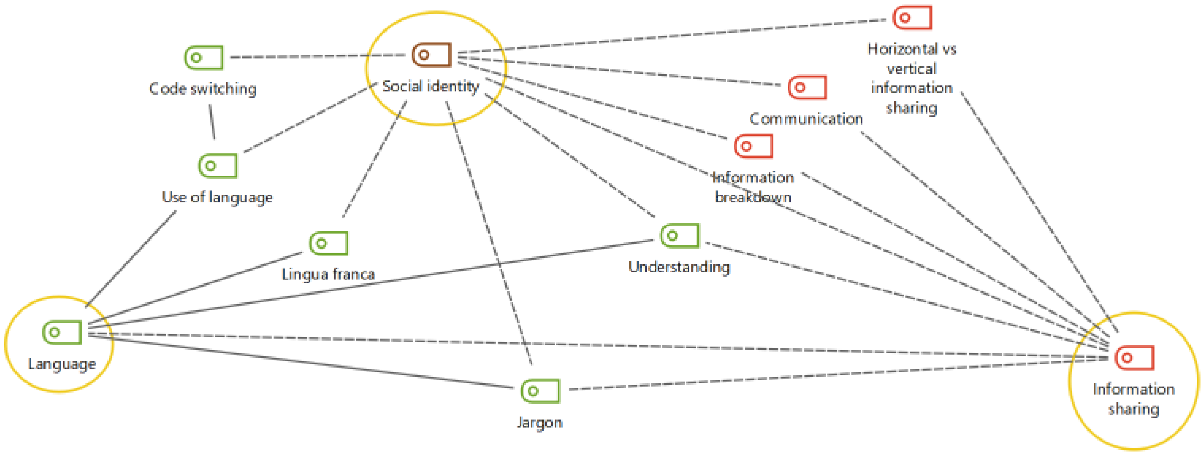
"How does social identity shape information sharing given the language use?"

"How does language diversity influence information sharing in virtual teams?"

"*How does code-switching influence information sharing in virtual teams?"*

This will give an overall answer on:

*How does language diversity influence information sharing in virtual teams under the lenses of Social Identity Theor*y?



27. Figure Language, information sharing and SIT connection (own illustration)

4.2.1 How does social identity shape information sharing given the language use?

<u>Social identification</u>

"How does social identity shape information sharing given the language use?"

Social identity is even more observable when looking at meetings as an outsider. According to Ellemers (2020), getting to this stage also means somehow a similar thinking, values or characteristics, along which they feel the belonging to the team. Team members get on the same wavelength and defend each other's opinion (Netnography_notes-final, Pos. 22). At this stage the connection is so close that this defense will remain (at least for a while) after the team has separated for some reason. As for an example, a team member had to move to another group, but assured the others of his help if they needed it. A <u>strong connection</u> is built between team members, and they can rely on one another. Despite the new position, availability is promised. They are no longer a team, but the inner ties and the group identity persists (Netnography_notes-final, Pos. 11).

Regarding the <u>acceptance</u> towards the other, the company attaches great importance to it. Newcomers are welcomed from the very beginning to make the person feel like part of the community. When talking with the case study participants, the same results were observable.

According to P9, people have built a connection to their colleagues, creating a common space (Ellemers, 2020). This is also supported by Ellemers (2020). A connection, which is to distinguish from building "*cliques or niches*" (P9 – transcript, Pos. 59). Previous studies show the importance of integration (Scheepers & Ellemers, 2019, p. 136 ff.). The new team member is assured that he/she will get all the help the person needs (Netnography_notes-final, Pos. 72). Creating a pleasant environment makes it easier to integrate people, which in the case of a virtual setting is even more vital. It unconsciously brings the person in the direction of group identification and as a result this person will highlight the positive characteristics of the in-group, while highlighting the negative aspects of the out-group. That way a close bond will build up (Scheepers & Ellemers, 2019, p. 144). This was also visible while examining the team. Good teamwork lies in the fact that the team members know and support each other. Managers have a great responsibility in achieving this (Netnography_notes-final, Pos. 11).

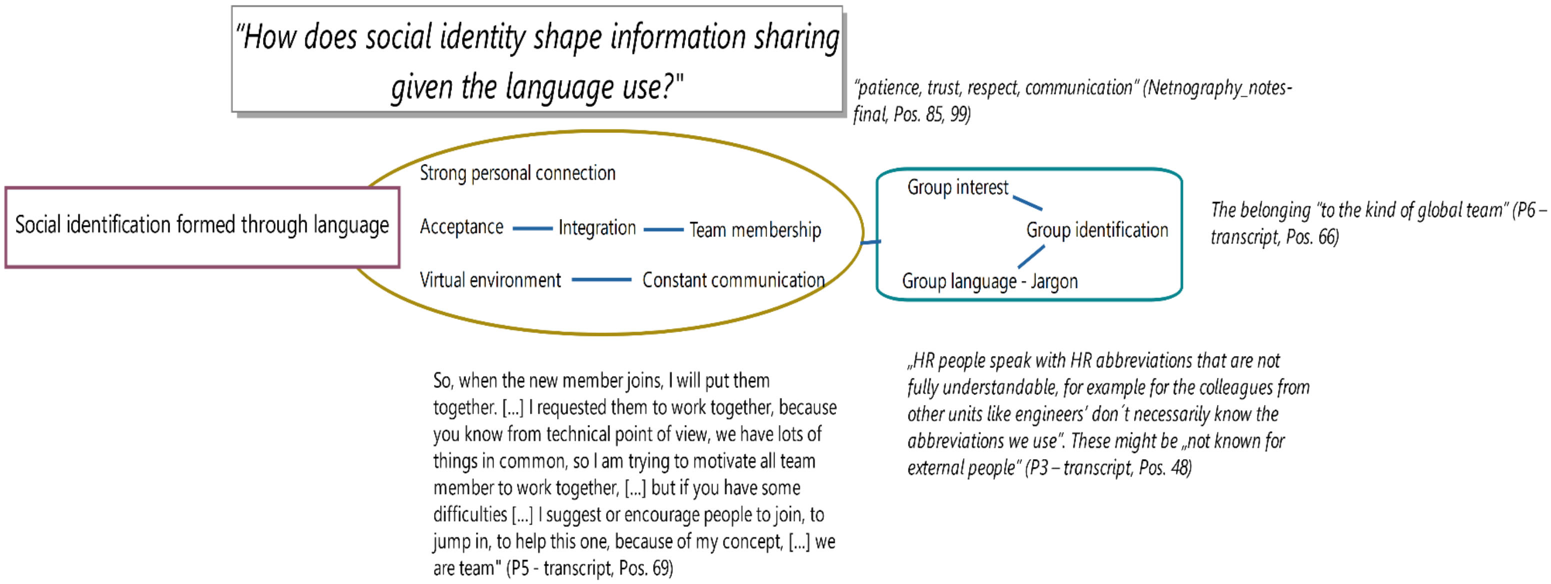
Being part at several groups at the same time doesn't mean to identify with all of them. In the team, people identify with the team and differentiate themselves from people that are in other teams by enlarging the in-group and rating the out-group negatively (Giles & Johnson, 1987, as cited in Edwards & Liu, 1997). As mentioned earlier, people who were not informed about the meeting, were team members from the bigger team, from the company level, not from the small team. All of his people got the invitation link without exception. Team membership is, however, so difficult, that even people from the company don't understand the difference between specific groups. For instance, it happened once that it was not clear what the teams NPI and NPD exactly do. The smaller teams within the big team are connected by the task, not by the personal affiliation (Netnography_notes-final, Pos. 78). Based on this research, personal connections show a stronger effect on the individual´s belonging than simply the task. I argue that in the long run, in order to maintain the identity built, personal meetings and communication are necessary, which faces, however, difficulties due to the virtual environment (P8 – transcript, Pos. 50). A challenge that P3 in the virtual set-up mentions is the lack of face-to-face contact and the lack of spending time together (P3 – transcript, Pos. 54). However, there is another way of sharing information. Constant calls are needed, not only within a team, but also between different teams to see where help is needed. The purpose of these calls and meetings are to keep the team together, to see what the other does, and to encourage collaboration and information sharing (P8 – transcript, Pos. 50). Therefore, constant communication is necessary.

Communication is determined by language (Tenzer, et al., 2017). The situation in which the company has been for the last two years makes it complicated. Travel restrictions don't allow the free movement of people. Although the virtual set-up allows team members to share information and work, personal contacts facilitate building connections (Netnography_notes-final, Pos. 51) and encourage people to speak up. This is particularly important in the case of not mastering the corporate language (P3 – transcript, Pos. 54). The same results were shown in the work of Tenzer, Pudelko, and Zellmer-Bruhn (2021), who were investigating the effect of language diversity on communication in multinational teams and agreed on language being a crucial factor for reduced participation in teams. A connection to the study of Lauring and Klitmøller (2014), who highlight job anxiety as a barrier and a reason for reduced participation, can also be found when looking at participants being scared to speak up. Therefore, in the absence of language knowledge the personal affiliation to a group gains importance.

All things considered, social identity is "an individual´s knowledge of belonging to certain social groups, together with someone emotional and valuational significance of that group membership" (Ellemers, 2020). The identities of the people are blended as the group identity emerges. As soon as team members put the group interest in front of their own and help each other, no matter how much work they have otherwise, the group identity comes to the foreground. They don't see helping as a task, rather as a mechanism to facilitate the transition from personal identity to social identity (P4 – transcript, Pos. 55, 61; P6 – transcript, Pos. 66). Because they see a common goal. Thereby, the individual goal becomes the goal of the team. Therefore, understanding the perspective of the other person, "*patience, trust, respect, communication*" are important characteristics to build this mutual understanding and identification. Members have different skills, and the best way to turn it to their advantage is to work together (Netnography_notes-final, Pos. 85, 99). Quoting one of the managers: "*They will help. This is my team coach […] So, when the new member joins, I will put them together. […] I requested them to work together, because you know from technical point of view, we have lots of things in common, so I am trying to motivate all team member to work together, […] but if you have some difficulties […] I suggest or encourage people to join, to jump in, to help this one, because of my concept, […] we are team, right. Sometimes you help people, right, you give people a hand […] so for me that's a good culture for team, because I don't want people to sit there, to do their own work by themselves, right, ´I don´t* *discuss, or talk with people´, right. I encourage people to talk to each other and help each other. For my team we are doing this way"* (P5 – transcript, Pos. 69). This means that finding something in common is the base for motivation.

In order to support this process, people need to be showed the necessity of it. Regarding the language, it was difficult to understand the meetings as an outsider. This happened not only due to the accent, but also given the Jargon issue. This statement was supported by the work of Tenzer (2017), who claimed that while forming social identity, language identity is also formed. Hence, Jargon is formed by now and expresses strong group and linguistic affiliation (Tenzer, et al., 2017). The belonging *"to the kind of global team"* (P6 – transcript, Pos. 66). English, as the Lingua franca of the company, is a way of facilitating the communication as such, but going a bit deeper Jargon creates a feeling of belonging, just because of the way of speaking (Heller, 1982, p.5 as cited in Edwards & Liu, 1997). The communication gets smoother and the relation that is created by this gives the basis of good teamwork (P1 – transzrkipció, Pos. 84). It gave the impression of being on the same page and having the same identity. However, people don't like to get involved in a dispute if it`s not in their native language, because they can`t express themselves in the same way (Netnography_notes-final, Pos. 20). Consequently, it also influences information sharing since it affects the common understanding.

Summed up, language diversity is an instrument for communication, which requires understanding (Netnography_notes-final, Pos. 8, 99). Smaller teams will be formed, since having a Lingua franca, in our example English, and later on Jargon show a specific belonging, but so do the different language layers. Therefore, at this point, smaller teams within the teams might be shaped, for instance *„HR people speak with HR abbreviations that are not fully understandable, for example for the colleagues from other units like engineers' don´t necessarily know the abbreviations we use"*. These might be *„not known for external people"* (P3 – transcript, Pos. 48). So, the way of using languages enables communication and information sharing, just as shown in previous literatures (Heller, 1982, p. 5, as cited in Edwards & Liu, 1997). From this, the connection between language identity and social identity can be deduced (Tenzer, et al., 2017).



28. Figure SIT - Social identification formed through language (own illustration)

4.2.2 How does language diversity influence information sharing in virtual teams?

Self-categorization

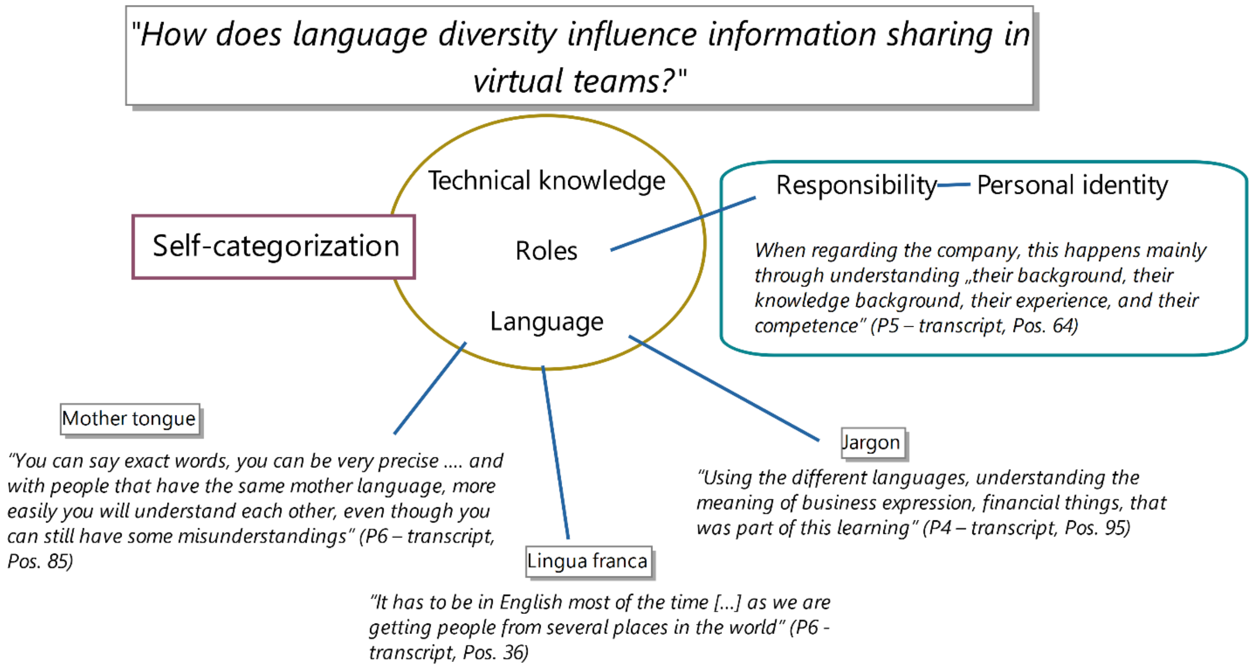
"How does language diversity influence information sharing in virtual teams?"

Communication is shaped by "*human nature*" (P9 – transcript, Pos. 24). Different people act and respond in different ways, which may be due to the categories they take on or that they feel fascinated by. Self-categorization is the basis of building a social identity (Scheepers & Ellemers, 2019, p. 136). The team members put themselves into types (Ellemers, 2020). So, at the beginning of building the team, it is important to "*figure out how they are*" (P9 – transcript, Pos. 26). According to the literature discussed in chapter 2, people build categories based on their technical knowledge, roles, or language they speak (Brown & Capozza, 2000, p. ix). For that reason, it is essential to know the background of the person, that is the personal identity, to see whether the categorization fits. Only after this, a social comparison and later on the social identity can be created, while integrating the person (Scheepers & Ellemers, 2019, p. 136). When regarding the company, this happens mainly through understanding „*their background, their knowledge background, their experience, and their competence*" (P5 – transcript, Pos. 64). P6 does this through inviting „*the person, and, in the time, [...] try to know him better, not only the professional side, but also the personal information*" (P6 – transcript, Pos. 62). Categorizing and consequently grouping is the start of the big process. All in all, the study regarding categorization shows „*in the first time, in the first days of course they will. You will clearly see groups, because people can identify, because they come from the same place, sometimes it's even because they come from the same high school or speak the same language. So, I think people in the first time, first days, they are looking for something to identify with, some similar things, so an identity thing. But then after time, talking to others, even if they come from different places, talking different languages, then you would have like those, more the personality matches, right*" (P6 – transcript, Pos. 72). Hence, personality matches through linguistic identification.

On the other hand, people can categorize themselves based on the <u>position</u> they fulfill in the company. The "*level of communication and interaction, the closeness*" will be different (P2 – transcript, Pos. 108). They need to improve constantly, and for that reason to take part at trainings. Team members seek for "*getting the certification*" in order to feel appreciated in their roles. This desire for recognition is a projection of the personal identity (Netnography_notes-final, Pos. 14). The role they fulfill in the organization entails responsibility. How they behave under the burden of this responsibility, regardless of the task issue as such, is a reflection on the person´s social background (Netnography_notes-final, Pos. 29). This background becomes evident only from the way how the person speaks, the kind of language he/she uses (Netnography_notes-final, Pos. 82), or feels the responsibility of the role they´ve been given. This can be connected to the settling into a comfortable environment.

Furthermore, people group according to the <u>language</u> they speak. *"Indian people in the office they organize events for themselves [...], then speaking the local language"* (P3 – transcript, Pos. 80). This gives the edge of personal identity, and the language layer, that reflects people´s identity, the Mother tongue. *„I notice like it will make more closeness if we speak in our old language than in our communication language so the common language is different, but even if we have our own mother tongue, the communication within the same language, the interaction and the closeness* *will be more"* (P2 – transcript, Pos. 77). When looking at the categories, this is the first one that individuals categorize themselves with and build classes according to it. These findings correspond the ethnolinguistic research of Giles and Johnson (1987) that claims language to be a factor of social categorization. Tenzer (2017) came to the same conclusion in her work together with Terjesen and Harzing, who argue that language is a key aspect for putting someone into categories.

Human beings need to feel the belonging to a social group since *"people are more supportive as they come to know each other"* (P6 – transcript, Pos. 31; P8 – transcript, Pos. 122). This feeling must be boosted by the person of responsibility based on the role and by the language. Heller came to the same result while highlighting the use of language and code-switching as a link to the belonging (Edwards & Liu, 1997). Language can be a great opportunity to have a basis along which people identify with others (Netnography_notes-final, Pos. 29). In fact, this is one of the first factors that people notice when initiating a conversation (P6 – transcript, Pos. 51). *"So, many languages, so, the person will group or unite together, it's a nature thing. They will go together for a break they will have a conversation in their own mother tongue"* (P2 – transcript, Pos. 99). Finding the right expressions in a foreign language might be a constant battle. P6 continues as follows: *"So, I think in the first days of course you will get together more easily with people that you identify with as similar, because coming from the same place or talking the same language. And here even the language can be a barrier because you can see someone that you can identify with, the personality can match, if one of those persons cannot easily talk the same language as English ... then cannot communicate well, so even though [...] they can identify with each other. But it can be a barrier, yeah"* (Pos. 72). Based on the arguments mentioned above, I claim language to be an important factor when building categories. Previous literature came to the same result, the corporate language being a potential obstacle for communication, if it is not mastered (Tenzer, et al., 2021; Henderson, 2005). Therefore, language layers can be seen as strong categories for choosing a group, thus expressing identity.



29. Figure Self-categorization - Language diversity and information sharing (own illustration)

4.2.3 How does code-switching influence information sharing in virtual teams?

<u>Social comparison</u>

"*How does code-switching influence information sharing in virtual teams?*"

People who are hired into the company and are assigned to a team undergo <u>trainings</u>. These are intended to give an overview of the job, but also on the people they are going to work with. This is a point where social comparison is observable (Netnography_notes-final, Pos. 11) through the identification of the group as such, and the identification of the person itself (Ellemers, 2020). It creates in-group and out-group levels, which can cause a difference in information sharing as mentioned above (Islam, 2014, p. 1782 ; Netnography_notes-final, Pos. 29). With the intention of a good working environment, people must feel the similarities found between himself/herself and the group and build up a <u>common understanding</u>. One must find, nonetheless, the right words to handle conflicts (P8 – transcript, Pos. 89; P6 – transcript, Pos. 68). Conflict points in this sense regarding the meeting were marked with "*hot topics*" because this is where personal objectives meet (Netnography_notes-final, Pos. 29, 82, 55). These words, however, do not necessarily have to belong to the same language family. It might be a combination of languages, or language layers. This can be the basis of finding the common ground, homogeneity within the group. *„It is not easy to have this common understanding. [...] when the language, the information, the understanding it's more important. Because, if you have people coming from different places on board, for the same program, and if everyone has the same understanding since the beginning, know what is expected from them, then it is easy, right. It is easy for everything to go smoothly until the end of the project”* (P6 – transcript, Pos. 95).

Comparing each other and finding this common understanding happens through information sharing, but on this level through the way people use the combination of words. Ahmad and Barner-Rasmussen (2019) explain this through the different linguistic competencies between members of a group of people. It is a system used for communication that sets boundaries. As an outsider, it is very difficult to differentiate between the teams. Not because of the small teams, but where is the limit from which someone´s affiliation can be drawn? How is it possible to be part of more than one team at the same time? The boundary between the membership of the smaller and the bigger team can be seen by setting the target. Code-switching happens in the company vanishing the boundaries.

Scheepers and Ellemers (2019) investigated cluster building in their research and claimed that people need to belong to a social group. Based on this research, however, the boundary of this group classification is not clear, meaning that people do need to belong to a social group, but inter-group relations exist. This implies that even though a person belongs to a group, based on specific characteristic the person assigns to that group, but he/she can join another group too if it is necessary or for a higher interest. Also, the competitor team for specific projects. As a consequence of code-switching, the boundaries diminish and communication and information sharing will be possible. I argue that up to a certain point, the perspectives meet, but only as long as the common interest doesn’t contradict the smaller group´s identity, to which the individual has built a stronger bond (Netnography_notes-final, Pos. 32). It is so to say a constant “competition for positive identity” (Islam, 2014, p. 1782), relieved by code-switching.

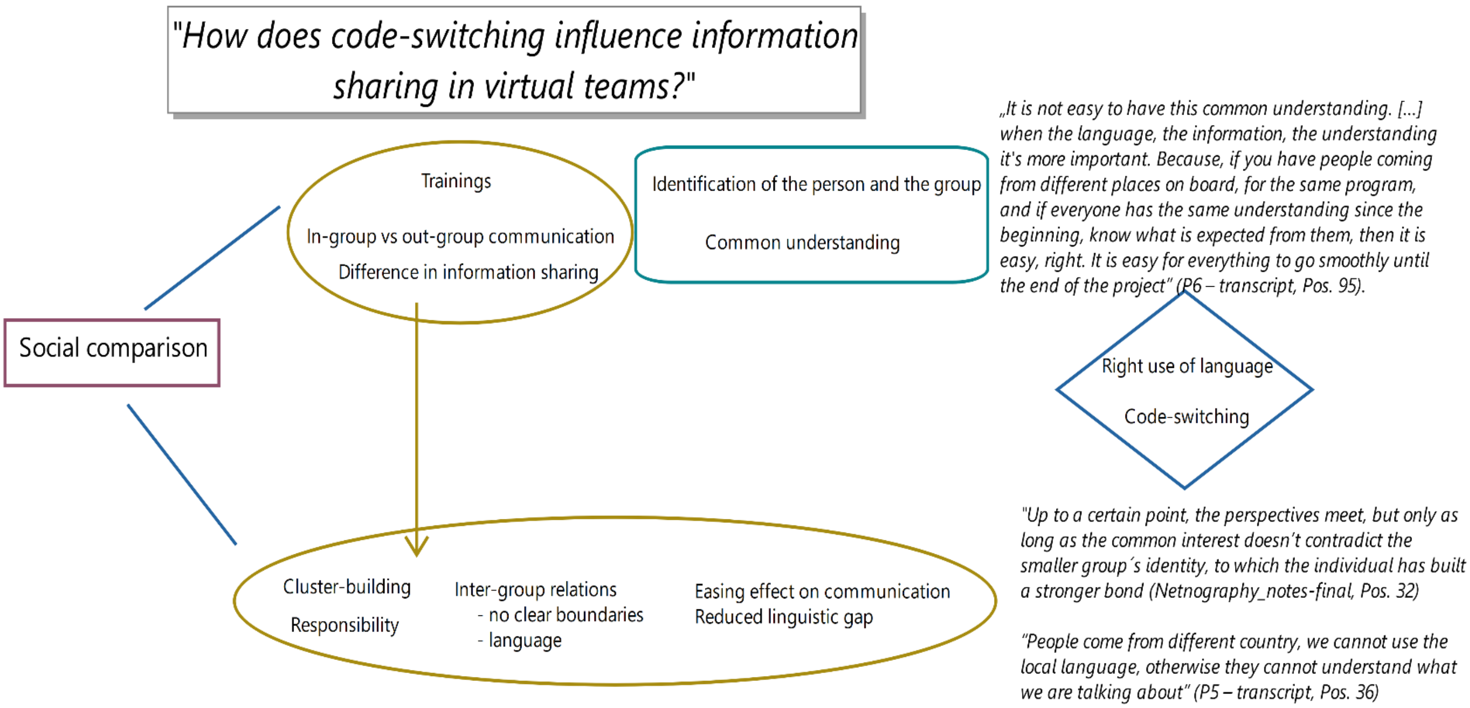
With regards to the case study organization, when asking whether this set-up is typical, the answer was:

„Nowadays I am comfortable with changing from Portuguese to English or vice versa. Those two I am quite comfortable with, but … because now that I belong to the kind of global team … I have been talking English for the last let's say …. few years. Because before … when I was several years in a local team, that time I would have a problem even switching from Portuguese to English, because for a lot of years I was … speaking only Portuguese, then the first time I changed to English, I could feel some difficulties, so it always depends on the phase. If you are in a phase having lot of meetings in English, I can … nowadays I can easily switch. But if then I came to a situation that I'm […] only with Portuguese of course maybe I will tend to have this problem in the first month let's say. But when I have to switch from Portuguese for example …. to Spanish … I would tend to use a lot of Portuguese …. Yeah. So, if it is a language that I am not talking every day, I would have problem. Yeah." (P6 – transcript, Pos. 66).

This means that since code-switching is an inherent part of the everyday life and with time team members get used to it and link it to the group identity. The discussions and opinions between team members reflect the homogeneity within the bigger groups and heterogeneity outside, thus sharpening the boundaries between in-group and out-group (Islam, 2014; Edwards & Liu, 1997), but given the use of languages observed during meetings and the common interest, it is not completely separable (Netnography_notes-final, Pos. 82, 29). This idea is supported by Hansen and Liu (1997), who emphasize the easing effect of code-switching on communication by reducing the linguistic gap between the conversation partners.

In conclusion, they have become more open to finding a comparison between their created group identities based on code-switching or the use of language and of those from other groups. A criterion, as mentioned above, is language according to the study. A specific language, a company language for instance, can determine the bigger in-group. Jargon is the language spoken in the smaller in-group. The case study organization possesses a great linguistic identity. This earmark is English. *"People come from different country, we cannot use the local language, otherwise they cannot understand what we are talking about"* (P5 – transcript, Pos. 36). This was also found by Henderson (2005), highlighting the negative effects of talking different languages. For that reason, the local language, the Mother tongue exists, and makes its way, leading to code-switching.

Despite the Lingua franca and Jargon, the stronger language will come to the forefront. It will always be a subject of evaluation, resulting from the fact that it is easy. People feel freer while using it (P3 – transcript, Pos. 36). *"So, languages are impacting us"*, and people with different characteristics will compare themselves to one another building their own identities (P2 – transcript, Pos. 101). Code-switching is inevitable.



30. Figure Social comparison - Code-switching, social identity and information sharing (own illustration)

5. Conclusion

5.1 Summary

This master´s thesis investigates the influence of different languages and language layers on information sharing in the virtual environment. In order to see this, one has to examine it not only from an economic perspective, but also from the psychological side, since language is a sign of identity and thus shapes people´s behavior, which then has an influence on information sharing. For that reason, the research is going to be investigated under the lenses of the Social Identity Theory.

For the purpose of answering the research questions,

"How does social identity shape information sharing given the language use?",

"How does language diversity influence information sharing in virtual teams?",

"How does code-switching influence information sharing in virtual teams?",

one must start with literature in this field, to have a strong basis which one can build on. Therefore, chapter 2 gives an overview on the theoretical background, such as the terms Social Identity Theory, language diversity, code-switching, and last but not least information sharing. Regarding this, people classify themselves into categories and compare themselves with others based on noticeable or hidden characteristics, that lead them to feel part of a team/group as a result (Brown & Capozza, 2000; Scheepers & Ellemers, 2019; Giles & Johnson, 1987). One of those characteristics is language, which is the focus of this study. The semi-structured interviews, as well as the observation show a connection between language and identity, both on the team level and on the individual level, and its importance is even stronger when it comes to virtuality. Team members give meaning to the group based on the language they speak. This can be the Mother tongue, as the strongest tie for social identification, or an established language layer, the Jargon. This Jargon differs from company to company, being a powerful sign of identification. This is also caused by the virtual environment, given the fact that team members have to work with each other across countries and time zones. This phenomenon of language and context of virtuality highlight the significance of information sharing even more, which is confirmed by the results of the research.

5.2 Theoretical Contribution

Contribution to research on Social Identity Theory in International Business

All the concepts are going to be connected under the lenses of social identity. It all starts with Giles & Johnson (1987), who were investigating the cognitive processes concerning the steps of Social Identity Theory, categorization, comparison, and the building of identity as a result. Its significance extends to psychology, where among other factors, people´s social standing is observed. According to Tajfel (1974) people are led by their self-interest and evaluate group members corresponding to that. Tenzer (2017) takes a step further in connecting social identity with linguistic identity, as it leads to the individual´s categorization and information sharing (Flanagin, et al., 2014), its effect remained a topic for future research though. A sharp line separates groups and people within groups from each other, based on specific characteristics. This research, however, illuminates this from a different angle. According to the interviews and observation, this boundary between the groups might diminish and at a certain level, as groups intertwine if common interest demands. Furthermore, it is shown that the specific characteristics which people identify with create a strong common ground, but personal, feeling-induced connections are long-term. Connecting this with language creates the communication needed. In this regard this master´s thesis connects all the issues mentioned above and extends the current literature by adding the factor of language-caused emotion, showing how much of an influence language has on information sharing through the eyes of the participant and the eyes of the researcher. That way it expresses the importance of Social Identity Theory and contributes to its research in International Business.

Contribution to research on information sharing in virtual teams

This study also adds to the research regarding information sharing in virtual environments. Previous studies connect knowledge sharing with language, whereas knowledge is regarded as information (Tenzer, et al., 2017). Information in this work refers to exchanging data between a group of people in order to reach the goals of the company. Tenzer (2021) conducted research on the topic in a German company with German native speakers, speaking in German and English, but the study is limited to that country, and does not take the virtual environment, which is an important aspect of this master´s thesis, into account. She recommends building a connection through virtual collaboration for future examination (Tenzer, et al., 2017). Through netnography and interviews, this study shows the importance of language on information sharing and collaboration in the virtual setting, whether it has a negative or positive outcome, from both sides: the side of the interviewee and the side of an independent researcher. Conflicts may arise, but the application of language and the right use of words can resolve it, because it avoids misunderstandings (P7 – transcript, Pos. 39). This master´s thesis contributes to research on information sharing by highlighting the importance of communication and language by involving participants from different linguistic backgrounds working with the help of a second language and through switching between the language layers.

Contribution to research on language in virtual teams

This master´s thesis sets up a link between language diversity (the layers of languages) and information sharing within the context of virtuality and language layers. Since teamwork happens across countries, the technical work, which is constantly changing and evolving, is crucial in the virtual environment. It requires information sharing. Information sharing happens through communication; thus, language gains an important role. Language has been an interesting and well-liked topic in the field of International Business (Piekkari & Tietze, 2011). In their work, Marschan, Welch & Welch (1997) highlighted language as an important element in management earlier on. They noticed how important the Lingua franca might be in a company that operated worldwide. Henderson (2005) then continued the language-related research within management teams and observed the interaction between teams. He verified the importance of the corporate language in the company. Brannen, Piekkari & Tietze (2014) then took it to another level by investigating the "multifaceted role of language in International Business", looking at the effect of language on a daily basis. Whereas previous literature highlights the importance of language and mentions the context, there is, however, no study where all those aspects are examined together. Based on the interviews conducted from 8 different countries, this importance can be conducted. Therefore, this master thesis expands the existing literature by combining the phenomenon of language diversity and the context of virtuality, creating the virtual teams in the setting of language layers and thus contributing to the study of language with its extensions in International Business.

Contribution to	Previous literature		Findings	Theoretical contribution
Research on SIT in IB	Giles & Johnson, 2017	Ethnolinguistic identity: a social psychological approach to language maintenance	People give meaning to their group by comparing themselves with other groups. This shows a relationship between psychology, language, and identity	Identity is built around certain characteristics, but emotion-induced, personal incentives, influenced by language are long-term. Language-induced emotion affects communication and information sharing
	Tenzer, Terjesen & Harzing, 2017	Language in International Business: A Review and Agenda for Future Research	There is a connection between social identity and linguistic identity, that leads to the individual´s categorization	Groups are formed based on specific characteristics, but this boundary between the groups can vanish and groups intertwine if there is a common interest
Research on information sharing in virtual teams	Tenzer, Terjesen & Harzing, 2017	Language in International Business: A Review and Agenda for Future Research	There is a connection between knowledge sharing and language	The right usage of words is important. Code-switching, the simultaneous use of the language layers facilitates information sharing
	Tenzer, Pudelko & Zellmer-Bruhn, 2021	The impact of language barriers on knowledge processing in multinational teams	Language barriers influence team communication, thus reducing participation in team	Extending previous literature by involving participants from different parts of the world, working in virtual environments. Investigation of the influence of language on information sharing from an outsider´s perspective through netnography and from the participant´s perspective through interviews.

Contribution to	Previous literature		Findings	Theoretical contribution
Research on language in virtual teams	Piekkari & Tietze, 2011	A world of languages: Implications for international management research and practice	Language-sensitive research in international business and management	
	Marschan, Welch & Welch, 1997	Language: The Forgotten Factor in Multinational Management	Language as an important element in management due to the increasing demand of operation in foreign language environment. English as the corporate language	Expending previous literature by enlarging the research on language with the language layers and examining the combination of language diversity and virtuality
	Henderson, 2005	Language Diversity in International Management Teams	Language diversity impacts team building, and communication. English as the corporate language might cause difficulties	
	Brannen, Piekkari & Tietze, 2014	The multifaceted role of language in international business: Unpacking the forms, functions and features of a critical challenge to MNC theory and performance	The interplay of language aspects affects business on a daily basis	

6. Table Theoretical contribution to previous research

5.3 Managerial Implications

Contribution to research on Social Identity Theory in International Business

The grouping of people influences the emotional process through language-related choices (Hinds, et al., 2014). This is true when people work in the office and have face-to-face contact. In a virtual setting, however, this has a weaker effect, since they work remotely, decreasing the possibility of forming cliques. Based on the findings it can be stated that the opportunity of building cliques decreases, on the other hand, however, the importance of language increases. Sensitivity trainings might be of help in boosting identity by highlighting the Lingua franca as a common and important characteristic of team membership.

Previous literature shows the connection between linguistic and social identity (Tenzer, et al., 2021). People compare their own team with other teams based on characteristics that are positive in their own group and rather negative in the other. An important characteristic is language (Giles & Johnson, 1987). Even though there are several smaller teams with different languages, their goal must be identical since they work at the same company. The subjects of the research are remarkably helpful to one another, given the leading principle of the managers to build a group identity. This can be done through building a community of practice. On this basis, it is suggested to encourage and motivate people to extend the small groups they build at the very beginning by giving them smaller tasks in different projects. Due to the pandemic this integration might face difficulties. In spite of this, from a positive point of view it pushes managers to take advantage of the opportunities offered by the technical developments that have already been given in these times, hence triggering self – and group-improvement.

Contribution to research on information sharing in virtual teams

Language barriers influence communication, thus negatively affecting participation in the team (Tenzer, et al., 2021). In companies where language diversity plays an important role, I suggest the introduction of a buddy program. Having personal contact with a smaller group of people facilitates communication and information sharing. On the other hand, a buddy program can reduce misunderstandings through constant help. That is the easiest way to get to know the person´s experience, competence, and general background.

Second, virtual teamwork gains importance in today´s globalized world (Zander, et al., 2013), but there is little information of research that focuses on information sharing in the context of virtuality using the identity theory. By giving an insight into the personal and work-related life of the participants, with real life situations, and suggestions, this research contributes to the home office design triggered by the pandemic.

Moreover, having the same understanding is the first step in the direction of information sharing (Brannen, et al., 2014). This also shows the tight connection to the language since different words might be similar but have completely different meanings. Team members should not "take things to the bad side" (P6 – transcript, Pos. 81) but clarify everything right away. Managers should clearly define the roles and responsibilities with regular discussions. Additionally, information sharing can be improved by the correct form of integration. This notion leads us to implications in the field of social identity research.

Contribution to research on language in virtual teams

This research includes 10 managers from 8 different countries. They speak various languages but have one language in common, the Lingua franca. Previous research shows the influence of language on communication in teams (Henderson, 2005). According to her, having a Lingua franca in the company can cause difficulties. First of all, as a result of this master´s thesis, this study contributes to the use of language by giving managers recommendations on how to overcome those difficulties. Team members have different linguistic backgrounds but improving the practice of one-on-one meetings and learning opportunities can facilitate, or even help to completely overcome these barriers. Further trainings have a visible effect on the increasing competence and skill levels, be that language-related or job-related. Managers should put more emphasis on language practice, not taking it for granted because the person masters it. There is a difference between "expressing" and "understanding" that managers should consider separately (P6 – transcript, Pos. 51). Being fluent helps, but does not necessarily solves the communication problem, because of Jargon as an issue. A solution might be a dictionary with the most common Jargon terms. *"It´s much easier to catch up and speak up. Even if it´s challenging because of the language*" (P3 – transcript, Pos. 54).

Secondly, I agree with the paper about job anxiety, that it is affected by foreign language, be it the corporate language, or another language besides the mother tongue, but managers can help (Lauring & Klitmøller, 2014). Building smaller groups for newcomers might reduce this anxiety. Some people, when being placed in a new environment, are shy to ask back, even if they don't understand something. In this master´s thesis, the information gained by the observation notes reflects on the difficulties, which interview participants sense, and suggest solutions. People are interested in opening up to other languages, if they are motivated (P7 – transcript, Pos. 63). Managers have to encourage team members to ask questions and should take friendly movements towards newcomers: *"be supportive, and [...] move friendly"* (P2 – transcript, Pos. 73).

5.4 Limitations and Directions for Future Research

This qualitative research is focused on the in-depth interviews of 10 participants. The participants are team members in a multinational organization that operates in the telecommunication sector. To make this research wider and have a sufficient number of people that represent not only the company in the virtual setting, but also in the sector (Eisenhardt & Graebner, 2007), it is suggested to involve several companies in future research.

Since people are being interviewed, I rely on their perceptions and interpretations. This can give a distorted picture because one cannot objectively look at the data, as it also includes the participants´ own views and personalities. For that reason, another source is being implicated, namely netnography through online observation (Tenzer, et al., 2021). This gives a more objective view, however conducting observational research is time-consuming (Tenzer, et al., 2017). Future research should make a more overall investigation that takes years instead of months.

Furthermore, even though this study focuses on information sharing in virtual environment affected by the language and virtuality as the context, culture might be also an influencing factor besides the linguistic part. People are influenced by their cultural background (P5 – transcript, Pos. 25). When communicating, *"human nature comes in"* unconsciously (P9 – transcript, Pos. 24). It can also cause the building of cliques (P4 – transcript, Pos. 76). Further research could take the cultural aspect into account based on participants answers.

Additionally, a term that wasn’t referred to by name but was involved in this research in regards to social identity is the concept of CoPs. These groups help to build group identity within a collective system (Gray, 2004). Future research should add this aspect to the research on the subject of language, information sharing and SIT.

Finally, the last part of the research on the individual level indicates the change in people´s behavior in the personal – and work-related aspect. During the pandemic the world has changed. With regards to the research, this did not leave too many traces on the company´s working attitude, because they had worked remotely before. What has changed is people´s behavior. Separate research should be done on the topic of the influence of the pandemic on people´s behavior in companies where remote work previously existed.

References

Ahmad, F. & Barner-Rasmussen, W., 2019. False foe? When and how code switching practices can support knowledge sharing in multinational corporations. *Journal of International Management*, September, 25(3).

Anglemark, L. & John, A., 2018. The Use of English-Language Business anf Finance Terms in European Languages. *International Journal of Business Communication*, 29 May, 55(3), pp. 406-440.

Anglemark, L. & John, A., 2018. The Use of English-Language Business anf Finance Terms in European Languages. *International Journal of Business Communication*, 29 May, 55(3), pp. 406-440.

Bhattacharya, K., 2017. *Fundamentals of qualitative research.* 1. ed. New York: Routledge.

Blom, J.-P. & Gumperz, J. J., 2000. Social meaning in linguistic structure: code-switching in Norway. In: *The Bilingualism Reader.* London and New York: Routledge, pp. 102-126.

Bowler, G. M. J., 2010. Netnography: A Method Specifically Designed to Study Cultures and Communities Online. *The Qualitative Report*, 9 January, 15(5), pp. 1270-1275.

Brannen, M. Y., Piekkari, R. & Tietze, S., 2014. The multifaceted role of language in international business: Unpacking the forms, functions and features of a critical challenge to MNC theory and performance. *Journal of International Business Studies*, 45(5), pp. 495-507.

Brown, R. & Capozza, D., 2000. Introduction: Social Identity Theory in Retrospect and Prospect. In: *Social Identity Processes.* London: SAGE Publications Ltd, pp. vii-xv.

Bullock, O. M., Colón Amill, D., Shulman, H. C. & Dixon, G. N., 2019. Jargon as a barrier to effective science communication: Evidence from metacognition. *Public Understanding of Science*, 1 October, 28(7), pp. 845-853.

Bunderson, J. S. & Sutcliffe, K. M., 2002. Comparing Alternative Conceptualizations of Functional Diversity in Management Teams: Process and Performance Effects. *The Academy of Management Journal*, October, 45(5), pp. 875-893.

Cheng, Z.-c. & Guo, T.-c., 2015. The formation of social identity and self-identity based on knowledge contribution in virtual communities: An inductive route model. *Computers in Human Behavior*, February, Volume 43, pp. 229-241.

Chen, S., Geluykens, R. & Choi, C. J., 2006. The importance of language in global teams: A linguistic perspective. *Management International Review*, December, 46(6), pp. 679-695.

Chesebro, J. W. & Borisoff, D. J., 2007. What Makes Qualitative Research Qualitative?. *Qualitative Research Reports in Communication*, 11 October, 8(1), pp. 3-14.

Chidlow, A., Plakoyiannaki, E. & Welch, C., 2014. Translation in cross-language international business research: Beyond equivalence. *Journal of International Business Studies*, 2 January, 45(5), pp. 1-21.

Constant, D., Kiesler, S. & Sproull, L. S., 1994. What´s Mine Is Ours, or Is It? A Study of Attitudes about Information Sharing. *Information Systems Research*, December, 5(4), pp. 400-421.

Dick, P. & Tietze, S., 2013. The Victorious English Language: Hegemonic Practices in the Management Academy. *Journal of Management Inquiry*, 22(1), pp. 122-134.

Dubois, A. & Gadde, L.-E., 2002. Systematic combining: an abductive approach to case research. *Journal of Business Research*, July, 55(7), pp. 553-560.

Dumont, K. & Louw, J., 2009. A citation analysis of Henri Tajfel´s work on intergroup relations. *International Journal of Psychology*, 44(1), pp. 46-59.

Dyer, G. W. J. & Wilkins, A. L., 1991. BETTER STORIES; NOT BETTER CONSTRUCTS; TO GENERATE BETTER THEORY: A REJOINDER TO EISENHARDT. *Academy of Management Review*, 16(3), pp. 613-619.

Ebrahim, N. A., Shamsuddin, A. & Zahara, T., 2009. Virtual Teams: a Literature Review. *Australian Journal of Basic and Applied Sciences*, 3(3), pp. 2653-2669.

Edwards, J. H. & Liu, J., 1997. Social Identity and Language: Theoretical and Methodological Issues. *TESOL Quarterly*, September, 31(3).

Eisenhardt, K. M. & Graebner, M. E., 2007. Theory Building from Cases: Opportunities and Challenges. *Academy of Management Journal*, 50(1), pp. 25-32.

Ellemers, N., 2020. *Encyclopedia Britannica.* [Online]
Available at: https://www.britannica.com/topic/social-identity-theory
[Accessed 3 May 2019].

El-Shinnawy, M. & Markus, M. L., 1997. The poverty of media richness theory: explaining people's choice of electronic mail vs. voice mail. *International Journal of Human-Computer Studies*, April, 46(4), pp. 443-467.

Eynon, R., Fry, J. & Schroeder, R., 2017. The Ethics of Online Research. In: *The SAGE Handbook of Online Research Methods.* 55 City Road: SAGE Publications Ltd, pp. 19-37.

Farr-Wharton, R. & Brunetto, Y., 2006. *The impact of the relationship between supervisors and local government employees post the implementation of NPM: A social capital perspective,* s.l.: s.n.

Fielding, N. G., Lee, R. M. & Blank, G., 2016. Ethnographies of Online Communities and Social Media: Modes, Varieties, Affordance. In: *The SAGE Handbook of Online Research Methods.* 2. ed. London: SAGE Publications, pp. 401-415.

FitzGerald, K., Seale, N. S., Kerins, C. A. & McElvaney, R., 2008. The critical incident technique: a useful tool for donducting qualitative research. *Journal of Dental Education*, March, 72(3), pp. 299-304.

Flanagin, A. J., Hocevar, K. P. & Samahito, S. N., 2014. Connecting with the user-generated Web: how group identification impacts online information sharing and evaluation. *Information, Communication & Society*, 17(6), pp. 683-694.

Geppert, M., Williams, K. & Matten, D., 2003. The Social Construction of Contextual Rationalities in MNCs: An Anglo-German Comparison of Subsidiary Choice. *Journal of Management Studies*, May, 40(3), pp. 617-641.

Gibson, C. B. & Cohen, S. G., 2003. *Virtual Teams That Work. Creating Conditions for Virtual Team Effectiveness.* 1. ed. San Francisco: Jossey-Bass A Wiley Imprint.

Gibson, C. B. & Cohen, S. G., 2003. *Virtual Teams That Work. Creating Conditions for Virtual Team Effectiveness.* 1. ed. San Francisco: Jossey-Bass A Wiley Imprint.

Giles, H. & Johnson, P., 1987. Ethnolinguistic identity theory: a social psychological approach to language maintenance. *International Journal of the Sociology of Language*, January, Volume 68, pp. 69-100.

Goettsch, K. L., 2014. *Understanding Intecultural Communication on Global Virtual Teams: Exploring Challenges of Language, Culture, Technology, and Collaboration,* Minnesota: s.n.

Gray, E., 2004. Informal Learning in an Online Community of Practice. *Journal of Distance Education/ Revue de l´enseignement à distance*, 19(1), pp. 20-35.

Grochow Mishuris, R., Yoder, J., Wilson, D. & Mann, D., 2016. Integrating data from an online diabetes prevention program into an electronic health record and clinical workflow, a design phase usability study. *BMC Medical Informatics and Decision Making*, 16(1), pp. 1-13.

Gumperz, J. J., 1982. Conversational Code Switching. In: *Discourse Strategies.* Cambridge: Cambridge University Press, pp. 59-99.

Gumperz, J. J. & Cook-Gumperz, J., 1983. Introduction: language and the communication of social identity. In: *Language and Social Identity.* Cambridge: Cambridge University Press (Studies in Interactional Sociolinguistics, pp. 1-21.

Hansen, J. G. & Liu, J., 1997. Social Identity and Language: Theoretical and Methodological Issues. *TESOL Quarterly*, 31(3), pp. 567-576.

Harroch, R., 2017. *Forbes - The 40 Most Frequently Asked Job Interview Questions.* [Online]
Available at: https://www.forbes.com/sites/allbusiness/2017/02/26/the-40-most-frequently-asked-job-interview-questions/?sh=4f2e854c1fc6
[Accessed 2 August 2020].

Harvard University, D. o. S., n.d. *Some Strategies for Developing Interview Guide.* [Online]
Available at: https://sociology.fas.harvard.edu/files/sociology/files/interview_strategies.pdf
[Accessed 22 August 2020].

Harzing, A.-W., Köster, K. & Magner, U., 2011. Babel in Business: The language barrier and its solutions in the HQ-subsidiary relationship. *Journal of World Business*, July, 46(3), pp. 279-287.

Harzing, A.-W. & Pudelko, M., 2014. Hablas vielleicht un peu la mia language? A comprehensive overview of the role of language differences in headquarters-subsidiary communication. *The International Journal of Human Resource Management*, 25(5), pp. 696-717.

Heller, M., 1982. *Language, ethnicity, and politics in Quebec.* Berkely: University of California.

Henderson, J. K., 2005. Language Diversity in International Management Teams. *International Studies of Management & Organization*, 35(1), pp. 66-82.

Hinds, P. J., Neeley, T. B. & Cramton, C. D., 2014. Language as a lightning rod: Power contests, emotion regulation, and subgroup dynamics in global teams. *Journal of International Business Studies*, June/July, 45(5), pp. 536-561.

Hogg, M. A., Abrams, D., Otten, S. & Hinkle, S., 2004. The Social Identity Perspective. Intergroup Relations, Self-Conception, and Small Groups. *Small Group Research*, 35(3), pp. 246-276.

Holmes, J. & Meyerhoff, M., 1999. The Community of Practice: Theories and Methodologies in Language and Gender Research. *Language in Society*, June, 28(2), pp. 173-183.

Hurmerinta, L., Nummela, N. & Paavilainen-Mäntymäki, E., 2015. Opening and closing doors: The role of language in international opportunity recognition and exploitation. *International Business Review*, December, 24(6), pp. 1082-1094.

Indeed Editorial Team, 2021. *What Are Certifications? Definition, Benefits, Types of Certifications and Examples.* [Online]
Available at: https://www.indeed.com/career-advice/career-development/what-are-certifications
[Accessed 13 October 2021].

Islam, G., 2014. Social Identity Theory. In: *Encyclopedia of Critical Psychology.* s.l.:Springer-Verlag, pp. 1781-1783.

Jonker, J. & Pennink, B., 2010. *Looking at ResearchThe Essence of Research Methodolofy. A Concise Guide for Master and PhD Students in Management Science.* Berlin Heidelberg: Springer.

Jonsen, K., Maznevski, M. L. & Schneider, S. C., 2011. Diversity and Its Not So Diverse Literature: An International Perspective. *International Journal of Cross Cultural Management*, April, 11(1), pp. 35-62.

Kahai, S. S., Carroll, E. & Jestice, R., 2007. Team Collaboration in Virtual Worlds. *Data Base for Advances in Information Systems*, November, 38(4), pp. 61-68.

Kankaanranta, A. & Louhiala-Salminen, L., 2013. 'What Language Does Global Business Speak?'-The Concept and Development of BELF. *Revista de la Asociación Europea de Lenguas para Fines Específicos/ Journal of the European Association of Languages for Specific Purposes (AELFE)*, 26(26), pp. 17-34.

Kembro, J., Selviaridis, K. & Naslund, D., 2014. Theoretical perspectives on information sharing in supply chains: a systematic literature review and conceptual framework. *Supply Chain Management*, 19(5-6), pp. 609-625.

Kermorgant, V. & Manninen, I., n.d. *Implementing Web Analytics the Nokia Way: a Customer´s Methodology,* s.l.: s.n.

Kimmel, P. R., 1994. Cultural Perspectives on International Negotiations. *Journal of Social Issues*, 50(1), pp. 179-196.

Klitmøller, A. & Lauring, J., 2013. When global virtual teams share knowledge: Media richness, cultural difference and language commonality. *Journal of World Business*, 48(3), pp. 398-406.

Kozinets, R. V., 2010. *Netnography: Doing Ethnographic Research Online.* 2. ed. s.l.:SAGE.

Kranzlmüller, D., Kacsuk, P., Dongarra, J. & Volkert, J., 2002. Recent Advances in Parallel Virtual Machine and Message Passing Interface. *Proceedings of the 9th European PVM/MPI Users´ Group Meeting*, Sept./Oct., Volume 2474.

Krawczyk-Bryłka, B., 2016. Intercultural Challenges in Virtual Teams. *Journal of Intercultural Management*, September, 8(3), pp. 69-85.

Lauring, J. & Klitmøller, A., 2014. Creativity and Performance in MNCs: The Power of Inclusive Language Use. *Academy of Management Proceedings*, Issue 1, pp. 11800-11800.

Lauring, J. & Klitmøller, A., 2017. Inclusive Language Use in Multicultural Business Organizations: The Effect on Creativity and Performance. *International Journal of Business Communication*, 1 July, 54(3), pp. 306-324.

Lauring, J. & Selmer, J., 2012. International language management and diversity climate in multicultural organizations. *International Business Review*, April, 21(2), pp. 156-166.

Maloney, M. M. & Zellmer-Bruhn, M., 2006. Building Bridges, Windows and Cultures: Mediating Mechanisms between Team Heterogeneity and Performance in Global Teams. *Management International Review*, 46(6), pp. 697-720.

Marschan-Piekkari, R., Welch, D. & Welch, L., 1999. In the shadow: the impact of language on structure, power and communication in the multinational. *International Business Review*, August, 8(4), pp. 421-440.

Marschan, R., Welch, D. & Welch, L., 1997. Language: The Forgotten Factor in Multinational Management. *European Management Journal*, 8(4), pp. 591-598.

Mesmer-Magnus, J. R. & DeChurch, L. A., 2009. Information Sharing and Team Performance: A Meta-Analysis. *Journal of Applied Psychology*, 94(2), pp. 535-546.

Miles, M. B. & Huberman, A. M., 1994. *Qualitative Data Analysis.* 2. ed. USA: SAGE Publications.

Ortiz de Guinea, A., Webster, J. & Staples, D. S., 2012. A meta-analysis of the consequences of virtualness on team functioning. *Information & Management*, October, 49(6), pp. 301-308.

Pavlenko, A., 2014. The bilingual mind and what it tells us about language and cognition. In: *The Bilingual Mind And what it Tells Us about Language and Thought.* Cambridge: Cambridge University Press, pp. 299-315.

Peirce, B. N., 1995. Social Identity, Investment, and Language Learning. *TESOL Quarterly*, 29(1), pp. 9-31.

Piekkari, R., Oxelheim, L. & Randøy, T., 2015. The Silent Board: How Language Diversity May Influence the Work Processes of Corporate Boards. *An International Review*, 23(1), pp. 25-41.

Piekkari, R. & Tietze, S., 2011. A world of languages: Implications for international management research and practice. *Journal of World Business*, July, 46(3), pp. 267-269.

Piekkari, R., Welch, C. & Paavilainen, E., 2009. The Case Study as Disciplinary Convention. Evidence From International Business Journals. *Organizational Research Methods*, 1 July, 12(3), pp. 567-589.

Pilerot, O. & Limberg, L., 2011. Information sharing as a means to reach collective understanding: A study of design scholars' information practices. *Journal of Documentation*, 8 March, 67(2), pp. 312-333.

Plakoyiannaki, E. & Budhwar, P., 2021. From Convention to Alternatives: Rethinking Qualitative Research in Management Scholarship. *British Journal Management*, 25 February, 32(1), pp. 3-6.

Plakoyiannaki, E., n.d. *Single vs multiple case designs. How do we select cases? [PowerPoint presentation].* s.l.:University of Vienna.

Plakoyiannaki, E., n.d. *The Qualitative Interview [PowerPoint Presentation].* s.l.:University of Vienna.

Plakoyiannaki, E., Wei, T. & Prashantham, S., 2019. Rethinking Qualitative Scholarship in Emerging Markets: Researching, Theorizing and Reporting. *Management and Organization Review*, June, 15(2), pp. 217-234.

Poulis, K., Poulis, E. & Plakoyiannaki, E., 2013. The role of context in case study selection: An international business perspective. *International Business Review*, 22(1), pp. 304-314.

Prime, N., Obadia, C. & Vida, I., 2009. Psychic distance in exporter-importer relationships: A grounded theory approach. *International Business Review*, 18(2), pp. 184-198.

Rafaeli, S. & Raban, D. R., 2005. Information sharing online: A research challenge. *International Journal of Knowledge and Learning*, January, 1(1), pp. 62-97.

Rasmussen, K. B., 2017. Data Quality in Online Environments. In: *The SAGE Handbook of Online Research Methods.* 55 City Road: SAGE Publications Ltd, pp. 38-54.

Research methodologies: an introduction to qualitative research. 2014. [Film] Directed by Jamie A. Dyce, Uzma Williams. Canada: Uzma Williams.

Scheepers, D. & Ellemers, N., 2019. Social Identity Theory. In: *Social Psychology in Action.* s.l.:Springer, Cham, pp. 129-143.

Schutt, R. K., 2012. Qualitative Data Analysis. In: *Investigating the Social World. The Process and Practice of Research.* 7. ed. s.l.:SAGE Publications, pp. 320-357.

Sharon, A. J. & Baram-Tsabari, A., 2013. Measuring mumbo jumbo: A preliminary quantification of the use of jargon in science communication. *Public Understanding of Science*, 21 January, 23(5), pp. 528-546.

Siggelkow, N., 2007. Persuasion with Case Studies. *Academy of Management Journal*, 50(1), pp. 20-24.

Sinkovics, R. R., Penz, E. & Ghauri, P. N., 2008. Enhancing the Trustworthiness of Qualitative Research in International Business. *Management International Review*, December, 48(6), pp. 689-714.

Spiggle, S., 1994. Analysis and Interpretation of Qualitative Data in Consumer Research. *Journal of Consumer Research*, December, 21(3), pp. 491-503.

Swain, J., 2018. *A Hybrid Approach to Thematic Analysis in Qualitative Research: Using a Practical Example.* London: SAGE Publications, Ltd..

Tajfel, H., 1974. Social Identity and intergroup behaviour. *Social Sciences Information / Information sur les Sciences Sociales*, 13(2), pp. 65-93.

Tajfel, H. & Turner, J. C., 2004. The Social Identity Theory of Intergroup Behavior. In: *Political Psychology: Key Readings.* 1. ed. s.l.:Psychology Press, pp. 276-293.

Taylor, D., 2020. *Multilingual, Virtual Teams: The Influence of Language Diversity on Global Birtual Teamwork.* Poitiers, France: 10th Annual Atlas-AFMI Conference.

Tenzer, H. & Pudelko, M., 2015. Leading across language barriers: Managing language-induced emotions in multinational teams. *The Leadership Quarterly*, August, 26(4), pp. 606-625.

Tenzer, H. & Pudelko, M., 2016. Media choice in multilingual virtual teams. *Journal of International Business Studies*, 24 March, Volume 47, pp. 427-452.

Tenzer, H., Pudelko, M. & Harzing, A.-W., 2014. The impact of language barriers on trust. *Journal of International Business Studies*, 45(5), pp. 508-535.

Tenzer, H., Pudelko, M. & Harzing, A.-W., 2014. The impact of language barriers on trust formation in multinational teams. *Journal of International Business Studies*, 45(5), pp. 508-535.

Tenzer, H., Pudelko, M. & Zellmer-Bruhn, M., 2021. The impact of language barriers on knowledge processing in multinational teams. *Journal of World Business*, February, 56(2).

Tenzer, H., Terjesen, S. & Harzing, A.-W., 2017. Language in International Business: A Review and Agenda for Future Research. *Management International Review*, 1 June, 57(6), pp. 815-854.

Tietze, S. & Dick, P., 2013. The Victorious English Language: Hegemonic Practices in the Management Academy. *Journal of Management Inquiry*, 22(1), pp. 122-134.

Wang, R. Y. & Strong, D. M., 1996. Beyond Accuracy: What Data Quality Means to Data Consumers. *Journal of Management Information Systems*, 1 March, 12(4), pp. 5-33.

Welch, C. & Piekkari, R., 2006. Crossing Language Boundaries: Qualitative Interviewing in International Business. *Management International Review*, 46(4), pp. 417-437.

Welch, C. & Piekkari, R., 2017. How should we (not) judge the `quality`of qualitative research? A re-assessment of current evaluative criteria in International Business. *Journal of World Business*, September, 52(5), pp. 714-725.

Welch, C., Piekkari, R., Plakoyiannaki, E. & Paavilainen-Mäntymäki, E., 2010. Theorising from case studies: Towards a pluralist future for international business research. *Journal of International Business Studies*, 16 December, 42(5), pp. 740-762.

Welch, D., Welch, L. & Piekkari, R., 2005. Speaking in Tongues: The Importance if Language in International Management Processes. *International Studies of Management & Organization*, Spring, 35(1), pp. 10-27.

Yin, R. K., 2003. *Case Study Research. Design and Methods.* 3. ed. United States of America: Sage Publications.

Yin, R. K., 2009. Introduction. How to Know Whether and When to Use Case Studies as a Research Method. In: *Case Study Research: Design and Methods.* 4. ed. United States of America: SAGE Publications, pp. 2-23.

Zahle, J., 2020. Objective data sets in qualitative research. *Synthese*, 25 March, pp. 1-17.

Zakaria, N., 2017. Emergent Patterns of Switching Behaviors and Intercultural Communication Styles of Global Virtual Teams During Distributed Decision Making. *Journal of International Management*, December, 23(4), pp. 350-366.

Zander, L., Zettinig, P. & Mäkelä, K., 2013. Leading global virtual teams to success. *Organizational Dynamics*, July-September, 42(3), pp. 228-237.

Appendix

Interview Guide

The research question of the study	**Questions for the interview**	**Literature used**	**Follow-up questions**
How does social identity shape information sharing given the language use? *How does language diversity influence information sharing in virtual teams?* *How does code-switching influence information sharing in virtual teams?*			
Domain	Introductory questions		
General questions about the job	1. What is the job description? Please describe what you do in the organization. Please provide examples of your work in the organization. 2. How is the job carried out? Is it online, offline, or hybrid? In the case of online or hybrid, which media channels are used (e.g. Skype, Teams, Zoom, etc.)? 3. Is there one project, or do multiple projects run simultaneously? What kind of projects are these? Please provide an example. 4. Are these projects carried out individually, or in groups? 5. Please describe a usual team set-up of a project. How do you put together the project teams? What is the team composition? (e.g. specialization, expertise, countries, tenure in the organization, which language are they speaking, what is the gender proportion). What are the business units given the customer base? 6. How is the structure of the team? Who is leading the project? 7. Are new teams built for a specific project (consisting of engineers from different domains)? 8. How do members of a team collaborate with each other? And how do they collaborate with other teams? Could you give me a quick overview of how this collaboration usually looks like (the steps of creating a project team)? Can you give me an example whe collaboration went wrong? 9. Please describe a meeting. What are the activities? How many people participate at these meetings usually? Can you talk a bit about the steps, status, further tasks, the distribution? Who takes the responsibility for projects that go wrong? What is the language used during the meeting?	(Harvard University, n.d.; Farr-Wharton & Brunetto, 2006) (Grochow Mishuris, et al., 2016) (Farr-Wharton & Brunetto, 2006) (Harroch, 2017) (Harvard University, n.d.) (Goettsch, 2014; Kahai, et al., 2007) (Taylor, 2020)	3. How much time is usually given for a project? 4. What project is he/she currently working on? What is usually the deadline of a project? 6. How much time does one get to carry out the project? 7. Who takes the responsibility? Does one have to take responsibility for other´s actions? In what way? 9. How many meetings do you have per day approximately?
	Probing questions		

Introducing the language	10. Following up our previous discussion, how do you communicate in meetings? What languages/ language do you use? On which language is the meeting carried out? Other than the corporate language, what are, if at all, the different languages used in a meeting? 11. What are the opportunities of using different languages? 12. What are the challenges of using different languages? 13. Can you reflect on a situation in the team, where the knowledge of the corporate language was needed but absent? Was there a lack of knowledge, or a "different" knowledge (I am referring to using different words, expressions, engineering language)? Can you reflect on a case where something was unclear owing to that jargon? 14. Is there a distinction based on language between the team members? 15. Suppose a new member joins the team. How do you integrate that person? What are the different steps and tasks a new member has to accomplish? How is the communication between the team members? How long does it take to find a common voice? Can you describe briefly the first days of a new team member? 16. How is the language use within the team? Team members having the same mother tongue speak on the corporate language within each other, or on their mother tongue? Can you talk about your experience? 17. Using more than one language (corporate language, jargon, mother tongue) within a short time frame may make a person switch from one language to another if a word does not come to mind. Did you notice this during your work? If so, can you reflect on a situation where someone used another language to express himself/herself while talking to you on the corporate language? If so, how did this happen? 18. How comfortable are you with this type of communication? Why? How do you overcome difficulties (if there are any) caused by this language diversity? What are the opportunities in having language diversity within the team? What is your strategy to handle it? Please provide examples. In your opinion, how does this influence information sharing? What are the reasons? Why? 19. Does in-group language diversity change with time?	(Peirce, 1995) (Farr-Wharton & Brunetto, 2006) (Peirce, 1995; Tenzer, et al., 2021) (Hogg, et al., 2004) (Heller, 1982, p. 5) (Peirce, 1995; Piekkari, et al., 2015) (Lauring & Klitmøller, 2014) (Hogg, et al., 2004) (Ellemers, 2020) (Gumperz, 1982; Blom & Gumperz, 2000) (Ahmad & Barner-Rasmussen, 2019)	10. Is language important in this field? 13. How do you overcome difficulties caused by that? 14. How does this affect the interaction?

	20. How is the out-group communication (communication between different groups) given the language diversity? Is team membership a factor that has an effect on the communication? 21. In your opinion, and according to the experience you had, are groups built (by themselves, outside of working hours or during breaks) based on what language they speak? If so, can this be regarded as a form "building cliques" through identity? Can you reflect on a situation when you've noticed this? (Personal identity → social identity)	(Henderson, 2005; Piekkari, et al., 2015) (Flanagin, et al., 2014)	19. How comfortable are you with those changes?
	Specifying questions		
Effects on information sharing	22. What are the different types of the language used in the team? How long does it take for a new team member to get used to the jargon? How is information sharing within the team and the new team member at the very beginning? 23. How important is information sharing between the team members and the managers? (I refer to the vertical information sharing/ communication between the team members/engineers and the managers). How does this take place? (Distinct social groups) 24. Can you reflect on a situation when information was not shared properly? Why wasn't it shared properly? In this situation, in your opinion, what could have been done better? And how? 25. In your opinion, does language influence information sharing? If so, can you reflect on a situation, where language was obviously the reason? What are the opportunities and the negative influences of the language? 26. At what steps in the workflow of the team is language important for the exchange of information? Is there a step where it is negligible? 27. Is there a difference between the communication between managers-managers and managers-engineers? What language is used in which case? 28. What are the levels you are working on? How is information on each (troubleshooting, customer support, etc.)?	(FitzGerald, et al., 2008) (Tenzer, et al., 2017) (Plakoyiannaki, n.d.) (Harzing, et al., 2011; Chen, et al., 2006) (Pilerot & Limberg, 2011; Mesmer-Magnus & DeChurch, 2009) (Ellemers, 2020)	24. Did language, or a misunderstanding caused by language have an influence on what have happened? 25. Are there other factors that might influence the outcome?
	Outlook		
About the current situation	29. How did information sharing change (if at all) due to the covid-19 situation? How did the communication change? How comfortable are you with those changes and why? Can you reflect on specific situations? Please provide examples!	(Tenzer, et al., 2021; Taylor, 2020)	

	30. How did this pandemic situation, if so, change people's working behavior from being part of the team (social identity, teamwork) towards individual work (personal identity).		

Participant Consent

Intercultural team working in virtual environments-The Influence of the different Language layers on Information sharing in Virtual Teams: A CASE STUDY OF A MULTINATIONAL COMPANY

- I ……………………………………………………………voluntarily agree to participate in this research study.
- I understand that I can refuse to answer any question without any consequences.
- I have had the purpose of the study explained to me and I have had the opportunity to ask questions about the study before, during, and after the interview.
- I understand that by participating at the research I take part at an in-depth qualitative interview.
- I agree to my interview being audio-recorded. I am aware that this is not going to be included in the thesis, it is used for data analysis.
- I understand that I can ask for deleting my interview within 1 week after the recording.
- I understand that the Information provided will be treated confidentially.
- I understand that in this research my identity will remain anonymous. This will be done by changing my name and hiding any details of my interview which may give out my identity or the identity of people mentioned in the interview.
- I understand that my interview/parts of my interview will be quoted in the master´s thesis of Julia Angi, BSc.
- I understand that a transcript will be made. I agree this transcript to be shown in the attachment of the thesis.
- I understand that I have access to the provided information.
- I understand that I can contact the researcher for further information at any time.
- I have received a copy of this consent form.

Researcher
Julia Angi, BSc
Tel.: 004368120740534
Email: a01307278@unet.univie.ac.at

Supervisor:
Univ. -Prof. Emmanuella Plakoyiannaki, PhD
Department of Marketing and International Business
University of Vienna

…………………………………………
Date

……………………………………………………………..
Name (in block letters) and signature of the participant

……………………………………………………………
Signature of the researcher

Interview Transcript - Sample

P9 - transcript

1	P9 – Transcription
2	I: I'm writing my master thesis in international business..
3	P: Okay
4	I: and … I am investigating the influence of languages or different language layers … on information sharing in virtual teams. The questions are divided in 3 to 4 parts … at first, I'm gonna ask you about your job, your job description in general. If you feel that something is not appropriate, then please tell me to skip. It's not a problem.
5	P: Okay.
6	I: And then I'm gonna continue with the language part the importance and the effect of language on information sharing.
7	P: Okay.
8	**General questions about the job**
9	I: Okay … I'm gonna make notes. … So, let's start with the first question. What is your job description?
10	P: Okay, so, I work in the same department as […], in the same big department, maybe 800 in that department, in the care department. So, we look after the customer and the customer support … and my role that is an operations manager, so I make sure that … whatever we sell to the customer we look up to that expectation, so we meet the contracts.
11	I: How is the job carried out?
12	P: It's on my mind … (…) it doesn't really matter to me because my role is playable, so I talk to people all around the world, people I work with all around the world … So, it's all done on Microsoft teams. And via email.
13	I: … is there a project, one project, or do multiple projects run simultaneously? How is it?

14	P: So, it´s not all project-based … We do have projects so, if something goes wrong, we have projects which look to improve … or if there is something that changes in the business, and we need to implement projects to … from that change to implement that, we are doing that way, but in my role there's a lot of monitoring and data analysis … that type of work but we do have projects when things go wrong, or if things are changing and we need a project to implement that change.
15	I: Are you working with others together are alone? In groups, or individually?
16	P: … it depends. It depends on, if it's a project work, then it's all together in a group … if it´s … sort of analysis work, then that tends to be on my own but obviously need to report the findings of that analysis and you want to take to other people and … get them on board to try to implement the actions.
17	I: How is your team set up? … are there people from a different specializations, or expertise, or countries? How is the composition of the team?
18	P: In, like, in the smaller team, are people all around the world. So, it tends to be engineers or people that used to be engineers, so they are no longer engineers, but now so progressed onto a management role. … So that, maybe 30 or 40 people in my smaller team and we are all about the world speaking what's different languages.
19	I: Who is leading the team? Is there one manager or how is are functions?
20	P: Okay, so there is 1 person, yeah. We have a boss (laughing). Yeah.
21	I: Are new teams built for a specific project?
22	P: It can be, yeah so, we have organizational team, where you are in specific projects, then we´ll have project teams too.
23	I: How is the communication within the team? … Could you give me a good example … how the communication is? How the communication between the team members is? Is like a fast communication, or slow, or are there problems with the communication? How is it?
24	P: … Generally, it´s good … but I think human nature comes in because we are a global team. Human nature comes into it …. Cultural differences come into it … different people respond different ways communicating, some people say things straight away, other people, if you want a quick response it´s failing, because you know they are not so good at responding an email, yeah, it depends on who it is, but you get to know within the team who responds in which way best. … And you kind of use the communication method to best suit personally you are trying to talk to.
25	I: How is the beginning? Is it difficult at the beginning with the new team member?

26	P: Potentially is, yeah. You need to figure out how they are. It´s particularly difficult … at the moment but generally speaking, well, the calls that the other person could be in a different country or is likely to be in a different country so, in my, it could be difficult but generally speaking we are very lucky … a lot of people you work with is very professional and they do, you know respond quite well to questions.
27	I: How does a meeting look like? What are the activities? How many people participate at the meeting? Generally.
28	P: They tend to be, it tends to be quite … small groups so, we have more than 10 or 15 people in a meeting. … Depending on what meeting we are trying to do, will determine what it looks like. Where, if we are looking to solve an issue then we´ll have someone that leads the meeting … and we'll have an agenda, we go through, and from there you know we´ll try to review each one of the issues, understand what the issues are, create different actions to try to improve things.
29	I: So, we finished the first part.
30	P: Okay.
31	**Introducing the language**
32	I: The language part.
33	P: Okay.
34	I: … I would like to ask about the communication during the meetings. What languages do you use in meetings? Generally.
35	P: Okay, so, generally, well, I can only speak for me, because I can only really speak English so, generally for me the corporate language is English. I can only speak English like I said my answer's going to be English.
36	I: … Do you speak anything else besides of English, I mean not the English language, but like … lingua franca is the English language and jargon? Do you speak, like do you use words that an outsider does not understand? Or might not understand?
37	P: Yes. […] is full of jargon (laughing), is full of acronyms, is full of technology in complex. … Yeah … A term, word is full of complexities that did you not used to at […] if you're not used to the jargon, if you're not used to the way that it works, I mean, it can be quite difficult.
38	I: If you think of … one word what would you think, like the opportunities of using different languages? If you could … describe in one word, what would it be?

39	P: Ooh I don't know (laughing).
40	I: Difficult question.
41	P: Good question (laughing). So, what is the..
42	I: Yeah, what are the opportunities of using different languages? What would you say as an opportunity? Afterwards, I´m gonna ask the challenge.
43	[…]
44	P: Okay, I see what you mean, yeah.
45	I: That's what I meant. But this question is tough I know because everyone would like, okay, I can't, I don't understand this question, it's tricky.
46	P: Yeah, yeah, maybe is more difficult for me because I can only speak English and I'm kind of, in some ways, I feel lucky but in other ways I feel very … you know everybody else makes a lot more effort than I have to. If you know what I mean. Nearly everyone I speak to is speaking in the second or third language. That was for me … I don't really have that mindset because I don't have to do anything different.
47	I: Yeah, but you are lucky because you don't have to think of all the words or how you want to express something.
48	P: Yeah, yeah. So, some, yeah, I´ve never been something really thought about …. I feel I would like to be of speak that language because I see the amount of effort that everybody else goes to (laughing) do you know what I mean. It's a very lucky but also feel that I'd like to make more effort with the language but yeah, it's just not for me (laughing).
49	I: For that you put effort in your work. Because you don't have to concentrate right on language, on the language part.
50	P: Yeah, yeah, it's something that I don't have to worry about that part the people do.
51	I: … Can you reflect on a situation in the team where the knowledge of the jargon, or the corporate language was needed but absent? That someone did not understand …
52	P: Yeah, all (laughing) all the time. Not all the time, but it is quite frequent because people working in the second language because everything generally is done in English and talking, yeah one on one, talking anything in the corporate language, then is all done in English. … when you mix that with the complexity of

	the situations that we deal with, plus all of the jargon that comes around the technical … aspects of the job. It can get quite confusing, quite quickly.
53	I: … Did it happen that a project went wrong because of the language issue?
54	P: Things don't generally … the project assignments don't generally go wrong. (laughing) That’s not … I don't mean it like that. What I mean, you’ve got … there are 3 main things you´ve got time resource and money. … If you don't have all of those then you´re gonna […] and its usually time, cause if you can't get some peace of time we don't have, you´re not free to give you what you need the time you’ve got. So, it’s not so much to go wrong, it's that you don't have the time that you do, you need to get the job done. So, language, it can be a barrier sometimes and it can make life a little bit more difficult than it would otherwise be but I wouldn’t say that its actually make something go wrong because we tend to work around it, it's not so black-and-white.
55	I: Yeah. … Is there a distinction based on language between the team members? So … so to speak, you speak rather to a parson … that has English as the mother tongue than to others? Is there a discrimination in that sense between the team members based on the language they speak?
56	[…]
57	P: Not … not so.
58	I: Suppose a new team member joins. How is … how is the person going to be integrated in the team? What’s the integration process?
59	P: Okay, so the integration, it is generally pretty good. I would say because everybody is working remotely anyway. You don't get the cliques or niches of people working in … in a … you know, in the same office, knowing each other, going out after work. Because we work remotely. Now in some ways you know, that's really really good, in other ways you miss the opportunity to develop a team by the same location. But as far as integrating something new goes, it doesn't … you know … it’s not an issue because everybody's far away. Using different language.
60	I: Are there different steps that a new team member has to accomplish? Or how is going to … be taught? How long does it take to teach the new team member? To accomplish its task if you know what I mean.
61	P: … Yeah, so … it's a good question I don't … I have never really been involved.
62	I: Okay.
63	P: Because my job is quite self contains, I'm not … a manager of people … so, I've never had someone new joining my team. … To you know perform the same role as someone else, I didn't get involved so, project

	management so, I would pull in the people that I need to my team, but they already got the skills that they need and that's the reason why I have them in my team.
64	I: Okay … did you notice that someone a different native speaker, I mean from another language … just … said something during a meeting in his mother tongue? Not on purpose (laughing).
65	P: Okay.
66	I: Did this happen?
67	P: (laughing) The people it's yeah. No, I think the standard of English of the people I work with so, they certainly, from a business perspective, in you go on to other subjects which are related to business then you know, but maybe certainly, a lot better than my attempt to speak in their language because I am absolutely hopeless (laughing) but yeah, within the business environment under normal business conversations you know, everybody speaks pretty good English.
68	I: … We've now reached the third part.
69	P: Okay.
70	[…]
71	I: […] (laughing) so, … I've asked about the different types of languages in the team, like jargon, lingua franca and the corporate language. How does it take for a new team member to get used to the jargon? What do you think? How did you see it?
72	P: Now I've been doing my job for 10 years. I think technology … technology moves so fast. If you think about, what mobile phones are done in the last 10 years, you come from basically being able to type SMS messages by pressing same button three times to get a C to what we have today. … It's a full-time job and I know just keep up with the technology. And jargon that comes with that technology. … Just increases over time so, I wouldn't believe anybody if they said they understood all of the jargon which goes in to of multinational technology company because it just needs to … quickly to keep up with. Everybody has to do their best they need to understand the jargon for a bit of the company that they work in. …. But it goes on at such a rate across such rate then it's very very difficult.
73	**Effects on information sharing**
74	I: But how does this … affect information sharing? In your opinion.
75	P: Can be difficult you know. I tend to be quite mindful of trying to write sentences at least which are quite simple and easy to understand. … Trying to limit the use of jargon that they have. … But as you talk you know and if you talk to people, it depends on the role they do. So, you talk to people who are managers or

	that project managers are like a higher level. Then it’s quite painful you know, everybody is talking at the same kind of level. If you start talking to engineers, you start getting into the nuts and bolts of the different problems. So, it very very quickly comes to very very technical facts and there is a lot of jargon in there which again is very very quickly but that’s the rate of the industry, is progressing.
76	[…]
77	P: (laughing)
78	I: Great. … Can you reflect on a situation … where information was not shared properly? Like one example. And you have been misinformed because of that? Or a team member.
79	P: Yeah. I wouldn’t say misinform cause, I wouldn’t say anyone would be misinformed. I think misinterpreted or misunderstood.
80	I: Okay.
81	P: It’s certainly, when it comes to some the written language it can be quite difficult to understand … When someone is writing in the second or third language, or perhaps it is not their best language yet, it’s really great to get that they would do that in the current corporate language but if it's not quite right then it can cause a lot of confusion because things can be … like, you know unfavored you know, how things can be written and interpreted in different ways … and that can also be the case you know, we see that in business world and we have to go back sometimes: “Hey, did you really mean that? Can you clarify it? Is this what you mean?” It’s just … you`re gonna have that feedback sometimes. Just to confirm what people mean.
82	I: At what steps in the workflow of the team is language important? Or the most important. At what steps is negligible? What would you say?
83	P: … For me is important all the time. Because if you're going down a particular route, we went on a particular project and something isn't clear and you don't clarify and I can take you out for a tangent and you are going the wrong direction that could happen at any point … so, if … I guess, it`s important all the time.
84	[…]
85	I: I have like … another … like the last two questions.
86	P: Okay.
87	**About the current situation**

88	I: Regarding the current situation. … How did information sharing change due to the covid situation? If at all. Or the communication change.
89	P: Okay, so, workwise it didn’t very change that much, because as I said, I mean a global world, so people around the world. So, doesn't matter whether I sit at home in my office or whether I go to a, you know, a corporate building and work there. … So, it doesn't matter. From a personal perspective, you see missing the people that you work with in the same office, and you go to lunch with, you go for a walk with, at lunch time, then you know, see this new communication, that`s completely disappeared.
90	I: Did you notice that the behavior of your colleagues has changed because of that? I mean, they are more introverted or extraverted or, you know what I mean? Did the behavior change?
91	P: Not really, cause the ones that I haven’t seen, I haven’t seen you know … I don’t generally get the opportunity […] to know (laughing) because work is just crazy. So, I don't know to be honest. […] (laughing)
92	I: Okay thank you very much, we`ve finished.

Observation notes

Netnography

2 **Date: 22.07.2020**

3 Time: 09:32 <u>Misunderstanding ABC-EBC</u>

4

Notes	Interpretation
• the difference is not clear • a group has received a mail, but it did not reply	Misunderstandings occur Late reply on a mail, information blocks

5 Time: 11:40 <u>Delay</u>

6

Notes	Interpretation
• Working from home is not going the way as it was expected • […] upgrade – not clear whether the other party was notified about the delay, in advance the information wasn't given…. not a good way for cooperation, […] did not notify the others • Did not even apologize for being late, no one knew it • A good way would be to notify the other party when the delay is for sure • A team member´s ability: 3 days of work, he is available	Teamwork has its weak spot. Not being in the office makes cooperation difficult. The information exchange is also weak, because however, the email was sent, it wasn't read from the other party, or only later, which slows down the work. It was a delay but wasn't communicated on time even though it was noticeable. It comes a bit of personal issue in there, because at least the apology should have been there. Good news, that a team member is available to give a hand.

7 Time: 15:46 <u>Delivery unit</u>

8

Notes	Interpretation
• Delivery units ○ […] • Opportunity to start the whole thing the next days	The whole meeting was very difficult to understand given the language issue, interpretation issue. Understanding it was a huge challenge, I´m not used to the accent. It was

	spoken too fast. It would be very difficult to summarize the meeting in a sentence. At the end of the day, the issue wasn´t solved, however, there is an opportunity to start it over again the next day.

9 **Date: 05.08.2020**

10 Time: 13:38 <u>Certification creation work</u>

11

Notes	Interpretation

• No feedback till now
• A team member is moving to another organization inside of the company
• […] management
• Someone is supporting the team from the technical side. He has experts from HR part also. There are a lot of experts in the organization
    ○ But: the team is in a special situation
        ▪ The team memberships have been changed recently
        ▪ New team members
        ▪ Need for status
• A team member has moved to another team, but he agreed to help the team out if needed
• For a work there are 5 people available
    ○ Steps: see the distribution of this topic (where are they with the materials → status) → distribution of the topic
    ○ One person was in the old team from the 5 people, he is up to date
• One has to know which topics were covered by this meeting and by others and see what the status is. Because one person might be involved in several projects parallel → they were progressing when the team member left → he is going to be contacted now → he will join the meeting, need for update
	The language is difficult to understand for me, the Jargons used make the whole no sense to me. There is a loss within the team, since a team member is changing position. But a manager gives support to the team from his team, so that the team will have support also from the technical side. The good teamwork lies in the fact, that the team members know and support each other. One knows who to rely on when problems occur. But if the structure changes, this security goes away which is also noticeable here. However, given the strong relationship between the team members, although he has a new position, he would be still available.
	
	Team membership → social identity theory
	
	There was a progress in the teamwork, therefore they want to keep them in there, even though the person is no longer member of the team. The personal feelings, the social identification can be seen here. On paper no longer part of the team, but the inner identification, that remains, the group identity.

◦ Showing where they now are, because that is the starting point for the new team • Conflict: they are talking next to each other interrupting the other. Clearly do not understand each other. “Are you not able to listen to me?” • The participants should send feedback, either except or decline the invitation • Someone is asking about targeting (timeline). This team has to see the people’s availability and based on that they will plan and propose the timeline. Several materials should be done, not only the practical part, but also the examination questions should be created (this is the smallest part). The biggest part is the L3 material creation. It has to be created, reviewed, for some material the audio part too. A manager will create a project band that will include these activities and the timeline for these activities. • For other projects, they have this time • Simple activity: create → wait on another team’s work and once they are all done → create exam and the training exercise, the system, assessing the task in the system. Now, more people are involved. The old way is to just do it, but now, that there are several teams, strong cooperation is needed. Restarting this process needs time • No other topics will be taken • They are talking about a nominee, but even though he was invited to that meeting he is not participating. But anyways, one engineer is needed. Someone will crosscheck this engineer. The problem is his line manager cannot be contacted directly. This manager will send him a mail • Since there are so many new people in this team, a manager is going to make a short presentation about the structure, courses, modules, and the exam. • An idea is to have a joined session	Conflict erases, people start interrupting each other, whether it is given the linguistic causes or personal issues is not clear. Not everyone was attending the meeting, but many of the absents wasn’t telling in advance that they are not participating. The planning faces difficulties. The connection is at that point not that good and the person’s voice who is talking is breaking. One team has to finish the part to be the other team able to start with it. Was difficult to follow this discussion. The tasks are given, other teams are also involved. Strong cooperation, leading to SIT, even though the comparison between the teams is given, it can be seen at the discussion also, the common goal is more important. They are several teams, but at the end they are one team working on this project within the organization. Not everyone was there who was needed. One guy was invited but didn’t appear. His manager must be contacted. New members join the team. An introduction must be taken place, which is very formative.

<table>
<tr>
<td>

Someone needs to make sure they have the right person, so next time this engineer must be online. They do not know whether they can support this project, an engineer is still needed. But this engineer’s presence is uncertain right now, that’s why a manager from this team is trying to contact another line manager to ask if he/she could nominate one of his engineers for this project. It seems that 4 people are enough if all the 4 people are working. But these 4 need to work
Need for extra call for this topic. He wants a final list of people with the teams
New questions arise: What is the scope of 1[…]? What is the scope of 2[…]? → the other managers will show him (he is a new manager in the team)
Summary: 2s […] define the cope, the content, training; this team supports it with documents, files, learning, exam. This team aims to provide resources for the 2[…] lab and builds a strong system that is needed, the whole structure
One open question with lab support: certification is released, when if it’s any problem with the lab, its crashing, who should be the guy who is supporting. Because till now every kind of problem was solved by the care people, but this was not in the initial agreement → The lab is owned by them, but the software is provided by the SMEs.

Whose ownership is to recreate. → he says, by care, they should maintain it. The SMEs define the need for the exercises, the system. So, there is a problem with it, it goes to the care people. If there is a problem with the lab, the lab goes down, the 2[…] people come
But this is an extra task which they should do. This task was not assigned to them. They are validating the lab exercises. But

</td>
<td>
Problem: lack of human resources. An engineer is not available for the project
Good to see that they have a plan B, because they are, however, not part of the same small team, but part of a big team, and feel responsible on for another.

It can be seen how a new person is going to be taught about the important issues. I have noticed that the linguistic frameworks, the difficulties with Jargon appeared during this part of the meeting. It is given the fact that engineers understand each other easier, but at the same time each small group might have its own kind of Jargon. This is not the general case, but it might appear. So linguistic issue.

The structure is written down, who does what. A team gets a new task which was generally not contained earlier.
</td>
</tr>
</table>

really if there are some problems the lab was not assigned to them till then. This is a new role for them o Another manager jumps in, he says no problem, they are going to have another meeting about that. o The system was created that way, that everyone can use it easily, based on the script of the document. Let’s discuss this later	Always a plan B. Didn’t finish till the end of the meeting, so they are going to postpone the topic for the next meeting.

12 **Date: 10.08.2020**

13 Time: 11:28 <u>Information because of absence</u>

14

Notes	Interpretation
• Change of media channel: using teams instead of jabber. For some people there is an access to jabber (call) for others not. • Jabber is external • Someone is going to holiday: but the data have to be given to the other person – certification data • The path of getting the certifications is going to be showed. Some certification information are open for more people, for someone has to have extra rights to have. However, some certifications are only allowed on team levels, no other manager is allowed to have those information. • Mandatory trainings • […] report (training report), not accessible for everybody, a person with the right must be contacted to give the information – detailed information to avoid misunderstandings • To update the NPI • Timeline is important to see if the nomination is valid • […] product, […] product • Mandatory trainings PBI	Technical issue. A change in the usage of the tool has caused technical problems, not everyone has access to it. Very flexible group, sometimes if someone needs an extra meeting, they can have a short call about the ongoing issues discussed. Personal identity, clear structured roles that people have been given. They are nice to each other, helping the other out if they have any difficulties. They are making jokes and laughing during the meeting, nice vibe. So much of Jargon that I´ve lost the sense of this part.

• […] • For NPI, the most important question is whether the information is updated • Dispute of the line managers: someone was asked but no reply came • One manager has access for detailed information, but others do not have.... everything is going through him.... team working is important at that stage, details are shared by him • Competence management	Different managers coordinate different tasks, and they are responsible for them. They need to work out effectively and work together Team working is very important here, since the information goes through this person, his role has enlarged respectively.

15 Time: 12:15 <u>How to continue the project</u>

16

Notes	Interpretation
• The initial contract was a thing, but as time goes on, it might change since technology evolves. Continuous contact is needed. • Expertees are working on specific projects with deadlines, after the time is over, they move on with another project. They have to crosscheck whether the person can continue the work or not. Discussions need to be done to see who is available 17 • They are preparing another meeting with the team members who have the information needed. They discuss when to have that meeting. It is difficult to have a time when everyone is available. Postponing the meeting seems to be the only opportunity. ...Internally can be discussed with the people that are available, and after that the information is going to be given to people that were not online • Postponing a meeting is possible, but only for that person, who is organizing that meeting. The other having the invitation should be there if they can.	Continuous teamwork from every side. Someone did not appear to the meeting, even though it would have been essential. Rudeness not showing up.

• Sharing each other's calendar makes the whole teamwork more effective • In that meeting some agreement needs to be found	

18 **Date: 14.08.2020**

19 Time: 10:41 <u>Complains, asking for information – preparing a team member for a presentation</u>

20

Notes	Interpretation

• LAB
• Possibility to use the lab
• Checking all the status, forecasts
• „What does qualify mean?' – NPD-s who already
• Someone was asking about the status→ need for update ...only the active and proved ones. One active has already started. Need to crosscheck this with the NPD team
• […] upgrade:
  ○ Have not got any mail about it
  ○ Outcome: not clarified, it seems that this team is going to do it.
• On Monday discussion with NPD....already discussions are going on. Need for check
• […] is going to be started. There is no clarified timeline, which is a problem. The team member is always asked about the timeline, there is no possibility to propose a timeline either...how to handle the situation? ----- no answer yet. A push for NPD because the cooperation is fragile. Even the first pilot is not complete and there are many complains about it
• Need to be said at the governance that there is no timeline, and neither can be pushed.
	It's about the candidate who are participating, guess
	
	There is a whole chain of work so to say. Several teams are working together, but not each and every team has a connection to the other, so that there has to be a person who has a role of a connector so to say. This role hasn't been given to that person as such, but generally the person fulfills it.
	
	There is a problem with information. Information, the mail wasn't forwarded. On the other hand, it is not sure who is going to do the task.
	
	Fragile cooperation. They did even more what they should have done before given their task, and now they should do even more.

• Idea: send the cases to the resource and by that time ask the question about the timeline from the NPD. Ask the line manager how they manage it. They can put a tentative nomination to a tentative timeline • Problem: shadow mode operation, not a full-time, they may have some timeframes, it depends on the NPD guys how they are doing its work. They should understand that one cannot give more information from what one is getting...no previous experience with this project....it is hard to manage many projects without getting enough details. • They should have a discussion after the session not during the activity in order to not to disturb the NPD guys. And after the session discuss with the NPD guys.... they are scars in projects. • This should be stated that only active and approved projects • The expectations might be too high...one did in the right way but is scared what the other team would say. • In the new slides every team can crosscheck where they are.... customer support thing • The participants in the trainings are giving the ratings • „Hot topic"-slide should be removed 😊 • Upgrade project is delaying for 4 weeks. There are so many mails that the outlook is crashing. • Budget for Q3, Q2 -→ never-ending discussion	who should be blamed because of the delay? Is this cooperation strong enough to overcome this? Lack of information. But why? No one knows where the information exchange was blocked. People working on the projects, which run simultaneously, have no access to detailed information. What´s in the background is not known. This meeting is about preparing a team member for a presentation because the person who supposed to present goes on vacation some topics are difficult to discuss because of the different opinions. One team member, who has to take part at a meeting and makes a daily in place of someone else wants to avoid the topics which might cause discussions. This might be because of the topic itself, but also because of the language. It feels that it is difficult to defend an opinion in a different language than the mother tongue.

21 Time: 11:06 Is there a need for upgrade?

22

Notes	Interpretation
• One part says that the change is so big that an update is needed, but the other part has a different opinion.	Different opinions, from different groups. Group identity.

• Training materials are general. Only the features or parameter changes, but the whole thing is not. • These new features will not be included. It's about to learn how the different functionalities are working. Some procedures might change, but the components are exactly the same. ....no big significance • Need for check: the practical changes, the exercises. If the solutions are the same, it's okay, if not, there is a need for update. .... Crosscheck: any lab? ...No lab but plans for upgrade • By whom is this crosscheck done? – should others also be involved or someone else from outside needs to be included?	Crosschecking is also an important part; they mention it all over again The question is who should crosscheck it. Should be an external person come? This might make the teamwork more difficult since they don't have that connection, only the personal identity is existent. After some time working together the group identity arises.

23 **Date: 24.08.2020**

24 Time: 14:29 <u>How to overcome the "lab" problem</u>

25

Notes	Interpretation
• There is a lab for integration certification (Curriculum creation) • For the lab there is a need for something from another group. It is working but there is a need for more. This lab can't be moved though • Idea was to create a temporary lab • The lab needs a solution, is not available now. Need for box installation. • The resource to correct the errors will be given, but need to wait for them • It does not make sense to have 2 labs, but no one is working • Need to work on the material • Need to check the needs of others and align it with the group • There is a deadline to launch it, that's the problem. The lab is a big issue...regarding	Nice talk, it can be seen that they understand each other's problem although they come from different teams. Look at the individual's problem and take it to another level, aligning it with the group. At this point, there is no information on this. It seems that a few steps need to be made.

this timeline, when will be available this lab?	
• Need for review: a reviewer. Usually, the review is doing inside the team. Only if there is no capacity someone outsider is doing it. → based on the availability, volunteers will do the review. Last time the project was huge, outsiders were needed. This time might be possible to do it within the team. However, if it´s needed, the manager who is connecting the line managers will request extra experts.	
• Progress for […] creation: → need for lab? → yes. Need for some things	Difficult Jargon again.
• Is there any possibility to have a progress without the lab or everyone is waiting for that lab? – some things are the same as before, only the name has changed – the functionality is the same.... question: with the old system it might be possible to continue the work. But!! is there a need to change the names (everything from the old system) to continue, or not?	It seems that this lab is important at the beginning of almost every project, it´s not done but it´s needed by several groups.
◦ Answer: the plug-ins are not the problem, but they have changed the name of the function. – ◦ → the original material should not be changed ◦ → the procedures inside will not work out without the lab, but they will try to give the new name and so continue to work. ◦ Other labs can be also used ▪ One explains it happens once that they were using a lab and if something happened, they switched to the other lab they were also using. It is possible to restore another lab by changing some dates.	Complete understandable, well-structured, well-explained, good language.
26 • By now everyone has joined the meeting • As a next step: any plans for next week?	

o Start creating the outline before the lab is available. At least the ones that can be done before the lab is available • Next meeting: why to have so many meetings? o Report the status o It's not mandatory to join all the meetings o A person might join the meeting because she knows the status → the others do not waste time with other meetings from other teams, she can join now and make everything clear	Flexibility

Date: 25.08.2020

Time: 15:01 <u>Status</u>

Notes	Interpretation
• Meeting starts, people are coming • Start with NPD and NPI project updates o NPI ▪ There is a change for a program: they have accepted 2 nominations for the participation ▪ A participation was cancelled. They want an expert so that they can understand better ▪ So, at the end, someone will ask 2-line managers to nominate each 1 from their team to end this → but ▪ → All together there are 2 seats (1 nomination from L3 and L2) → somebody was laughing .... „It is a demo, why do we need to limit the number seats?" -asked someone.	They arrived on time However, given the Jargon words it wasn't that understandable for me and I`ve lost the line sometimes, it was a well-structured meeting, the inputs were important. At some point somebody was laughing, because he couldn't understand why they should limit the seats. - somebody was laughing .... „It is a demo, why do we need to limit the number seats?" -asked someone.

<table>
<tr>
<td>

It’s not fully a demo, it has parts that are full
Someone will provide the name
Another person asked her about someone, but she has no information about it. She needs the mail forwarded to crosscheck it.
Besides the meeting someone is controlling the ppt
The final dates of the nomination are not finalized (was asked by someone)

NPD

After the governments call: they are waiting for the final dates (September, October-city congress) she is waiting for the final names
They are waiting for the customers
Starts in October
→ they are now checking the updates from the different countries

Certifications

Certification status: progressing

Someone completed the certifications: congrats L4 certified engineer in […]
L4 certification can speed up
1 more registered and 5 other people in progress

The hot topics will be discussed at the end of the meeting
Mandatory trainings:

60% completeness
25 September completion date

</td>
<td>
Since the bigger team is operating worldwide, a strong cooperation and a good teamwork is needed.

Even though it is a huge team, (they are also part of a smaller team but still) they show appreciation even for one engineer. It shows that everybody is valued, this gives motivation for further success.

It can be seen that some topics are noted as “hot topics” which need time to discuss. People have different opinions; it is interesting to observe how they throw the opinions in the discussion. It`s not always the right tone I have to say, but in this case one can see the different types of people. The identity of the person. Who is the opinion leader, who comes with etc.
</td>
</tr>
</table>

<table>
<tr>
<td>
Hot topics
L3 certification share of responsibility between […] and […]

He had a meeting with […]. They are concerned with the progress of certification creation and about the share of responsibility. Based on the latest discussion, the administration, the lab availability providing SME in each product are their responsibility, they cannot take more because they are a small team.
The part of the team I am listening to is the content creation, lab maintenance, equipment problems, the validation of practical exercises
Discussions regarding recording part. They say that they do not have stuff to do this.
Someone does not like this, she says it seems to be silly.

</td>
<td>
Different opinions come across. Some people don’t like it at all (“silly”)

Some problems with recording – record if it makes sense. →there is a disagreement between 2 groups. To me it sounds like that, because a team is pushing the other, they want to give away the task, is a never-ending story. One person is passionate about that, she does not like it and she also shows it

Feeling the responsibility of the role they´ve been given. Identity issue occurs, but can also be seen the interaction, they understand each other´s problems in this part, they also feel responsible to help. The whole social process is interesting to watch.
</td>
</tr>
</table>

• Check for the need.... if there is a need for upgrade, record it, if not, not ← outcome • This recording topic comes again all the time → agreement ▪ Lab support • They say that they are providing this lab, but if any issues happen, any crash, they are coming to this team to crosscheck the problem • They do not have capacity to do it • → need to divide this responsibility from the very beginning, because no one would volunteer.... understand that this is a significant time commitment for a long time....course creation people, and course maintenance people and make sure their managers understand the time commitment of that role	I was trying to look behind the tasks, to see people´s behavior in different situations. The problem how I see is, that the tasks cannot be divided and shared between teams.... because of different things, time, equipment, sources. Everyone should contribute. So, the teams need to work tightly together. It goes beyond the task issue, it´s about behavior, therefore identity issue, how they react in different situations given their social background. People are working on their best effort. They give more than 100%, not only doing their own job, but also helping others if they have some problems. Everybody knows where to go and who to call if some difficulties arise. Work in progress

	• Another suggestion is to make a replacement, so that not the same people should do this the whole time. The big problem is that the nominations are hard to get for some of the certification • She would argue that this is a training opportunity...so for who are not experts...--> this is a strong argument • Full-time people cannot be given more tasks. They are working on a best effort • Answer (of a man who has not said anything till now): the resource situation will not change, no capacity. So, 2 options: 1 change the targets, or get some resources from somewhere and take responsibility for their targets, not push this team. Because the main task of this team is emergency, this	Conflict between opinions. A representative from one group claims something to be important, others have other opinions. There is a discussion between 2 managers, one said that the other is missing her point. Lack of resources. They cannot do everything for everybody. Mentality issue(??) Another team member jumps in being on the same page with the lady Different opinions, they cannot get on the same page seems to.

<table>
<tr>
<td>

team cannot put aside its task for those
Further discussion needed

L3 certification target

The recommendation done, waiting for confirmation, so the target will be reduced
Right now: 60 completed, to reach around 20/month and the new target will be reached.

L4 certification

First completion.
Several ongoing

Upcoming certification

Names provided, but need for 2 guys […]

[…] (product)

Old guys most of them
Some teams are set up, some needs more discussion
„Who says this is important at all?” .... lab availability is not given, how is going to be checked if there is no lab? .... need for a lab for checking

She argues that they have so

</td>
<td>
It´s difficult to follow because of the Jargon as an external person.

There is a discussion about that, because the step before this is not ready, you need L4 certification criteria. This is what I got from the whole discussion, but not really sure due to linguistic problems.
</td>
</tr>
</table>

many things to do on their list, why would they do the other • The other manager says that they have to crosscheck if there are any changes. • It does not matter what is going to be crosschecked, because at the end these are the same resources. • But he says that not the same resources on the certifications • The lady is also giving an example • Other more important certification. Any other manager in this call who prioritize it? • If there is no chance to work on it, one can postpone it • Main problem: no way to plan because the team is working on best effort • → make a list to see everything.	

<table>
<tr>
<td>

The manager who is connecting the teams will speak with […]
[…] found where the problem is, why the lab is frequently lost.

CoP nomination

Those products which are only on cloud (cloud native) should be
What is the list of those products? → more details will be requested

Complaints about certification

He shows a table, the other managers need to update the list with their engineers

Waiting for L3 nominations
[…] supporting teams (L3) have to be defined

This is a new product, it is only in Budapest

No other topic for discussion

</td>
<td></td>
</tr>
</table>

30

31 Time: 15:22 <u>A tegnapi meeting</u>

32

<table>
<tr><th>Notes</th><th>Interpretation</th></tr>
<tr>
<td>

Volt egy kellemetlen meeting, a másik fél megemelte a hangját és csak a sajátját mondta
Megmondta hogy egy kicsi csapat, nincs kapacitásuk másokat beállitani hogy átvállaljanak feladatokat
Régota szó van róla hogy ki mit csinál. Nem tiszta hogy ha baj van a laborral ki

</td>
<td>Az érintett fél fel van háborodva.

Mindent egy csapatnak kell felgöngyölítenie. Nem bírják, segítségre van szükségük. Nem haladnak a saját dolgukkal, mert máséval vannak</td>
</tr>
</table>

az aki megjavitja, általában mindig ehhez a csapathoz jottek hogy megjavitsák, hogy aki csinálta a labort az jöjjön és csináljon valamit hogy újra muködjön. Ezt ők már nem akarják csinálni	elfoglalva. Érezhető volt a személyes sértettség, mindenképp változást akart.
• Nehéz velük, nagyon sok certificationt csinálnak és az SME-k akik segítségül vannak valamennyire értenek a dolgokhoz, de ők is kínlódnak mert nincs ember	Személyi hiány van, érezhező a csapatban hogy kevés a csapattag, még kell emberi forrás.
• Viszont más csapat nem tudja megcsinálni helyettük, ha vannak céljaik, de nincsenek eszközeik, nem fogják tudni megcsinálni, megpróbálják másokra rásózni a munkát	Megvan az akarat a csapatban , csak az eszköz hiányzik. Humán forrás.
• Egy levelezéssel kezdődöt, ahol valaki kiosztotta a feladatokat és megszervezte a megbeszélést.	
• Ez a manager megpróbál több csoportot összekötni és intézni a dolgokat, kvázi egy összekötő a csapatok között, miközben pedig a csapatok kellene beszéljenek egymással. Közvetítésnek itt nincs értelme, mert egy idő után nem megy. Van egy erős érzelmi oldala is ennek, mert mindig valakin csattan a dolog, akinek amúgy nincs befolyása a történésekhez • Nem tiszta hogy ki mit csinál. Kell egy rendszer ami mentén haladnak és úgy tiszta. Sok dolog, pl „maintanance” tag fogalom. Nehez megfogalmazni hogy mi tartozik ahoz	Kis csapatok a nagy csapatban. Nagyon érdekes volt figyelemmel kísérni ezt a megbeszélést. Az érintett fél aki nemtetszését mutatta egy kapocsként áll a kisebb csapatok között. Ebben a felállásban már nagyon nehéz megkülönböztetni a csapatokat. Nem is a kis csapatok miatt, hanem hol van az a határ amitől kezdve valakinek a hovatartozása húzható? Hogy lehet az, hogy valaki egy csapathoz is húzódik, de ugyanakkor a másikhoz is tartozik? Itt különböző kategóriák figyelhetők meg. Az embe kategóriára bontja a meghatározó jellemvonásokat, majd összehasonlítja, amiből a végén összeáll a szociális identitás. Itt elmosódnak a határok.
• Nem tartják tiszteletben mások munkáját, külön kis alternatív univerzumban csinálják a dolgaikat és nem veszik figyelembe hogy mennyi kapacitás áll rendelkezésre	A személyes identitásnak előtérbe kerül. Nem őrődnek azzal, hogy mennyire nehezítik meg az emberek munkáját, vagy másnak a munkáját, egyből akarnak mindent a forrás megadása nélkül.
33 • Ha nincs döntés fentről arról hogy melyiket mire használják, akkor minden csapat arra használja amire szeretné. Más csapatok nem szólhatnak bele. Mondhatják hogy még csak 2 target keszült el és 3 van, nem számít, a másik csapatnak nincs ilyen targete.	A szabad döntés meghozatala adott.

• → Az […] termék csúszik. Akkor lesz megcsinálva mikor lesz rá kapacitás és labor	Eredménytelen, mivel nincs meg hozzá a forrás, nem lehet megcsinálni.

34 **Date: 27.08.2020**

35 Time: 10:47 Covid situation

36

Notes	Interpretation
• There is a request from the Hungarian government (innovation and technology) to change the policy on home office • Unexpected regulation, waiting for the official regulation • HR representatives are helping, they are looking at the opinions of the others • Expect: office will be changed, new layout – much less sitting place, half of the people will work from home, but the plans are not finalized. • The company tries to negotiate with an office supply company, negotiate the contract with them, if there is a collection of requests for office equipment from the company side, for the home office.	How the team react on external factors.
37 • Problem: if someone can be warned if the person does not wear the mask in the office....is a common thing in Hungary, that people are not wearing their masks. Discussion about how they can be forced but not in an aggressive way. Going to each of them to ask them to wear a mask is not a good way. • At […] (another company): 2 infected guys in the office had been found, the office will be closed, test all the people in the office • Experience: people are wearing their masks in the common places, but not during work	A compromise has to be found. I was thinking during the meeting that both parties do their best to find that common spot, where safety and efficiency meet. Another example taken, of the competitor. People are responsible.

Date: 04.09.2020

Time: 11:18 <u>Nominees</u>

Notes	Interpretation
• The line manager is listing up which engineer is at which product • Ongoing certification • All the line managers confirmed that they can cooperate but none of them can take the lead • The team lead should always participate at the meetings • They are talking about the list of the nominees, who would be good to send	Time pressure I see. They can participate, but they are not willing to lead the group. Also, the tone was important at this part.

Date: 08.09.2020

Time: 10:58 <u>Planning, updating</u>

Notes	Interpretation
• A bit of covid situation, how this is in India ○ Because of the economic situation they cannot close it further • Ask for update the NPI • It is done • Anything important that was changed? Something totally new • They are discussing now the changes. A new slide with the new upcoming projects will be created	

• Problems with the customer lab • They are going to have a meeting with NPD • Any hot topic? – mandatory training must be pushed. A suggestion: • They do not understand each other in something, she suggests something what from the others perspective does not make sense......" we are not complicating our lives even more" • They discuss the to do things • They put a discussion for the next day before a big meeting. But her suggestion is to discuss it internally before the meeting, and after the meeting with the […] (a group)	One has the feeling of a bit "too much" because having a meeting extra to plan a meeting They are laughing at this point

44 **Date: 09.09.2020**

45 Time: 09:12 <u>Covid Situation in Hungary</u>

46

Notes	Interpretation
• No changes in "home office" situation • The situation in June -July helped to see the measures that must be held to keep this under control • Being a technology company, the team should also check the Hungarian governments suggestions • They have to manage the situation no matter what and achieve the performance • Taking care of health, home office is recommended, more need for cooperation between the teams • All of the measures were communicated: defense	Safety measures Away from every day's issues The rules are going to be communicated to see how to plan

47 **Date: 10.09.2020**

48 Time: 09:14 <u>Invite to a new meeting</u>

49

Notes	Interpretation
• a WebEx meeting is not cancelled, the team was not added • A manager helps another manager to create a meeting invitation • Sharing a new invitation, new teams meeting	Something went wrong at the beginning and most of the participants haven't received the mail. Another try, another meeting.

50 Time: 10:30 <u>Travel restrictions due to Covid and the effect on trainings and budget</u>

51

Notes	Interpretation

• People are coming
• […] project – tomorrow will be closed
• For no travel –
• […] project
• She tells how much the costs are
• The overall package will be closed – once this training is delivered there is no need for more trainings
• […] product
    ○ This year there is almost no budget and is not clear if travelling will be possible
    ○ Many trainings do not take place because of travel restrictions and the engineers do not even have opportunity to get to know the product. Almost no expenditure, only 1: China internal travel
    ○ System verification – it is not sure it will actually take place, but it is planned
    ○ It's up to a line manager
• […] product
    ○ Both technical parts removed
    ○ Q4 will happen
    ○ Timeline is not set but the opportunity is given
    ○ They have different teams in different countries
    ○ They are talking about the projects, how they can fulfill them, it is a probability that an internal travel is possible
	Pure business, estimation of the costs due to covid
	
	Internal problem. To make sure that people are specialist trainings must be organized but given travel restrictions this is not possible. Even though virtual environment allows people to work from home, from different places, around the world, having a training completely virtually is difficult. Teamwork is better when personal contacts happen, on spot, not through the internet. Is much easier to create this connection. Some products are in some countries available, and thus this covid situation not only affects the teamwork as such, the personal connections, but the way of how they usually get to know the products. It can also be shown at the expenditures: almost no travelling costs compared to last year.

○ Someone is joining the meeting ○ Someone says that there was a competence in the last quarter because the engineers were not able to participate at trainings and the timeline was short. • Someone is talking about the status and the plans • This is going to be the last opportunity for a training, is not that there is buckets of trainings • Someone asks about the restrictions, whether they are happening right now or are planned to happen. The answer is some of them are for sure, some is only planned, some will be removed, it is not sure (travel). • Q4 travel – Australia, Mexico (difficult), India (is opened) • Singapore project – for the next version is okay. So, if by then the travel restrictions will be deleted, then it is going to be taken place, if not, not • […] euros totally (budget) • One person did not understand something – answer: for Q3 no travel. They are discussing the total cost (29000) • Problem (one manager has got an email): the cost in an email is the same as told before, but it is said that this is also the last one that is paid for. Email sent at the beginning of august. So, in the near future it is official that no more money is going to be spent on headhunt. • Situation: need for further request the extra expanse from a line manager.	Personal issue: Expertees are needed, but no more money will be spent

52 Time: 10:33 <u>Let´s fight or not</u>

53

Notes	Interpretation
• They are laughing • A manager did not even get a mail that was important. But they are laughing about like nothing happened, it is a nice ambient	

• A manager proposes to go to contact another manager to have an approval. He is putting many managers into the conversation just to make sure that everyone can read it. A manager thinks that the approval is not that important, says she. He asks her to discuss it with the manager that does not think that this is important and ask another manager whether the team should further support it. Should the team go to that line manager for approval? If it is really needed, they are going to that line manager to get the approval...” Let’s discuss should we fight for it or not? How important is it?” • So: ask whether it is important „than the fight” – they are laughing	Internal discussion, different views on a topic. Personal exchange.

54 Time: 17:13 <u>Discussion about the content</u>

55

Notes	Interpretation

• Discuss related to the training
• First discuss to a line manager and if it’s really important, he will contact a line manager and push it
• Everyone is arriving
• Main topics
    ○ Certification examination with different products
    ○ Training cartels
    ○ Updates on training cartels
• Certifications
    ○ Projects certifications
    ○ The structure is important, because not every manager is interested in everything, so a manager suggests adding a topic, namely the question of resources, what level of knowledge should the engineers have for integration
	It is important to show the personal need, not always visible
	
	A manager sees the point. Not everything is important to everybody, but everybody has to have access to the information needed. It is very difficult to make this process flow, but also at the same time not to overload people.

o Having product knowledge	Lot of jargon coming, very difficult to understand it
o System of trainings – the whole product level should not be covered by others	
o No exams have been launched before the content. The costumers have to cover what is in the content and they do not have the content yet	Human resource is an important topic, which comes repeatedly.
o Initially they did not have the examination because the people who had the trainings were equally certified	
o The certification does not cover the practical aspect	
o Module of troubleshooting, this should cover it.	
o The module will be created, and it covers all scenarios.	At this point, I felt lost. I couldn't keep up with the happenings.
o Some people might go for further certification	
o A manager has expected something to be here, it is not, he tells the other one if he is interested in that, should go for it	
o Why not included?	
▪ Exam: a manager shared 20-25 SMEs and waited for approval and the other managers said no. Need for certification and trainings. Others than these SMEs need for wait for other trainings and certifications.	Again, different opinions, because they have different groups, and of course they keep in front of their eyes what's the best for their team.
▪ Waiting for validation to either separate or combine these 2 products	The problem of lacking in information.
▪ Need for more information about the content because it's not enough	Slow information flow
▪ → so, they cannot launch the exam because they need another manager to say, okay they will do this. He is waiting for this	

confirmation from that manager • In another meeting troubleshooting was mentioned and said that it is going to be covered. • To make a best-case model, what is expected, put people to each side, product knowledge is something important, but not the most important • They want to leave the product setting, they focus really on the technical aspect in the trainings, not about understanding the product, but about the technical use. This is what they consider as level 3. practical aspect. They are concerned about the content, all the questions that are connected to the topic • No need the content now, but make sure that it is going to be covered • Another topic: agreement for the existing team members • Someone is entering the meeting. They share with him what they have been talking about. It is basically, that they need to make sure that the topics covered meet the expectations. The modules need to be included. Is there major topic that need to be topic? –what the organization is doing. The knowledge, the common issues. What are the steps if something happens? This is what care is all about and which should be put more focus on • Costs are also important • Face topic by topic. Storage topic. Whatever topic comes, need for care. How to come across situations? • Just look at the table content. Most common issues, troubleshooting strategies, make sure that people are experts of the product • Technical topic, negational part • Features of the product. 50% should be this care • They do not agree, the other manager shows him a table with the topics and	At this point they were all talking at the same time one interrupting the other. He wanted to make clear what the actual topic is No matter that someone was late, they explain the person everything. Again: since there are people from different groups, so this is a group which contains smaller groups that have to work together differences of opinion happen. They are interrupting each other by talking at the same time

tells him that he puts a bit too much focus there.	
• They discuss the table. A manager reads some titles out loud and tells that all these things belong to the same page, are the same. He would like to separate more.	
• She says that of course they have covered these because...... → lack of consensus	Lack of consensus
• A manager requests the others (2 others) to sit down together, to go through the questions together and have tomorrow another meeting. They should be ready by tomorrow	Strong words, but also purposeful. One has to come to an end.
• A manager suggests covering only 20% of content staff and the other the technical part	
• To see the care process. First thing to do is to check the common issues. How the organization is	
• Another manager says that these kinds of questions can only be answered by one manager whose people have experience.	They argue and interrupt each other
• What is the product feature that helps...? – what is necessary? This is important	Right to the point!
• They should have the questions by next week	

56 **Date: 17.09.2020**

57 Time: 12:28 <u>Discussing the topic of the next meeting</u>

58

Notes	Interpretation
• Nothing is happening. Before this meeting she restarted the PC • Discussion about today's meeting • Learning index, mandatory trainings, certification status, budget: updated the budget file, 45000 • He wants to do the parts separately • Highlight the budget • Different […] topic	

○ Summary for the […] ○ Certification released status ○ Creation status ○ List of SMEs who are supporting this – more than 50 ○ Hot topics ▪ Q3, Q4	
▪ Although he sent an email to the guys requesting something, they did not reply so it must be pushed during the meeting	The information sharing was at this spot poor. No reply came.
▪ Maintenance, nominations, […] team related complaints (progress)	
▪ Our approach to have an agreement with the LM community that they will support the resource	Cooperation with another team is needed.
▪ They are doing some assessment and based on that they are doing the planning.... which certification should be done in which quarter. This plan was not crosschecked with the line managers. Need a discussion with the line management	Wasn't discussed it within the big group, it is only a need from one side.
▪ The main planning is done by […] team. The others can suggest some input, […] team has the input, and this team has the validation done by them. They are sharing the target. From this team, the resourcing is the challenge 59	These teams have a line manager each. The teams are experts in a particular domain with the engineers. These teams are giving their people to another team if more help is needed. In this case, it is not sure whether this team needs to enable its people or not. It is not official yet, but it seems that yes
▪ The last information is, that no support is needed but this team should be available if they do.	This manager wants to have a discussion because the resourcing is simply not possible otherwise. They are always complaining that they have no resource

60 **Date: 24.09.2020**

61 Time: 09:21 <u>Actual skills, list of trainings</u>

62

Notes	Interpretation
• Need to share the information, that it seems that they will have less and less opportunity with NPD team	
• Let's see what is happening actually	
• This team got this information, and the expectation is not good	
• She (this manager from India) wants to go to the office, but there are some formalities. She needs to talk to her office manager	
• Someone called her regarding a training – some confidence plan	
• He answers, they already have provided the list of trainings, and this have to be defined by the line managers. They have to know the actual skills	
• The line managers will question this team whether a confidence development plan is given	
• Without knowing the actual skills there is no plan. The line manager should assess the situation and based on that come the trainings	New skills needed, therefore plan for trainings.
• Updates on NPD? – no	
• She has some technical issue with her computer	Exchange issue
• For NPD just wait what's happening – next call. And later inform the line managers about the change. Only wait for the confirmation	

63 **Date: 04.11.2020**

64 Time: 11:26 [...]team side, discussion about their support

65

Notes	Interpretation
• At the beginning of the meeting: talking about the lockdown and the difficulties from it. The last few weeks have been tough. • Someone asks whether someone might join the meeting. – the answer is no, because that person has another meeting at the moment, some of them took the invitation. Anyways, they are waiting a bit for the others to arrive.	It is difficult to be part of several teams, in this case, part of a smaller team within a bigger team. Parallel meetings make the person to decide and prioritize. Nevertheless, given the information sharing, the person is going to be updated.
• This time, almost the whole team has managed to be present, because all the team together has to make this certification content/content, but they also need the support of [...] team. None of the [...] team people has accepted the invitation, so they are waiting a couple of meeting, if none of them joins, they are going to have another meeting tomorrow anyways and he will talk about the license certification tomorrow.	Since it is not only about one person, but also more are absent, the meeting might be postponed.
• He is giving info about what has been discussed the other day. He knows someone who can allocate somebody from the [...] team part • He has a question regarding the timeline: when should they be ready with this certification work? – He answers, it depends on the content that is going to be available. He cannot tell a date. – The SMEs tell the timeline. One must see who can do what. And based on their feedback can they suppose a timeline.	Right allocation of human resources of importance.
66 • They are usually giving timeline quarters. The next quarter, 20/21 would be great. After having the timeline, they can	These connections between the teams are crazy, everything depends on everything, and they have meetings parallel so they cannot be present. At this meeting only 2 persons participated, which is insane. No one of the invitees has responded, not even telling a no. The person, who has set up this

request […] team support with launching the certification. He will discuss it tomorrow with them, and after that, he will set up another meeting. • They are talking about the next meeting, which begins shortly.	meeting, is apologizing because no one came. No one was representative from the […] team. In my perspective, this meeting wasn't successful.

67 **Date: 09.11.2020**

68 Time: 13:30 <u>Checking the list</u>

69

Notes	Interpretation
• They are talking about people that are on the list, the system. Mark as edits, contribute or delete • She notices a name, she says, that she does not know what she is doing. • Some lists can be edited. They are talking about what to change. The description is more or less the same, they are not changing it. Some things need to be changed. • There is something, all the line managers should have access to, but not others	It is very difficult to put everything on the same level, thus, to coordinate everything. They are the background players, they organize most of the meeting, have the information, and have to transmit the information from one team to the other, while they are also checking, that all the information goes to the right person, they have to watch out the right information flow (some information should not get to some parties).

70 **Date: 11.11.2020**

71 Time: 10:52 <u>Availability of trainings</u>

72

Notes	Interpretation
• They are talking about a software, that other managers are also using. It's a training program, she says, if the software is changing, it would be still useful. • The host is a lady • Time for questions	

- Coding managers of CSSC – she does not receive the file - She needs to send her the file to make sure she can read all those and send her the answer to the question - A question about the trainees - It is for external training. The purpose of the file is to have it for ourselves, so they would also know what are the trainings that the others are planning. Because they have some budget, and that's why they have to see the key things. The budget is not covering (the costs) all the mandatory trainings, but they can look at the consolidated list and see and have a more comprehensive view. See the trainings, or some other areas, which are also strategically important, thus see what to develop, in which sector to develop for […] use internally or what other. Check how to support other training areas. - He asks a very good question which she cannot answer at the moment, so she asks him to put this question on the list and send it to her. - They are discussing the responsibilities. She introduced someone, who has joined […] the company the other week. She is responsible for application engineering.	Problem with the information exchange. She is explaining everything in detail. This is good, no matter what they are asking, even though the question came up earlier, she is giving the information to be able to follow. She tells the others that they can interrupt her whenever they do not understand something. I like the way how she introduces her. One can feel that they want her to feel part of the community. This is also a way of strengthening the social identity within the firm, to have a corporate and social identity. Now she is going to tell a few words. She tells the new member, that she doesn't have to feel bad if she doesn't know something, if she needs

<table>
<tr>
<td>
She talks. She is welcome here.
At this meeting, not only responsible people are invited, but also line managers and other people that wanted to join, so she does not want to confuse everybody by sending the excel file and emails.
They received email from […] a team of the company, on the 19th of November is going to be a learning-sharing session on public cloud and learning offering.
Next topic (proposed by […] a team member): structure support. […]. Learning store: a platform collection with the latest information about the online training.
Presentation: she talks about the availability of training platforms.

40000 licenses. This means, that full […] company employees will have access to a training. These licenses will cover all of this. For any case, there is going to be an extra 10000 license.
Once a user has a license; he has access on all the courses without a limit
Subscribe based on the personal skills
She is talking about the important dates, what is available and what is inaccessible
[…] the company learning and development
Not only valid for this, also for skill board

Now all content owners who have learning permission
Question: students that have already started the curricula but do not have the

</td>
<td>
something, she can get help. That is a good way to integrate someone, make the environment comfortable. In a case of a virtual team, or virtual teams working together, this is important. People are identifying themselves with their social affiliation and highlight the strengths of the in-group characteristics while highlighting the negative characteristics of the out-group world. This shows the basis of the social identity theory.

To have some basic knowledge is a must, but they also have the possibility to gain this knowledge. So,
</td>
</tr>
</table>

skills, are not registered. Students need to register ◦ Curriculum-registered users – she will discuss this topic internally	people who want to learn also have the chance to learn.
◦ Linked-learn courses. List of curricula. 75 competencies – not only […] company competencies, but LinkedIn-learning competencies ◦ […] company learning and development data validation report: can be used to find curriculums and trainings. ◦ Share the findings with other users as well ◦ YouTube: it is not allowed to share as a training material, it is allowed to share the link. Double-checked with […] company legal and its okay to link, but not to link directly on a side of the curricula ◦ […] another company: independent global organization. In order to use this program, one needs to contact them and make an agreement on each program. ◦ At the end of the day the access will be closed and if one does not upload its curricula, it will be unsatisfied. ◦ LinkedIn-learning does not have books ◦ Question: one has a proposal, to make sure that the curricula works without all these requirements ▪ Answer: it's not possible, she explains why	Connection to another company.

• Next topic: targets for next year ○ Take a look at all these together and work together.	

73

74 **Date: 12.11.2020**

75 Time: 11:22

76

Notes	Interpretation
• Give the infos to the line managers	Was not easy to understand, I barely did not understand anything, it was a short part of the meeting recorded anyways (Jargon)

77 Time: 12:34 <u>Elkésett meghívás</u>

78

Notes	Interpretation

• Nem jó hir a csapatnak. Kérdés: csak support vagy programozni is kell?
• Valaki kilép a csapatból.
• A dolgok nem működnek jól, a másik csapat nem szól időben. A kolléga akivel a beszélgetés zajlik nem kapta meg időben a meghívót, hanem 5 nap késéssel.
  ○ Éjjel 3kor küldték a meghívót hogy másnap reggel kezdődik a meeting. Azert panaszkodott, hogy máskor azért szólhatnának kicsit hamarabb
  ○ Ezt az NPD-sek meg is igérték
  ○ Meséli, hogy valamivel elakadtak, és azzal a mai napig nem is haladtak semmit. Egy indiai srác majd átveszi a munkát a következő héttől
  ○ Most akkor ki nem küldte el időben a meghívót?
  ○ A másik csapat
  ○ Véletlenül vagy akarattal?
  ○ Valószínőleg véletlenül
  ○ Ezek a sessionek hogy mennek, mindenki hozzá tud szólni, vagy cask a másik fél?
	The team got bad news. This meeting is in Hungarian.
	
	I don't understand everything, the quality is bad.
	
	Mivel különböző csapatok dolgoznak együtt, nagyon nehéz összhangba hozni a munkat. Itt egy meetingről van szó, amikor is nem küldték ki a meghívót mindenkinek, habár olyan is volt a csapatban aki pontosan tudta hogy olyanok hiányoznak, akiknek ott kellene lenniük. Ez is mutatja mennyire nehéz ha ennyien együtt kell dolgozzanak különböző időzónából, mivel itt az időzóna is egy probléma volt. Ami ennek a csapatnak reggel fél 6, az a világ másik végén már akár délután is lehet.
	
	Ebből is látszik a social identity theory: a csapatban az emberek saját magukat a csapattal azonosítjak, és különbséget tesznek a többi ember között, akik más csapatokban vannak. A sajátjainak nem felejtett el szólni.

○ Mindenki ○ Szóval ez egy félreértés volt hogy a local team nem küldte a meghívót. Viszont volt akinek elküldték ○ Valaki bent volt, aki tudta hogy az illetők nincsenek bent a meetingen. ○ De ha ő bent volt és tudja hogy még csapattagok hiányoznak, akkor hogyan nem küldi át a meghívót? ○ Nem tudja. ○ A két dolog most mennyire fedi egymást, hogy NPI oldalról is bent vannak meg NPD oldalról is? ○ Ő nem teljesen tudja hogy mi a kettő között a különbség ○ NPD: most már cask azokat támogatja akik első berendezés/üzembe helyezést csinálják, nem sokat. Mert ott még a tudás náluk van, és ezt adják át. Nem mennek bele olyan dolgokba amit az emberek már tudnak. Csakis új tudás. NPI: folyamatosan támogat az üzembe helyezés után is. Az NPD után veszi át. Maga a scope az más. ○ Az NPD-nél (New Product Deployment) a scope most változott, mert le karják csökkenteni, mert nagyon megdobja a projectkoltséget, csak a minimálisra akarják, minnél kevesebb project, csak a legfrissebb dolgokat csinálják ők • Akkor a local team nem küldte ki a meghívókat mindenkinek. [...]egyik csapattag ment reklamálni az NPD-sekhez, de ez akkor nem is az ő saruk.	Annyira bonyolult, hogy még a csapaton belül sem értik a különbséget a különböző csapatok között, hogy melyik csapat mivel foglalkozik. Ezért nem tudta a csapattag a különbséget. Rengeteg kisebb csapat van a nagy csapaton belül, es habár egy és ugyanazon céghez tartoznak, mégsem érzik magukénak a nagy csapatot, cask a kisebbeket. Mert velük azonosulnak. A különbség el lesz magyarázva. Jó a csapat felépítés, habár óriási, szinte már átláthatatlan külső szemlélőként, mégis érezhető benne a rendszer. Sokan elmentek a csapatból. Együtt dolgoznak, mégsem tudja hogy pontosan mivel is foglalkozik a két csapat. Ebből is látszik hogy nem velük azonosul.

79

80 **Date: 07.01.2020**

81 Time: 10:54 <u>A step into 2021</u>

82

Notes	Interpretation
• This topic was already discussed last year. They did not have a proper communication.	It is really hard to understand.
○ Define which objectives are related to which team and cascade to that team.	He explains how the objectives should be defined.
○ The request of the team is only to have a clear understanding of each of the requests, what is inside, and what is the role of the team and what they can do to fulfill it.	
○ They check the target of last year	
○ Need to understand what the issue is. All teams have to have their personal objective, personal setting. One cannot achieve the whole target; however, they are able to do it within the last minute	Someone is laughing. All teams have to have their personal objective, personal setting.
○ What are the expectations? What did we get from the last year? ○ One should not have the last minute to reach the target. Need to be better in that.	One has to think about what the earnings are from 2020 and what should be the next steps to improve in 2021. Looking into the future. Searching ways to develop.
○ This was not the goal of the team to achieve the target in the last minute. But they are happy that they have achieved because they were in a status that they were not sure that they can achieve it.	Pushing responsibilities on other teams
○ That means, the team can do in in the last minute. The thing is it should be do it earlier. Important is to see what can be learned from the previous year. After a call, he will share the information and they are going to have a follow-up discussion. • Next topic: budget	I feel a bit of like “telling-off”. The other two participants are also not happy. How I see this, it is not easy to coordinate so many groups how they do it. It is also not easy to check at first, double-check afterwards because someone has missed something and did not finish its work causing a delay to all the groups.

○ Lot of review about the budget
○ The question is: how can we survive?
    ▪ What is the issue? Due to covid, it can be seen, that health did cost a lot of money. What is the analysis from last year?
    ▪ Suggestion: they should get some feedback from the line managers; how do they see the actual status of competence development and some feedback about what their weaknesses are. Because they know what the status in the team is. And based on that feedback they can start some improvement. If they know what is missing, they can push their efforts on that direction. They have what was spent per quarter (quarterly analysis)	

▪ What would be the actual budget that should be available this year?
    ▪ Lately those partly trainings
    ▪ Is the budget realistic?
    ▪ The line managers are requesting this 100 for their enablement, he thinks, this is needed for them. It is not.
	He is interrupting him. He is one head of the firm and wants to have everything under control. I feel misunderstandings between the two parties communicating. This is caused by the language, the boss is talking slowly, however, it is not always understandable what he is saying. He is also using examples to demonstrate.

▪ He answers, the managers are requesting those budgets based on their needs, they are not requesting much more that they need ▪ The boss asks whether he has the list of spending	He is interrupting him again.

or not. What is the actual request? ▪ In 2020, they did not spend anything for travelling. So, they don't have travel costs. Only 1 travel costs, in China, internal travel. ▪ The boss explains how he sees everything after covid is gone ▪ One team member comments, that this analysis have been already done, that's why they haven't considered any budget-related cost for travelling. Only trainings costs were considered in the budget 83 ▪ The boss says, they need to get in touch with the people who are in the 'cost'. But do everything step by step. Right now: see what the actual expectations are. He doesn't expect them to do everything by themselves. But to work together • Actual issues which they are facing, ongoing challenges and the solutions might be another topic too • 5G ○ Only new products include this feature ○ Focusing on product-related enablement ▪ Functionalities are included step by step ○ What is the estimation for 2021 in the 5G core? ▪ They do not have the 5G core product	One of the team members suspires. There is a difference between the opinion a team member said and what the boss thinks. My personal opinion is this conversation is not easy at all. It is so uncomfortable.

84 Time: 12:43 Current problems and solutions

85

<table>
<tr><th>Notes</th><th>Interpretation</th></tr>
<tr>
<td>

Everything depends on the other team, when they have the meeting and when they have the results.
At this point, it comes the word „our team”
Problem: restricted number of people in the team → so they know each other’s roles and responsibilities. But now since the team gets bigger and bigger, and teams are working together, these roles and responsibilities diminish. Right now, it is an issue.
If they have some issues, they are not getting support from the management. The line managers do not support the team issues.

Usually there comes a kind of support from their side
Everybody is overloaded
The small team supports each other. But everyone is overloaded
Question: is more support needed?

This time is not so urgent. The load can be managed. If new activities come, further support is needed

Priority

There are some urgent issues, and have a higher priority
There are many priorities, but there is lack of time to do all
Sometimes this person talking has so many emails and issues that he does not know which one to do first. Everyone is waiting and pushing their problem

</td>
<td>
Discussing when to start the project.
The basis of social identity theory is the belonging to a group. This divides the social world in different categories of people, the „we” and the „they”.
Should have an overall team meeting to have a view.
What is the problem? Need for solution (Management support)
They do not discuss it within the team; however, they work in a strong relationship with each other. The explanation is: everybody is overloaded.
→ the boss is authoritarian, no one should disagree with him. Not always but happens how I`ve noticed.
</td>
</tr>
</table>

o Requests come; they are not sure when → solution: request of support from other teams in peak situations • Sources o Resources might be sometimes time-related or budget-related, and in many areas the resources are short...all: time, budget, people	
• Skills o Plan the training time and use it for training purposes, not for business. For all teams. This is the team´s interest. o Dedicated time should be allocated	A dedicated time for trainings is needed. It is good to look back what has happened and see whether the team needs changes or needs to change. This is an overview of what the problems are, and they are sitting together to find a solution, considering all options.
• Patience one with the other. Even though there is no solution for the problem without the solution yet, respectful approach with the other without hurting. • When can they start? • It depends when they get some updates from NPD o NPI meeting is tomorrow o NPD meetings already scheduled ▪ Not yet o They should have a meeting today, but it was canceled → she will initiate a meeting • „Checkpoint 4" → what about this? - she asks o He hasn't crosschecked the time ▪ He is nervous, forgot to crosscheck it. He has 2 meetings parallel, and he accepted it without checking the time. It's important to be on both	Trying to understand the perspective of the other and helping. Patience, trust, respect, communication. Perhaps the other person is dealing with other issues. The teams within the team and outside the team should work together, they have different skills, and the only way of succeeding is to put all the skills together, work together.
• She wants to ask the person who initiated the meeting to postpone one • Yes, because the other one is also […] a team-related, and other teams are also involved • They are discussing when to have another meeting • Views for problem and solution:	This is a flexible team, he suggests postponing this meeting, which is running, because she is at home with her child

◦ In their team to find roles and responsibilities ◦ That time, it wasn't an issue. He says, they need to know each other better to have an overview ◦ They should have an overall discussion/team meeting for the beginning	They have a restricted number of people in the team, so they know each other's roles and responsibilities, but now since the team is larger, they don't know the new guys and what their pros are.

86

87 Time: 13:53 <u>Clear responsibilities</u>

88

Notes	Interpretation
89 • Course for engineers who are supporting emergencies, having basic issues not knowing the process. This is a training to have all the understanding. • It is important for everybody to understand the entire process • The trainings are divided in 3 modules, so to give the best support ◦ It is important not to confuse people, because till now, only the task were given, what to do, and not how to. So, it is important to make clear responsibilities. It is important that the engineers collaborate, but the responsibilities must be divided and fixed. It must be crystal clear, who is responsible for what, and not to involve everybody in everything	

90 **Date: 11.01.2021**

91 Time: 13:47 <u>To have the same view</u>

92

Notes	Interpretation
• Discussion about the delivery date between the teams. What are the possibilities? Feedback whether prioritization is possible and if so in what way • Which process in which quarter will be done	Very quick and effective

93 Time: 15:03 <u>Q&A training test</u>

94

Notes	Interpretation

• Emergency license status
  ○ High level overview, progress
  ○ Kick-off meetings are needed and will be organized
  ○ The deadlines are good (modules)
• Update about the questionaries. More questions will be included
  ○ The test questions are tricky and takes much time to pass. It must be easier. None of them are professional educator and it’s not easy to create a good test
  ○ Careful consideration and make sure it’s not overly tricky
  ○ This brings up another conversation: they are asking L2 and L3 engineers and managers to take this class
  ○ It’s about the understanding
  ○ People come into it from their own perspective
  ○ Important is to have everything on place at the end of February
• Next meeting:
  ○ In 2 weeks
  ○ Its already scheduled
	Everyone agrees on that.
	
	They came to an end with a common understanding and agreement.

95 **Date: 12.01.2021**

96 Time: 11:56 <u>Short discussion – to be on the same status</u>

97

Notes	Interpretation
• This meeting- to have the same understanding • Target is to end it till the first quarter without pressure. All of the leaders of the team should be on the same level regarding what to say. So even though they will come to them and pushing them, all of the managers should say the same thing • They expect to finish but there are unforeseen circumstances • Weekly kick-off, tracking	Great teamwork. Constant communication, updates

98 Time: 16:18 <u>Meeting, but problems with understanding it (language)</u>

99

Notes	Interpretation

• Exposed an article to the customers
  ○ Need to make it easily understandable.
  ○ have people, specialists at all of the products to give support and knowledge
  ○ Build trust between colleagues
	He has a strong French accent and is very hard to understand
	
	There is no sense for me to listen it till the end because I cannot understand, or only a bit.
	→linguistic issue
	Building trust between the team members is a point discussed.

100 <u>[…] software</u>

101

• Take care of the updates and hopefully there won't be more issues • Question: if they have lab exercises for the new material, they can start creating them	

○ Need for […] software access for the other teams ○ There was an issue, where one of the students was not able to find the training courses – so they selected a replacement. ▪ They needed to add a replacement ○ There was also an issue with the e-books 102 ○ Information of the […] software completeness? When is going to be the […] software deployed? ▪ People are working on that ○ What about the resources? ▪ They are in good shape ▪ They are going to use the resources from another part ▪ The resources will be reused ○ Hopefully at the end of the week they are going to have the […] software • Let's wait for the […] software	Team working

103 **Date: 23.02.2021**

104 <u>Test</u>

105

Notes	Interpretation
• It's about the amount. This was a notification from one group, not an agreement. • Working days and hours ○ When the content is bigger, so is the effort. These hours will be counted somehow. They have issues in this field. Some people work more than 50 hours a week	As so far how to me looks like, he is trying to push the responsibility on a team member from another team. People work over their effort to achieve the goals, also helping out in other teams.

○ He asks to give the input to have an output ○ → they have an argue. One asks not to say the things over and over again. Another says, it's not his fault, not their fault, he does not want to blame anybody. ○ Don't waste time talking about it, find a solution ○ The answer is, he is looking at it from a different way. • They should have examples, templates, questions in a word document. The questions should be organized in sections. This is more like an exam. ○ Important how long does it take. They have 1 week, but they have also other things to do ○ They expect them to finish it within a week, 1 day-8 hours total effort. Need to think about what fits in that. Don't need 100 questions, 20-30 questions are more reasonable ○ A comment is the format that the other person wants is not available ○ He answers, it must be structured and clear. That's all • They are going to have weekly review • The extra working hours will be spread over the next month	Noticing how one party puts the blame on someone, and how the other tries to destroy this "blame" issue and concentrate on how to solve the problem rather. They cannot find an agreement on the hours.