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PROJECT MANAGER'S COMMUNICATIVE COMPETENCE IN CUSTOMER INTERFACE

A Case Study in a Global Manufacturing Company

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Abstract

The aim of this research is to increase understanding of communication as a success factor in project management, particularly in the customer interface of projects. This research has two objectives: First, to examine project manager's communicative environment and communicative tasks to identify central issues that affect project success in the customer interface, and second, to investigate how a project manager can acknowledge those issues in his/her daily communication and therefore, enhance project success.

The research was conducted as a qualitative case study. Empirical data was collected in the electrical machines business of a global manufacturing company, focusing on communication between the production unit project managers and local sales units project managers. The data collection was done in triangulation combining interviews, observations, and documentary data. Ten interviews, of which six were conducted with the production unit and four with the local sales units' project management from Africa, America, Asia, and Europe, served as the main source of information. They were supported by observations in the production unit and by email conversations between the production unit and the sales unit project management.

The theoretical framework consists of project management literature and business communication literature. The project management literature has been examined to get an understanding of the project environment and how success and communication are seen in the field. The business communication has been reviewed for two reasons: First, to get an understanding of the effects of the virtual global business environment to project communication, and second, to understand how a project manager can enhance project success by communication.

This research offers a multifaceted image of project managers' complex working environment and the constitutive role of communication in it. The literature and the empirical data suggest, that project managers are not only seeking task-oriented communication, which is connected to clear and precise information, but also relational communication, which allows them to control uncertainty: The success factors identified in the specific context of the case company's customer interface of technical projects are clarity, technical knowledge, timely and sufficient information, and relationships. The success factors are analyzed through four communicative competences, technical, discourse, socio-linguistic, and strategic competence. Based on the analysis, it can be concluded, that a project manager can enhance project success and improve as a communicator by consciously using the communicative competences to acknowledge the success factors.

Tekijä Taija Sadornil

Työn nimi Projektipäällikön viestinnällinen kompetenssi asiakasrajapinnalla. Tapaustutkimus globaalissa teollisuusyrityksessä.

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Tämän tutkimuksen tarkoituksena on lisätä ymmärrystä viestinnästä projektinhoidon menestystekijänä erityisesti projektien asiakasrajapinnalla. Tällä tutkimuksella on kaksi tavoitetta. Ensimmäisenä tavoitteena on tarkastella projektipäällikön viestinnällistä ympäristöä ja viestinnällisiä tehtäviä, jotta voidaan tunnistaa keskeisiä projektien menestykseen vaikuttavia tekijöitä asiakasrajapinnalla. Toisena tavoitteena on tutkia miten projektipäällikkö voi kyseiset tekijät päivittäisessä viestinnässään huomioiden edistää projektien menestystä.

Tutkimus toteutettiin laadullisena tapaustutkimuksena. Empiirinen aineisto kerättiin globaalin teollisuusyrityksen sähkökoneyksikössä, jossa keskityttiin tuotantoyksikön ja paikallisten myyntiyhtiöiden väliseen viestintään. Aineiston keruu tehtiin hyödyntämällä triangulaatiota yhdistäen haastatteluja, havainnointia ja dokumenttiaineistoa. Kymmenen haastattelua, joista kuusi toteutettiin tuotantoyksikön ja neljä paikallisten Afrikassa, Amerikassa, Aasiassa, ja Euroopassa sijaitsevien myyntiyhtiöiden projektinhoidon kanssa, toimivat pääasiallisina tiedonlähteinä. Haastatteluaineistoa tuettiin havainnoinnilla tuotantoyksikössä ja seuraamalla sähköpostikeskusteluja tuotantoyhtiön ja myyntiyhtiöiden projektinhoidon välillä.

Teoreettinen viitekehys koostuu projektinhoito- ja liikeviestintäkirjallisuudesta. Projektinhoitokirjallisuutta on tutkittu, jotta on saatu ymmärrys projektiympäristöstä ja siitä, miten menestys ja viestintä on alalla nähty. Liikeviestintää on tarkasteltu kahdesta syystä. Ensiksi, jotta on saatu ymmärrystä virtuaalisen globaalin liikeympäristön vaikutuksista projektiviestintään, ja toiseksi, jotta on saatu ymmärrystä siitä, miten projektipäällikkö voi edistää projektien menestystä viestinnällä.

Tämä tutkimus tarjoaa monipuolisen kuvan projektipäällikön monitahoisesta työympäristöstä ja viestinnän konstitutiivisesta roolista siinä. Tämän tutkimuksen lähdeaineistosta ja empiirisestä aineistosta voidaan vetää johtopäätös, että projektipäälliköt eivät tavoittele vain tehtäväsuuntautunutta viestintää, joka yhdistetään selkeään ja tarkkaan tietoon, mutta myös relationaalista viestintää, joka mahdollistaa esimerkiksi epävarmuuden kontrolloinnin: Tapausorganisaation teknisten projektien asiakasrajapinnalla havaitut menestystekijät ovat selkeys, tekninen osaaminen, oikea-aikainen ja riittävä tieto, sekä ihmissuhteet. Näitä menestystekijöitä on analysoitu neljän viestinnällisen kompetenssin teknisen, diskurssi-, sosiolingvistisen ja strategisen kompetenssin kautta. Analyysiin perustuen on pääteltävissä, että projektipäällikkö voi edistää projektin menestystä ja kehittyä viestijänä käyttämällä tietoisesti viestinnällisiä kompetensseja menestystekijöiden huomioimiseksi päivittäisessä viestinnässään.

Avainsanat projektinhoito, viestinnällinen kompetenssi, liikeviestintä

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1 INTRODUCTION

Lately, there has been growing interest in projects and project-based organizations (Butt et al., 2016; Ziek & Anderson, 2015; Morris, 1994). Project management, as discipline, has been well recognized over half of a century (Morris, 1994; Padalkar & Gopinath, 2016). However, there are still areas to be explored, such as front-end phase, in which projects are shaped before the actual execution has been started (Edkins et al. 2013; Morris, 1994). The front-end phase has been almost ignored in the literature, although it is the phase which largely defines the project later success and therefore, requires skills, such as commercial skills, which are not usually mentioned in project management literature (Edkins et al. 2013; Morris, 1994).

Success is an area of project management research, which has interested many researchers. However, researchers have not been able to agree on success factors and criteria for projects or project management (Edkins et al. 2013; Morris, 1994; Padalkar & Gopinath, 2016; Sarhadi et al., 2018). Considering the complexity and many uncertainties projects often are characterized with (Ahola, 2018; Daniel & Daniel, 2017), it is not surprising that research has not been able to find a consensus on the definition of success. The field has evolved by the last decade's rapid technological development and globalization, which have shaped project manager's daily work and communication habits (Morris, 1994; Ziek & Anderson, 2015), bringing people all over the world together via virtual communication mediums (Du-Babcock, 2018; Louhiala-Salminen & Kankaanranta, 2011; Morris, 1994; Zakaria, 2017). Nonetheless, the iron triangle of projects, time, scope, and budget is still dominating, while other success factors, such as quality, have been introduced along with it (PMI a). Yet, communication is one of the most commonly mentioned success factors (Ziek & Anderson, 2015).

Communication has been shown to have a significant role in project management; In addition to being defined a success factor, it has also been defined as a competency, that project managers want to be effective in (Ziek & Anderson, 2015). However, the work of project managers is largely presented in the literature as using planning and controlling techniques, which are just a part of their work (Pinto & Winch, 2016). In other words,

research around project management has traditionally circulated mainly around task-oriented view, in which communication is seen as a tool of project managers when executing tasks (Morris, 1994). Consequently, most of the existing project management literature deals with processes and techniques, forgetting the social side of the profession (Ziek & Anderson, 2015). A fact, that has been almost ignored in many project management studies is, that project managers lead and have always led their projects by communicating with other people (Morris, 1994). Nowadays communication just often happens virtually and is more intercultural than ever before, which requires to pay more attention on the way issues are communicated and to revise the old assumptions of communication in project management (Chiu, 2013; Daim et al., 2012; Du-Babcock, 2017; Zakaria, 2017).

There seem to be a tension between the view that researchers, in general, have of communication in project management and the results of the research they have done; The researchers see communication mainly through information transmission view, in which a message is only transmitted to the receiver, while the results of the studies show, that good communication has many kinds of advantages, such as improved project performance and stakeholder satisfaction, which indicates constitutive role of communication (Ziek & Anderson, 2015). The constitutive view of communication sees, that the (social) world is created by (interpersonal) communication, not only explained by it.

The recent study of Geraldi & Söderlund (2018) about project management research directions reveals, that the field has lately started to diversify, allowing new perspectives, such as seeing the field through different lenses and taking into account other than technical projects. Ziek & Anderson (2015), for example, see the role of communication in project management as constitutive:

> *"Communication is about how projects are created, directions decided and outcomes determined. In other words, communication constitutes the dialogue between project managers and project stakeholders that ultimately shapes the scope of projects (Söderlund, 2004; Winter et al., 2006)."* (Ziek & Anderson, 2015, p.792)

As it has been discussed, the transmission view of communication is very strong in project management literature (Ziek & Anderson, 2015), yet, some researchers have attempted to challenge it with constitutive view. Assumedly, the changes in project environment have

triggered those studies. However, both views fail to see the whole picture of the complex phenomenon of communication in project management context, let alone connecting communication and project success. In addition, a few studies, that have been conducted on constitutive view of communication seem to be rather conceptual, while some researchers (Glegg et al., 2018; Padalkar & Gopinath, 2016; Sarhadi et al., 2018, Ziek & Anderson, 2015) express the need for practice-based studies of communication in project management. Ziek & Anderson (2015) ask for more research especially on the social side of project managers' work and shift for empirical social research.

This research attempts to answer for the call for research on social side of project manager's work in various ways. The aim of this research is to increase understanding of communication as a success factor in the customer interface of projects. The customer interface in this context means interaction with any internal or external representative of the end customer, such as a project manager of a sales organization. The almost-forgotten front-end phase is a natural part of the scope of this research. This research takes a holistic and pragmatic approach to unite different views (constitutive view combined with transmission view) of communication to contribute to the earlier research on project management, and at the same time to give new insights for practitioners.

This study aims at increasing understanding of communication as a success factor in the customer interface of projects by answering the following questions:

> Research question 1: *What are the success factors when communicating in the customer interface in a global technical environment?*

> Research question 2: *How a project manager can enhance project success by communication when operating in the customer interface?*

>> Sub-question 1: *What are the daily communicative tasks of a project manager in the customer interface in a global technical environment?*

As success in project management is not defined unambiguously, it is necessary to define for the purposes of this research. Therefore, when talking about success in project management in this research, it refers to my own definition, if not stated otherwise:

A successful project manager manages and communicates the project progress and negotiates and manages any changed or unclear circumstances in the scope, time, cost, or quality of the project, in a way that it satisfies the sales organization, the customer, and the project organization and its steering committee.

The sub-question is attempted to be answered first to get an understanding of the background of the phenomenon. First, the project managers' complex working environment and the constitutive role of communication in it have been explored. Then, critical success factors when communicating in the customer interface have been sought after. Finally, the second main research question is attempted to be answered by looking at the success factors and the communicative tasks of project managers through communicative competence model for project management, which is modified from Canale & Swain's version of Hymes' model. The renewed model consists of four communicative competence areas, technical competence, discourse competence, socio-linguistic competence and strategic competence, which a project manager can exploit and develop to enhance project success. The model is presented in more detail in chapter two.

Hietanen et al. (2014) argue, that researchers often set their research questions and other guiding principles too tight in advance and thus, are limited by them. Following their advice, the approach of this research is abductive: The research design is based on the previous knowledge gathered by observing the project managers' work and getting familiar with the research that has been conducted earlier in similar environment. After getting the first insights into the field, more theoretical knowledge has been acquired before collecting the empirical data.

To get theoretical understanding of the research area, project management literature, especially in the area of success and communication, has been reviewed first. It has been combined by business communication literature to widen the perspective. Business communication has been chosen due to the commercial environment of the project managers in the customer interface. The effects of the changed environment are taken into a special consideration by getting familiar with the specialties of virtual communication in global teams. Finally, a communicative competence model, originally from linguistics has been

presented, and later used for analyzing the communicative competence in project management environment.

The research questions are attempted to be answered by the means of a case study. A case study is a common method for investigating a less known phenomenon in its context to get information of its nature (Hietanen et al., 2014). The case study method allows the events to be presented in their environment in rich detail, which leaves space for the reader to make her/his own interpretations (Flyvbjerg, 2006) of the specific complex communicative environment of the customer interface in project management. This case study uses also pattern matching to help in generalizing the results into other similar environments (Hietanen et al. (2014).

The empirical part of this research has been conducted in a global manufacturing company, in its electrical machines business. The focus is on the communication between a production unit (hereafter PU) project managers who are in the customer interface of the order-to-delivery process of the company, and the project managers of local sales units (hereafter LSU), who are the links between the factory and the customer. Every PU project manager has several sales units who with he/she communicates and various projects to manage.

Figure 1 presents the communication situation from the point of view of a project manager of the PU (electrical machines factory). The focus of this research is the link between the PU project manager and the LSU project manager (highlighted with red color). Only one LSU and customer are presented for simplicity, although the PU project managers handle projects with various LSUs at the same time, and there are many times quite long customer chains due to the complex industrial environments.
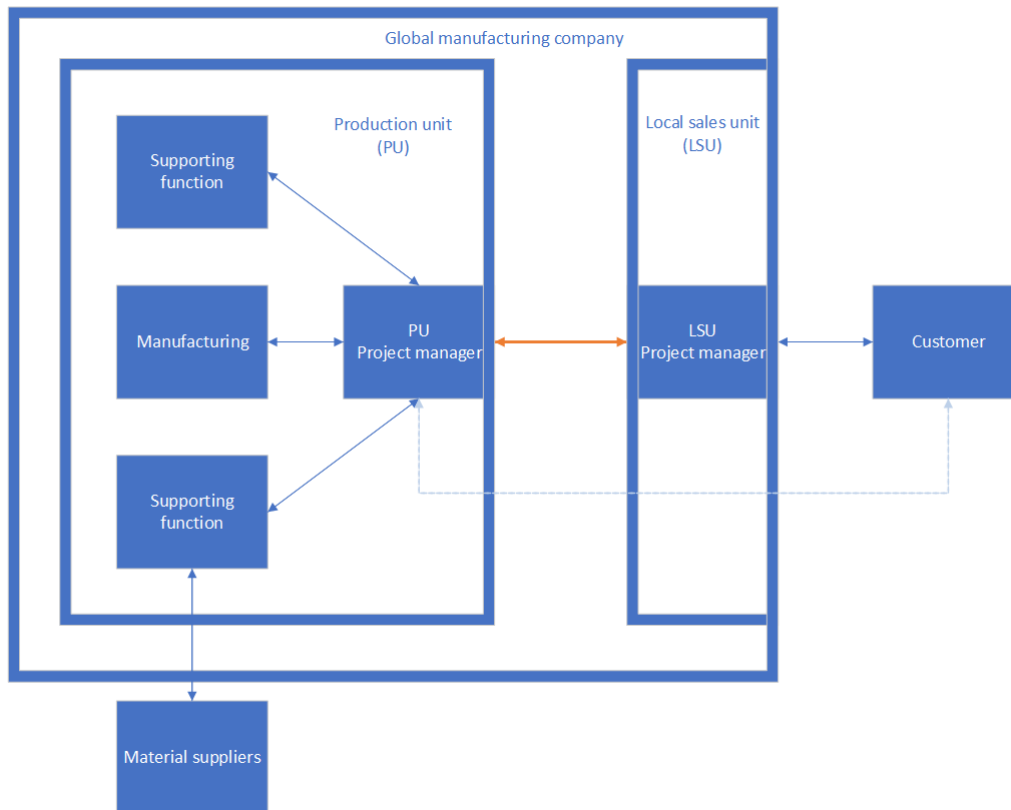
Figure 1. Communication relationships of a PU project manager.

Communication relationships of the PU project manager. The focus point (highlighted with red color) is the link between the PU project manager and the LSU project manager.

The data collection has been done in triangulation to increase accuracy (Neuman, 2016). As Hietanen et al. (2014) argue, the nature of qualitative research is colored by the perspective of the researcher. They also remind, that when interviewing people, the stories might be different than the reality. To reduce this uncertainty, three types of data have been collected for the purposes of this research: 1. Emails, 2. Observation, and 3. Interviews. The research settings are discussed in more detail in the methodology section.

This research demonstrates, that communication has constitutive role in project management. It is evident especially in the customer interface in which a project manager has different roles (technical and commercial). Factors that most affect success in the customer interface of the case company are diverse: clarity, technical knowledge, timely and sufficient information, and relationships. The main findings of this research are, that project managers are not only seeking task-oriented communication, which is connected to clear and

precise information, but also relational communication, which allows them to control uncertainty. Therefore, project managers need technical, discourse, socio-linguistic, and strategic competence to enhance project success.

The following chapter (chapter two) examines the theoretical background of this research. The framework consisting of project management and (business) communication literature, complemented by a model of communicative competence, which has its roots in linguistics, has been built in theoretical triangulation, thus looking at the phenomenon from different angles (Neuman, 2016). The third chapter presents the methodology and research design, which have been used in this thesis. The empirical research findings, analysis, and discussion are presented in the chapter four. Conclusion and managerial implications, as well as limitations and possible future directions are provided in chapter five.

2 COMMUNICATION AS A SUCCESS FACTOR IN PROJECT MANAGEMENT

Project managers and communication go hand in hand (Ziek & Anderson, 2015). Communication is seen as a competence area and a success factor among project managers (Ziek & Anderson, 2015). Yet, despite their efforts, researchers have not been able to create a clear and holistic picture of communication in project management (Padalkar & Gopinath, 2016; Sarhadi et al., 2018). The underlying reasons seem to be increasing amount of uncertainties due to the changes in project management environment, as well as a limited view for communication in project management. Thus, most of the research on project management communication has been conducted through transmission view of communication, which does not consider situational factors and the recipient's interpretation, despite their central role in global virtual communication (Chiu, 2013; Daim et al., 2012; Louhiala-Salminen & Kankaanranta, 2011; Marlow et al., 2017).

As this study aims to explore how a project manager can enhance project success by communication in the customer interface of projects, it is essential to look at project managers work and communication from various angles to understand what affects success in her/his work. We start by taking a brief look at what is the nature of a project manager's work and how success in it can be defined. Then we move on to look at how communication is seen in the field. Communication is discussed more broadly in the second part of this chapter, finishing to the model of communicative competence applied to project management.

Issues related to communication in the customer interface, such as virtuality and cultural aspects are in special focus since they are vital for the project success because the project manager is the only connection point between the customer (or customer's representative) and the project team. Research in change management reveals that among the most frequent reasons for negative effects from project changes are caused by wrong interpretations of the project scope and insufficient communication with its stakeholders (Butt et al., 2016). Therefore, project manager's communicative competence in various aspects has a special role in affecting the project success.

The next sub-chapters present a review of literature on project management and communication.

2.1 Project management and communication

Project management as a discipline that has history of over half of a century (Morris, 1994; Padalkar & Gopinath, 2016). Lately, it has been evolving fast due to rapid technological advancements and globalization, which have enabled working in virtual global teams (Morris, 1994; Ziek & Anderson, 2015). Research in the field seems not to have been able to follow the pace regarding some aspects, such as communication, which has not been studied much from the social side. Success as a research area has gained a lot of attention, but researchers have not been able to agree on the success factors or criteria (Padalkar & Gopinath, 2016; Sarhadi et al., 2018). It is not surprising since "complex" is a term, that has been used often to describe the working environment of a project manager (see Azim et al. 2010; Pinto & Winch, 2016). Ahola (2018) argues, that complex systems have many interorganizational interdependencies (e.g. supplier's motor and the end user's power plant) which make it challenging to manage the projects and communicate issues effectively. Daniel & Daniel, (2018) describe a complex system including changing interactions (causality relations) that are difficult to be predicted or interpreted correctly, even afterwards.

Most of the researches in project management seem to concentrate on "finding the truth", thus, seeing the world from a positivist perspective, which is typical for engineer-based fields such as project management (Morris, 1994; Neuman, 2006). The success question is a manifestation of positivist worldview since researchers are trying to find causal explanations between success factors and success criteria.

The next sub-chapter presents the nature of the work of project managers and how communication is seen in it. First, project management literature is reviewed briefly to get a general understanding of the field and how success is seen. Then, communication is discussed to get a more detailed understanding of the field and how communication is seen in it.

2.1.1 Project management as discipline

Since project management is a relatively old, and growing field (Morris,1994; Butt et al., 2016; Ziek & Anderson, 2015), there are many definitions for projects and project management. Project management refers often to technically oriented projects, therefore, most of the project management literature is based on techniques and procedures rather, than on human issues (Morris, 1994). It can be seen in the definitions. Project Management institute, which is widely appreciated among the practitioners, and has shaped the views of the field over decades (Edkins et al. 2013; Morris, 1994; Pinto & Winch, 2016), describes projects as follows:

> *"It's a temporary endeavor undertaken to create a unique product, service or result."*
> (PMI a)

Some scholars (Morris, 1994; Pinto & Winch, 2016; Andersen, 2016) argue, that the field has not been settled yet: There are still many uncertainties in which researchers have not been able to agree on. As mentioned before, success is an area of project management research, which has interested many researcher, but they have not been able to agree on the success factors and criteria for projects or project management (Padalkar & Gopinath, 2016; Sarhadi et al., 2018). It is not very surprising, considering the fore-mentioned complexity of projects: We are dealing with different projects with their unique goals and limitations, in different organizations (sometimes many), and even a network of people carrying out several interrelated tasks (Ahola, 2018; Westerveld, 2002). Also, the perspectives of the researchers, as well, as the people in the organizations studied, surely shape the studies, resulting in a variety of different results.

Project Management Institute (PMI) publishes Project Management Body of Knowledge (PMBoK) guide (PMI, b), which is one of the most widely recognized guides in the field, with a long history. The newest book is the sixth edition. PMI claims to provide practitioners with the newest best practices and tools for their daily work (PMI, b). The execution-oriented approach of the book has maintained along the decades, and it has not been questioned much (Andersen, 2016) Morris, 1994; Pinto & Winch, 2016). The major part of researchers, and especially the practitioners, take the PMBOK® view as granted (Pinto & Winch, 2016). The discourse around the profession in organizations and in research reflects the view strongly.

Morris (1994) believes, that the fact, that project management is an engineer-based profession, has directed the development of the field.

The success research circles largely around ten knowledge areas defined in PMBoK: integration, scope, time, cost, quality, procurement, human resources, communications, risk management, and stakeholder management (Andersen, 2016; PMI, a) Therefore, although the success factors might vary depending on the context, there seem to be many areas in which a project manager has to be competent. As Azim et al. (2010) point out, the project managers, not the tools, carry the projects through. Thus, project managers are factors for success or failure (Azim et al. 2010; Zulch, 2014).

However, projects and project management success has been researched largely from task-oriented view, thus, considering what tasks are important to be performed well in order to succeed. The elements of the old iron triangle, time, scope, and cost, are considered as the cornerstones of project management, which define the "playground" in which project managers operate. This concept is old, but it still constitutes project management (Bierwolf, 2017). There have been some attempts to widen the concept by adding elements, such as safety, but the basic elements remain as the basis (see Azim et al., 2010; Lester, 2017; Morris, 1994; Pinto et al. 2016; Westerveld, 2002).

Pinto & Winch (2016) use quite strong language blaming that the PMBOK model (initiating, planning, executing, monitoring and controlling, closing) "focuses so closely on the actual delivery of the project that it comes perilously close to ignoring the larger context within which the project is idealized, validated, and shaped by multiple stakeholder forces." (Pinto & Winch, 2016, p. 238)

Morris (1994) puts it in other words in his book's preface,

> *"It [project management] is widely misperceived as a collection of planning and control techniques rather than as a rich and complex management process. Indeed, many of the project management specialists themselves perhaps do not fully recognize the real scope of the discipline."*

Some researchers have taken a bigger lens to look at the profession (Andersen, 2016; Morris, 1994; Pinto & Winch, 2016). They point out, that the "bible of the field", PMBoK® ignores the management issues, especially the critical front-end phase, in which the project is shaped before the execution (Edkins et al. 2013; Morris, 1994; Pinto & Winch, 2016).

Edkins et al. 2013 have demonstrated in their study, that the front-end phase is extremely important to be managed well since it largely determines the project success. They also point out, that the skills needed in the front-end phase are essentially wider than in the execution phase, including economical (finance and profit related) and commercial (legal contract issues) skills. Those skills have not been recognized in the project management literature since it concentrates heavily on the execution phase (Edkins et al. 2013). The economical and commercial skills added to the project execution skills should enable a project manager to estimate the project's viability and feasibility to decide whether to accept, reject, or attempt to modify the project proposal (Edkins et al. 2013).

Projects vary by their time, scope and budget, as well as by organizational and people issues. Another important reality of projects, which seem to be missing in the definitions of projects (if not including in the complexity) is, that projects tend to bring changes along the way of their life cycles, which are caused, for example by misunderstanding the project scope or other human behavior related uncertainties, changing environment, or subcontractor's delayed deliveries (Butt et al., 2016). The changes affect the original time, scope, or/and budget limits and therefore, require also change management and communication efforts from the project manager (Butt et al., 2016). The earlier the causes of the changes have been identified, the better the position of the project manager to solve them effectively (Butt et al., 2016). Despite Ahola's (2018) argument, that controlling is essential for any organization to be effective, everything is not possible to be controlled: There are uncertainties, issues that cannot be defined beforehand (Daniel & Daniel, 2018), and require tolerance from a project manager.

Around the millennium there were a lot of studies which were attempts to renew the concept of project management (Morris, 1994; Padalkar & Gopinath, 2016), assumable because of the changes in the operational environment. It is worth to mention here the Morris' Management of Projects (MoP) view, which he introduced 1994 (Pinto & Winch, 2016; Morris, 1994) and polished 2013 (Pinto, 2016). Morris seems to pay a lot of attention to

words and semantics. He attempted to turn the whole concept of project management around by changing the word order to put more weight on the word "management".

The MoP view is holistic, including front-end activities, in which the projects are shaped, as well as other management and people aspects (Pinto & Winch, 2016; Morris, 1994). In contrast, the PMBoK view concentrates on the execution phase and tools and tactics (Pinto & Winch, 2016; Morris, 1994). Morris (1994) and Pinto & Winch (2016) claim this approach to be outdated, explaining that the working environment of project managers has changed, which makes them need a wider set of capabilities, claiming that technical knowledge is not enough to be a successful project manager nowadays. They make an important point saying, that today's project managers work in a complex and rapidly changing commercial environment. The definition of the term commercial seems to be different than what Edkins et al. (2013) presented earlier. When mentioning commercial environment, Morris (1994) and Pinto & Winch (2016) seem to relate it to business in general, not only contractual issues.

As a response to Morris' call for including more aspects to project management research, there have been lately more studies, for example related to relationship building (Pinto & Winch, 2016). Although Morris gained attention and influenced many studies, the shift did not happen as he hoped for (Pinto & Winch, 2016). The PMBOK® seems still be dominant since it is often mentioned in the literature. However, it can be seen, that there have been many studies influenced by Morris' view. Pinto & Winch (2016) argue, that he has had even seminal contribution to the field. The influence of his work can be seen by the topics, such as trust and relationship building, introduced lately (Pinto & Winch, 2016).

Andersen (2016) argues, that some project managers see their work from an organizational perspective, which contrasts with Morris (1994) and many other researchers; They claim project managers to see their work from task-oriented view, which means that they aim to complete tasks instead of seeing themselves creating value for the receiving organization, as in the organizational perspective. The findings of Andersen (2016) are an evidence of the influence of Morris and the researchers following his view.

Andersen (2016) summarizes the different views as follows:

"The project can be seen as a way of making a unique product (main focus is on delivering on time, within budget and with specified quality), but it can also be looked upon as a temporary organization in close interaction with a permanent organization (main focus will be on supporting the value creation of the receiving organization)."
Andersen, 2016, p. 60)

Andersen (2016) claims, that these perspectives depend on many things, such as what we find important in a given moment or what experiences we have: Thus, the perspectives might change along the time and vary from project to project. I see, that the discourse in the organization and around the profession (the PMBoK or MoP view) affects how project managers see and organize their work. Thus, the organization can direct the view to one or another direction by discourse. Andersen (2016) continues that though, by pointing out, that the view affects how the projects are organized (Andersen, 2016). In turn, Ziek & Anderson, (2015) claim, that the whole project management profession can be seen through dialogue with the project stakeholders in order to construct the desired outcome.

Jonasson & Lauring (2012), as well as Azim & Gale (2010) represent the "people side" of project management research. They have studied hard and soft skills, arguing, that, that project manager needs both, soft and hard skills. Azim & Gale (2010, 392) define the terms as follows:" "hard" skills in the PM context generally refer to processes, procedures, tools, and techniques, whereas the "soft" skills refer to dealing with human issues, i.e. the "people" part of the project." They clearly refer to the soft underexplored management skills Morris (1994) demands.

Sarhadi et al. (2018) on the other hand, suggest, that success can be entirely or partly subjective. This thought broadens the view from positivism, to interpretivism, which helps to understand human issues in the social world (Neuman, 2006).

Cova (2005) looks at projects from organizational view, widening the traditional task-oriented perspective:

> *"'a complex transaction covering a package of products, services and work, specifically designed to create capital assets that produce benefits for a buyer over an extended period of time" (Cova, 2005, p. 355 citing Cova et al. 2002)*

To sum up the project management as a profession: Task-oriented view is dominating in the field, but it has been challenged to meet better today's project manager's needs. As mentioned before, the operational environment of project managers has changed radically in the last decade (Morris, 1994; Ziek & Andersen, 2015). Therefore, the researchers conducted decades ago, as well, as the narrow sight for the topic might be outdated. Morris assumed right in 1994, that project management in the 21st century becomes increasingly global and dependent on telecommunications (Ziek & Anderson, 2015). It is evident, that those changes in the operational environment have affected the profession in many ways, not least communication. Thus, communication is considered in many studies to be among the success factors of project management. Communication research in project management is discussed in the next sub-chapter.

2.1.2 Communication as a success factor in project management

In the last years, undoubtedly, because of the major changes in the operational environment of project management, soft skills have started to gain interest in the research along with hard skills, as mentioned earlier (Azim et al. (2010). Communication can be thought of as a soft skill (Ziek & Anderson, 2015), which enables interaction with other people. However, in the context of project management, communication is usually seen as a tool for transferring knowledge, rather than constituting the function (Ziek & Anderson, 2015). Thus, the "soft side" of communication is underexplored (Ziek & Anderson, 2015) due to the hard-sitting task-oriented view of the field (Andersen, 2016; Morris, 1994; Ziek & Anderson, 2015). Ziek & Anderson (2015) are among the few researchers that have taken the constitutive view for project management.

As communication is one of the ten knowledge areas, that PMI promotes (PMI a), Ziek & Anderson (2015) claim, that the field is heavily influenced by the PMI's task transmission view of communication:

> *"So although a project manager communicates in many ways, the point here is that they believe that the sender is responsible for making the information clear, unambiguous and complete so that the receiver can receive it correctly (Project Management Institute, 2013). In other words, respondents believed that more and faster communication equals better transmission and thus better control over a project and project stakeholders."* (Ziek & Anderson, 2015, p. 795).

Although communication in project management has been studied by many researchers (Glegg et al., 2018; Sarhadi et al., 2018; Ziek & Anderson, 2015; Zulch, 2014), the view is very limited (Ziek & Anderson, 2015). Most of the studies that have communication in focus, see communication as a tool for transfer information timely and accurate (Ziek & Anderson, 2015). The study of Ziek & Anderson (2015) shows a strong correlation between the view of researchers and the view of the practitioners in the field. In other words, the respondents in many researchers seem to see their communication through information transmission view, which can be defined as follows:

> *"Communication is the transmission of information, ideas, attitudes, or emotion from one person or group to another (or others)"*. (Hallahan et al., 2007 citing Littlejohn, 1992)

Transmission view of communication is limited to the information delivery and message content, whereas constitutive view is wider, considering various aspects affecting communication (Hallahan et al., 2007; Ziek & Anderson, 2015). The focus is also different; constitutive view concentrates on meanings and how they are constructed in interaction. (Hallahan et al., 2007; Ziek & Anderson, 2015). The constitutive view sees communication breaks as the result of the current situation, in which affect the sender, the receiver, as well as the environment. Thus, to find a solution through the constitutive view to correct the situation might not be very simple (Ziek & Anderson, 2015). In contrast, the advice in the transmission view of communication is simple: the sender must create more and better

messages. It does not take other aspects into account (Hallahan et al., 2007; Ziek & Anderson, 2015).

At first, the transmission view seems to fit well to the technical environment, in which the interpretation of messages should not be a concern in the first place since the messages should be clear and precise. The transmission view expects the receiver of the message understand it as the sender has intended (Hallahan et al., 2007; Ziek & Anderson, 2015); The responsibility is in the sender's side. It is just logical to think email conversations through the transmission model since the sender is not aware of when and how the receiver receives the message (Zakaria, 2017): Thus, the sender is the only responsible. However, the constitutive view is important to be acknowledged: By understanding, that the circumstances in which the message is received affect the interpretation of it, can help the sender to seek more feedback from the receiver and thus, identify the possible communication breaks earlier.

It seems that communication has been studied in project management mainly by using quantitative methods or by creating conceptual frameworks from earlier studies. Glegg et al (2018), Padalkar & Gopinath, (2016), Sarhadi et al. (2018) and Ziek & Anderson, 2015) demand practice-based research to get more detailed information about communication in an authentic project management context. The practice-based studies that have been conducted, though, have shown positive results towards communication as a success factor and as a competency; Therefore, recent studies suggest researching more this area, underlining the need for practice-based research. (Glegg et al., 2018; Padalkar & Gopinath, 2016; Sarhadi et al., 2018, Ziek & Anderson, 2015)

Littlejohn & Jabusch (1982) divide communication at different levels. They mention the systemic level and interpersonal level among others. They describe the systemic level as follows:

> *"The central element of the systemic level is information exchange, made possible by information storage and retrieval." (Littlejohn, 1982, p. 33)*

According to Littlejohn & Jabusch (1982), quantity, quality, and timeliness of information are important in the systemic level of communication. As mentioned, those elements are

promoted strongly in the project management literature regarding communication (Ziek & Anderson, 2015), and seem to be still valid: Zulch (2014) points out, that ineffective communication, thus communication that has not been understood correctly or is ambiguous, can lead to problems in executing projects. As a result, project managers evidently need to concentrate on the quality and timeliness of messages (Ziek & Anderson, 2015) since they are surrounded by many kinds of information (e.g. documents), which they need to transfer. Closely related knowledge management has also been studied widely since project management is "at the heart of project's information and control system" (Zulch, 2014, p. 1002). The emergence of big data has also directed the research towards knowledge management (Pinto & Winch, 2016).

Daniel & Daniel (2013) argue, that it is not meaningful to try to fit projects with high complexity and uncertainty to universal models or control very strictly. Instead, modeling should be flexible and shared among the team members to enable its effective use when needed. Therefore, sharing ideas and collaborating with colleagues seem to be extremely important when there are issues that have not been predictable. Daniel, & Daniel (2018) define such a situation as follows:

"Uncertainty appears when decision-makers cannot consolidate past observations to form a subjective probability or relative frequencies for the future (Davidson, 1991). "(Daniel, & Daniel, 2018, p. 188)

The transmission view of communication does not give tools to cope in such uncertain situations. Ziek & Anderson (2015) have noticed, that by seeing communication to be more than only transferring information, a project manager can become even more successful in his/her projects: A good communicator can purposefully affect the behavior of other people, which will eventually have effects on the project outcomes. Ziek & Anderson (2015) argue that a project manager can control, influence and frame projects by communication. Here we talk about interpersonal level of communication, which project manager deals with (Littlejohn & Jabusch (1982).

Therefore, seeing project management as managing projects and solving problems by using discursive strategies can be beneficial (Glegg et al, 2018). For example, having enough communication and stakeholder integration can be significant in avoiding problems in

project changes (Butt et al., 2016). In addition, Ziek & Anderson (2015) argue, that teams with much communication and collaboration are more likely to succeed than teams that do not share so much information and ideas. They see, that informal communication plays a big role in it. Moreover, communication must be planned in a way that it takes into account the global, multicultural nature of a contemporary project manager's work since there are unique challenges that can affect the project's success (Daim et al., 2012; Zakaria, 2017). However, the more communication, the better is project success also in multicultural virtual environments (Ziek & Anderson, 2015)

However, communication in project management has been still studied mainly from the transmission view (Ziek & Anderson, 2015). Therefore, it does not take the social side of communication into account but is mostly interested in delivering clear information. However, some researchers (see Morris, 1994; Ziek & Anderson (2015) remark, that practice-based studies in the social side of communication in project management would be needed.

Also, the contemporary understanding of communication emphasizes the interactive nature of the communication process in which the meanings are constructed and shared together (Hallahan et al., 2007). As a result, understanding communication from different angles increases the number of tools one has in his/her toolbox to use in his/her work. Thus, one can adjust his/her communication efforts and understand other's communication more effectively. However, as we can interpret from the literature and our own experiences, we can never be sure of the effects and actual flow of a human communication situation.

To take a holistic perspective to the multifaceted dilemma of sending clear messages and getting them interpreted the way we have intended, we will look at business communication in the next section. To get an understanding of the various factors affecting the communication environment of project managers working in the customer interface in a global environment, the effects of virtuality and global aspect in communication are discussed in the next sub-chapter.

2.2 Virtual communication in global business environment

What is communication? What is competence in communication? It depends on who the question is asked. This chapter offers a short review of communication literature with an intention to widen the perspective from project management to business communication. The theme is first examined through virtual business connections, moving on to cultural issues.

When we send a message (by any means), the recipient interprets it based on his/her subjective viewpoint of the world (Hallahan et al., 2007). That is called connotation. If we do not take that into account, there occur easily misunderstandings and unexpected reactions (Hallahan et al., 2007). Therefore, attempting to share the intended meaning (denotation) (Hallahan et al., 2007) is important especially in new or critical situations. To get some hints of the possible interpretations of the message receiver, we will look at the business communication issues, that affect most the project managers' communication environment in this section.

Business communication research offers perspectives for combining the understanding of the communicative environment of project managers with the different views of communication. The ways of seeing communication in business communication vary depending on the research areas (Ziek & Anderson, 2015), but the common element is the intention of reaching an economic goal by communicating (Jonasson & Lauring, 2012). That is exactly how project management can be seen, as well.

Research of Louhiala-Salminen & Kankaanranta (2011) revealed, that business communication is not only talking about business, but politeness and other interpersonal aspects count as well. Mason & Leek (2012) note, that many tasks in business are performed through interpersonal communication: People seek to create personal relationships to gain, share, and create information. Relationships serve also many other purposes, such as adaptation, negotiation, and surviving in difficult situations. Communication in general, and business communication as a specialized area of communication is very context dependent; It is essential to do a situation assessment and adapt one's communication to it (Balboni, 2014; Daim et al. 2012; Jonasson & Lauring, 2012).

The important aspects for understanding communication in the context of project management are effects of the virtual intercultural environment since today's project managers work often in global virtual teams. The specialties of virtual communication will be discussed shortly, and then moved on to broaden the view by considering the effects of cultural issues for business communication.

2.2.1 Communication in global virtual teams

Many researchers have noted, that technological development of communication tools has shaped the business environment by making global virtual teams the new normal (Chiu, 2013; Daim et al., 2012; Du-Babcock, 2017; Marlow et al., 2017; Zakaria, 2017): The virtual communication mediums, as email, chats, and video conference tools have enabled an ongoing global communication. Therefore, it seems impossible and even meaningless to talk about business communication without including virtual and intercultural aspects in it.

Marlow et al. (2017) highlight importance of quality of communication in virtual and diverse teams. They argue, that quality communication increases the performance and satisfaction of the team. They present a definition for communication quality:

> *"The extent to which communication among team members is clear, effective, complete, fluent, and on time,"* (Marlow et al. 2017, p 578 citing Gonzáles-Romá & Hernandez, 2014, p. 1046)

The elements of the definition of quality communication, presented by Marlow et al. (2017), are very similar to the traditional golden triangle of projects. Thus, the same elements seem to be important also in virtual teams. Marlow et al. (2017) argue, that task complexity together with virtuality is likely to cause misunderstandings and mistakes; Effective communication patterns are very important. Therefore, looking at the communication through transmission view, rules and norms to increase communication quality might alleviate the situation (Marlow et al., 2017).

However, technical aids may lower the quality of communication, due to less nonverbal cues, such as facial expressions or tone of voice (Daim et al., 2012; Marlow et al, 2017). Misunderstandings or other complications may occur easier in (written) virtual

communication since without nonverbal cues it might not be clear that the other party has received and understood the message (Marlow et al., 2017; Zakaria, 2017). Another issue that affects understanding is that it is not so easy to ask clarifications when it cannot be done immediately by the cues, or even with a direct question. (Marlow et al, 2017).

Chiu et al. (2013) suggest, that when lacking other cues, people tend to use more words in their messages to be understood better. Thus, using words to substitute nonverbal cues. As they put it, written communication

*"...encourages to articulation in the exchange of ideas." (*Chiu et al., 2013)

Marlow et al. (2017) bring up another interesting point: Virtual messages might be forgotten easier than live messages. Marlow et al. (2017) do not explain it further, but they seem to relate it with nonverbal cues as well, such as smell and touch, which are present only in live situations. Here we can draw an assumption, that important messages might be worth delivering in person.

Chiu et al., 2013 and Marlow et al., (2017) suggest, that the effects of distance can be mitigated by using a media-rich medium, such as video conference, in which the nonverbal cues are more evident. Chiu et al. (2013) clarify this saying, that even a phone conversation can transmit more cues than a written message. However, (Mason & Leek, 2012) have a slightly different standpoint. They say, that a media-rich medium is not always the best choice, but the medium should be chosen according to the task at hand. To illustrate, text and numerical values for a nameplate of an electrical machine will be received more accurately if they will be sent by an email, than told in a phone conversation. On the contrary, a price negotiation for an additional feature might be better to be carried out face-to-face or in teleconference. Yet, due to personal preferences and habits, or other factors, like a past or a future event might suggest a different choice (Mason & Leek, 2012; Zakaria, 2017). Therefore, it is worth to consider the communication medium choices according to the tasks and consider them against the desired outcomes, in order to be effective and satisfy the recipient (Mason & Leek, 2012).

Daim et al. (2012) and Marlow et al. (2017) add to the transmission view: It is not only about the information transfer that makes good communication, but relational communication is

needed also. Marlow et al. (2017) talk about task-oriented and relational communication. Daim et al. (2012) and Marlow et al. (2017) both rely on the much-researched theme of trust by saying, that trust is an important element in virtual communication, and it is created in informal, relational communication (Daim et al. 2012; Marlow, 2018).

Daim et al. (2012) and Marlon et al. (2017) argue that trust is not easily created in task-oriented virtual communication. However, thinking about the lack of cues in virtual, especially in textual communication, regular personal meetings or even virtual teleconference meetings might make a difference. Also, using different channels for relational communication, such as chats, might be fruitful. In addition, Chiu et al. (2013) found in their study, that in chats people tend to replace cues with emoticons, which they considered to be an effective way to realize relational communication.

Effectiveness seems to be related with both, task-oriented and relational communication. As mentioned earlier, Marlow et al. (2017) suggest effective communication patterns to avoid misunderstanding and mistakes when both, complex tasks and virtual communication are involved. On the other hand, Butt et al. (2016) argue, that effective communication routines enhance trust. Likewise, Mason & Leek (2012) add, that appropriate communication medium choices also create trust. Assumedly, the underlying thought is, that predictable and suitable patterns of behavior are a factor for trust. However, trust can be built also in relational communication (Daim et al., 2012; Marlon et al., 2017), as it will be demonstrated in the next section.

Zakaria (2017) points out, that relational communication and relationships building are most important in the beginning of a new professional contact. Therefore, it might be worth to pay attention on relational issues and trust building when choosing the mediums for the first conversations with a new colleague due to the limitations of email communication.

The effects of the language and culture are discussed more broadly in the next section to understand the ways and the degree in which they might affect project communication.

2.2.2   The effects of language and cultural background on communication

The language we use and how we use it frames the messages we send (Glegg, 2018; Louhiala-Salminen & Kankaanranta, 2011). Language and culture are intertwined, shaping the way one thinks and sees the logic of the situation (Du-Babcock, 2018; Suchan, 2014; Zakaria, 2017). Therefore, it seems essential to consider how language and cultural background can affect understanding and the way issues are communicated. As discussed earlier, virtuality increases misunderstanding in communication. Adding the language and culture issues to it, might result even more challenges (Zakaria, (2017).

Self-evidently, language competence is important since, with lack of skills, important information might get lost or cause misunderstandings (Du-Babcock, 2018). English is researched as the "lingua franca" (ELF) in global communication and in the business context (BELF) (Du-Babcock, 2018; Louhiala-Salminen & Kankaanranta, 2011). Louhiala-Salminen & Kankaanranta (2011) point out the importance of understanding the role of English among non-native speakers. They investigate the forms of using the language among non-native speakers versus native speakers; They argue, that competence in BELF is different from the English that native speakers speak among themselves and thus, should be evaluated in its own category. Louhiala-Salminen & Kankaanranta (2011) remind us, that BELF speakers' language skills levels vary, which requires the BELF users to adapt to the communication situations, for example by using simpler terms and asking clarifications when needed.

Du-Babcock (2018) and Suchan (2014) go further in their arguments about BELF users, noting that there are differences in the use of English in different geographical areas. Both pay special attention to cultural issues affecting behavior when communicating in English (Du-Babcock 2018). They show us, that the worldview of the communicator has significant effects on the communication situation. The way of using language and communicating through nonverbal means reflects the people's own language and culture (Du-Babcock, 2018; Suchan, 2014). Zakaria (2017), exploit Hall's classical high-contex and low-context culture view to explain these differences: Low-context cultures (e.g. Japan, Korea, France) rely heavily on words and direct messages, while high-context cultures (e.g. the USA, Australia) use more nonverbal communication and indirect ways of expressing ideas.

Consequently, when communication occurs between members from different cultural backgrounds, misinterpretations are likely to occur if people are not familiar with the other's way of communicating (Du-Babcock, 2018; Suchan, 2014). Du-Babcock (2018) has made an important contribution to the BELF literature opening up the different cultures inside Asia. She notes, that although the general assumptions are, that there is an "Asian way", the countries in Asia have developed culture and their language skills differently depending on historical reasons and the globalization phase of each country. Interestingly, the study of Du-Babcock (2018) reveals, that bilinguals tend to alter their behavior closer to the norms of the language they speak in each moment; They also behave differently depending on whether they speak with natives or non-natives. Likewise, Zakaria (2017) argues, that after the initial stage of collaboration, people start to adapt to others' communication style. Some people also change their style depending on the situation. In addition, she points out, that people do not always possess characteristics of a certain cultural behavior.

What can be understood from these studies, the adaptation to the language in use might be the mixture of the effect of the amount of exposure to the other (or global) culture and the values in one's own culture. These notions seem to suggest not to overemphasize the cultural factors when using BELF but taking them into consideration and adjusting one's communication according to the notions in each communication situation. However, Zakaria (2017) suggests general cross-cultural training to become aware of the characteristics of a global environment. All in all, Louhiala-Salminen & Kankaanranta (2011) suggest, that the fact, that English, in which the business connections are usually maintained, in many situations is a foreign language for both parties, creates emotional solidarity and trust between the parties. In addition, trust and solidarity can be built with simple things, like greeting the other person using her/his mother tongue (Louhiala-Salminen & Kankaanranta, 2011).

In the next section, we will look at the roots of communicative competence model since it offers a basis for understanding what elements communicative competence includes and how a project manager can affect project success by communication.

2.3 Communicative competence and project management

As mentioned earlier, a good communicator can purposefully affect the behavior of others; he/she can use communication as a control mechanism (Ziek & Anderson, 2015). Moreover, Glegg (2018) argues, that a project manager can see the whole profession through a dialogical view: Understand and solve problems using communication. Ziek & Anderson (2015) point out, that communication is a competence, that can be developed. However, they see that project management education is mostly concerned of the instrumental role of communication, such as what and how messages should be delivered, ignoring the social side of communication.

Louhiala-Salminen & Kankaanranta (2011) found out in their study, that communicative competence is an important part of professional competence in general. The term communicative competence has its roots in linguistics, but the concept has been applied to a few other fields, as for communication (Louhiala-Salminen & Kankaanranta, 2011). However, the term communicative competence seems to be used especially in foreign language acquisition. There are different historical approaches to language learning. The development has gone from language orientation towards a more holistic communication view, which allows the linguistic models to be adapted into related fields (Amirian et al., 2017). Hymes' sociolinguistic approach in the 70's triggered various practice-oriented language educators to form modified theories and models (Amirian et al., 2017; Chiu 2013; Louhiala-Salminen & Kankaanranta, 2011). Various approaches and the relatively long history makes the concept interesting and relevant still today.

The best-known version of the communicative competence theory, known as Hymes theory, is the Canale & Swain model for foreign language teaching and acquisition, with four dimensions: grammatical competence, sociolinguistic competence, discourse competence, and strategic competence (Chiu 2013; Louhiala-Salminen & Kankaanranta, 2011). The grammatical competence refers to the rules of language, such as vocabulary and word and sentence formation, while sociolinguistic competence is about the situational use of the language, thus, considering the context and culture depending socially accepted rules and dealing with them (Louhiala-Salminen & Kankaanranta, 2011). Discourse competence, on the other hand, is concerned about how the messages are formed to make sense and convey the intended meaning. Strategic competence is the ability to complement the other

competencies by using different tactics, as paraphrasing or asking for repetition (Louhiala-Salminen & Kankaanranta, 2011).

Widdowson, on the other hand, has divided communicative competence into two wide areas, knowledge and ability to use the language (Louhiala-Salminen & Kankaanranta, 2011). Littlejohn & Jabusch (1982) have similar approach. They use term communication competence. Their definition for communication competence is "the ability and willingness of an individual to participate responsibly in a transaction in such a way as to maximize the outcome of shared meaning." (Littlejohn & Jabusch, 1982, p. 29). Interestingly, they argue, that communication skills alone are not enough to be competent communicator. The scope of their model of communication competence is very wide, including process understanding, interpersonal sensitivity, communication skills, and ethical responsibility. Littlejohn & Jabusch (1982) point out, that people are more competent in certain areas than in others. They also note, that the competence varies from setting to setting. It makes sense, thinking of how many variables the interaction between people can include.

Louhiala-Salminen & Kankaanranta (2011) state, that in communication research, instead of using the term communicative competence, we talk usually about effective and appropriate interaction, in which the effectiveness refers the recipient's reactions, while appropriateness takes the situation and social norms into account. They argue that communication research takes a more holistic view for communicative competence than the linguistic view does since the first-mentioned acknowledges also the recipient's part of the two-way communication. Louhiala-Salminen & Kankaanranta (2011) point out, that the communication approach emphasizes the context in which the communication happens, unlike the linguistic approach, in which the way of using the language is central.

Louhiala-Salminen & Kankaanranta (2011) have paid attention to the increasing globalization by suggesting bearing in mind ELF, English as lingua franca when considering the communicative competence in today's business environment. Their model proposes that multicultural competence, BELF competence, and business know-how are necessary for the existence of global communicative competence of a business professional. They are in line with Daim et al. (2011) arguing, that the international nature can affect communication and thus, it must be taken into account. However, Daim et al. (2011) emphasize more cultural

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issues, while Louhiala-Salminen & Kankaanranta (2011) are more concerned of the language issues.

An important outcome of the study of Louhiala-Salminen & Kankaanranta, 2011) was the notion, that a person communicating in a global business environment needs to be sensitive toward "different ways of doing things", which they connect to sociolinguistic and discourse competence of the Hymes' model. They refer mainly to language adaptation explaining, that it includes tolerance for different ways of using language. However, they have put these skills under a broader category, multicultural competence, in which they include also other factors related to different origins of people.

All in all, there are several approaches to communication that originate from the Hymes' model. They look at communication from slightly different angles, all pointing out some important aspects and ignoring others. However, since it seems impossible to capture every aspect of the multifaceted phenomenon, we have to choose the one that best fits to our purposes. I see the four dimensions of the Canale & Swain version of the Hymes' model to describe best the communicative competence of project managers that work in complex projects in a global virtual environment. However, the model needs to be modified to suit better to the specific context of project management.

Model of Communicative Competence in Project Management

To understand project manager's communicative competence, we have to go back to the success discussion in project management. Based on the combined view for project manager's success areas, I suggest the following definition, which was presented already in the introduction, for project manager's success in the customer interface by balancing the elements of project management and communication:

> *A successful project manager manages and communicates the project progress and negotiates and manages any changed or unclear circumstances in the scope, time, cost, or quality of the project, in a way that it satisfies the sales organization, the customer, and the project organization and its steering committee.*

As discussed in the previous sections, project management literature emphasizes the information transmission view of communication, whereas communication offers a wider

perspective into it. However, some researchers in the project management literature have also adapted the constitutive view. That entails the need for widening the view of communication in project management. This research contributes to earlier research in project management by broadening the view. It ties the task-oriented and social side of communication together, by combining the transmission view and constitutive view of project manager's communication.

I suggest a modified communicative competence model for project management (Fig. 2). It is based on the traditional and well-known model of Canale and Swain, which was presented earlier in this section. That model seems to be used widely especially in language acquisition research and education. The traditional model has been chosen to this research for its pragmatic and flexible nature despite the fact, that there are many more recent modifications for it. Although there have been many attempts to capture the real multifaceted phenomena of communicative competence, none of the newer models have got so wide acceptance than the original model (Amirian et al., 2017).

Based on Amirian et al. (2017) suggestion of not attempting to demystify communicative competence in general, I respond by creating a model which attempts to capture the main elements of communicative competence in the specific context of project management. Thus, it is not intended to answer the difficult or impossible question of communicative competence in any given context. Rather, I follow the tradition of communication research (Louhiala-Salminen & Kankaanranta, 2011) and put a special emphasis in the context in which the communicative competence is discussed. Thus, this model is valid specifically for globally operating project management in customer interface of technical projects.
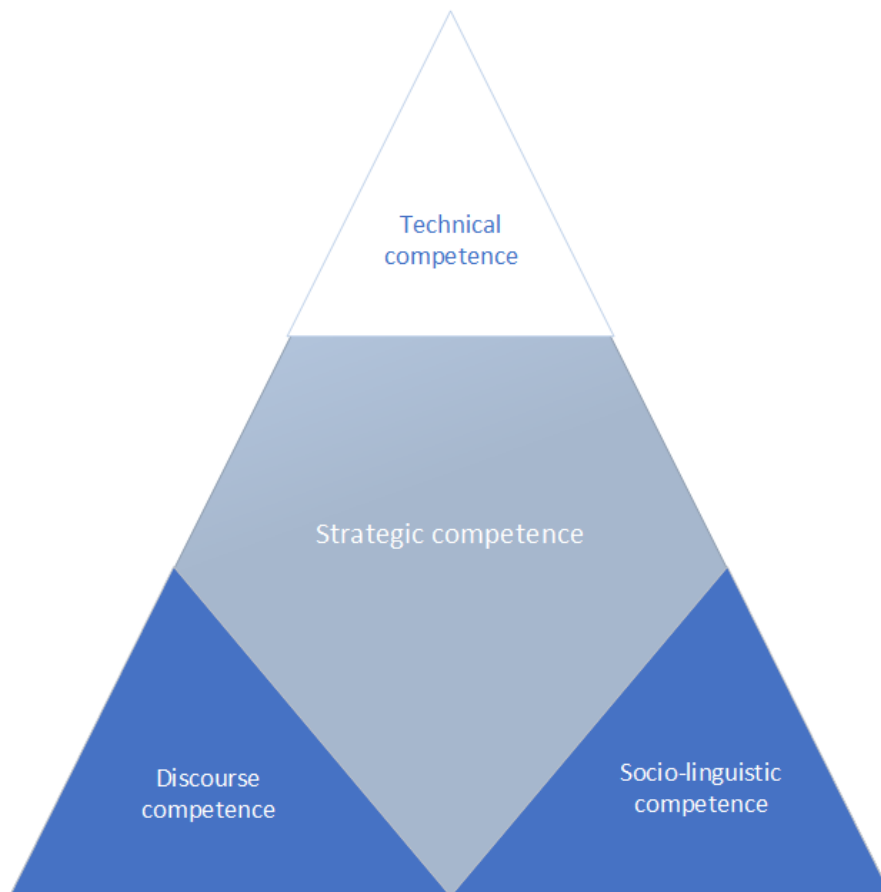
Figure 2. Communicative competence model for project management.

The context for which the model is developed shapes the geometrical form of the model and the weight of the different areas of communicative competence. This model suggests a new approach to communication in project management. All in all, the model emphasizes the underlying, but less acknowledged constitutive role of communication, but acknowledges also the importance of technical competence and information transmission. As discussed earlier, grammatical competence is perceived not to be the key question in international business communication: Instead, "getting the job done" is (Louhiala-Salminen & Kankaanranta, 2011). The general assumption in business communication is, that people involved in international operations have sufficient English skills to be able to get their work done (Louhiala-Salminen & Kankaanranta, 2011). Therefore, grammatical competence in the Canale and Swain model has been replaced with technical competence. That is an attempt to look at the communicative competence from task-oriented view, which is emphasized in project management literature (Andersen, 2016). The technical competence o

This model emphasizes the realization, that when exchanging information in projects, technical competence is inherently important, but it is not enough alone (Littlejohn & Jabusch, 1982) I argue that technical competence is like the tip of an iceberg since it is the most notable part, supported by a range of other elements. However, it has an essential role since handling and transmitting technical information is the central part of the project manager's work.

Technical competence in the communicative competence model in project management refers to the knowledge part of communication, that Louhiala-Salminen & Kankaanranta, 2011 mention. It also substitutes the function of grammatical competence in the original model: Without knowledge of the system (grammar or physics laws), it is impossible to convey a meaning (Amirian et al., 2017, Littlejohn & Jabusch, 1982). Technical competence can be also thought as substance competence including other knowledge areas, such as knowledge of the business, industry, and standards used in it. In addition to the knowledge, technical competence refers also to understanding how the issue is related to the entity, and the ability to apply the knowledge by forming the content of communication related to project execution, including the project evaluation before accepting it, as well as the possible post-project communication phase. In contrast, all the other parts, discourse, sociolinguistic, and strategic competence, refer solely to linguistic ability. In other words, the technical part answers to the question "what" (is said or done/will be done), while the other parts answer to the questions "how" (it is said).

This model suggests, that the discourse and socio-linguistic competence form the cornerstones of project management competence. As you might be able to recall some situation from your own life, the people who have a deep knowledge of a certain theme do not always know how to explain it in a way, that people who know less about it, would understand it without big efforts. In contrast, people who are competent in discourse and sociolinguistic competence can express themselves in a way, that it suits the recipient's level of understanding. However, technical competence is needed to provide the context into the message.

The discourse and socio-linguistic competence in this model refers to the meanings in the original model. Thus, *discourse competence* is concerned with understanding and connecting words and sentences together to form whole messages that make sense and

convey the meaning (Louhiala-Salminen & Kankaanranta, 2011). **S*ocio-linguistic competence****,** on the other hand, considers the socially accepted rules in each situation, acknowledging cultural issues ((Louhiala-Salminen & Kankaanranta, 2011).

Strategic competence is in the middle of the project manager's communicative competence model since it seals the gap between discourse, sociolinguistics and technical competence. Discourse and sociolinguistic competences are the cornerstones of communicative competence, while technical competence symbols all the technical content and other substance knowledge project managers need to communicate. Daim et al. (2012, p. 202) point out, that there is not "one size fits all solution" when talking about communication. Therefore, the strategic competence is needed to help a person to cope with different situations. It plays a vital role especially in changing or otherwise difficult situations, such as unclear project scope, when a person's competence in some area(s), such as technical competence, might not be sufficient. The strategic competence allows a project manager to look for alternative ways to handle the situation or act proactively to facilitate and control similar situations in the future. This model follows the Canale's elaboration (Amirian, 2017) on the original model, in which he describes the strategic competence to be more than communication tactics: It includes aspects, such as self-confidence and readiness to take risk. Therefore, it is basically any means that support conveying an intended meaning.

As noted earlier, people are more competent in some areas and settings than in others (Littlejohn & Jabusch, 1982). However, the distribution of the competency areas in the model assumes, that certain areas are easier to learn than others. Therefore, the model can be thought as the starting point when evaluating the employees' competence from a communicative perspective. Thus, noticing the areas in which the person is competent and, on the other hand, the areas which she/he needs to develop further

The communicative competence model in project management brings together the perspectives for communication in both, project management and communication. It serves as a lens through which the data collected for this research will be analyzed. The methods for conducting the research and analyzing the data will be described in the following section.

3 METHODOLOGY

Social science is a study of people: Social scientists explore people's behavior, beliefs, interaction etc. Since those issues are hard to measure precisely, social science relies heavily on methodology to produce new knowledge (Neuman, 2006). There are several approaches to choose. Social research is

> *"A collection of methods and methodologies that researchers apply systematically to produce scientifically based knowledge about the social world."* (Neuman, 2006, p.2)

According to Neuman (2006), social researchers use also their imagination and creativity while systematically combining theories and facts together: It requires people skills, patience, and discipline from the researcher.

This research is conducted with an interpretive view, which sees people constructing the reality in social interactions, and aims to "understand and describe meaningful social action" (Neuman, 2006).

3.1   Research method and design

This research is a qualitative case study. Qualitative research is more common than quantitative research in social science (Neuman, 2006). Qualitative research is ideal for exploring knowledge, that is not very well known before. This research was chosen to be conducted as qualitative, because communication in project management is not researched much from the social side. The qualitative method is suitable for this study also because the events in qualitative research are often reported in form of cases that are constructed from the data and interpreted from the point of view of the people studied (informants), as well as the point of view of the researcher (Neuman, 2006). Hirsjärvi et al. (1994) argue, that it is often too challenging to look at one phenomenon from different viewpoints, but it is fine to use different levels of analysis.

However, the theoretical part of this research attempts to intentionally look at the project managers' communicative competence from two angles, constitutive and transmission view,

to understand the multifaceted problem. The emphasis, however, is in the constitutive view. The transmission view of communication is used to understand the traditional, and still visible thoughts in the field and to leave space for both views to emerge from the data. Mabry (2012) supports this idea by saying, that theoretical triangulation makes the data analysis deeper and the process easier.

> *"Different potential interpretations suggested by different theories help the interpretivist case study researcher to think deeply about meaning."* (Mabry, 2012, p. 16)

Case study method is a common and flexible research method (Hirsjärvi et al., 2005; Neuman, 2006). The data in a case study is often a collection of different types of data, with a purpose of getting a rich description of the case (Mabry, 2012; Metsämuuronen, 2006). It also allows the researcher to draw his/her own conclusions of the collection (Mabry, 2012; Metsämuuronen, 2006). Moreover, a case study researcher is even supposed to be curious and open to follow unexpected paths, rather than testing the theoretical assumptions from previous knowledge (Mabry, 2012). That leads to the notion, that a qualitative case study is always analyzed through the researcher's personality and experience; Therefore, the researcher's standpoint towards the subject must be made clear, and the data presented in the report in a way that the reader can make his/her own interpretations of it (Mabry, 2012).

A case can include one or more people. It can be also an event or an organization. The problem with the case study is, that the knowledge of one case is not generalizable; However, the researcher might find a common feature between the people in that case (Metsämuuronen, 2006). This research is conducted as a multiple case study, combines four cases.

The empirical data of this research consists of three types: 1. Emails, 2. Observation, and 3. Interviews. The email conversations have been collected from ten projects concerning four different geographical areas. The observation has been done in meetings of the factory project managers with LSU / end customer, as well as following the working environment of project managers. Semi-structured interviews have been conducted with project managers of both sides. The data collection methods for this study were agreed with the head of the project management. Moreover, following the email conversations of certain projects was

agreed with the responsible project managers, who were also told to inform the respective LSU project manager about it. The interviews were agreed individually with all the participants and permission for recording was asked before each interview.

The interviews have been chosen as the main method of data collection in this research since they give a possibility to dive deep into the topic (Hirsjärvi et al., 2005; Neuman, 2006). A survey, for example, is considered to be superficial (Hirsjärvi et al., 2005). Therefore, it is not meaningful to collect that type of data when the intention is to understand the phenomenon deeply and widely. A survey requires a careful question pattern design and testing; Something might be forgotten or not taken into account (Hirsjärvi et al., 2005).

In contrast, an interview situation can be altered (depending on the interview type); therefore, the interviewer can ask additional questions if needed. Also, the content is usually richer than in surveys since people can answer freely; The possible additional information provided by the respondent can reveal new and surprising directions for the research (Hirsjärvi et al., 2005). Hirsjärvi et al., (2005) note, that respondents might frame their answers to be beneficial for them: For example, acting against the norms might not be revealed. They also remind, that there are cultural differences in the answers ((Hirsjärvi et al., 2005; Neuman, 2006). Also, the interviews are situation specific and may not apply in other situations (Hirsjärvi et al., 2005; Neuman, 2006).

The project management teams of the factory were interviewed using semi-structured group interviews to guide the interview situations, but not to tie them too much (Hirsjärvi et al., 2005). Some of the informants were decided to be interviewed in groups since the teams have handled the projects together and thus: Together they might be able to give a richer picture of the events and their views (Hirsjärvi et al., 2005). Hirsjärvi et al., (2005) suggest the group size to be from two to three participants, which matches well with the project management teams.

Individual semi-structured interviews were chosen to be used with the sales unit project managers. Some projects are partially handled by various people in the sales units as well, but for simplicity, only the project managers had been decided to interview, except one interview, in which a sales manager, who had been involved in the projects was interviewed together with the project manager.

Observations and email conversations were used to support the interview data and to give a wider angle to the phenomenon. The observations were done in participant observation. It means, that the observer clarifies his/her intentions to the people he/she observes, but he/she creates a relationship with the people and might also ask questions (Hirsjärvi et al., 2005). Hirsjärvi et al. (2005) remind that it is important, that the observer makes a clear distinction between the observations and his/her interpretation.

According to Hirsjärvi et al. (2005), the data type is not important as long as it enables finding the answers to the problem. This study uses primary data and secondary data in triangulation to understand better the multifaceted phenomenon and to validate the findings. The primary data is collected through interviews and observation to get the answers to the research questions. The secondary data, email conversations, are used for getting an overview and more details to support the primary data.

The quality of the secondary data must be evaluated to make sure, that it is in line with the current study objectives and perspective (Hirsjärvi et al., 2005). The emails used in this research are considered to give as realistic picture as possible of the actual communication processes in the projects since they are authentic two-way conversations. They tell about the communication from a different angle since the interviews can reveal only the subjective truth (Neuman, 2006). However, the notions of the emails are also subjective from the point of view of the researcher. That claim of the interviews as subjective truth is based on the understanding of communication as a situational act (Balboni, 2014; Daim et al. 2012; Jonasson & Lauring, 2012; Littlejohn & Jabusch, 1982). The observation of project managers in social situations is conducted with the purpose of getting data from different situations and therefore, understand the project manager's work and communication better.

The common method of deciding the amount of data is saturation; The data is collected until it does not reveal anything new. Hirsjärvi et al. (2005). However, it is not so simple to decide when the data collection has reached the saturation point since it depends on the skills of the researcher to find new insights of the data (Hirsjärvi et al. 2005). Hirsjärvi et al. (2005) offer a metaphor of detective to understand the research path: The researcher has a leading thought of how to solve the problem and he/she follows the clues risen from the data to get findings by interpreting the solution

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That was done by altering the interview questions along the way the data was collected in order to get more information on certain aspects that emerged in the first interviews. The saturation point seemed also to be reached after six interviews with the factory project managers and four interviews with the LSU project managers.

3.2 Empirical context

The data for this research is collected in the order-to-delivery process of a global manufacturing company. The company operates in more than 100 countries with more than 100,000 employees. The focus point of this research is the project management of its electrical machines business, which is located in a production unit (PU) in Helsinki, Finland, and delivers electrical machines around the world. The context information is collected from informal conversations with the project management, from documentary data, and from observations in the PU.

The project managers work with several local sales units (LSU) from different geographical areas. The local sales units serve as connection points between the factory and the customers all over the world. Each of the project managers handles tens of projects that are in different phases and of varying complexities, that makes the project managers' work days unpredictable. Duration of the electrical machines projects ranges usually from twelve weeks to six months. The simplest standard process includes four contact points (order handover, order acknowledgment, design drawings, and delivery information) between the PU project manager and LSU project manager. However, since the products in the order-to-delivery process are not bulk products, only a minor part of the projects follow the standard process. Customers' special requirements and changes along the projects, as well as different challenging issues in the factory, make most of the projects (70%)[*] to step out of the standard process and multiply the number of the communication points.

A project includes seven phases, scope clearing, engineering, final engineering and final purchasing, component manufacturing and assembly, packing and shipping preparations, and delivery. Appendix 1 presents typical communication topics (excluding documentation)

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[*] according to the company database records between 8/2017 and 8/2018

with LSU in each phase from the point of view of a PU project manager in an average project highlighting the phases in which there is usually extensive amount of communication.

The first phase after the project handover to the PU is scope clearing, in which the project is shaped and all possible missing details in the customer's purchase order are acquired and possible unclear technical and commercial issues are clarified. The second phase is engineering. Usually, there is no communication before the customer receives the first drawings of the products. However, after that point, there is usually a peak in the amount of communication since the possible misunderstandings, missing details, or increased understanding of the requirements of the customer's site becomes evident. The engineering and purchasing are finalized in the third phase. All questions should be clarified, and changes done in this point, but many times the discussion started in the previous phase continues still in this phase; Therefore, some engineering and purchasing must be repeated. The fourth phase is component manufacturing, in which all components are acquired. Sometimes the project scope includes components, that the end customer sends to the PU, which requires some communication between the PU and LSU.

Starting the manufacturing and assembly marks a point in which everything is usually clear and goes smoothly unless there occur some unexpected complications: If the complications affect the delivery time or require changes in the design, they must be communicated to the LSU. Some end customers, and sometimes also the LSU project manager want to witness a factory acceptance test (FAT) of the product in the PU. The arrangements require some communication with the LSU, and sometimes also directly with the end customer. The FAT lasts from a half day to several days and includes a lot of informal communication along the technical issues. Often, there remain open issues, regarding the products or the documentation, arisen in the FAT, which must be solved after the customer has left the factory. That causes another peak in the amount of communication together with the sixth phase of packing and shipping preparations, in which there still might be some documents to finalize. The seventh and last phase is the delivery of the products. That phase does not usually require much communication, but sometimes there are still some details in the documents to be clarified.

Although, the LSU project managers sometimes visit the factory to follow a FAT, the PU project managers have not ever seen some of the LSU project manager face to face. The most frequent communication channel is email. Chats, teleconference, and telephone

conversations are used occasionally. At the moment the project managers do not have a harmonized way to cope with or communicate the alternating situations along the project life cycle, thus, every project manager has her/his own ways to handle the situations and communicate them to the LSUs. Therefore, the quality and timing of the communication depend on the individuals in both ends. In some cases, it can harm customer relations. In addition, communication takes a significant amount of time and leaves room for misunderstandings and confusion when one must improvise and create customized messages.

In addition to the complexity of the projects and variety of ways to handle communication, the long chain of people communicating in both ends characterizes the order-to-delivery projects. The LSU project manager is between the customer and the factory filtering the information between the parties. Moreover, the customer of the LSU might not be the end user of the product. Sometimes the information, that the PU needs from the customer, comes through many companies and people before it reaches the PU. Likewise, a PU project manager communicates with many departments inside the factory to get the product manufactured according to the agreement with the customer.

3.3 Data collection and analysis

Data collection

One of the qualitative research principles is to tie the interpretation of the data to the context in which the social event occurs (Neuman, 2006). Therefore, it is important to understand and report it. Neuman (2006) points out, that the meaning of a social action is distorted if the environment in which it occurs is not considered. He also notes that the meaning of certain events alters from culture to culture. Which is important to note since this study aims at exploring widely the effects of the operational environment to the project managers' communication in order to be able to get a deep understanding of their communicative needs.

As a starting point for this research, I familiarized myself with the daily work of the project managers and project engineer. I observed the project managers' daily work in their office, while working also on other assignments, during the initial part of this research from July to September 2018 and asked them to show me how they work in certain aspects, as for example booking a project in the information systems. I also interviewed the head of project

management, as well as the team leader, a change project manager, and two electrical machine project managers to get a picture of their daily work and the challenges they have regarding communication. In addition, I looked at Net Promoter Score (NPS) results to get some background information from the point of view of the LSUs about the situation.

I also attended different meetings to understand better the work and the whole range of communication in projects: Two project handover meetings, which were organized by teleconference with a disciplinary team to decide whether the project scope, time and budget were adequate and to notice if there were any needs for clarifications and one packing inspection and two factory acceptance test (FAT) meetings, in which the representative(s) of the end customer, and possibly also the LSU project manager had come to witness the performance of the machine.

Email conversations between the project management teams of the factory and project managers of LSUs in four different continents (America, Asia, Europe, and Africa), concerning ten projects, were followed during the summer and autumn 2018 to get an authentic picture of the flow of communication. The projects were chosen by combining information-oriented selection and random selection. The information-oriented strategy was used in two rounds to get maximum variation and the random selection was used to avoid systematic biases. The information-oriented strategy was used first by choosing geographically diverse areas to investigate. Then both strategies were used to select average two projects per region: Some ongoing projects were selected by the degree of complexity in their initial phases, while other projects were selected before they had been started and therefore, the complexity of the issues in them was not possible to be identified. The information-oriented selection was used another time when finally deciding one example project and LSU and PU project manager from each of the four regions to be used as an example case.

The chosen cases represent well the variety of projects in the order-to-delivery process of the multinational manufacturing company's electrical machines business, in which the study was conducted: The cases vary in terms of their geographical location and in their perceived complexity, which is a sum of complicated technical issues, customer's special requirements, and issues in communication. The reason for including such a diversity in the cases was to study as many communication situations as possible to illustrate differences

and similarities in the cases, regions, and people, to better understand what communicative aspects are critical for project success, and how much cultural background affects the desired communication style. The key features of each project are presented in table 1. The cases are described in more details in chapter four, focusing on the link between the PU and LSU.

Table 1. Case projects.

Project / Feature	Africa	America	Europe	Asia
Perceived complexity	Low	Fairly high	High	Very high
Short description of the project	1 motor, clear and easy project. Only minor changes in the drawings.	1 motor, quite challenging, but a well-proceeding project. Good collaboration.	2 motors, challenging, two-part project. Issues were solved well in the first part because of good collaboration.	2 motors, complicated project. Special components. Many questions and requests from the customer.
Identified issues	Official Purchase Order delayed for several weeks. Special document requirements from the customer.	Unclear customer needs.	Unclear customer needs. Difficult design	+30 special components. PU PM changed several times. Many requirements (documents, changes) from customer. Other incidents.
Duration of the project	4 months	5+ months	9+ months	8 months
Number of emails in total	30+	40+	100+	240+

The project management teams in the PU and LSU of the four case projects were interviewed. The interviews PU1, PU2, PU 3, and PU 4 in the table 2 are the PU project management team interviews and the interviews LSU1-LSU4 are the LSU project management interviews. Hirsjärvi et al. (2005) point out, the informants are carefully chosen in a qualitative study. The diverse geographical areas were chosen to notice possible differences depending on the area. The amount of the focus regions was limited to four because they were considered to be diverse enough and therefore, together represent all. In

addition, three PU project management teams from different regions were interviewed in two group interviews (PUb1 and PUb2). Titles and the areas of responsibility of a few interviewees in the PU have changed during the research. However, the interview groups were decided according to their areas of responsibility during July-September 2018. Also, four LSU project managers, and one sales manager (SM) together with an LSU project manager (PM) were interviewed as well. The interviews were conducted in December 2018 in the PU or through videoconference (Skype). Interview languages were Finnish, English, and Spanish.

Table 2. Interviews.

Interview	Interviewees[†]	Project Management Experience	Region	Length of the Interview
PU1	Timo	7 years	Africa	1h 7 min
PU2	Matti, Emma	5 years, 4 years	America	54 min
PU3	Pekka, Ari	7,5 years, 1,5 years	Europe	54 min
PU4	Jesse, Ville	1,5 years, 2 years	Asia	1 h 56 min
PUb1	Pauli, Jari	from 8 months to 3 years	Europe	50 min
PUb2	Anna, Tommi, Henri, Ella	from 9 months to 2 years	Europe	49 min
LSU1	Tarik, Khalid	5 years, 2-3 years (supporting PM)	Africa	40 min
LSU2	Alex	3,5 years	America	1 h 2 min
LSU3	Daniel	1 year	Europe	54 min
LSU4	Chiyo	0,5 years	Asia	46 min

The project teams consisted of the project manager, who is responsible for a certain region and a project engineer, who co-manages the projects with her/him. The project engineers were considered important sources because they do a big part of the daily communication with the LSU. Some project engineers manage certain projects independently, while others co-manage all the projects with the project managers.

[†] The names are changed for privacy purposes.

Based on the view gained from the observations and interviews, I decided to include the project engineers into the terms *project management* and *project manager* in this thesis when there is no specific need to separate their roles. The decision is based on the notion, that the project engineers work on the projects almost equally with the project managers; The only significant difference is, that the official project manager has the final responsibility of the projects and thus, is consulted often by the project engineer to get an approval for decisions, or asked to give the last word for the customer when facing a difficult issue.

However, the project engineers manage the daily communication in the projects that are assigned for them, or in which they assist the project manager. The project teams are divided by geographical areas and are a part of a bigger entity. Every region has a project manager, who either works alone, or with a project engineer. The teams have organized their work according to their preferences; Some teams have divided the projects to be managed by one person, while others work together in all of them. The holiday season and sick leaves break this order since the projects of the people who are absent, must be handled as well.

The interviewees were asked to discuss their work and communication in it. The questions were mainly open-ended, and the interviewees were encouraged to elaborate the topics freely and in conversation with each other (when applicable). Four PU projects management teams and all LSU project managers were asked also to describe a previously chosen and informed project in a few words and to explain the flow of it from their point of view. The four project cases were later built using the documentary data (emails), interviews, and observations to capture different communication situations and to analyze the effects of different cultural backgrounds.

Data analysis
The factory project management interviews were conducted in Finnish, and one of the LSU project manager interviews was conducted in Spanish. Three of the LSU interviews were conducted in English. Also, all the emails that were collected for this research were written in English. The quotes in this thesis are translated in a way, that their meaning best matches with the original comment; They are not always literal translations.

First, the raw data from each data collection method was transformed into a form, that it was possible to analyze. The observation notes were first cleaned by carefully separating the facts from the observer's own interpretations. The observer's interpretations were later evaluated and used in the analysis. The emails from all of the ten projects, that were followed, were organized into timelines during the data collection period. The timelines consisted of the date, the sender, and the content of the message. Turning points and other notions risen from the timelines were highlighted for further analysis.

After organizing the data, it was handled in various iterations. The interviews, that were related to certain projects (PU1-4 and LSU1-4) were listened through, making a time marked sketch from the content. Then the content was divided into six themes. The themes were culture and language, good and bad communication habits, daily activities of PM, communication channels, project flow, technical competence. When the first eight interviews were handled, each of the themes was analyzed separately and compared to the data in the other interviews. The project flow data was used to describe and compare the four case projects. The communication-related and work description-related data were coded by using the descriptive codes that emerged from the interviews. The codes were then compared, contrasted, and coded once again to broader concepts. The concepts are presented in chapter four. Finally, those concepts were analyzed through the communicative competence model for project management, which is presented in chapter two. The observation notes, organized email data, and the two interviews, that were not related to any specific projects (PUb1-2), were then compared with the final codes. The interviews were partially verbatim transcribed and if necessary, translated to present them as direct quotes in this report.

3.4 Research Ethics

According to Neuman (2016), the researcher should avoid violating the participants' privacy, anonymity, and confidentiality by not using their real names or other identifying details of them or of other people. However, as he explains, it is not very easy to succeed in it since making up details raises the question of reliability of the whole study. Therefore, the researcher must weight his/her options of presenting the data. The participants in this research were told, that their names will be changed, but it is possible, that the respondents can be identified because of their respective geographical areas; However, the participants

were told to have the right to notify if they find it important to protect themselves from being related to a certain comment. The decision of using geographical areas to describe the responses was made to demonstrate the degree of differences regarding different geographical areas.

4 COMMUNICATIVE COMPETENCE IN THE CUSTOMER INTERFACE OF PROJECTS

As the aim of this research is to increase understanding of communication as a success factor of a project manager, the nature of project managers' work and central communication issues in the customer interface are examined first. Then, the data is analyzed through the communicative competence model that has been applied for project management (presented in chapter 3) to explore how a project manager can use her/his communicative competence to enhance project success.

The empirical data in this research complements earlier research on project management communication, which seems to pay little attention on customer interface. As the case company project managers communicate with LSUs in different geographical areas, the evidences of the effects of cultural background and distance communication (Chiu, 2013; Daim et al., 2012; Marlow et al. 2017) are paid special attention on in the data analyses. Including cultural aspects increases the variables and uncertainty in communication situations, which encourages to look at communication in the customer interface holistically, through the constitutive view of communication, unlike most of the project management research, which is limited to information transmission (Ziek & Anderson, 2015).

The findings are presented in this chapter as follows. First, concerned interviews, observations, and documentary data are organized into four project cases, which vary in their levels of complexity and represent the global environment in which the case company operates. They are organized into cases to find central themes and analyze which aspects in them are universal and which are region/person-related. In the end, the cases are summarized, including the interviews that were not tied to any project. The findings are analyzed in the third sub-section using the modified communicative competence model that is presented in chapter two. The implications of the findings and how they are related to earlier research are discussed in the fourth sub-section.

4.1 Project Cases

The project management teams, working with the case projects (presented briefly in chapter three in table 1), were asked to describe the case project flow and communication in the customer interface regarding that specific project. The case descriptions are constructed by combining the data from the interviews with the project emails. In addition to the project descriptions, the project management teams were asked also to talk about their communication with the LSUs in that region in general. The findings about communication in the regions in general are based on the interviews and supported by email data and observations. Details of the interviews and interviewees is presented in table 2 in chapter three.

Following Geraldi & Söderlund's (2018) suggestion to seek understanding of the day-to-day activities to not to draw naïve conclusions, four cases were examined in order to understand the complexity and unpredictability of a project manager's work, The chosen cases represent different geographical areas, Africa, America, Europe, and Asia, which means that the LSUs are located to certain countries in those areas and serve customers in that specific country and possibly also in a few other countries. The specific geographical areas were chosen with the purpose of analyzing how much the cultural background affects project communication. The cases also represent varying degrees of complexity. These cases illustrate both extremes, low complexity, and very high complexity, as well as two different cases in between.

In addition to the case descriptions, the project management teams in each region were asked about communication in their projects in general to understand their challenges and preferences in each region. The project descriptions and the project managers' communication are presented in the next sub-chapters.

4.1.1 Case Africa

Project description

The chosen Africa project was easy to execute since the technical specifications were clear, and there were not any major or late changes in the customer order. However, the official purchase order from the LSU came several weeks after the handover meeting had been organized; Therefore, the designing, nor booking a manufacturing slot for the motors were

not realized. Another handover meeting was arranged after a month from the first one. As a result, the first drawings were late from the initial schedule and the planned delivery date was later than the customer expected. There was some conversation about these issues.

The next contact was before the customer witnessed FAT. There was some conversation related to organizing it. The PU project manager was not able to attend to the FAT for holidays, but he arranged a substitute. The customer had ordered a routine test for the motors but asked reference results of a more comprehensive test type. The PU did not have any results of similar motors since the motor type was quite new. However, the PU project manager had to explain and reason it for the customer, through the LSU many times.

The next and last contact was about the shipping arrangements. There were about 30 emails in total, which the PU project manager reported being very small amount even for the easiest projects. According to his records, a common amount of emails per project ranges between 70 and 110. However, he reported, that the LSU project managers, and sometimes also the end customers, especially in this region tend to send WhatsApp messages in quick questions or as reminders to answer to a certain email.

Communication in the Africa Region Projects

LSU sales manager, named Khalid, has a quite long experience of working close to the LSU project management and supporting the team. He and the PU project manager, named Timo, who is responsible for this region have worked together in some projects more than half a year and they have had a chance to see each other face to face. The LSU project manager, named Tarik, and the PU project manager Timo do not know each other very well. Despite his primary responsibility in sales, Khalid was decided to be invited to the interview due to his involvement in the case project communication.

The length of the interview with the LSU team was not as planned since we had some connection and hearing issues during the Skype-interview. Also, the interviewees received a customer in their office while in the interview. However, they expressed their biggest concerns about communication with the PU in general. They seemed to be very focused on using the chance to give feedback on project communication, which they probably had brainstormed earlier together. Therefore, the issues had seemingly bothered them for some time, although they said that the Helsinki PU is one of the best PUs to work with, in general.

Khalid and Tarik expressed concerns that are related to different issues related to timing and sufficiency of information regarding their projects with the PU: Their principal concern are slow responses from the factory to their emails. They had experienced it taking many times a long time before they get any answer from the PU, which they reported being problematic since the question or a request (e.g. to change something) usually comes from the customer, which, in turn, is pushing them to provide the answer for them. Thus, they seem to be pressed in between the customer and the PU, without being able to do anything. Khalid explained his situation when he has to wait for getting an answer for their email from the PU:

> "...or you don't have an answer back from your factory, it is difficult for a client to accept no response, but at least, if you tell him, ok, the factory has [received your message], and in 3 days in order to reply you back, at least you can communicate back to the client." (Khalid)

This comment indicates to an expectation of only small time-slot in between the initial email and the answer for it. The time expectations and priorities might be different in the LSU than in the PU depending on various cultural issues, such as the professional culture and the society in which they operate. The LSU is in direct contact with customer, which, in addition to the functional, has economic interest in the project: The new machine must fit seamlessly in its own (or the end customer's) processes and established facilities to be feasible as an investment. This suggests, that the LSU project manager needs to use her/his commercial understanding in the execution phase of a project, not only in the front-end phase as Edkins et al. (2013) suggest. In contrast, a PU project manager is mostly concerned of internal functions, in which there are different challenges: The focus is on optimizing various processes and projects to make the organization to function well and to be feasible.

Looking at the case project emails reveals, that at the beginning of the project execution there had been one week between the initial email and a reminder to answer to it: Tarik sent another email for Timo, asking him to answer to his first email. Timo gave a polite and detailed answer on the same day. Khalid thanked him of his quick answer to one of his questions, probably trying to indicate and motivate the desired behavior. Yet, regarding this project, Timo had answered the emails within the same or the next day, with some exceptions. However, the timing issue is nothing new in the case company. Timo told, that they had been advised to give quick responses on emails.

"During the time I managed North Europe and substituted, for example, Central Europe, we have been taught that it is very important, like, very important to answer, that you will answer, that you have noticed the message of the other one. You should answer very quickly, that "I have noticed your problem and I will come back to this as soon as possible." (Timo)

However, he looks at the issue differently. He argues, that a confirmation of having received the email is like not having responded at all since it does not answer the question asked. He also talked about cultural differences related to the content of the first response:

"Then, [The case country people] feel, that it is not an answer at all, and I see it kind of similar way. You are not, like answering anything, so, they ask you something, so, you don't give any kind of answer by telling them that you will answer tomorrow. On the other hand, [a country in Asia], you must give like, a perfect answer. The first comment should be, like, the perfect answer." (Timo)

In contrast to what was noted before, that what is considered important, is seemingly a cultural question in many levels: national culture, organizational culture, and professional culture since the worldview of a person affects his/her communication. (Du-Babcock, 2018; Suchan, 2014, Zakarian, 2017), Khalid sees timing issue as important for everybody. He elaborates, that a delay in communication triggers other issues and makes the communication difficult.

"You are all seeking for proper feedback at the right time. When it comes to delaying in the responses, so, it gets more difficult in communication even between you and the factory and of course the back end and the client. So, it is a cascading process. So, time is measured factor for sure, in the communication." (Khalid)

The time measure, in fact, is one of the golden triangle of project elements. Probably Khalid generalizes the timing issue in his comment thinking of project management culture.

To demonstrate the importance of providing enough information about the project progress, Khalid and Tarik explained, that they had had a couple of "dramatizing" experiences, like machines arriving to the customer's site although the customer had been waiting for an invitation to attend to a FAT in the factory. Those are extreme cases but demonstrate well the importance of timely and sufficient communication. As discussed in the literature review, misunderstandings and mistakes occur easily when task complexity is combined with virtuality (Marlow et al., 2017). However, the communication might have been accurate and understood as intended in both ends: There are many possible reasons why the described event could have happened, such as, forgetting to include the customer witnessed FAT to the project schedule in the information systems. In any case, more information about the progress of the project might have revealed the issues before they happened, as well as created trust.

Timo, on the other hand, is concerned about the lack of technical knowledge and competence to use it in LSUs. He says, that it makes it difficult to gain and pass critical project information.

> *"It's like a universal problem in my opinion that there [in LSUs] are a lot of people who don't quite internalize, that they ask for something, and they don't quite internalize the answer, that, they send it directly to the customer without any processing, so then also the possible further question or clarifying question, so they do not internalize that question and it comes directly to the factory." (Timo)*

Timo raises another issue related to information and timing. He is frustrated with certain LSU project managers who seem to be less active in getting the needed answers from their customers: He sees it creating unnecessary uncertainty.

> *[in certain countries] they are a bit passive in a way, that they don't go to squeeze the response from customer, but they are more like receiving, like, that, what the customer gives us, that we take, but if some issue is open, a bit like floating, so they don't go to push the customer that "Could you, please answer to this, this is missing", but it is hanged, that "we don't know", that, "let's do something". In these situation it often hits on the face, that, at some point the customer then wakes up and wants the opposite than what we have decided to do, and it would have been revealed four*

months ago if somebody would just have informed that, "with all respect Mr. client,
but this project is not proceeding before we get a response from you, right or left",
like a caricature, that "black or white", and because whenever we start guessing,
there is always a 50% chance that it will go wrong. " (Timo)

The LSU team suggested having regular teleconference meetings to share information and updates of the projects. They also said that they prefer oral conversation over emails in general in order to clarify issues. The comment of Khalid demonstrates well the limitations of virtual written communication (Daim et al., 2012; Marlow et al, 2017) that have been described in the literature review:

"I always prefer the call, the calls communication [over] mail communication,
because sometimes, you know when writing emails forward and backward and trying
to highlight what you mean and what you have understood from the other side, so
the easiest way is to pick up your phone and do it verbally. It leaves a lot of...
shortens a lot of routes here." (Khalid)

The preference for phone calls can be interpreted as a relational aspect, in addition to the possibility of clarifying issues easier. Timo mentioned good relationships in general being very important for people in this region. This theme was not possible to talk with the LSU team because of the short interview, but I also witnessed by myself an event in which the guests (FAT) from this region engaged in long conversations with a few people from their country, who they met in the case company by a coincidence.

Timo also values relationships. He sees, that it is easier to communicate with people who you know:

"I have realized that the more I see the sales unit guys face to face, the better I get along with them. " (Timo)

All in all, the data suggests that Africa region project management seem to face some issues that might have something to do with cultural differences and the way each party sees the world, as Du-Babcock (2018) and Suchan (2014) suggest. However, some disputes are likely to occur when people and organizations have different goals, as Ahola (2018) suggests.

Therefore, it seems to be important to form good relationships and communicate often to mitigate misunderstandings and increase clarity (Marlow et al., 2017). More frequent communication would surely also increase trust, as it can be interpreted from the quotes and from the literature (Butt et al. (2016).

4.1.2 Case America

Project description

The case project chosen from the America region was quite a challenging due to unclear needs of the customer in the beginning of the project. However, the PU PM team evaluated the issues not having been problematic since the collaboration and open communication between the PU PM team and LSU PM made the project to proceed well. The LSU PM reported having spent a lot of time with the customer clarifying its needs. The PU PM team also mentioned his efforts in solving the issues.

According to the PU PM, the customer's comments on the drawings come usually within a few weeks of releasing them, depending on the customer chain and the information flow in it. Many times, the purchases have been started when the customer comments and changes are received, which results in new component purchases. To avoid repurchasing, this project was made with the LT model, in which the customer chain is encouraged to accelerate the commendation of the drawings in order to get their acceptance of the design documents before the purchase phase is started.

The communication was handled mainly by emails. The PU project manager reported having sent a little bit more than 20 emails to the LSU PM within this project. She/he mentioned that it is a very small number thinking of the unclear issues at the beginning of the project. However, he also reported, that they had had a number of conversations by other means, such as teleconference.

The PU project management team reported of not having much conversation with the LSU after they had accepted the drawings and test plan for their motor(s). They reported that the project was still ongoing, and a customer witnessed FAT would be held within the following month, which will result in a few more emails when discussing the practicalities.

Communication in the America Region Projects

The PU project management team, named Emma and Matti, and the LSU project manager, named Alex, had worked together for a few years. Matti had noticed an improvement in Alex's project manager's skills within the last year. Alex, on the other hand, mentioned having pursued an official PM certificate (PMI training), which had complemented his business education by giving him many tools and techniques to solve project issues faster and more efficiently than before.

Alex is convinced, that he needs technical understanding to succeed in his work, while his actual value added is in customer communication. He appreciates the high technical competence the PU project management team has. Emma and Matti also appreciate technical competence in LSUs, and in fact, agree with the Africa region PU project manager, expecting more technical understanding in LSUs in general.

Relationship related issues were another theme in the interviews with both America region teams, although Emma and Matti did not mention relationships or relational communication. They highlighted the importance of working together on issues and communicating openly.

> *"Although there have been challenges, it [managing a project] has been a lot of easier because the counterpart has taken the issues in a rational way." (Matti)*

The way they talked about collaboration, gave an impression, that the teams collaborate well together. Emma and Matti seemed to relate relationships and collaboration to effectiveness. They mentioned also clarity being very important thing in their communication. Alex talked in a similar fashion. However, he clearly sees relationships valuable for other reasons as well: He sees relationships facilitating information flow and therefore, increasing clarity to the customer's needs:

> *"They [LSU project managers] might know the customer, they might know the individuals, and a lot of times if I see projects coming in and I know the PM, I already talk to them before I even, do anything else. ...and usually, they come up with a couple of items, so that helps me to see what is important to them... And then I present it to the factory accordingly, you know, saying, you know, this customer is really looking*

for... Because the more information I get to the factory, the better too, to help them understand what is going on." (Alex)

These different views for the meaning of relationships illustrate what Mason & Leek (2012) say about the many different tasks relationships can be used for. Alex talked also about trust, such as Daim et al. (2012) and Marlow (2017).

"I think it's a common understanding, of, kind of, what's going on, and I don't know, if it's, you know, obviously trust built up over the projects… …I think a lot of it is trust, I think, a lot of it is mutual respect and understanding of the person's strengths, basically." (Alex)

Both ends project managers reported, that they expect, that a project is progressing well if there is no communication regarding it. Yet, both sides also signaled, that a lack of information causes a feeling of uncertainty. However, they explained mutual trust and similar ways of handling issues helping in the times when there is less communication. The assumption about the project going well if there is no communication, signals to effective communication patterns, which have been demonstrated to create trust (Butt et al., 2016).

Alex sees also very important how things are said, and that the messages are tailored according to the audience.

"I have to kind of tailor my messaging to the type of individual, where, in a lot of cases they are more commercial, so, then I just talk commercial with them, and help their engineers tell them what they want." (Alex)

That demonstrates also socio-cultural awareness, which is also demonstrated in small details in some project emails together with a clear message: Some relational elements, such as greeting with the mother tongue of the other person, as suggested by Louhiala-Salminen & Kankaanranta (2011), can be seen in the emails of the example project from time to time. The emails also reveal that the LSU and PU have a good collaboration and clear messages.

To conclude, the America region does not seem to be having cultural issues in their communication. Being Western countries, their worldviews are supposedly closer to each

other than it is in the case of the Africa region. The biggest issues seem to be related to their professional cultures: The LSU is more concerned of commercial issues, while the PU is concerned of technical issues. Both appreciate open and direct communication, and it seems that they are having it.

4.1.3 Case Europe

Project description

This project was still ongoing. It was a two-part project, of which the first part was already delivered by the time of the interview, and the other part is close to being finished. The first part delivery was successful, although it required a vast amount of problem-solving. The customer's needs were not very clear at the beginning, and it required a lot of conversation and changes in the drawings. Another challenge was, that the customer wanted some technical solutions which were not familiar for the PU. The PU and LSU worked hard and in good collaboration. Both parties said, that the project went well after the issues were solved and that the second part will probably go smoother.

The PU project management team solved some issues also directly with the customer, while the LSU project manager was always included in the email conversations. The PU project engineer, who was mainly in charge of the project communication, reported having received about 50 emails from the LSU project manager, and about 10 emails from the customer. He calculated the total amount of emails regarding this project to be about 100.

Communication in the Europe Region Projects

The PU project team, named Pekka and Ari, had worked together only in two projects with the LSU project manager, named Daniel. Yet, one of the projects was canceled quite in the beginning. Therefore, the case project was basically the first one to be managed together. Ari was mainly handling the case project in the PU side after the project had been initiated by Pekka. Ari explained, that it was easy to get involved in it after the Pekka and Daniel had built a good *relationship with each other*. Ari and Daniel met each other face to face for the first time during this project, when meeting also the customer to talk about some project issues.

Ari reported having it been easier to communicate with the Daniel once they had met in person and discussed some technical issues, as well as having had some casual

conversations. Thus, relational communication created trust (Daim et al. 2012; Marlow, 2018) and helped to predict the behavior and thoughts of the other person. Similarly, Daniel, as well as most of the interviewees in the cases presented earlier, strongly emphasize the importance of relationship building:

> *"I try to have, I think it's because of me ... Subject of where I come from [another country than in which he works], culture, I always try to initiate a conversation... ..in this case a project that now for a good time I have a counterpart, that is a project manager there, I would like to start a relationship, instead of just send an email, "yes", or "no" ... Call, introduce myself "Hey, I'm [a name], we're going to work on a project in a good time" ... some relationship. That facilitates it..." (Daniel)*

There surfaced a cultural element in that comment. Otherwise none of the interviewees in this region paid much attention on cultural factors in their communication although, there were three cultures mixed: The PU country, the LSU country, and the LSU project manager's original home country. Probably the interviewees have been exposed enough to the somewhat unified European business culture, to assimilate it (Du-Babcock, 2018; Louhiala-Salminen & Kankaanranta, 2011).

Ari emphasized trust in his notions about the effects of relationships:

> *"There, [in FAT] we also create, create faces behind the text or behind the phone's voice. It's always, usually, a good opportunity, like, creating trust and facilitating future communication."* (Ari)

> *"Maybe if, like, you manage to create a kind of, a relationship, so, either with the sales unit or even with the end customer, then in a way those bad adversities will reinforce the trust, that if you, like, solve it together, I argue, that you can build trust that way too, so that even though it would be challenging, you can get over it.."* (Ari)

Both sides promoted the importance of knowing the audience and tailoring your message according to it. The emails between the Daniel, Ari, and Pekka seem to be quite short and frequent: Both sides have usually answered in the same or the next day. It seems, that many issues have been talked on the phone, teleconference, or chat and later confirmed by email.

The style of their emails is straight forward, without compliments. However, the tone is friendly, as in this email:

"Hi [name],

Just to be sure I don't forget to transfer the request: [customer] would like to receive the motors on-site the Friday 07.09.2018. Earlier delivery could represent an issue because of site's readiness." (Daniel)

Empathy and humanity are clearly present in some emails, like this response to a notification about missing parts in the customer site illustrates:

"I can imagine that identification of jacking oil parts is a mess." (Ari)

As it can be seen from the emails and what was evident in the interviews, both sides clearly value relational aspects in communication, but it should not override clarity in the information. That became especially clear when the informants described a colleague who communicates well:

"Clear, she/he doesn't, she/he can filter unnecessary [information] away from the customer [message]. Asks us only the essential things." (Ari)

They use quite often lists and images, clearly indicating the meaning of a question or explanation. Sometimes someone has sent some wrong information (e.g. a document) but has apologized it and sent the correct one instead. The informants also seem to be very well aware of that there is much more in understanding, than just a perfectly formed message, as the transmission view would suggest. They seek clarity by asking confirmation of the correct interpretation of their messages:

"Please confirm if I have understood correctly or something else is required?" (Ari)

They also value technical competence, just like the other example cases. These project management teams did not talk as much of technical aspects as the other regions, but obviously, they see technical competence as an essential asset. They seem to relate professional competence (technical and commercial knowledge etc.) with experience:

"You can see it clearly of some people, that they only press the "forward" button. So, of course, if you're new, you can't know. If you are experienced, so, with that experience, you can facilitate at least our work. I think, that most of the experienced people use it, or, like, that they also filter it [information], take just the essential thing." (Ari)

In addition to the clarity and relational communication, Daniel, just like the others in the other cases presented, hopes for faster responses from the PU:

"I understand that the factory is not sitting and waiting for that I ask questions that they can answer. They are doing other things and they need, need some time to process the things. But, no doubt, look for a way to minimize the time of processing in which they will answer me and help me. Because the factory is my technical support." (Daniel)

Similarly, to the others, he also appreciates confirmation of having received the email. He expresses clearly, that no answer creates uncertainty:

"I don't even need the answer yet, but I do need a confirmation that the factory is working on the answer. ... "If in 2-3 days I get 0 answers, I only have uncertainty and I don't know how to..." (Daniel)

The Europe region seems to be very similar to the America region since cultural matters were not found to be affecting this region either, although they might color the communication in some situations. This notion might be related the high-context and low-context culture theory, which Zakaria (2017) exploits. However, this region valued highly co-operation and relationships, just like the two other regions.

4.1.4 Case Asia

Project description

One of the motors had been required with more than 30 special components on the top of the standard design, which is an enormous amount. They had had also other special requirements, such as very tight physical dimensions. The order had been rejected by the

electrical and mechanical engineers of the PU to clarify further certain issues. Finally, the issues had seemed to be clear and the order had been accepted.

Soon after the first drawings, the customer had asked to get information of many details about their motors. However, the PU had not been able to provide the information in that early phase. PU design engineers had had to update the design drawings about twenty times due to misunderstandings or forgetting some details. The PU project engineer estimated a normal amount of revisions in challenging projects being approximately five. According to him, all the information had not flown to all stakeholders as supposed, which had increased the unclarities and the need for communication.

The PU project engineer joined the project in this phase. His first challenges were to negotiate what to put to the rating plate of the motors since the customer accused the PU having designed the motor 20% too powerful. After looking at the order specifications, talking with the designers, and the LSU project manager, she/he became to the conclusion, that the customer or the salesperson had not fully understood the technical details required. However, the conversation about this theme continued for months, in different levels of the organizations (LSU and PU).

The PU project manager, who was in charge of the project, changed. The change was not communicated well, resulting in direct emails for the previous project manager and frustration when not getting answers. The project manager of the LSU was involved until almost the end of the project, but there were a lot of other people involved in the case (the LSU project manager interviewed for this case has not been involved a long time, but she/he was chosen for the reason, that she/he is currently on a long-term assignment in Finland). The project manager in the PU changed another time while still revising the motor changes and trying to answer the questions and meet the other requirements of the customer. Nevertheless, the same project engineer continued handling the daily issues of the project. Some summer trainees handled also some of the communication.

After the motor had finally been successfully manufactured, the customer came to the FAT, in which occurred a few unfortunate issues. A wrong test field was booked accidentally and some of the tests had to be postponed. Luckily the customer was able to stay for the other date also. Yet, there was also some bad luck; Both motors had some small issues, that had

to be solved during and between the FATs. The customer wanted to witness also packing. There were a couple of minor issues, that were possible to be solved fast.

The customer wanted to see a lot of different certificates and other documents while on the site. Some of the documents had to be sent also after the motors had been delivered. Finally, despite all the difficulties, the project was executed successfully.

The project engineer in charge of the project reported of having received about 120 emails from the PU PM regarding this project. The total amount of emails with the PU PM he estimated being a double, about 240. He pointed out, that before she/he had joined the project, there had been some more emails.

Communication in the Asia Region Projects

The PU project management team, named Jesse and Ville, did not know the LSU project manager, named Chiyo very well during the case project. However, she has neither been alone responsible of the project. She had got involved in it in the later phases. However, after the case project had finished, she has been in a several months assignment in the PU. Chiyo was chosen to be interviewed since she has got recent and relevant experience in the project management in LSU, as well as in the PU. The reason she was sent from the LSU to the PU was to increase understanding of the different working environment and working habits between these units with the purpose of improving collaboration.

Similarly, as in the Africa region, cultural issues seem to be visible in the Asia region. Actually, they seem to be the main concern in the Asia region for both, the PU and the LSU. There seem to be fundamental differences in the values and ways of thinking between the PU and the LSUs in Asia, which affects the project communication. However, similarly as Du-Babcock (2018) and Suchan (2014) state, the type and degree of the issues seem to be varied, depending on the Asian country.

The customers in the example country are seemingly powerful and affect the daily routines of PU through the LSUs by their many requests; They tend to send a lot of emails about some details, expecting fast answers:

"In [the case country] quality criteria is quite high. And also, the customer always expects us to respond within one or two days. And the request amount, in terms of quantitativeness, is quite different. So, I think [the case country] customer, they send a lot of emails for minor questions, even though it is minor. And they request us to promptly reply. But here, for example in Finland, all people tend to reply not one by one, but try to summarize all the questions and tend to reply in a small amount of emails. So, like for example, if the customer sends 10 times emails for different questions, probably people in Finland try to reorganize the requests and reply in one or two emails." (Chiyo)

The PU project manager described the same issues with more details:

"Every single thing has to be as clear as it can be. If someone, say, a European customer, it is enough to say, that we have this problem, we'll fix it and have a timetable for it. Maybe that's ok, that's fine. But if you send it to [the case country], to a [case country] customer, it's not enough. But, it must be that "How are you going to fix it?". Is there any instructions/pictures/evidence for the repair process and whether the tools, that are used for the repairing, have all the certificates and calibration certificates?" The timetable must be day to the day. If we are ahead of the schedule, it is a bad thing, if we are late, it's a bad thing." (Jesse)

Both, the LSU and the PU project management team reported the case country to be concerned about quality issues and to be very detail oriented, which sometimes complicates the things seemingly unnecessarily. Also, as the PU project management team reported, the tendency of the LSUs in this region of sending many emails makes it difficult to keep track of all the questions and requests and handle them accordingly. Therefore, the PU project management team sees clarity and exactness to be crucial in their communication.

The Asia region, just like all the other regions, suffers from time and information related issues, such as late responses and notifications. Very similarly to the other regions, Chiyo explains these issues causing uncertainty:

"...if it takes more time, just reply, that "We received, and we checked your requirement and we are working on it. That is enough. And, without receiving any email we are wondering whether PM here has taken into account our request, or not" (Chiyo)

The biggest concern of the PU seemed to be prioritization of the customer requests. They argue, that most of the project managers in the case country just try to push the request of their customers through with urgency. The PU would like the LSU taking a more active role in developing, prioritizing, and communicating the customer's needs:

"[a name of a LSU project manager], however, can somehow prioritize and her/his own projects and their content, so, I wish the same from the whole LSU. As I said, it's going to be developed to that direction, that there would be a review, for example, once a week "What do you really want us to get done by the end of next week? If you all shout, that right now, and this, and everything must be, it's just not realism. Then, if we were here the same amount [of people], as they are there, then maybe, but not with these resources, it's just not possible. " (Jesse)

When contrasting the Africa region project manager's concerns about LSU project managers that do not pull the needed answers from their customers, with the Asia region that pushes the requests to the PU, we can see similarities: The customers use their power in both regions/countries, and the LSU project managers try to keep them satisfied in the way that suits that culture. In both non-Western cases it sounds, like there were strong power relations between the customers and the LSUs. That migh also be related to high-context cultures in which avoiding confrontation is important (Zakaria, 2017). We seem to talk about deep cultural values, that cannot be easily overcome (Du-Babcock, 2018; Suchan, 2014). The LSU project manager cannot change the situation either, but only facilitate the communication between the parties.

In contrast to the wishes of the PU project management team of clearer communication, the Asian way of interacting with customers is not that direct, which might, despite the LSU project managers' efforts, affect their communication with the PU. Rather, they highly value relationships and harmony, typically for a high-context culture (Zakaria, 2017):

"In Asian society, things cannot be done without a relationship. We cannot be really too practical, or too logical." (Chiyo)

Both, the LSU and the PU project management team see, that knowing and understanding the situation and the way of thinking of the other society in some level would help to manage better the differences in the habits and expectations. Chiyo revealed, that while she has been in her assignment in the PU, she has understood more of the logic of Finnish people and their way of working, as well as how small the resources are in the PU there compared to her home office:

"Now I am here, and I understand how project managers, how busy they are. ...sometimes it is hard to reach a project manager here. Now I understand how busy they are. It can be, it can be disturbing, when random people try to reach PM here. It can be sometimes disturbing if I receive a phone call or a skype contact from LSU. It's kind of difficult to balance." (Chiyo)

This case demonstrates well the high complexity and uncertainty of project manager's work, that has been mentioned often in the project management literature (Daniel & Daniel, 2017). There were many unfortunate events, which the project management had to solve, as well as people and culture issues. Communication in this region seem to be affected by cultural differences more than in other regions. However, getting to know the other culture and the person who with you communicate, might alleviate the situation. At the end, people might not be very much culturally charged when they speak (business) English (Du-Babcock, 2018; Louhiala-Salminen & Kankaanranta, 2011.

All in all, there are clearly some cultural differences between the countries and regions, especially between Western and non-Western countries, which demonstrates what Du-Babcock (2018), Suchan (2014) and Zakaria (2017) said about the effects of the communicators' worldviews to the communication situation. However, in many aspects

cultural differences seem not to be visible, or they do not affect communication or other project management activities negatively. In addition, there were issues, that were very similar in each region. Therefore, the summary of the cases, that is conducted in the next section, will highlight issues that are mainly independent of cultural background.

4.2 Summary of the cases: Managing projects by communication

This sub-section summarizes the main findings of the research. Project manager's communicative tasks are presented first and after that the central issues affect project success in daily communication. The two interviews with the project management teams handling different European area projects, which were not tied to the example projects, have been analyzed comparing the results with the case project interviews, and included to this summary. From this section on, when talking about a project manager, it refers to all people managing projects, regardless their specific titles.

4.2.1 Knowledge management and relational communication

Based on the interviews, observation, and documentary data, the case company project manages seem to be working with very typical project management tasks since most of them appear to be related to transferring and handling knowledge (Ziek & Anderson, 2015; Zulch, 2014). However, as seen in the cases, there are some tasks that can be seen mainly as relational. Including the LSUs to the research enabled looking at the phenomenon from different angles, revealing the explicit need for relational communication, which has been studied largely in business communication, and less in project management. Table 3 presents PU project manager's communicative tasks dividing them to knowledge management and relational communication.

Table 3. PU project manager's communicative tasks.

Knowledge Management (Task-oriented Communication)	Relational Communication
Acquiring knowledge • Asking technical specifications • Asking customer's preferences • Looking for technical solutions (with PU experts) • Asking designing/manufacturing etc. progress or schedule	Hosting FATs, collaborating • Creating and maintaining relationships • Building and maintaining trust • Meeting and exceeding customers' expectations
Handling and producing knowledge • Revising and modifying documents • Booking (manufacturing slot, FAT etc.) • Negotiating and re-negotiating technical and commercial issues	
Sharing knowledge • Providing documents • Providing notifications (changes, instructions etc.) • Answering technical and commercial questions	

As the table 3 presents, a PU project manager acquires, handles, produces, and shares knowledge. A big part of a project manager's day goes clarifying issues, either with the LSU project manager, or the PU experts. As the cases reveal she/he does not need to know everything by her/himself, but she/he must understand the information so, that she/he is able to process it and provide it where it is needed, and in the form that it is understandable and relevant for the other party.

There are fewer tasks clearly related to relational communication. Someone might argue, that hosting a FAT is not a relational task since it is all about technical issues. However, as I have experienced, and some project managers also described it, it is spending time with the customer while the machine is being tested. Of course, there are technical issues, that must be discussed, but there is usually plenty of room for casual conversations. Therefore, a FAT is clearly a great chance for all parties (PU, LSU, customer) to see the factory, the faces behind the written lines, and to get to understand the other people and their cultures. These aspects can be related to broader themes, such as trust and relationships, which are inherently important in collaboration, and not less in the context of virtual teams, in which they might not be built as easily as in local teams (Daim et al., 2012; Marlow, 2017).

It is evident, that communication has a constitutive role in project management. All in all, project managers' work can be seen to be all about dealing with people: They are the nodal point, in which all the information and people meet. As people are not machines that function according physics' laws, they obviously need to be approached with a different mindset, one that takes into account social and cultural aspects. So, it is obvious that project managers need relational communication. Not for making friends but facilitating the information flow and reducing uncertainty (Daim et al., 2012; Marlon et al., 2017).

The interviewees talked about their work in very similar fashion than Morris (1994) and Pinto & Winch (2016) in their argument that a project manager needs a wide set of capabilities to succeed in the rapidly changing commercial environment: Technical competence alone is not enough. Interestingly, the LSU project managers clearly consider their work as more commercial than technical. The PU project managers, on the other hand, consider their work to be more technical than commercial.

4.2.2 Central issues affecting project success

Technical, yet commercial nature of the case company project managers' work seems to relate to the topics risen in the interviews. There were four themes, that got a lot of attention: clarity, timely and sufficient information, technical knowledge, and relationships. These themes seem to be linked to uncertainty.

Clarity and technical knowledge are evident needs for project managers dealing in complex technical projects, as it has been shown in many earlier studies (Butt et al., 2016; Pinto & Winch, 2016). Technical knowledge seems to be in connection with clarity since the PU project managers expressed their frustration with the low level of technical understanding in the LSUs in general. The informants claimed, that some LSU project managers, especially new ones, do not process technical information enough, but mostly transfer it from the customer to the PU and the other way around. The PU project managers said, that it increases their workload and misunderstandings.

Timing and information issues are also important in projects (Littlejohn & Jabusch, 1982; Ziek & Anderson, 2015), which can be understood, for example, by thinking the elements

of the golden triangle of projects: time, scope, and budget. Response time and the amount of information provided in projects seem to be largely related to controlling of uncertainty: The LSU project managers described the situations when they did not get answers or updates from the PU, as being doubting what is happening, and not knowing what to say for the customer.

Need for relationships in both sides became evident in various ways; In addition to the word "relationship", the interviewees talked about collaboration, trust, and knowing and understanding the other person. It seems, that the desire and benefits of building relationships are universal, although the appreciation of relationships is more apparent in some cultures than in others. One informant (Chiyo) even argued, that in her country there is no business, if there is no relationship: Relationships are an effective way to increase trust, and therefore, control uncertainty to some degree (Zakaria, 2017). As trust is demonstrated to be an important issue in project management and in virtual teams, it is worth to be noticed. Daim et al., (2012) and Marlow et al., (2017) suggest, that trust is created in informal communication, which makes relationships extremely important. Trust and certainty seem to go hand, uncertainty being a broader term.

In general, the LSU project managers seem to be more aware of the importance of relationships, than the PU project managers. The LSU project managers expressed their worries in project communication through customers and customer relationships. Although they handle technical projects, their commercial mindset is seemingly strong: They are notably customer centered. That is affected undoubtedly by the fact, that they are close to the customer, but surely also by the sales-oriented units' organizational cultures. The front-end activities, in which commercial knowledge is clearly needed (Edkins et al., 2013; Morris, 1994), are surely highlighted in their organizations.

All in all, the data of this research suggests, that clarity, technical knowledge, timely and sufficient information, and relationships together answer to a need for reducing uncertainty in projects. These aspects can be seen as success factors of communication in the customer interface of projects (fig.4). However, it is worth to notice, that the success factors founded in this research is no means intended to be an exhaustive list, but to reflect the project manager's concerns regarding their daily communication in the customer interface. The combination might be different in another point of time, or in another organization. Yet,

these issues are familiar from many studies in project management and virtual communication. This combination of factors also indicates the need of adopting constitutive role of communication in project management: The transmission view does not explain relational communication very well.
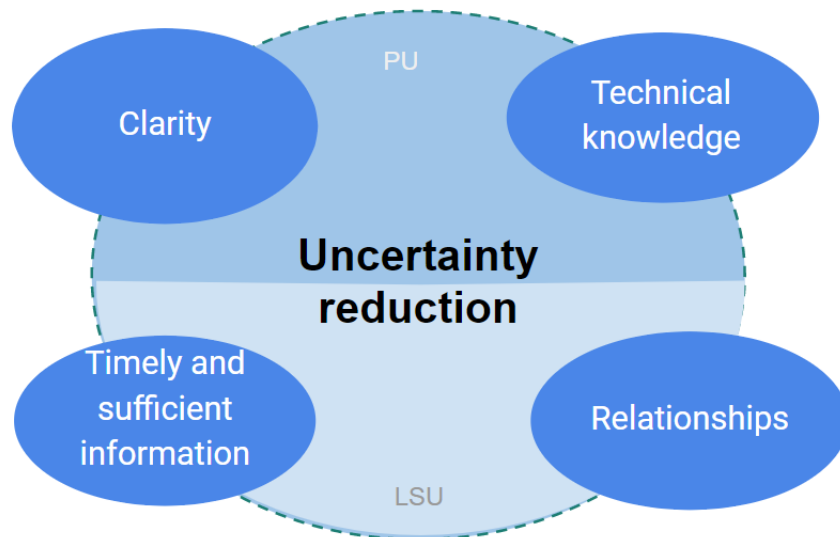

Figure 3. Success factors in the customer interface of projects.

As discussed earlier, the emphasis in the concerns of the issues were different in the LSUs (Timely and sufficient information, relationships) than in the PU (clarity, technical knowledge). However, both sides were aware of all these factors and thus, all of them seem to be important. Therefore, the findings suggest that project managers in customer interface should aim to address all these factors in their communication to enhance project success. However, since the issues are very different from each other, it might not be obvious how they can be taken into account in project communication.

To understand how a project manager can enhance project success by communication, these factors are discussed in the next section linking them to communicative competence.

4.3 Project manager's communicative competence

Having explored the project manager's complex working environment and daily challenges we got some answers to a question of *what* issues a project manager should take into account when communicating in the customer interface. The findings suggest, that project managers

seek accuracy and that they intend to reduce uncertainty in many ways. However, the question *how* to communicate in a way, that these expectations become fulfilled is still to be answered. This chapter discusses the issues linking the success factors found in this research to four communicative competence areas, technical, discourse, socio-linguistic, and strategic competence to understand how a project manager can affect project success by communication when dealing with customers/sales organizations.

The findings of this research and literature (Hallahan et al., 2007; Ziek & Anderson, 2015) indicate, that there is needed more than transferring information in the projects. The findings suggest, that a project manager does not only share knowledge, but also acquires, handles, and produces it. Also, the way how the information is transferred, matters. It is important especially in a cross-cultural environment (Zakaria, 2017). However, the simple ultimate goal of the project manager's work is to deliver the agreed product or service on time, in scope, and within a certain budget. To manage projects successfully a project manager works in collaboration with a diverse group of people. Therefore, communication has clearly constitutive role in project management. Consequently, it is evident, that a project manager needs a wide set of communicative competences.

To bring the understanding of communication in project management closer to the contemporary view of communication, it is worth to emphasize the interactivity and context dependence of communication (Hallahan et al., 2007; Ziek & Anderson, 2015). Thus, both, the sender's, and the receiver's interpretations of the issue, that are affected by their worldview, knowledge, and situational factors in each communication situation, have to be considered (Du-Babcock, 2018; Hallahan et al., 2007; Suchan, 2014); A project manager must be capable of altering her/his communication to suit each situation.

The communicative competence model developed for project management (see chapter 2) helps to understand different factors affecting communication situations. The communicative competence areas can be also used as a check-list in uncertain situations. Each of the communicative competence areas and their relation to the success factors in project manager's work in customer interface are discussed next.

4.3.1 Technical competence

When discussing the issues a project manager faces in her/his communication, technical knowledge or competence surfaced often in the interviews. In the earlier section, those terms were grouped under technical knowledge emphasizing the theoretical knowledge, while here we talk more about competence in applying the technical knowledge. Technical competence is an evident need for a project manager, as she/he needs to acquire, handle, produce, and provide technical information (Pinto & Winch, 2016). She/he cannot just forward all information that she/he has got from one party, but she/he has to understand it and how it is related to the larger entity to be able to coordinate and direct the project accordingly.

Yet, based on the interviews in the case company, it seems more important to be able to communicate well than to have a deep technical knowledge. Given the above, it seems important to have a general technical understanding, such as interpreting technical drawings, and an attitude of learning more along the way. Technical competence appears to be a skill, which can be, and is even expected to be developed along the time. Therefore, the "iceberg model" of communicative competence developed for project management (Figure 2) seems correct: Technical competence is the most visible part, and surely important, but it must be supported by the other competencies which might not be so obvious.

Yet, the interviews and observation in the case company revealed, that the more technical competence the project manager has, the more she/he can add value and enhance the process by her/himself. By having both, technical knowledge, and technical competence, a project manager can exploit them to new issues, such as spotting inaccuracies in the technical scope of a special product. As a result, technical knowledge, and the ability to use it can sometimes save a significant amount of time and money.

Technical competence can be used also to address the other success issues, clarity, timely and sufficient information, and relationships. A technically competent project manager can be very effective in providing and acquiring accurate and clear information by being able to differentiate essential information from secondary one. What it comes to timely and sufficient information, a technically competent project manager understands the process/product details well enough to be able to estimate the information needs in each moment.

Transmission view of communication suggests, that the likelihood to be understood correctly, when providing clear and accurate information, is high. However, it has to be kept in mind, that especially when communicating virtually, all of the details in body language and vocal tone, which might reveal e.g. hesitation or need for further explanations, might not be present or captured (Daim et al., 2012; Marlow et al, 2017), or they can be interpreted wrong (Du-Babcock, 2018; Suchan, 2014). Therefore, a message clarity depends also on the other communicative competences the person has, as well as of the recipient's understanding and circumstances (Du-Babcock, 2018; Suchan, 2014). Even differences in the habitual way of presenting information might hinder the message effectiveness.

As mentioned earlier, knowing the other person and having good relationships may facilitate communication and problem solving. Technical competence could be used also for creating relationships: While solving a challenge together, people create bonds (Mason & Leek, 2012) and increase trust, especially if they leave space for some informal communication (Butt, et al., 2016). Also, using her/his competence to help another person to understand a difficult issue might strengthen a relationship.

4.3.2 Discourse competence

Discourse competence is one of the cornerstones in the model of communicative competence in project management. It is the ability to form messages that make sense and convey the intended meaning, thus, are clear and informative. However, despite the clarity and informativeness of the message, it might be interpreted differently in the other end, as it has become evident from literature and from this research (see Du-Babcock, 2018; Marlow et al. (2017). Therefore, a communicator can never be sure, that her/his message will be understood as she/he intends (Hallahan et al., 2007). However, if the message is not formed well, the odds, that it will be unclear or misunderstood, are big. Therefore, discourse competence is essential for a project manager, who is seeking clarity. Technical competence becomes helpful in the project manager's work only if she/he is able to communicate it in a meaningful way.

The findings in this research support the view of Morris (1994) and Pinto & Winch (2016), in that a project manager's working environment is complex and rapidly changing

commercial environment, with many different communicative tasks. Therefore, it is easy to agree with them also in, that technical knowledge alone is not enough to be a successful project manager. Instead, a combination of technical knowledge and discourse competence can be powerful. A technically oriented person, who also possesses a high discourse competence, can explain complicated issues in a logical way, providing necessary background information and a suitable amount of details to enhance understanding. On the contrary, a person who lacks discourse competence, might provide the same information in a way, that it does not make sense for the recipient, regardless of her/his knowledge of the subject: e.g. the facts might be thrown in a random order, or linking words and sentences which might enhance understanding of the relationships of the issues, might be omitted.

As a result, discourse competence responds to the need of clarity. Clearly structured and well focused information surely enhances understanding. Competence of forming clear messages is especially important in written (email) communication, as suggested by various researchers (Chiu et al., 2013; Daim et al., 2012; Marlow et al., 2017) since misunderstandings are more likely to occur when nonverbal cues are missing. However, Chiu (2013) makes an important point saying, that using emoticons functions as relational communication. That can be extended to an assumption, that emoticons or other visual elements might compensate partially the lack of nonverbal cues, and therefore, increase understanding of the intentions of the message sender. To summarize, visual elements, with skillfully organized and connected words and sentences, can make a message very informative and powerful.

The discourse competence can be exploited also in situations in which unofficial conversation is possible and even expected, such as the FAT meetings of the case company. A project manager, with a high discourse competence is in a good position of making the guests to be comfortable and well informed. As Daim et al. (2012) and Marlow, (2018) suggest, also relationships and trust are built in informal situations. The relationships in turn, can be made use, for example in information sharing and collaboration (Mason & Leek, 2012), which are essential in project coordination.

Ziek & Anderson's (2015) notion, project management can be seen through a dialogue which constructs and controls the desired outcome (e.g. a product that will be delivered) suggests discourse competence to be actually the most important competence of a project manager.

Nevertheless, Littlejohn & Jabusch (1982) argue in their classical work, that communication skills alone are not enough, but process understanding and interpersonal sensitivity among other features are needed. Hence, socio-linguistic competence is needed to understand when and how communication is appropriate to be realized.

4.3.3 Socio-linguistic competence

As mentioned in the previous section, socio-linguistic competence is essential in order to be able to consider "the correct" time, place and style to communicate. The correctness depends on the social situation and the cultural environment in which the communication happens, referring to the context-dependent socially accepted rules (Louhiala-Salminen & Kankaanranta, 2011).

Having said that, the socially accepted rules are not always clear, which makes communication difficult to master: You have to be sensitive to the environment to be able to choose the best way to communicate (Louhiala-Salminen & Kankaanranta, 2011) in each situation. This seems important notion especially in international situations. Similarly to the findings of Du-Babcock (2018) and Suchan (2014), it was notable in this study, that there were variations in the behavior of people, not only in region level, but also in country level: The LSU project managers, who obviously have been exposed to various cultures and learned to adjust their behavior, seem to behave in a neutral way. On the other hand, cultural traits were notable in some situations, when meeting the end customers.

Preferred timing and amount of information might also be reflected by culture, as some of the project managers suggested. However, there were also clear indications to functional needs and uncertainty reduction when talking about the speed of responding to questions or the amount of progress reports that were expected to be received by the project managers in the case company. As a result, it seems to be rather a professional or organizational issue. Socio-cultural awareness is beneficial also when thinking of sub-cultures.

Socio-linguistic competence is seemingly related with audience orientation, which surfaced in some interviews: As one of the LSU project managers (Alex) said, he tailors his messages depending on whether he is addressing a commercial or a technical person. As to illustrate, a project manager with high socio-linguistic competence might use different words when

describing a technical problem for an electrical engineer than for a salesperson, depending on the recipient's competence and interest in the subject. In addition, a person with a deep technical knowledge and a high socio-linguistic competence might also find situations in which it is not correct to talk about technical issues at all.

Many interviewees in this study indicated, that building relationships with people with who they collaborate continuously, reduces uncertainty in communication situations since knowing the other person helps them to predict how she/he will react to a certain message. Furthermore, they said, that one can choose her/his communication style accordingly, which enhances mutual understanding and trust. The interviewees strongly related media-rich communication mediums to relationship building. It makes sense since the more nonverbal cues are transmitted, the greater the possibilities to give more or adjusted information in one message, as can be understood from the literature (Mason & Leek, 2012; Chiu et al., 2013; Marlow et al., 2017). However, the socio-linguistic competence is needed to decide how and when to use and not use certain cues successfully.

Some project managers argued also media rich mediums increasing clarity. This could be also interpreted through understanding of the message better due to nonverbal cues (Chiu et al., 2013; Marlow et al., 2017) together with socio-linguistic competence, which allows to send and interpret those cues. Yet, one has to acknowledge cultural differences, not only in behavior and language use, but also in nonverbal communication (Du-Babcock, 2018; Suchan, 2014).

As we have seen, the socio-linguistic competence together with the other competence areas is very powerful. However, people vary in the areas in which they are more competent (Littlejohn & Jabusch, 1982). Moreover, the effects of the receiver's competence and the situational factors should not be forgotten. Therefore, the strategic competence becomes necessary: It complements the other competence areas and helps coping in new situations

4.3.4 Strategic competence

Strategic competence helps to cope with difficult and unfamiliar situations using different verbal and nonverbal tactics, such as asking the other person to repeat or paraphrase her/his

message to make sure that she/he has understood it correctly. The request can be done by several means, such as facial expressions, murmurs, or verbalizing the request. In other words, strategic competence triggers creativity where knowledge or skills are missing, or not wanted to be used.

Strategic competence seems to be a very important skill for a project manager, who works with complex issues in a changing environment (Cova, 2005); The findings in this study suggest, that there are continuously issues, that she/he is not very familiar with, and she/he must seek help from other people. To be able to gain enough information from one person in order to be able to explain it to another person (e.g. from LSU to the PU engineering) in a meaningful way, requires different tactics to be used: The person can, for example, increase clarity by using a metaphor to describe something, that she/he does not have words for, or remain silent to encourage the other person to talk more.

Strategic communication tactics appear to be needed especially in multicultural environments, in which people have different levels of language skills, and their ways of using it vary, as Du-Babcock (2018) and Suchan (2014) point out. A communication break can be caused by a lack of language or discourse competence either in the sender's, or the recipient's end, or simply that the receiver has not understood the message the same way as the sender has intended. Sometimes it might be also a lack of socio-linguistic competence: The sender has expressed her/himself in a way, that is perfectly understandable in her/his society, but when the message reaches the receiver in another cultural background, it might not seem to make any sense (Du-Babcock, 2018).

As suggested by Ziek & Anderson (2015), communication can be used to control, influence, and frame projects. Thus, in addition to the fore-mentioned reactive examples, a strategically competent project manager may use different tactics proactively to enhance the effectiveness of communication. For example, technical knowledge can be used strategically: By including or excluding certain details (which interests the recipient), one solution can be framed to look better than another one. Strategic competence might be used also to help acquiring technical knowledge for later needs by asking explanations/background information for issues that occur in projects. What comes to timely and sufficient information, a strategically competent project manager may provide project information to ensure a smooth flow of project/project communication, even if not requested. Relationship

building, on the other hand, can be enhanced, for example, by including relational communication to the daily task-oriented messages, for example, by using a media-rich communication medium, even if the issue would not require a live conversation.

Strategic competence is evidently an essential need for a project manager, who manages complex projects in uncertain environment. However, most of the strategies and tactics need the other communicative competences to be realized. Consider a project manager, who has no discourse competence: she/he is not able to acquire or share information that she/he needs to process verbally. On the other hand, a project manager in a global environment, that has no sensitivity for cultural and situational factors, might harm the customer relationships. And finally, a technically incompetent person requires a vast amount of time (her/his own, or of other people) to handle any technical issue she/he faces. Therefore, it is evident, that a mixture of all the competences is needed to enhance project success, and the more of each, the better.

As Ziek & Anderson (2015) point out, communication is a skill that can be developed. Therefore, a project manager should ensure competitiveness in all the communicative competences to enhance project success. Moreover, this section demonstrates, that the communicative competences can be used to tackle the success factors in communication in the customer interface, which can lead to improved project success.

4.4 Discussion

The data reveals, that project managers seem to be well aware of communication being a central part of their work. The way they talk about communication gives somewhat dual impression about their thoughts of the role of communication in their work. On one hand, they seem to see communication constituting any event realized in the projects. On the other hand, similarly to Ziek and Anderson's (2015) notion about the general trend, the case company project managers talk about communication as a tool. Mixing the two views (constitutive and transmission view) is seemingly caused by the general assumptions in the field and in project management literature, that concentrates on task-oriented communication (Andersen, 2016), which is combined by the case company project managers' own notions about the wide variety of technical, commercial, as well, as relational communication issues characterizing their work. Evidently, the project managers in the case company have sensed

the role of communication to be more than just providing information, but they might not be aware of alternative ways of seeing communication.

Moreover, the duality in the views of seeing communication might be affected also by the fact, that a project manager's work consists largely of document handling and other knowledge management (or task-oriented communication), which is often looked through information transfer view (Andersen, 2016; Morris, 1994); As a result, it appears that relational communication is seen as separated form of communication among the case company project managers. Alternatively, knowledge management could be considered as the main focus of a project manager, while relational communication would be an integrated part of task related communication, that supports and facilitates it: Sometimes occurring separately, sometimes intertwined with task-oriented communication.

The focus on the customer interface highlights the necessity of a multi-angle view for communication. The differences in the focus areas in the PU and LSU (customer needs vs project execution) demonstrate, that the customer interface is a special area in which a project manager needs a variety of competences to be able to initiate and manage the project successfully. Similarly, to Edkins et al. (2013) notions, this research demonstrated that in addition to technical skills, there are needed commercial and social skills. As Edkins et al. (2013) and Morris (1994) point out, the front-end phase is what defines the project success. That became evident also in this research through the project descriptions.

The literature (Butt et al. 2016), as well as this research findings show, that uncertainty is a common element in project management. It might not be possible, nor meaningful to eliminate entirely since it comes from many different sources, such as unclarities in the scope, or delays in the supplier schedules. Therefore, it should be controlled as much as possible. In the case company, uncertainty originates largely from the limitations of transmitting explicit knowledge of the end customer's needs to the manufacturer through a chain of intermediaries (a customer chain, sales, project management, production). On the other hand, uncertainty seem to be increased during the project execution due to inefficient communication patterns (Butt et al. 2016).

Cultural ways of seeing the world and doing things affect projects to some degree. However, uncertainty, when lacking information seem to be universal; The findings of this research

highlight the importance of giving enough and timely information (also Marlow et al., 2017). Since situations change and there is often rush, a project manager must prioritize her/his work. Many times, the project manager prioritizes to the project execution. However, the customer expects to be taken care of, as well. These two different aspects are sometimes difficult to be balanced. However, the higher her/his socio-linguistic competence is, the better she/he can predict the consequences, and do informed choices.

Du-Babcock (2018) and Louhiala-Salminen & Kankaanranta (2011) have demonstrated, that cultural issues are notable in global business context, but not as excessively as in other contexts. However, the way how issues are communicated, especially in the beginning of a new relationship, affects the communication flow and understanding (Zakaria, 2017). It entails, that a project manager benefits of a high socio-linguistic competence when interpreting different virtual and face-to-face communication situations. Strategic competence, on the other hand, supports in cultural and other situations which are not very clear.

However, the findings in this study demonstrate, a project manager could not succeed in her/his work without a technical and discourse competences since her/his work is communicating technical information to get products manufactured and delivered to the customer in a way that both parties are satisfied. Therefore, a project manager should develop or maintain her/his technical and discourse competences in a good level to be able to manage projects. Yet, the other competence areas, strategic competence and socio-linguistic competence can make her/him excellent communicator and therefore, to enhance project success. Moreover, it seems, that by exploiting the communicative competences to target the success factors, clarity, timely and sufficient information, technical knowledge, and relationships in her/his daily communication, she/he can optimize the project communication.

As there seem to be different, even competing factors for successful communication in customer interface of projects, consideration of the team's and individual's values, and competences might be beneficial. Yet, creating certain routines, based on team values, success factors, and competence areas, might be beneficial for realizing and exploiting the results of the new understanding of the communication needs in project management. Creating effective regular communication routines seem to increase also clarity and trust (Marlow et al., 2017; Butt et al., 2016). Trust is an important element in virtual

communication, but it is not very easily created in task oriented written communication in which the nonverbal cues are not present (Daim et al. 2012; Marlow, 2018). Therefore, relational communication plays an important role in it (Daim et al. (2012) and Marlow et al. (2017).

Thus, by complementing regular task-oriented communication patterns with relational aspects, a project manager can effectively create trust and enhance project success. Although researchers have not found a consensus of what is a success in project management, and how it is obtained, communication has been mentioned often (Ziek, 2015). Therefore, we can draw a conclusion, that communicative competence is an important asset in controlling projects. The importance of communicative competence becomes visible especially in the customer interface.

5 CONCLUSION

This chapter summarizes the research, presenting also managerial implications, as well as limitations of this research and suggestions for future research directions.

5.1 Summary of the research

This research aims at increasing understanding of project manager's communication in the customer interface of projects. Project management literature reveals, that communication is an extremely important competence area and success factor of project management (Ziek & Anderson, 2015). Yet, it has been shown mostly through transmission view, which is limited basically to the recipient's ability to convey an intended meaning (Chiu, 2013; Daim et al., 2012; Louhiala-Salminen & Kankaanranta, 2011; Marlow et al., 2017). However, as demonstrated in the literature and in this research, communication in the customer interface of complex projects is constitutive by its nature and affected by situational and human factors (Andersen, 2016; Jonasson & Lauring (2012); Ziek & Anderson, 2015).

This research explored the social side of communication in the customer interface of projects attempting to answer to the following questions:

Research question 1: *What are the success factors when communicating in the customer interface in a global technical environment?*

Research question 2: *How a project manager can enhance project success by communication when operating in the customer interface?*

Sub-question 1: *What are the daily communicative tasks of a project manager in the customer interface in a global technical environment?*

The framework for this research consists of two project management communication and business communication. Project management literature was reviewed to see how the profession and working environment is described in the literature, and what success in project management means. Business communication was reviewed to get more understand about the working environment of globally oriented project management and the challenges

they face in their daily communication. Communicative competence was also reviewed since it was attempted to be used in the analysis of the empirical research.

The empirical part of this research was conducted as a qualitative case study in a PU of a global manufacturing company. The data collection was done in triangulation. It consists of interviews, observation and documentary data regarding project managers communication in the customer interface in the PU complemented by interviews with LSU project managers from Africa, America, Asia, and Europe.

The findings of the empirical study followed the literature showing that the complex global virtual business environment affects project communication in many ways (Chiu, 2013; Daim et al., 2012; Marlow et al., 2017, Zakaria, 2017). The concerns the informants brought up in the interviews, were somewhat similar in all geographical regions, that were analyzed: They seem to be seeking uncertainty reduction by clarity, timely and sufficient information, technical knowledge, and relationships. These can be thought as success factors in project management in a global context.

The findings suggest also, that a project manager can address each of the success factors by consciously applying the four communicative competence areas, technical competence, discourse competence, socio-linguistic competence, and strategic competence, that were suggested for project management. Littlejohn & Jabusch (1982) suggest, that people vary in their competence areas. As a result, it might be, that a project manager has almost ignored a certain area and, therefore would benefit of a tool for consciously considering her/his communication efforts regarding the success areas. In addition, creating certain routines around the competence areas might facilitate communication in various ways, such as enhancing trust and reducing misunderstandings (Butt et al., 2016; Marlow et al., 2017).

This research contributes to earlier research on project management in various ways. It increases the understanding of the social side of communication in project management, that Ziek & Anderson (2015) have asked for, naturally taking a stand in constitutive view, unlike most of the research in project management. In addition, as the focus of this study is in the customer interface, front-end phase, which has not been studied much (Edkins et al. 2013; Morris, 1994), is a part of this study.

5.2 Managerial implications

In addition to the contributions to the scientific literature, this study can be exploited also directly in organizations which want to develop or evaluate the communicative competence of their project managers.

This research suggests, that there are four success factors that need to be addressed when communicating in the customer interface: timely and sufficient information, clarity, relationships, and technical knowledge. They appear to be universal tactics to control unnecessary uncertainty. This research indicates, that each of the success factors can be addressed through one or more communicative competence areas, which are clarity, timely and sufficient information, technical competence, and relationships.

As stated by Marlow et al. (2017), effective communication patterns reduce misunderstandings and mistakes. Moreover, Zakaria (2017) suggests, that people often work with people from multiple cultural backgrounds, which makes them to mix and match their communication styles depending on personal and task-related factors. That suggests, that project success might be enhanced by developing universal communication routines around the success factors and communicative competence areas that are studied in this research, regardless of the region. Since communication, as well as project management are complex areas of study and very context dependent (Louhiala-Salminen & Kankaanranta, 2011), it is not meaningful to attempt to find a single truth of how a project manager should communicate to enhance project success. Instead, increasing project managers' understanding of their communicative competences by analyzing their communication through the success factors and the competence areas, is likely to help them to apply their skills also in different situations. The table in appendix 2 summarizes the findings of this research giving some examples of manifestations of each communicative competence areas addressing each of the success factors.

5.3 Limitations of the research and further research directions

This research focuses on project manager's communication in the customer interface, which makes this research to stand out of the common settings of researching project network in general. Therefore, leadership aspects have considered not to be important to be included.

On the other hand, negotiation and conflict solving, as parts of leadership, would have been relevant. However, they have been excluded since they are not part of the basic environment of project management. Neither is sales in the interest of this study since the customer side contact person tends to be technically oriented.

A limitation of this study is, that only the basic communication between the PU and LSU has been studied. This theme could be studied further by including communication with internal stakeholders, such as manufacturing, engineering, and purchase. It would be also interesting to continue the research by investigating the distribution of different communicative competence areas among project managers. An interesting twist could be also to investigate how project managers alternate their communication styles, depending on who they communicate with.

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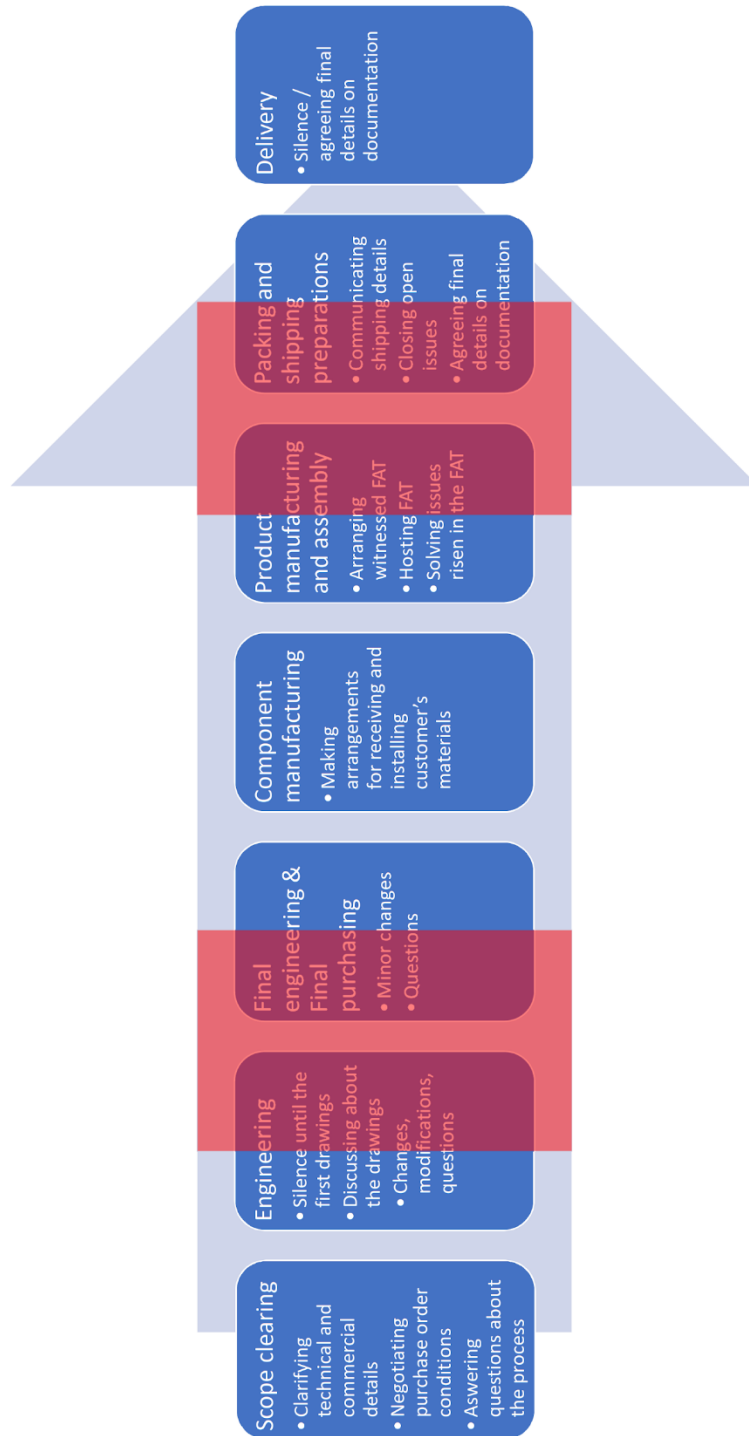
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APPENDICES

Appendix 1. A Typical Project Communication Flow Between PU and LSU

Appendix 2. Manifestations of communicative competence

Uncertainty reduction				Project success enhancement
Clarity	**Technical knowledge**	**Timely and sufficient information**	**Relationships**	**Communicative competence areas**
Providing an accurate tech. specification Providing only essential tech. information Pointing out a specific piece of information needed	Spotting missing techn. information Applying tech. knowledge to a new issue Processing tech. Information and creating new knowledge	Providing needed tech. Information Providing certain tech. information in the moment it is needed	Searching for a tech. solution in collaboration Helping another person to understand and process tech. information	**Technical (substance) competence**
Providing clearly structured and focused information Using simple language and short sentences Using visualizations	Providing technical information Providing tech. Information with a suitable amount of details	Providing a well formed informational message Providing an insightful and well-formed comment as a response	Discussing issues of common interest or past common experiences Discussing about personal issues Providing background information for requests and questions	**Discourse competence**
Providing only necessary tech. information according to the recipient previous knowledge and needs Providing information in a simple way when not knowing the recipient	Providing techn. information that is suitable for the recipient's level of understanding Providing tech. information only in socially accepted situations	Providing background/progress information according to the recipient's expectations Communicating in a schedule that meets the recipient's expectations	Using the other person's mother tongue Mentioning issues of common interest Using media-rich communic. medium whenever suitable	**Socio-linguistic competence**

				Strategic competence
Asking to provide information in another form Paraphrasing to increase common understanding Summarizing the main points of a longer explanation/conver sation	Clarifying technical details before they are needed/requested Studying product information and technical issues related to it Including or excluding techn. information to frame a message	Providing project information even if not requested Responding fast to requests and questions Providing or asking additional information to facilitate later phases / future projects	Choosing a communication medium according to the issue at hand Creating opportunities for relational communication with a new colleague/customer Asking the other person's preferences	