Høgskolen i Østfold

MASTEROPPGAVE

Authentic EFL communication through telecollaboration

Investigating the communicative strategies employed by Norwegian 7th graders during virtual exchange

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16th of May 2022

Master in English Pedagogy - LMUENG40517

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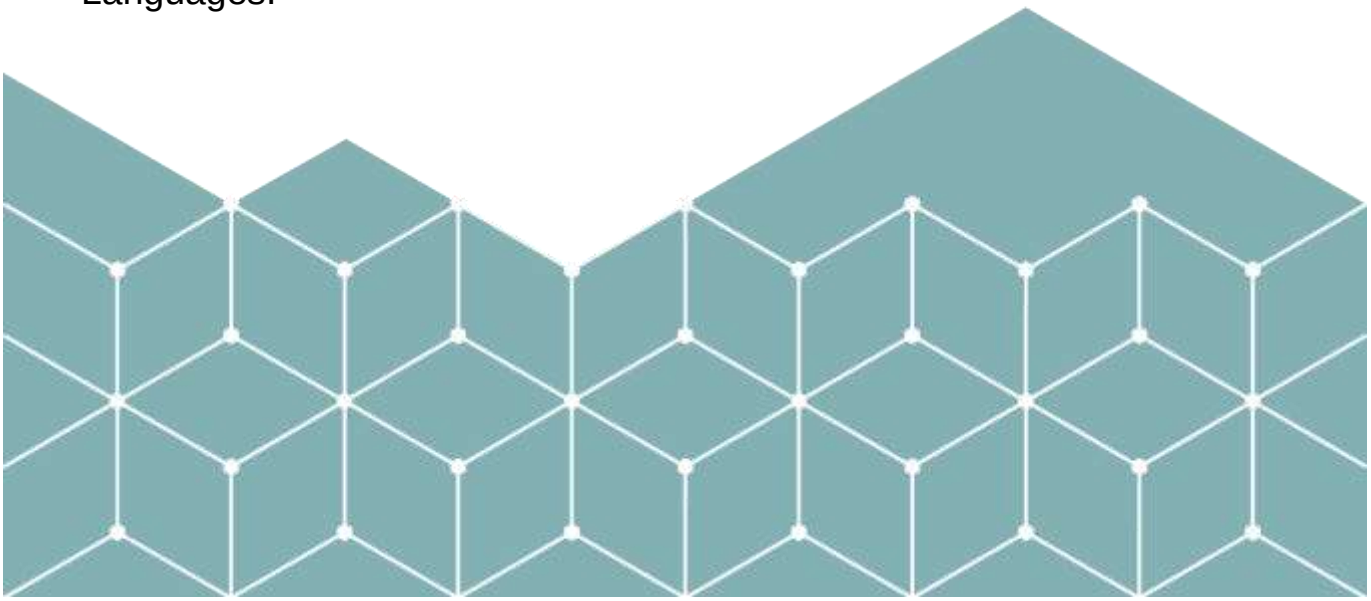

SAMMENDRAG

Virtuelle utvekslinger har blitt mer vanlig med økt tilgjengelighet av IKT i skolene. Denne studien har som mål å dokumentere hvilke kommunikative strategier norske 7. klassinger bruker under nettbaserte telesamarbeid for å finne de kommunikative problemene de står overfor. Studien henter primært inspirasjon fra Dörnyei & Kormos (1998) og deres taksonomi av problemløsningsmekanismer. Deres taksonomi kategoriserer problemløsningsmekanismer i disse kategoriene; tidspressbehandling, ressursunderskudd, opplevd mangel på språklige evner iseg selv og andre. I tillegg til disse inkluderte vi visuelle problemløsningsmekanismer basert på ideen om at videosamtaler ville gjøre at kroppsspråk ble implementert i samtalene. Mens kommunikative strategier og problemløsningsmekanismer har blitt studert i forhold til kommunikasjon i det virkelige liv, har det ikke blitt sett på i en online videochat-situasjon. Ved å gjennomføre en casestudie der en norskklasse ble satt til å kommunisere med utenlandske elever, har vi dokumentert hvilke kommunikative strategier de har tatt i bruk, og hvilke kommunikative problemer de møter når de bruker dette mediet. Resultatene viser at elevene brukte kommunikative strategier som forlenget tenketiden mest, noe som indikerer at de ikke produserer setninger raskt nok. De brukte også mye ressursunderskuddsmekanismer, der kodebytte og meldingsavbrudd/reduksjon var vanlig. Den minst brukte kategorien av problemløsningsmekanismer var oppfattet selvmangel. Observasjonene viste også at elevene knapt brukte kroppsspråk under samtalene og fokuserte først og fremst på de språklige utfordringene. Resultatene indikerer at elevene var trygge på språket sitt, og brukte kommunikasjonsstrategier for å holde samtalene aktive. Intervjuer bekreftet dette, og avslørte at deltakerne følte seg trygge, og var veldig spente og fornøyde med telesamarbeidet, og følte at de utviklet seg språklig fra å snakke engelsk i en autentisk setting.

ABSTRACT

Virtual exchanges are becoming more common with the increased availability of ICT in schools. This study aims to document which communicative strategies (CS) Norwegian 7th graders use during online telecollaborations to find the communicative problems they face. Taking primary inspiration from Dörnyei & Kormos (1998) and their taxonomy of problem-solving mechanisms (PSM). Their taxonomy categorizes PSM into these categories; time-pressure processing, resource deficit, perceived deficiency of self and perceived deficiency of others. In addition to these we included visual PSM based on the idea that video-conversations would allow for body language to be of interest. While communicative strategies and problem-solving mechanisms have been studied in regard to real life communication, it has not been looked at in an online video-chat setting. By conducting a case study in which a Norwegian class was set to communicate with foreign students, we have documented which communicative strategies they have employed, and which communicative problems they face in this medium. The results show that the learners used CS which extended their processing time the most. Indicating that they do not encode sentences fast enough. They also used resource deficit mechanisms a lot, where code switching and message abandonment/reduction were common. The least used category of problem-solving mechanism was perceived deficiency of self. The observations showed that the learners barely used body language during the conversations and focused primarily on the linguistic challenges. The results indicate that the students were confident in their language, using CS to keep the conversations active. Interviews confirmed this, revealing that the participants felt confident, and were very excited and pleased with the telecollaboration, feeling they were developing linguistically from speaking English in an authentic setting.

ACKNOWLEDGEMENT

Writing this thesis has been an educating journey, where we have had to learn about what eTwinning is, how to arrange a telecollaborative project, and how to engage students in it. We would like to thank Hilde Øen, one of Norway's eTwinning Ambassadors for being so kind to dedicate an entire evening to teach us how eTwinning works. We would also like to thank the lovely teachers Sudha Eng and Monika Greiner, who willingly partook in our study, taking both time and effort in arranging the meetings. They were very patient and cooperative throughout the entire process, allowing us to gather the data we needed! Along with them, we also want to thank the amazing students in both Norway and Austria, who did something new, different, and maybe uncomfortable. Lastly, we want to thank our supervisor Nazareth Amlesom Kifle, who has guided us with valuable feedback throughout this journey!

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1 INTRODUCTION

In March of 2020, Norway experienced its first of many lockdowns caused by the COVID-19 pandemic. The lockdown caused schools to temporarily close down, forcing teachers to educate both themselves and their pupils in digital competence overnight. The learning had to occur through digital platforms, and this greatly affected the way teachers educated their pupils, while also altering the teachers' planning process. New aspects of pedagogy needed to be considered, based on the conditions under which the teaching took place. With this in mind, the online platform became more relevant in teaching than ever before. The online classroom consisted of digital tools such as Zoom and Teams. Using these, learners and educators communicated exclusively through voice, video, and written formats. Teachers and students have had to completely alter their traditional ways of working on projects and tasks like presentations, tests, physical activity and the lessons themselves. However, have the pedagogic restrictions caused by the pandemic only affected learning negatively? This thesis will investigate the opportunities provided by the newly acquired comfortability in digital communication, exploring in what ways computer-based learning may benefit EFL learners through virtual exchanges and how the learners fare communicating through online platforms. Online school has provided a positive development in the pedagogical area. It has increased access to communication apps and increased digital literacy amongst teachers and students.

Digital competence is becoming more prominent in schools (Utdanningsdirektoratet, 2020), and teachers can benefit from maintaining the computer-based teaching implemented during the lockdown. They can even take it a step further. Teachers may implement digital communication into their lessons, by allowing their pupils to communicate not just with local peers, but with learners hailing from different nationalities. This would be granting them the opportunity to improve their digital competence as well as challenge their linguistic competence. As mentioned previously, the teachers and learners have greatly increased their digital competence. This, in turn, may have made this sort of communication a new normal providing various pedagogical opportunities for both learners and teachers.

The goal of English education is to prepare the students for real world communication with people internationally. The English language is known as a lingua franca, meaning it is a universal language. This implies that international communication is an integral part of English teaching in schools. This has been the case in Norway since the 1970's when

Chomsky's theories regarding communicative competence were integrated into the Norwegian curriculum. This changed the aim of the English subject to focus more on the link between communication and language, emphasizing appropriate language use in any given context and the importance of a meaningful communicative experience in the EFL classroom (Fenner & Skulstad, 2019, p. 29).

Oral communication, and communicative skills in general, can be argued as the most relevant skill to excel at for international communication, as it is the skill one will rely on the most when traveling abroad or talking online. The oral communicative skill focuses on the learner being able to express themselves, their opinions, and thoughts through speaking, and also that they are able to understand and react appropriately through listening to other people. English oral skills are traditionally taught through tasks such as presentations, interviews and in-class conversations. These provide good opportunities for the pupils to practice their pronunciation, sentence structure and fluency. However, these conversations are typically scripted, heavily prepared, and performed with peer students, meaning that the conversations are not improvised and authentic. While these tasks may improve their English skills in general, they will not prepare them for real-world situations where they need to be spontaneous and genuine conversationalists. The term "communicative skills" encompasses several abilities which allows an individual to communicate efficiently. These may include knowledge of language, such as vocabulary and grammar, understanding pragmatics and culture, negotiation, and discussion (Alshumaimeri, p.80, 2021). Good communicative efficiency is a central life skill to possess, as it may determine what opportunities one may get later in life (Alshumaimeri & Alhumud, p.80, 2021). It is therefore crucial that students are taught good strategies regarding this, which includes gaining experience in communication. Most students have not fully mastered the English language, they may lack the vocabulary, grammar, or know-how to say what they want in English. However, English communicative skill is not solely about language knowledge and oral skills. The students may also use alternative communicative strategies (CS) to convey what they wish. This could be facial expressions, miming, or linguistic strategies like using synonyms, approximations, and more. Having to improvise and use alternative communicative strategies is a necessary means for most non-native English speakers to ensure they are fully understood.

The subject description for English in the LK20 curriculum states that, "The subject shall give the pupils the foundation for communicating with others, both locally and globally, regardless of cultural or linguistic background" (Utdanningsdirektoratet, 2020). One way to

teach communicative skills would be through authentic conversations. An authentic conversation is spontaneous in nature, it is not scripted. This is the type of communication the students are preparing for when undertaking their education, as described by the curriculum. There are generally very few opportunities for students to partake in authentic English conversations, as they generally occur when traveling, meaning that they may miss out on valuable learning and experiences. Virtual exchange through telecollaboration has proven to be a good tool to give students the opportunity to partake in these authentic conversations. eTwinning is a program driven by the EU which aims to internationalize pupils and to give them an opportunity to collaborate with other countries through telecollaboration. The program connects schools from different countries together using Information Communication Technology (ICT), allowing them to teach and learn about each other's cultures and ways of life (Pateraki, p. 5, 2018). Through this program the students must typically rely on their English skills for cross-border communication, as they cannot use their mother tongue to communicate efficiently.

Some students may use online communication in their spare time, or during holiday trips to practice their spontaneous oral communication. However, this is not a luxury available to every pupil, nor do they all share an interest in improving these skills. Therefore, giving them an opportunity to do this at school, for instance through eTwinning, would bring equity to their English learning. An eTwinning telecollaborative project will satisfy several of the competence goals present in the LK20 curriculum. For example, from after 10th grade, "*explore and describe ways of living, ways of thinking, communication patterns and diversity in the English-speaking world*", "*use different digital resources and other aids in language learning, text creation and interaction*" and "*describe and reflect on the role played by the English language in Norway and the rest of the world*" (Utdanningsdirektoratet, 2020). These competence goals could be satisfied through resources already present in the classroom, such as textbooks and the internet. However, it could be argued that eTwinning gives a more "real" scenario with authentic conversations for the students to practice these goals, which in turn may give a better learning outcome. The online conversations taking place through eTwinning also grants the teacher an opportunity to assess their students' spontaneous communicative skills, and to see them employ what they have learnt. This in turn, could help the teacher plan future lessons, focusing on the communicative aspects the pupils are lacking in. Along with communicative skills, eTwinning also gives the students an opportunity to

enhance their ICT skills through the projects they partake in. It can therefore be argued that having an eTwinning project will prove valuable for the students' English learning.

Through cross-border cooperation, everyday programs such as Word and PowerPoint, as well as video editing software gain a new authentic use. Rather than creating projects simply within the classroom, the students construct creative projects in order to talk about themselves to foreign learners. This will make one's lessons more diverse, which in turn may increase motivation amongst the students (Azmi, p. 111, 2017). Looking at these facts there are many apparent advantages to working on projects online using long-distance communication. However, considering that long-distance communication through the internet is a somewhat new concept, there are some challenges. Firstly, how does one create meaningful conversations and engagement between students across borders? Secondly, how do students fare using a language they are not fully developed in during authentic conversations in it and what communicative strategies do they need to employ? Lastly, are these authentic conversations a positive experience for the students?

1.1 Study Aim

eTwinning and other telecollaborative platforms have been going on for many years and have been studied thoroughly. However, most of these studies focus on the educator's experiences, and there is an apparent lack of studies studying the students' participation in eTwinning (Bengtsson, p.22, 2016). This means that there is much to study regarding students' learning experiences and outcomes on the platform. There have also been several studies done on the communicative strategies various learners use, and the factors which affect them. However, there is little research on the communicative strategies learners use while communicating online.

This thesis will look at a case study of an eTwinning project between two classes of Norwegian 7th graders and one Austrian class. It will look at and discuss the students' authentic communication in the conversations, their experiences with them and what alternative communicative strategies (CS) they employ. The eTwinning project will be researched through three different methods, these being observation, case study, and qualitative interviews with the participants. By including numerous methods, different aspects and experiences with the international collaboration will become clearer to us as researchers and we will gather more data to work with.

Therefore, this study will aim at answering the research question: “What type of communicative strategies do Norwegian 7th graders use to solve communicative problems during online telecollaboration with foreign students?”. The aim is to find what type of CS the students used during online conversations, and to then understand what type of communicative hurdles they faced during them. The CS we are categorizing are based upon Dörnyei & Kormos’ (1998) taxonomy of problem-solving mechanisms (PSM). However, with some adjustments, some PSM which overlap in use and function have been combined. There is also no PSM-category in Dörnyei & Kormos (1998) tackling visual aids during conversations, however we hypothesize that the subjects will use visual tools to help them communicate. This reasoning is based on the idea that it is natural to use body language during conversations to emphasize certain focal points of the conversation or as part of the statement. We have thus decided to include the category of visual PSM, under which we have included the mechanisms; gesturing, miming, and displaying images or items.

2 THEORY

When studying alternative communicative strategies (CS) amongst young L2 learners during online telecommunication, it is crucial to know which strategies exist, and the mechanisms which put them into play. One must also take into consideration the theories which explain how language is acquired, as well as how one can ensure that language is used efficiently. Language acquisition theories explain how learners pick up and understand language through listening, reading, and using language. Through using language, learners will employ CS and subsequently review their performance, leading to an acquisition of language. This section of the thesis will review sources that explain how students learn and use language, including the problem-solving mechanisms they employ during oral communication. It will also look at telecollaboration, defining it and explaining its practical use within the EFL classroom. Lastly, it will look at what hinders L2 oral communication, and discuss how one can optimize authentic communication in an online setting.

2.1 Language Acquisition

There are many language acquisition theories that explain how language is acquired. Most prominent of which, and relevant to this study, is Skinner's behaviourist perspective, Krashen's monitor hypothesis, and the interaction hypothesis.

The behaviourist perspective state that all behaviour is in response to surrounding stimuli. Skinner applied this to language learning through operant conditioning. Operant conditioning being the use of positive and negative reinforcement to alter behaviours. Success received positive reinforcement, whilst failure received negative reinforcement. The focus was thus on error correction/prevention. Through communication, the learner will experience positive and negative feedback through evaluating themselves as well as from the responses from their interlocutor, meaning they will acquire language (Lightbown & Spada, 2019, p. 15).

Krashen's monitor model is the most practical theory due to it giving an actual strategy to be used whilst learning a language. It is built upon 5 hypotheses that build off each other and outline the process that is commonly gone through when learning a new language. Krashen's theory lays out the difference between language acquisition and learning. Krashen argues that we all acquire language subconsciously and that language is universal. He compares it to seeing, eating, and other uniform human activities. Learning is a far more conscious effort that needs formal correction. The first hypothesis is called the acquisition-

learning hypothesis. It states that there are two ways for a learner to develop their linguistic competence, subconsciously through everyday use, and consciously through active learning (Krashen, 2013, p. 1). The second hypothesis, the input hypothesis, assumes that language acquisition happens through understanding messages. The third hypothesis, the monitor hypothesis, states that the language we acquire is available to us as a monitor, meaning that the language and grammar rules one is taught functions as a monitor for one's language. The sentences one produces is analysed internally and one learns consciously through correcting potential errors (Krashen, 2013, p. 2). For the monitor to function one must know the rules, needs to be aware of correctness and form, and the learner must have sufficient time to analyse. Only when these conditions are met can one's linguistic expressions be monitored (Krashen, 2013, p. 3). This usually only happens when taking a grammar test, and not in casual encounters. The fourth hypothesis, the natural order hypothesis, states that there is a specific order in which different layers and complexities of language is acquired. This order is not exact, meaning that people acquire this at different orders. Krashen claims that it is impossible to alter the order through explanations, drills, and exercises. The acquirer will develop in the different linguistic areas when they are ready for it (Krashen, 2013, p. 1). The last hypothesis, the affective filter hypothesis, states that affective variables do not impact language acquisition directly, but instead prevent potential input from reaching the language acquisition device. These filters may be anxiousness, low self-esteem and stress. A learner with these traits will understand language input but will not process it with the language acquisition device. The hypothesis aims to explain how two learners can receive the exact same input, however one of them will progress whilst the other does not. One of the acquirers are open to the input whilst the other is not (Krashen, 2013, p. 4).

The Interaction Hypothesis proposes that when English language learners try to speak in the target language (TL) the gaps in their abilities are discovered. The hypothesis requires that comprehensible input and tasks requiring the participants to exchange information is present for the learners to achieve second language acquisition (Tran-Hoang-Thu, 2009, p. 4). The hypothesis concludes that self-realization of gaps in language competence, while negotiating meaning, will help learners produce TL output to negotiate meaning and look for the knowledge they lack. The hypothesis also implies that the use of strategies of repair and paraphrasing facilitates the learners' TL acquisition via interaction. (Tran-Hoang-Thu, 2009, p. 2-3) Long et al. (2003, p. 98) emphasizes the importance of communication and its impact on language acquisition. Interactions increase learners' awareness of what communicative

skills they are lacking and encourages them to be more active with processing input in the TL. Van Patten and Cadierno (1993) argued that new language learners need structured input activities, enabling them to focus on meaning while paying only some attention to form. This in turn, allows them to use the language they know to produce output in the target language.

Summarized, based on these theories, interacting with other people whilst using the TL will cause language acquisition to occur. Language usage most typically occurs in social settings with different parties interacting with one-another. Through these interactions the participants will subconsciously learn language while exchanging information, through monitoring and evaluating themselves. However, different variables may filter the learner's input, affecting their language acquisition.

2.2 Authentic Orality in English as a Foreign Language (EFL) Communication

Authentic oral communication occurs when two or more participants communicate, this communication must be reasonably spontaneous in nature and needs to exchange meaning which all parties are interested in (Rivera, 2010, p. 48). Authentic oral communication can occur in various settings, such as in real life through conversations, meetings, and online when using digital platforms. People who visit foreign countries do authentic communicative activities even though they know little of the language (Munden, 2014, p. 211). For authentic oral EFL communication to occur, there must be two or more parties who speak English as a foreign language. With this definition, one could argue that interactions between students in the classroom are authentic. However, for the sake of this thesis we would argue that it is not. Engagements within the classroom are typically fabricated (Rivera, 2010, p. 48) for the sake of language learning, and are not spontaneous in nature, meaning that the participants do not produce sentences spontaneously. Classroom activities such as roleplays, scripted conversations and rehearsals of texts are not spontaneous in nature, and therefore not authentic communication. Instead, activities like conversations and interviews can be considered authentic oral EFL communication.

To facilitate an authentic conversation for the students one may include external participants through platforms such as eTwinning. Through the meeting of foreign students, either through travelling or telecollaboration, the students can practice their communicative abilities through authentic language use which does not include speakers with a common L1. While these conversations will still be partially fabricated in nature, they give the learner a more genuine language and learning opportunity. When students must use the foreign

language in ways that mirror everyday life, making decisions of what to say and how to say it as they speak, there is a higher chance that they develop an automatic use of language (Ellis, 2003).

Rivera (2010) argue in their study that teacher-student and script-based dialogue tasks offer little in regard to EFL proficiency development for language learners, as the students become more passive in their communication. Student-student interactions lay the foundation for spontaneous communication to take place. It is widely known that students learn themselves (Rivera, 2010, p. 49). Different ways in which they can interact meaningfully have come to be favoured in classrooms. Although there are different options for promoting student-student interaction in the EFL classroom, not all of them seem to foster authentic communication, and as a result, hardly suit the communicative lesson (Rivera, 2009).

When seen in the light of language acquisition theories it is reasonable to assume that authentic communication settings are crucial to enhance language acquisition. Through interaction with foreign EFL students the speaker will encode and evaluate their own language, monitoring it. They will receive positive or negative reinforcement from both themselves and their peers (Lightbown & Spada, 2019, p. 15), acquiring and developing language in the process.

2.3 L2 Problem Solving

L2 speakers differ from speakers using their first language. They speak slowly and hesitate more compared to when they are using their L1. This may hinder communication, having the users rely on L2 problem solving to keep communication coherent and understandable (Dörnyei & Kormos, 1998, p. 354). When the interaction between humans is disrupted, the speaker will most likely try to resolve the conversational struggles by employing a variety of strategies and tactics to negotiate meaning. Nakatani (2010) states that the term oral communication strategy is used to "highlight interlocutors' negotiation behaviour for coping with communication breakdowns and their use of communication enhancers".

Canale and Swain (1980) included strategic competence in their framework of communicative competence. They defined strategic competence as "the verbal and non-verbal communication strategies that may be called into action to compensate for breakdowns in communication due to performance variables or to insufficient competence" (p. 30). Canale (1983) went on to further develop the term stating, "mastery of verbal and nonverbal

strategies both to compensate for breakdowns in communication due to insufficient competence or to performance limitations and to enhance the rhetorical effect of utterances" (p. 339). Dörnyei and Thurrell (1991) emphasized that the ability to appropriately use CS is a strategic competence. They considered this to be a component of communicative competence, just like Canale and Swain did.

The early research on communication strategies suggested that the difference in target item, proficiency level and type of learner resulted in different CS selections (Ayedoun et al 2019). This in turn, tells us that different variables affect the selection of CS. With this in mind, it is necessary to consider variables that may affect the results of research and the taxonomy that best fits the research design.

There are mainly two views on communication strategies. The interactional view of CS is based on the interactional process between language users and their attempts to create meaning to improve their linguistic understanding. CS can be explained as "mutual attempts of two interlocutors to agree on a meaning in a situation where the requisite meaning structures do not seem to be shared" (Rabab'ah, 2016, p.626). The psycholinguistic view considers CS as the cognitive processes involved with a focus on understanding and the production of language (Rabab'ah, 2016, p.626). Faerch and Kasper (1983, p. 36) define CS as "conscious plans for solving what to an individual presents itself as a problem in reaching a particular communicative goal." Communication strategies are according to this view a problem-solving device, as they assist in solving communicative problems during conversations. Our thesis' research question will mostly focus on the psycholinguistic view, as it seeks to discuss which problem solving mechanisms Norwegian EFL students use, and the processes behind them.

2.4 Problem Solving Mechanisms

There have been several attempts at defining the strategies language learners employ during their communication (Tarone & Swierzbin, p. 73, 2019). This thesis will focus on Dörnyei & Kormos' (1998) taxonomy of problem-solving mechanisms. While newer taxonomies exist, we have chosen this one, as it gives an expansive and thorough account of communication strategies while categorizing them into language categories. Dörnyei & Kormos' taxonomy is based upon Dörnyei & Scott's taxonomy from 1997. Dörnyei & Kormos define problem-solving mechanisms (PSM) or communication strategies, as strategies L2 learners employ

when resource deficits hinder the planning and encoding of the preverbal plan (Dörnyei & Kormos, 1998, p. 357-358). Dörnyei & Kormos distinguish between four problem sources and their solving mechanisms for L2 communication: L2 resource deficit, processing time pressure, perceived deficiencies in one's own language output, and perceived deficiencies in the interlocutor's performance (p. 350). Dörnyei & Kormos outline a taxonomy of problem-solving mechanisms used by L2 learners (p.359-373) which are based upon the four problem sources mentioned above. The speaker knows that to hold an active conversation they must avoid long silences and pauses. When a speaker understands that their encoding will take more time than the conversation allows, they have three options: Message reduction or abandonment, resort to resource deficit PSM to change the encoding or use stalling mechanisms (p. 368).

2.4.1 Resource Deficit

Resource deficit PSM stem from a lack of L2 knowledge and are divided into three under-categories: Lexical, grammatical, and phonological. When an L2 speaker has difficulties retrieving appropriate vocabulary, they may engage using lexical PSM. They then have two main options for how to engage in the conversation: They can modify their speech plan or abandon it completely or keep their speech plan but change their preverbal message (p. 358). Examples of lexical PSM are message abandonment/reduction/replacement. However, these PSM can barely be described as a problem-solving mechanism as the speaker either abandons or changes their speech plan to get out of their communicative problem (p. 362). Grammatical encoding is a continuation of lexical retrieval. If the speaker lacks sufficient grammatical knowledge, they may use grammatical PSM. These can be grammatical substitution mechanisms such as overgeneralization, where they use L1 or L3 grammar rules in their L2 encoding, or grammatical reduction mechanisms, where they simplify their speech to keep the conversation active (p. 366). After the speaker has encoded their message with appropriate vocabulary and grammar, they need to articulate their message. If this process is challenging, they may use phonological and articulatory PSM by reducing their articulation or articulating similar-sounding words (p. 367-368). Examples of resource deficit PSM are content reduction, language substitution, macro-and micro reconceptualization such as restructuring and circumlocution, appeals for help, grammatical- and phonological substitution, and phonological reduction (p. 359-362). Ayedoun et al (2019) bring forth another example of a communication strategy, approximation. Approximation consists of using a term that expresses the meaning of the word as closely as possible. Circumlocution is

used when a speaker lacks the vocabulary to describe the target item but describes or exemplifies it using other words (Bøhn & Myklevold, 2018, p. 186). PSM/CS in general are derived from the notion of problem-orientedness, meaning they were viewed as devices to decrease communication gaps between speaker and listener.

2.4.2 Processing Time Pressure

L2 speech is comparatively less automatic than L1 speech, L2 production requires more time encoding (p. 368), meaning that producing sentences takes longer. Processing time pressure mechanisms give the speaker time to encode sentences by extending the time. These mechanisms can occur in two ways, either as pauses, or as repetitions. Pauses require no additional processing in terms of sound production but gives the speaker more time to encode. Pauses can be strategies like: Sound-lengthening, umming and fillers (p. 370). The sounds created through umming or repetition of previous utterances are subconsciously placed to counteract the silent parts occurring during the conversation, thus making it less awkward. Repetitions can occur of one's own and of other people's utterances. Retrieving a recently processed string through self-repetition will give the speaker more time to process their sentences, while keeping the tempo of the conversation active (p. 371).

According to Fox Tree (2010) a forewarning of delays, such as through umming/erring, may be subconsciously placed to help listeners anticipate what is to come, and that what is being presented may be difficult to process based on the speaker's difficulty in encoding it. This suggests that some time processing mechanisms are placed not to showcase a lack of linguistic proficiency but to signalize that the forthcoming statement could be potentially difficult to decipher.

2.4.3 Perceived Deficiency of Self and Others

Before expressing themselves, the speaker monitors their language output. If they find a mistake they re-encode their sentence, using self-correction (Krashen, 2013, p. 2). However, the speaker may also produce errors while speaking, prompting them to engage in error repair, correcting themselves to their conversation partner (Dörnyei & Kormos, 1998, p. 371). Problem solving mechanisms within this category, perceived deficiency of self, also include accuracy checks where the speaker asks if what they said is correct or if the interlocutor understands them.

The interlocutor's performance can also affect the L2 speaker depending on how good their speech comprehension is, through perceived deficiency of others PSM. The speaker may

misunderstand, not understand, or only understand parts of a sentence. If this occurs the speaker may engage in *meaning-negotiation*, where the participants attempt to gain an understanding of one another through different PSM, for example by asking for clarification, guessing or expressing non-understanding (p. 375). However, the speaker may also feign understanding to keep the conversation's tempo (p. 376). Other factors such as not speaking loudly enough, or in the case of online communication, connection issues, may also trigger these PSM.

2.5 Optimizing Online Oral Communication

According to Ayedoun, et.al (2018), communication within an L2 is of great significance when facilitating exchanges between individuals from different lingua-cultural backgrounds. A fundamental goal within second language development is to ensure the learners' readiness and communicative proficiency for whenever the opportunity to communicate presents itself. This builds upon MacIntyre et al. (1998) and their theories concerning willingness to communicate (WTC) which they define as "readiness to enter into discourse at a particular time with a specific person or persons using an L2" (MacIntyre, et al. 1998). MacIntyre et al. (1998) go on to suggest that the increase in learners' WTC should be the goal of L2 learning, seeing as learners with higher WTC produces better linguistic products in the TL. The idea behind developing WTC emphasizes the importance of good learning environments where the learners are able to practice the L2. Reinders and Wattana (2014) state the challenges of developing WTC when explaining how many learners feel anxious about speaking and performing in front of others. They also mention that most classrooms are lacking in regard to communicative practice. Ayedoun, et al. (2019) state that the problem with this is the encouragement and motivation of the learners, where most pupils rarely if ever use the L2 in natural language production. To maintain and develop L2 learners' WTC and encourage meaningful interactions during classroom situations, Yashima (2002) has stated several important things for educators to do. She suggests lowering the learners' anxiety, keeping the topics interesting and relevant, facilitating students' acceptance of the language as a necessary skill for communication and instilling positive attitudes towards international collaboration are the most important for this study.

Anxiety, a state of apprehension or fear, can affect language learners negatively. Language anxiety is one of the main hindrances for L2 learners to overcome to speak proficiently (Parcon & Reyes, p. 208, 2020). Therefore, to prepare students for an authentic conversation, and to optimize their learning potential, it is crucial to lessen their anxiety as

much as possible. This directly connects with MacIntyre's theories regarding willingness to communicate mentioned previously and demands that learners are prepared for communicational situations before they occur. One of the main factors for language anxiety is difficulties with using the L2 language, which can be experienced due to different social environments. Some L2 speakers may attempt to "escape" situations where they must speak English due to their anxiety. Speaking English is also typically associated with evaluation and expectations, which makes some students feel insecure (Tanveer, p. 61, 2007). Another factor that may affect oral anxiety is insecurity regarding cultural norms (Tanveer, p. 62, 2007). Tanveer suggests that teachers should converse about the feeling of anxiety with the students and discuss appropriate strategies for handling this. They should make the classroom a safe environment for mistakes while emphasizing that showing L2 errors does not affect their grade negatively (Tanveer, p. 64, 2007).

Mesgarshahr and Abdollahzadeh (2014) pointed out how language learners in lower levels of education are likely to find communication in the TL difficult. They go on to explain how too much difficulty during the communicative training may cause the learners to give up their attempt and may consequently stop them and their desire to communicate in an L2. This makes it clear that the need to assist learners in overcoming difficulties with their L2 development and ability to express themselves is of the highest priority when maintaining their WTC. This entails that during the telecollaborative conversations it is necessary to assist the subjects if they seek help to communicate or encode their message. Compton (2004) found that chatting in online forums assisted pupils in feeling more confident and made them more willing to participate orally in class discussions. She also noted that chatting's impact on WTC varied greatly from learner to learner, and depended on several factors, with the topic of discussion and the attitudes of the partner being among the most notable.

Underdevelopment of the strategic competence may account for some of L2 learners' lack of knowledge to overcome communicative pitfalls, thus affecting their WTC. Mesgarshahr and Abdollahzadeh (2014) stated that if learners have low WTC, an achievement in overcoming interactional challenges or a good competence does not guarantee that the learner will use the L2. The reasoning behind this is that the WTC in L2 is affected by variables such as anxiety and self-confidence (Ayedoun et al, 2019). This idea is very similar to Krashen's hypothesis of affective filters, which states that language acquirers will struggle to actually pertain the knowledge if they feel they are lacking in the linguistic area (Krashen, 2013, p. 5).

2.5.1 Telecollaboration / Online Conversations

This thesis will use telecollaboration through online video communication to put students in authentic ESL conversations. This section will therefore give an explanation of what telecollaboration entails, as well as previous research on the topic.

Telecollaboration, with "tele" meaning "distance" in Greek, is a cooperation between two or more actors over long distances. Efforts of telecollaboration can be traced back to the late 1800s. Telecollaboration occurs in fields such as business and education. In education, it has been defined as international learners participating in language classes using communication tools such as e-mail, chat, forums, etc. (Chapelle & Sauro, 2017, p.169-170). Without careful planning, videoconferences and other means of digital collaborative efforts are nothing more than stunts that do not contribute in a meaningful way to the overall instructional design of an EFL course (O'Dowd, 2005). Participating in virtual exchanges does not automatically develop foreign language competence (Rienties et al. 2020). The most important aspect of online collaborative learning is that the students have been actively involved in their own learning and that they have had authentic classroom materials available about things in which they are interested. Cates (2013) has constructed a key aim for global education, which implies that the learner acquires the ability to think globally, whilst acting based on local terms and traditions. A positive factor with telecollaboration is that it can be performed in many environments, i.e., the classroom, at home, in a workplace, or somewhere recreationally. This flexibility has elevated telecollaborative projects during the COVID epidemic. Telecollaboration can also be performed through a variety of programs and applications and within flexible timeframes. Meaning that it could be done as in-the-moment conversations between two parties, or through slower communication through forums and e-mails. Norwegian schools have been exceptional in adapting technology into the classroom (Utdanningsdirektoratet, 2020). Meaning that the availability of digital resources such as tablets and computers is plentiful. This enables nearly every school and thus class to participate in telecollaborative projects.

Telecommunication has become more common in education in recent years with technology like computers and the internet being more available. eTwinning is a telecollaboration network launched by the European Schoolnet in 2005. eTwinning seeks to develop students' language and intercultural skills through telecollaboration, as well as equip

young people with the technological skills and multicultural awareness to partake in increasingly international society (Camilleri, 2016). Baroni, et al. (2019) has presented their idea of the virtual exchange (VE). VE is the idea that the act of traveling to and meeting other lingua-cultural people is replaced by digital media. VE is defined as the practice of connecting learners with different lingua-cultural backgrounds together over long periods of time via digital communication means, as an integrated part of their curriculum and under guidance from experts (Baroni, et al., 2019). Foreign language educators implement the VE method to foster their pupils' foreign language competence, intercultural competence, and digital competence (O'Dowd, 2018, p. 6). If we see the idea of VE in light of Cates' (2013) aim of creating globally thinking, but locally acting individuals, it is a promising approach and fits greatly with the term global education. The VE approach also fits with Byram (1997) and his theories of communicative competence in learning a foreign language (FL). Byram states that the goal of learning an FL is for the learner to learn to use the target language respectfully in communication, whilst also developing an open and curious attitude supporting their willingness to engage with peers from other lingua-cultural backgrounds.

In relation to language learning, telecollaboration is more widespread compared to other disciplines (Chapelle & Sauro, 2017, p.172). O'Dowd (2019) suggests that when designing cross-border exchanges one should follow a transnational model, which entails that the learners work together on shared tasks based on both local and global real-world problems using a lingua franca. These ideas fit with what the European policy discourse of global education focuses on, which is that teachers are to support their learners in becoming agents of change in an increasingly global world (Schreiber & Siege, 2016). White (1989) stated that people in conversation often convey information through two channels: the main one, through which speech flows, and a secondary one, dedicated to sending meta-conversational signals. The secondary channel is used to support the speaker's turn by conveying the listener's understanding and interest, meaning verbal and non-verbal expressions occurring when listening to others speak. Therefore, digital tools such as video conferencing may allow for non-verbal expressions and CS such as gestures and miming to be communicated.

2.5.2 The State of Online Teaching

The online learning model was first used as a term to describe learning systems utilizing computer-based internet technology (Kuntarto, 2017 & Baig, 2011). In the initial stages of online learning, it was mostly used at higher levels of education (Dewi, et.al, 2017), however,

in recent years there has been an increase in the research of online learning conducted in elementary schools, for instance using Zoom and Teams (Beach, 2018; Yanti, et.al. 2020). From various studies conducted on online learning many conclude that it is effective and can be applied in education, it is proven that the development of online learning greatly assists pupils in using self-regulation strategies, that are personal, behavioural, and environmental (Larson & Vontz, 2018; Shelton et al., 2017; Wei & Chou, 2020; Delen & Liew, 2016).

Due to the outbreak of the pandemic the typical educational classroom has been greatly affected, where the norm changed from face-to-face to distanced learning utilizing online learning (Fauzi, Hermawan, Khusuma, 2020). Schools all over the world were shut down for a longer period, requiring the teaching to take place over digital platforms. This in turn demanded that both learners and teachers increased their digital competence practically overnight. Using ICT in teaching bears some challenges, as one's school's internet or computer equipment may fail at random, making it difficult to complete the lesson. There is also the hinder of being sufficiently proficient with ICT, as many educators may struggle utilizing it effectively. However, there are many benefits to using ICT in teaching. Through using computers along with the internet, one gains access to a large quantity of creative and productive tools which can be used for teaching. Janssen and van der Voort (2016) claim that governments across the world need to deal with the disruptive era of the 21st century. They suggest that governments must provide education and training that focuses on the convenience of increasing competence, adaptability, and comfortability with the implementation of ICT. Through this, populations will gain skills suited for the 21st century. The increase in ICT in the 21st century has ensured that people are not separated from technology, but rather quite comfortable with the prospect of using it (Martha, Adi & Soepriyanto, 2018). Due to the comfortability of technology growing so much and society changing towards ICT being a focal point, the educational sector is required to respond positively and be more adaptive to changes occurring. With this in mind, schools are somewhat required to adapt to use the technological aspect to face the challenges posed by the COVID-19 restrictions.

2.6 Research Findings

This section will present research findings within the fields presented in the theory section. These are studies which look at the effect of CS instruction, and to which degree various CS/PSM are used by students. However, there are few studies looking at the target of this study, Norwegian 7th graders speaking online. Therefore, studies regarding different countries, ages, and real-life communication will be presented, in order to give a general overview of CS/PSM usage. In the field of online teaching and telecollaboration, studies regarding the use of online teaching and experiences implementing this method will be presented. The aim is to identify factors to be mindful of and finding out how to best optimize online meetings for language learning.

2.6.1 Studies of PSM in Practice

Parcon & Reyes (2021) bases their study about 18-year-old Filipino students' use of CS, on Dörnyei & Kormos' (1998) list of problem-solving mechanisms. Differing from Dörnyei & Kormos, Parcon & Reyes categorize alternative communicative strategies into three sections: Direct strategies, interactional strategies, and indirect strategies. These strategy sections are again divided into several strategies (Parcon & Reyes, p. 202, 2020). Direct strategies were identified as strategies used by students when they lacked sufficient English skills, similarly to Dörnyei & Scott's (1998) resource deficit category. During their study, Parcon & Reyes found that the most common direct strategies amongst their group of Filipino L2 learners were code-switching and message abandonment. The students were speaking to students of the same mother tongue, meaning that code-switching would work well as a strategy to make oneself understood (Parcon & Reyes, p. 202-203, 2020). Interactional strategies are strategies where the language user interacts with another element than themself. The most common interactional strategies found amongst the Filipino L2 learners were asking for help, asking for clarification, and expressing non-understanding. Indirect strategies refer to strategies that do not provide an alternative meaning to the communication, but rather a carrier of meaning. Examples are the use of fillers and repetitions. Parcon & Reyes found that the most common challenges their students faced had to do with lacking English skills and having oral anxiety (Parcon & Reyes, p. 207-208, 2020).

Su (2021) found in their study that Taiwanese ESL college students used message abandonment and non-verbal CS such as time pressure mechanisms the most, while more complex PSM were uncommon. This indicates that the students would rather reduce communication than solve it. Students of lower proficiency relied mostly on message

abandonment- and reduction while those of higher proficiency used a larger variety of communicative strategies. Su mentions the prevalence of non-verbal CS may be due to the participants focusing on controlling their anxiety. Rodriguez & Roux (2012) studied use of communication strategies in beginner EFL learners within 6 sessions. They used their own taxonomy, and found that code switching, comprehension checks, repetitions, and asking for confirmation were used the most. They also included miming as a communication strategy, which was used a total only 1% of the time (Rodriguez & Roux, 2012, p. 119).

Bøhn & Myklevold (2018) performed a study on Norwegian lower secondary students where they sought to answer four research questions: To which extent Norwegian students' metacognitive strategies affected their use of CS, if giving instruction on CS affected quantity and quality of CS used, if there is any association between grade level and use of CS, and if motivation affects CS use. Similarly, to Parcon & Reyes (2021), they made their own categorization of CS based upon Dörnyei & Kormos (1997) and Rossiter (2013), dividing them into: Circumlocution, approximation, superordination, and fillers/stalling strategies. Furthermore, they assigned these categories with properties such as "low"-, "medium-", and "high-quality" CS. In their study Bøhn & Myklevold gave instructions on CS to a group of 22 15–16-year-olds. They tested each group to gauge their use and awareness of different CS. Afterwards, they were interviewed to investigate the students' metacognitive awareness. They found that the students who were given instruction in communicative strategies used considerably more communicative strategies during communication, including CS they had not been taught, as well as being more aware of their use of CS (Bøhn & Myklevold, 2018, p.190). They did not find that proficiency level affected the use of CS (p. 197). However, they suggested that conscious awareness may increase use CS, exemplifying that giving extensive training on the topic may help in improving students' communicative competence (p. 196). Regarding motivation's effect on CS use, they found that students who found English fun, used circumlocution more (p. 194). However, other than that there was little evidence suggesting that motivation affected CS use. Their study did have a small sample size, meaning that their data cannot be used in a general manner, and their data regarding motivation and proficiency level was self-reported, leaving room for error.

Dörnyei (1995) found that giving CS instruction greatly affected speaker's performance during EFL communication. Meaning it is a crucial skill for communicators to speak effectively (Bøhn & Myklevold, 2018, p. 181). Similarly, to Bøhn & Myklevold (2018), Rabab'ah (2016) performed a comparative study where they gave communication

strategy (CS) instruction to one group of EFL learners, and not to another. During this instruction the participants were taught seven strategies from Dörnyei & Kormos (1997, 1998); appeal for help, clarification request, confirmation check, asking for repetition, self-repair and guessing. In their study they found that the communication strategy training had a great effect on the learner's oral communication, both on novices and advanced learners. They argue that this proves CS to have great value in terms of EFL teaching, as they enable the learners to achieve communicative goals, and meaning, and to improve their communicative abilities. Therefore, teaching CS to EFL learners will help them with language difficulties to improve their language acquisition (Rabab'ah, 2016).

Looking at Parcon & Reyes', Su's and Rodriguez & Roux' studies, the most common PSM their students employed were code-switching, and message abandonment. Code-switching is only viable as a PSM if the participants have the same mother-tongue, something the participants in our study did not have. However, these studies only looked at a select few communication strategies rather than Dörnyei & Kormos' (1998) entire taxonomy. Notably time pressure mechanisms such as umming/erring are barely mentioned. Meaning that these CS could have been used a lot though not noted down. The students in this thesis' study communicated in groups, meaning appeals for help among one-another with code-switching may be more common. These above studies also indicate that anxiety and CS instructions play a significant role on the frequency and type of PSM L2 speakers use, meaning that the level of preparation and setting in which the conversation takes place in may affect play a huge role onto the results.

2.6.2 Experiences in Online Teaching/eTwinning

Bozdağ (2018) argues that there must be a critical look at eTwinning and telecollaboration and how it is employed for teaching. In their case study regarding a collaboration between a German and Turkish school, they found that some teachers default to using traditional teaching methods such as lecturing during telecollaboration. The students experienced that the teachers talked too much, leaving them too little room to communicate with their foreign peers. They also found that the student ages were mismatched, whereas one of the classes was 2-3 years older, which made the students hesitate with contacting one another. He found that this teacher-student method made the lessons boring for the students and lessened the potential for cooperation. Bozdağ mentioned that a less teacher-centred project where the

students were involved in designing the project would be better. However, the teachers who participated in this study had not had an eTwinning training session. The scope of the internet-based telecollaboration projects is shaped and limited by the school cultures and perspectives of the teachers who design and guide these projects (Bozdağ, 2018).

Fortune, Spielman, and Pangelinan (2011) investigated 156 students who chose between online learning and face-to-face learning of a course at the University of Northern California. They found that there is no statistically significant difference in learning preference between the two groups. Tratnik, et.al (2017) also conducted a study that focused on student satisfaction levels regarding online classes compared to face-to-face learning of EFL. Face-to-face learners were found to be more satisfied with their learning than their online counterparts. Mukhtar, Javed, Arooj, and Sethi (2020) conducted a study regarding the limitations and advantages of online teaching during the COVID-19 pandemic. They found that the faculty of schools had the opinion that online learning ensured remote learning, it was easily manageable, and the learners were able to access teachers and learning materials easily. It eased administrative tasks such as recording lectures and marking attendance. Both learners and teachers found that the online learning modalities had encouraged student-centeredness during the lockdown periods. The students themselves had also become more self-directed learners and increased their digital competence greatly. However**,** both workers within the field and the learners exclaimed how online learning modalities were unable to work when the practical aspect of learning was of importance. They were only able to teach and assess knowledge and information. Because of the clear lack of immediate feedback from learners, teachers were unable to assess the understanding of their pupils. Students also reported that due to the nature of online teaching their attention span was even more difficult to uphold through the screen. Another obvious limitation is the pupils' access to the wide web, allowing them to stray from the lessons and do other things than what they are supposed to.

2.7 Theory & Research Summary

There are several theories regarding language acquisition. The most *relevant* ones, Skinner, Chomsky, and Krashen, mention social settings as an important space for language acquisition to take place. Using EFL communication, the communicator will stumble and face problems. These problems may stem from a lack of L2 knowledge and proficiency.

When facing these challenges, the communicator must employ communication strategies, or problem-solving mechanisms, to keep the conversation active. There are many different PSM the communicator can employ, relating to different communicative problems ranging from resource deficiency, lack of processing time, and perceiving one's own and the interlocutor's skills.

Understanding students' use of PSM is of interesting nature, as it gives the teacher insight into what aspects of the English language their pupils are comfortable with, where they stumble and to what degree and in what ways the pupils can adapt during difficult linguistic situations. Understanding this gives the teacher knowledge regarding what to work further with and what communication strategies the learners need to work on.

Authentic oral EFL communication, which in this thesis is defined as communication with someone who does not share the same L1. Can be challenging to arrange in an everyday classroom. Through telecollaboration and eTwinning one can connect with foreign classrooms and engage in linguistic activities together, enabling the students to experience authentic communication. However, telecollaboration comes with specific challenges one must be aware of, such as technical issues.

Considering the studies outlined in this chapter, the preparing the in advance of the foreign encounters is crucial to facilitate a good oral encounter with maximum willingness to communicate and learning potential. The speakers benefit greatly from being taught strategies for handling anxiety and to solve communicative problems. One must also be aware of the shortcomings of telecollaboration and try to prevent technical problems as much as possible. They should also be made aware of various communicative strategies, as well as be given sufficient time and preparatory tasks for the conversations.

3 METHOD

This thesis employs an exploratory study in order to investigate the communicative strategies pupils use when struggling with their L2 competence. The study will be based on a collaborative project between a Norwegian and an Austrian classroom, allowing the informants' L2 to be at centre stage. This study will mainly be based on a qualitative approach, having a case study with observational- and interview-based data as the focal points. However, due to the nature of the observational study being the numerical value of the communication strategies used, the study will also contain some quantitative data. Seeing as the study contains both qualitative and quantitative data, from both observational and interview-based sources, the study has a mixed-method approach. This entails that the quantitative data collected will assist in the elaboration, reflection, and reasoning of the qualitative data. The method chapter will provide insight into the methodological choices made, granting an insight into the reasonings behind our choices, details regarding specific details unique to our study, participants, and experiments as well as ethical and theoretical concerns that needed to be considered.

3.1 Case Study

This project will have the case study as its main method of research. Case study was chosen due to the need for a structured and valid situational classroom fitting with what the thesis is trying to explore. According to Gagnon (2010), the case study is appropriate in this sense. He states that the case study method provides a deeper understanding of specific phenomena, the processes occurring in the subjects, and the subjects themselves. In this case, this entails telecollaboration transnationally with the linguistic processes being explored and the subjects being pupils in middle school. Gagnon continues by writing that the case method is appropriate in describing, explaining, predicting, and controlling the processes occurring within the case. The focus of the case study is on the variety of phenomena at both individual and group levels. Dyson and Genishi (2005) emphasize that the focus of the case study is not on the subjects, but on the phenomenon of interest. This means that the actors in the study are of little to no importance, when trying to answer the research questions. Crowe et al. (2011) also stand by the case method when stating that it is especially useful when trying to obtain an in-depth understanding of issues in their natural real-life context.

The case study is constructed around our research questions, entailing that it has a focal point aimed at the communicational strategies pupils employ during English

conversations wherein the L1 of the speakers are unavailable. With this in mind, we expect the pupils to feel somewhat threatened by the idea of being forced to speak in their second language. However, we also believe that this aspect allows them to showcase all their linguistic skills and flaws, whilst the pupils find comfort in the fact that their conversational partner also has English as their second language. The situational context being present in this project will grant us valuable data regarding EFL competence in Norwegian learners and the value of "authentic" English conversations in acquiring language knowledge.

Due to the experimental nature of using a telecollaborative media in education, learners may be motivated and find the experience to be entertaining and fun simply due to it being different from ordinary English lessons. It was expected that the learners would feel enthusiastic about being allowed to use their language skills to become familiar with people from another nation. We also predicted that some of the learners were avid users of different digital platforms or video games, granting them a base of communicational experience useful in this exercise. On the other hand, it was also safe to assume that there were pupils who are normally shy or are lacking in English or digital proficiency, these learners may be frightened by this experience and need some sort of support during the conversations.

Since we have altered an already established classroom dynamic and thus also their entire lesson plan in the middle of the semester, we also expected hindrances and problems occurring in our research. We assumed that the time needed for each of the groups would make the period in which the conversations took place to be extended over at least a couple of weeks. This in turn would grant some learners more time than others to mentally prepare themselves and also to come up with conversation topics and become comfortable with the idea of executing the conversations.

Case study in and of itself is not a methodology for collecting data, but a research framework or strategy in need of other research methods in order to fulfil its purpose. Postholm and Jacobsen (2011) explain this by explaining how, "case study" is a term for several research designs with minor alterations, where the common ground for them is that they all study a case (p. 62). The case study approach will be used as the main research base. The added methodologies of observation and interviews will be used to complement and investigate the significance of the case study.

The most viable option for this research study is singular case research through the instrumental case study method. This method uses a particular case to gain a broader

appreciation of an issue or a phenomenon. The aim of the singular case study is to present an in-depth understanding of one single case (Creswell, 2013). In this instance, the single case is the telecollaborative effort of a Norwegian 7th-grade class. The base of the research will be to understand what takes place within the context of the class. Postholm and Jacobsen (2011) explain further what the singular case study entails. They write that it is specifically the observed pupils, within their class, taught by their respective teacher that is the centre of the study (p. 64). The duo goes on to describe how the singular case study can have an explanatory purpose, with a focus on uncovering different processes creating a certain state or a result. The aim of this study is to explain how transnational communicational situations affect the learners and their linguistic development Thus, explaining what they learn, how they learn and why they act as they do in various situations.

A problem with this type of study, however, is according to Huberman (1987) that the data produced is of a local nature, meaning the information is relevant for a certain context, in this instance one specific class in Norway. With this in mind, the information gathered through this study will be of huge interest to the teacher of the studied class, meaning the internal validity and reliability will be high. For a singular case study to be relevant outside the specific context, it was studied in, the researcher needs to reflect on the question "Is the knowledge gathered from this specific case also of interest to others?" (Huberman & Crandall, 1982). This question provides insight into the aspects of external validity and reliability, meaning to which degree and with what certainty one can claim that the gathered information from one context is valid in another one as well. This, in turn, brings forth the question of the studied class's similarities and differences from other classes

The case study is the best option for us since we are interested in gaining an in-depth understanding of the phenomena of authentic English-speaking situations and their effect on Norwegian learners. This however poses the issue that by altering the peers' work habits we also affect the credibility of the case study where these usually require the environment to be in its natural state.

Based on the aim of this research project being the acquisition of communicative competence and adaptability of pupils in the EFL classroom the research needs a case where these are prominent parts of the lesson. This puts an emphasis on the importance of being critical in the choice of class to work with and makes it a more viable option to temporarily alter the environment of the research to complement the aims and needs. Seeing as we want

to execute the instrumental study type, we need to be specific in the choice of case and it becomes a necessity to ensure the relevance between what our research demands and what the subjects are doing. By constructing an environment fit for our needs we adapt our subjects for the instrumental case study type. This entails that we focus on one specific and peculiar case to gain insight and increased knowledge of a situation or phenomenon.

Construction of the environment entails that we apply changes and alter the classroom dynamic in order to allow for answers to the questions we are studying. In this instance, we have introduced a Norwegian class to the opportunity of collaborating transnationally with a completely foreign class they had no relation to whatsoever. This also means that we as researchers are unable to completely isolate ourselves from the subjects we are studying. We need to actively participate in the introduction of the collaboration as well as the execution of it, due to its experimental nature and the subjects' inexperience. On one hand, this negatively affects the reliability and the genuineness of the studied environment. However, on the other hand, with the above fact in mind, it becomes even more important to validify our study through other research methods. Crowe, et.al (2011) states that the case method approach involves the collection of multiple sources of evidence, using a range of quantitative and qualitative techniques. Because of this, our thesis focuses on several research methods to explore the research questions. This, in turn, makes the case study an even better option in order to satisfactorily answer our research questions.

Yin (2003) details how the case study can be exploratory, explanatory, or descriptive. Our research aims at answering in what way transnational telecollaboration affects the EFL learning of Norwegian pupils and what communicative strategies are being employed by the subjects. Following Yin's description of the case study, the exploratory nature of our study makes it appropriate for the case study approach. Our project relies on the exploratory question "what communication strategies do the pupils employ during online EFL telecollaboration?". According to another article by Yin (2009), the case study approach captures information on questions concerning "how/why/what". The method offers insights into the gaps that exist in the research area and can as a result of this develop or refine theory.

The case study method's focus is on a small number of research participants - language learners or teachers are typical examples - and sometimes just one individual is involved. The individual's performance, knowledge, and/or perspectives are then studied closely and intensively, to address timely questions regarding language acquisition, attrition,

interaction, motivation, identity, or other current topics in applied linguistics (Duff, 2012, p. 95, in Mackey & Gass). The data collection will happen with the assistance of two classes of 7th graders in a Norwegian school and one in Austria. The focus is aimed at the Norwegian pupils' performance regarding communication and problem-solving skills, with their personal reflections on the collaborative project as supplementary data granting further insight into their performance during the conversations.

Duff (2012) states how the case study requires a focus on depth rather than breadth in its scope and analysis. Entailing that the researcher tries to particularize and grant insight of wider relevance and significance (p. 96). The focus of this thesis is as previously stated the communicational strategies employed by EFL learners during the usage of telecollaborative work transnationally. The aim of the study is thus not the advantages of eTwinning in and of itself, but the aim is to delve deeper and gain an insight into how pupils' actions during these collaborative efforts are of significance. This requirement of the case study is also detailed by Postholm and Jacobsen (2011) where they state how the case method needs to focus on a unique context of an environment. If for instance, a class is a case, it is of the utmost importance to emphasize what characterizes the class, in order to understand what happens within it and the significance of each occurrence (p.63). The environmental settings of the eTwinning project are what made it relevant for this study, ensuring that the exact character of the class and the lessons being held with it, is the main focus and reasoning behind why the case study is chosen and used with this specific group of learners.

3.1.1 Observation

To gather data enabling the case study to be viable, observation will be used to explore to what extent pupils employ different strategies during their communication. This choice was made due to the nature of the method, wherein the researcher writes down their discoveries in a well-constructed and organized form. Marshall and Rossman (1989) define observation as "the systematic description of events, behaviours and artifacts in the social setting chosen for study" (p. 79). With this definition in mind, the method of observation is a brilliant complementing methodology to the case study, where the data is gathered by the researcher using their senses in order to gain an in-depth understanding of the subjects and the situations occurring during the project. According to Schmuck (1997), methods of observation are useful to researchers in a number of ways. They provide researchers with ways to notice non-

verbal expressions of feelings, determine who interacts with whom, grasp how participants communicate together and check for how much time is spent on different activities.

During the observation sessions it is of great importance that there is a decided-upon limit to the participation of the researcher. The aim of these sessions is for the researchers to simply observe the pupils without interfering. Whenever a linguistic problem occurs the only job of the researcher is to note it down and not interfere or assist the learners, seeing as this would negatively affect the data. We thus expect to fully immerse ourselves in the role of the observer and try to not actively affect the subjects in any way during the conversations.

Our observation schematics include a number of items that are impossible to gauge simply through watching the subjects. In order to tackle these PSM we will record the pupils and analyse their oral language sentence by sentence. These include the linguistic mechanisms falling under the PSM-categories resource deficiency, time processing and perceived deficiency of others and self.

For this study, the most relevant observational method is participant observation. Participant observation enables researchers to learn about the activities of the observed subjects in their natural environment, through observing and participating in those activities. It allows the researcher to familiarize themselves with the subjects'' language usage. It allows for observation of situations the subjects describe in interviews, making the researcher aware of distortions or inaccuracies in the description provided by the informants (Marshall & Rossman, 1995). Schensul, Schensul and LeCompte define participant observation as: “the process of learning through exposure to or involvement in the day-to-day or routine activities of participants in the research setting” (p. 91). Through our involvement with a class during their telecollaborative transnational project, we will be exposed to the subjects and their handling of situations as they occur naturally.

Bernard (1994) has commented upon the participant observation, stating that the observer needs to maintain a sense of objectivity through distance. Bernard defines the method as the process of creating relations within the community being observed and acting in such a way as to blend in, so the members act naturally. When the observation is completed, the researcher removes themselves from the community to immerse themselves in the data so they can understand what the subjects’ activities meant. This entails that the researchers need to have their subjects become familiar with them, in order to ensure reliable data during the observational period. In this study’s instance, this happens through spending

time with the subjects, allowing them to gain trust in the researchers. During the conversations, the researchers will be there not just as observers, but also as aids in extreme cases where the subjects struggle to express themselves. According to Bernard's comment we fail to distance ourselves from the subjects but succeed in gaining their trust and allowing them to feel safer around us. When we assist the learners, it is of great importance that this does not occur an excessive number of times, in order to not alter the data too significantly. If we focus on aiding the pupils whenever they are really stuck and distance ourselves for the majority of the conversation we have an acceptable balance between familiarization and distance. Regarding observation of EFL usage, a learner's natural language production is susceptible to minor changes in the social context. One must be aware that teachers or researchers observing may affect the subject's spoken language, even if they keep a low profile to avoid affecting the data. Therefore, one should keep note of the social context during the observation (Tarone & Swierzbin, p. 97, 2019). The subjects' familiarity with the researcher ensures that they are not threatened or scared by the presence of someone watching them when the actual observation takes place. On the other hand, the simple presence of anyone may, as stated above, alter the results and thus affect the credibility and reliability of the data collected.

Gold (1958) notions that there are four different kinds of observers, these being the complete observer, complete participant, observer as participant and participant as observer. Out of these the most relevant role for this study would be the observer as a participant, which Gold (1958) describes as undertaking intermittent observations alongside interviewing, with the fact that observations are taking place being known by the subjects. Seeing as we will become obvious observers of a group of pupils, we will also affect the learning environments and interview certain subjects as a follow-up to the collaborative project. The observer as participant role allows the researcher to participate in the group activities as they please, however, the main goal is still to collect data. Participation in activities is a choice made to improve the observations and thus generate a better understanding of the subjects. Kawulich (2005) explains how out of the different observation roles, participant observation provides the most ethical approach to the research. This is because the observation activities are known to the group being studied, yet the emphasis for the researcher is still on collecting data, rather than participating in the activity being observed. Adler and Adler (1994) note that this role allows the researcher to both observe and interact closely with the subjects in order to establish an insider's identity without participating in the activities constituting the core of

group membership. This statement is interpreted in this instance to entail the identity of someone adopting a teacher or assistant role. Merriam (1998) writes that while researchers have access to many different people in the situation being researched, the members of the group are the deciding factor as to how much information is being given. This puts a greater emphasis on the opportunities Adler and Adler point out and thus the importance of relational building with the research subjects, for them to be willing to collaborate as much as possible with the study.

3.1.2 Interview

To finalize the research for the case study, interviews were employed in order to gather qualitative data regarding the subjects' reflections and opinions about the telecollaborative project (appendix 2). This in turn allowed us to gain an insight into the value of using the platform, its impact on different learners and how to utilize communication situations like those found in the project in order to develop linguistic competence in Norwegian EFL learners. Weiss (1995) explains interviews when describing how it grants access to the observations of others. Through interviews, researchers are able to learn about places they have not seen and settings they have not lived through. One can learn about people's internal experiences, meaning what the subjects perceived and how they interpreted their perceptions of an event (p.1). This entails that the interview grants insight into the partaking actors' reflections concerning the project and the situations they have worked with and through. The interview method will thus be used to collect qualitative data regarding the pupils experiences and reflections concerning the telecollaboration. This in turn, will be compared to the quantitative data to grant us insight and greater analytical opportunities.

Talmy and Richards (2011) describe interviews as co-constructed speech events based on social relationships and interactions. The interviews do not necessarily generate complete or accurate versions of the subjects' perspectives or proficiency, however, they do yield a partial representation of reality or a construct of past events. During interviews the subjects are being tested, they are performing a particular role, or they could be prompted or constrained by the interviewer in a number of ways. With this in mind, the gathering of data occurs socially in the interactional relationship between interviewer and interviewee. Kvale and Brinkmann (2019) state that the production of data during interviews happens through mechanical compliance with rules and is dependent on the interviewer's skills and situated

personal evaluations considering how the questions are asked. The data that is gathered through the qualitative interview is very much based on the individual respondent and the information they provide, this means that the sample of respondents is much smaller than it would be in a quantitative interview study (Weiss, 1995, p. 3).

The subsequent interviews took place with the same groups as the online conversation the day after the conversations were held. This was a choice made in order to allow the pupils to collect their thoughts and process the experience. This hopefully provided more reflected and valuable answers ensuring that our data is as valid as possible. The interviews were performed in groups to lessen the formality of the interviews and to allow the students to play off each other. This, however, may lead to some insufficient data and difficult situations to analyse. It could, for instance, have led to some subjects not sharing their actual thoughts and opinions in order to not feel different. Another risk is that group interviews may have created an imbalance regarding the actual participation of each subject, with some of them not saying anything during the interviews.

We expected that the learners would share both positive and negative experiences with the project, however, we also assumed there would be a more positive tone due to the interviews being conducted by strangers. The fact that the learners did not know the researchers may have led to them answering in a way they assume is expected of them, making the role of the interviewer and the follow-up questions that much more important. This reasoning is why the interview were to be a semi-structured one allowing the researcher to alter the questions based on the subjects, their competence level and their willingness to share. We thus constructed some general questions allowing the pupils to share their thoughts before going more in-depth on the answers we found to be interesting for the study. If we strictly followed a structured interview guide the subjects would not be allowed to elaborate on their answers and grant us the knowledge needed for our research.

The interviews themselves took place in the subjects' L1. This was a choice made to ensure that the pupils were comfortable and able to share their reflections and experiences as accurately as possible. However, it also entails that the answers were provided in Norwegian before being translated and analysed by the interviewers. This may have led to insufficient or false data based on whether or not the interviewer understood and translated the answers correctly. If the data collected during the interviews would have been the main data for this thesis this could have posed a problem, however, for this research, we will focus mainly on

the linguistic proficiency during the telecollaboration. This means that the main purpose of the interviews is to serve as supplementary data granting us further insight into the experience of being a part of the project and in what ways it has impacted the participants. The inclusion of multiple sources of data sets also strengthens the reliability and validity of the study, where the interview can serve as a method of cross-checking and validating the finds collected through the other methodologies.

Weiss (1995) explained how the qualitative interview is fitting when the aim of the study concerns the subjects' interpretation of events they have experienced or when the aim is to gather information about what the event has produced or changed within the subject (p. 4). In this study's instance, the focus will be on how the telecollaborative transnational project affected the learners and their linguistic development.

Brinkmann and Kvale (2019) stated that through interviews you may gather different types of knowledge; these include relational, conversational, contextual, produced, linguistic, pragmatic and narrative. For this study the most relevant information to gather would be the produced knowledge. This entails that the knowledge is constructed socially during the interaction between interviewer and interviewee. The resulting knowledge is not just something that is discovered, the product is created through the collaboration between the two parts (p. 335).

3.2 Data Collection

This research study employed three separate methodologies, case study, observation and interviews. This sub-section will be dedicated to presenting the specific details regarding the different methods of research related to our project. We will thus present information regarding the participants, the conversational topics, and how the different datasets were to be collected and processed.

This study was performed in two Norwegian 7th grade classes consisting of roughly 20 pupils each, who collaborated with an Austrian class of 22 students. We made contact with the individual schools based on our previous connection to them. We have previously worked at the schools during practice periods as teachers, meaning we are familiar with both schools. The teachers of the participating classes were thus not of personal relationship. With the two groups of people situated in different countries chosen, we connected the two teachers with each other. They were quick to share ideas and thoughts regarding the project

and showed great enthusiasm toward telecollaboration. The teachers constructed a thorough plan for what to do and when to do it between the start of the project and summer vacation. However, the Norwegian teacher we collaborated with had never done anything similar before, meaning she was inexperienced and in need of guidance. We could have opted for a teacher and class already invested in the eTwinning way of teaching, however, we wanted to focus on the typical Norwegian class. The idea was aimed at figuring out what linguistic advantages telecollaborative work has on average Norwegian EFL learners.

The Norwegian classes were thus new participants in the already existing plan of the Austrian school, wherein they previously collaborated with an American school. Due to the time zone difference between Austria and USA, they preferred something closer, making a Norwegian class a good match for them. The Austrian class had thus partaken in an eTwinning project previously, while the Norwegian class had not. The inexperience of the Norwegians is of great interest to our study, because we want to look at the average class and their pedagogical gain from using telecollaboration. The Austrians' previous experience with eTwinning can also be of value to our study seeing as this could affect our subjects both positively and negatively. The comfortability of the Austrians may allow the Norwegians to feel more at ease during the conversations and the Austrians' experience with keeping a conversation with strangers can assist our subjects to become inspired and share more of themselves giving us a greater insight. If, however, there is too big of a gap between the different parts of the conversations there may be a clear imbalance in participation. The Norwegian learners may simply allow the Austrians to dominate the conversation, not bothering to engage themselves or share due to fear of being too inexperienced.

The participants were accustomed to using English orally. Their teacher explained to us that they have performed various tasks with oral proficiency as the focus and that they only speak English during their lessons. The teacher also decided to prepare the pupils for the online conversations by presenting and discussing various communication strategies. Thus, giving the learners an insight into how to keep a conversation natural and what strategies one might employ during conversations to be engaged and engage others. This has led the pupils to be confident and comfortable English speakers. This is something to be considered whilst analysing the data since many classes do not have a significant focus on oral performance equal to that of this class. This may have allowed this class to be more mentally and competently prepared, than what an "ordinary" class would have been. This affects our data because it directly alters the learners' base of knowledge and preparation, meaning the

authenticity of the class as inexperienced conversationalists could be considered invalid. However, the pupils had only been instructed in how to act during the conversations and what communicative strategies may be viable for them, they had never experienced an opportunity in which they applied this knowledge until the actual project took place. This entailed that the pupils' first instance of employing communicative strategies was when conversing with the Austrians, meaning the inexperience is still of great value to our study. But it also grants the learners more opportunities to partake in the conversation and allows them to share more and ask more of their conversation partners, giving us more data to analyse.

As stated earlier, the participants we studied consisted of two classes. For the telecollaboration to be as effective as possible we needed to divide the subjects into groups. This would allow everybody to participate and also improve the collected data. Seeing as the Austrian class had fewer pupils than the Norwegian ones, the groups conversing would be somewhat imbalanced. The two Norwegian classes we had at our disposal were thus divided into four groups with three to five pupils in each. These groups were made in collaboration with the teacher, based on their linguistic competency and confidence in the English language. Groups were constructed with the aim of having equally competent students in each group, so to avoid confident learners to overpower the conversations or less confident learners to become too inactive. The group division based on linguistic competency and proficiency is also of interest when looking at the employment of PSM during oral communication, where the level of knowledge may affect both the choice of PSM and the ratio of PSM usage. With both the researchers being placed in Norway we had no direct way of affecting the group construction in a similar manner for the Austrian pupils, entailing that the two conversing groups may have completely different prerequisites. We also noted that the Norwegian groups and the Austrian groups were different in regard to gender, whereas the observed subjects had mixed-gender groups, whilst the Austrian groups had groups based on gender. The Austrian groups also consisted of varied ages, ranging from 11-14 years old, differing from the Norwegian 12-13 year olds.

Approaching the conversation, the students expressed that they were looking forward to the conversation as well as meeting their Austrian counterparts. They were eager to ask their questions and experience something different from their usual everyday school life. The eTwinning project's theme was "getting to know another country". The tasks within the project were planned to take place from February to June. These tasks consisted of having the pupils write about themselves, their own country, preparing videos/presentations about their

own countries, online conversations which are to be observed by researchers, watching cultural content such as films, and lastly a virtual meeting. The goal of the project was to exchange cultural knowledge between peers from the two schools, and to increase cultural awareness amongst the students.

The online meetings were performed in groups to allow the informants to lean on each other for both linguistic, physical, and mental support. The students were asked to prepare three interview questions to ask the foreign group. These questions were meant to act as a conversation starter, to guide them into spontaneous conversations. These online conversations were performed through the digital platform Zoom and were designed to last approximately 20 minutes. The reasoning behind giving the subjects 20 minutes to work with, was because of the aspect of familiarization and gaining a feeling of safety and confidence during the conversation. We hypothesized that this would allow the pupils to open up more, share more of themselves and engage in more reflective and exploratory conversations and rants, wherein the conversational strategies may be more visible to us.

The pupils were made aware of the project a long time before the actual meeting was to take place. They had received information about the project along with the consent form (appendix 3) a few weeks in advance. They were told that the focus of the first sessions would be to familiarize themselves with the Austrians. The pupils were tasked with preparing three or more interview questions allowing them to learn what they were interested in and helping them become more comfortable in the situation. The students' questions asked about their conversation partners' everyday life, favourite foods, personal details and culture. During the session the Austrian students had prepared many more questions than the Norwegian group. Meaning that the Norwegians replied more to them, giving us more relevant conversation data, compared to them primarily reading out scripted questions.

Their teacher had emphasized that there are some personal boundaries that one does not cross, leading to the pupils refraining from asking about topics such as politics and sexuality. The teacher also put time out of the class's English lessons to train the pupils in communication strategies, mannerisms and polite phrases for the conversations to be as coherent and competent as possible. This is not something we asked of the class; however, the teacher saw the pedagogical value provided by the project and thus incorporated it into her lesson plan.

The participants were aware that they would be observed and that their audio would be recorded, however, they did not fully comprehend what exactly the purpose of the study was, due to the complicated topic. This shrouded the presence of the researchers in mysticism, but none of the subjects seemed affected by our presence and seemed somewhat comforted by the fact that an adult was present. This means that the learners' main focus was on the execution of the conversations and that the focal point of the study would not be a distraction for the participants.

Although not originally intended we decided upon conducting a second session of conversations due to popular demand from the learners. This provided new opportunities for gathering data and allowed the participants to use their previous experience from session 1 to be more active and proficient in session 2. These conversations took place close to the Easter break, leading to the topic of the conversation being Easter. Due to the supplementary nature of this session the data collected from it will not be considered primary, but rather grant us more reflective opportunities to correlate the potential differences and factors playing in between the two sessions.

3.2.1 Data Processing

The online meetings were recorded using audio recorders. These recordings were later transcribed and subsequently analysed. The transcriptions were done on a group-by-group basis, assigning each participant in each group a letter. The transcriptions were done sound-accurately, entailing that they contain every pause, umm, abrupt stop, etc., in order for problem solving mechanisms related to time processing to be properly gathered.

Due to the research being conducted by two researchers, we naturally analysed the transcription slightly differently, resulting in somewhat differing results. We counted the different PSM in separate manners, where there was a slight miscommunication in whether or not to increase the count when the same PSM was used multiple times during the same utterance. This led to one researcher's count being much higher than the other's. There is also no way of knowing how big of a variation there was in the actual analysis, where one could have been more careful in their count of PSM. However, the specific number of PSM is of little interest, the ratio of PSM used is the significant data and the result's ratios were still very similar.

In addition to the audio-recorded data, we also gathered supplementary data through interviews and observations. The observations were processed in the same schematic as the audio-recorded conversations and granted further admittance to a wider array of PSM and thus also a grander insight into the subjects' EFL proficiency. The interviews were conducted in a similar manner to the observations, by audio-recording the groups as the interviews were conducted, before analysing their answers when the sessions were complete. Interviews took place in order to showcase the participants' experiences and personal development throughout the project. The interviews were not transcribed, instead they were listened to, and the general tone of the answers was written, with the more interesting reflections being noted down. This was a choice made to lessen the amount of work needed to process the information, due to many of the pupils providing similar answers to the questions.

During the observations, the Norwegian students conversed online in groups of three to five pupils with the foreign students. Doing a video recording would in theory be ideal, in order to capture visual PSM such as hand-gesturing. However, due to privacy concerns and legal reasons, we opted for doing a combination of audio-recording as well as observations. During the conversations, we would use an observation schematic (appendix X) as well as audio recorders which were later used to transcribe the conversations. The schematics were designed to count the students' use of PSM during the conversation with one schematic for each group. We did thus not look into each individual subject's proficiency but the group's as a whole. For the visual PSM, we also planned to note down timestamps for when they occurred, in order to link the schematic with the transcription of the recordings. The reasoning for this was that there may have been a correlation between the conversation's topic, the linguistic choices and how the subjects used their bodies. To simplify the data analysis of the observed data, we have taken inspiration from Parcon & Reyes (2020), and combined certain PSM that were similar to each other into singular mechanisms, greatly reducing the amount of possibilities. We will look at the observation results in a quantitative manner, meaning that we look at the frequency with which the various PSM are used. The PSM in the schematic is based upon Dörnyei & Kormos' (1998) taxonomy. We divided the different PSM into categories allowing us to gauge not just the specific PSM employment, but also what category they fell under. From Dörnyei & Kormos's taxonomy, we included the categories time-processing, resource deficiency and perceived deficiency of self and others. In addition to these categories, we also constructed our own category implementing visual

PSM. This was a choice made due to a hypothesis posing the idea that the pupils may employ mechanisms such as body language and facial expressions during the video conversations.

The first conversations were performed in two groups simultaneously all throughout the same day, with each of us observing one group each at a time. The project thus took much of the subjects' school day, and some of the learners thus had more time to prepare based on when their conversations were to take place.

The environment for the conversations was quite noisy, as the school we executed the project in did not have group rooms available for the pupils, leading to the meetings taking place in a common area found between the classrooms. This entailed that the two groups undertaking the conversations simultaneously would be in the same space and thus hear each other and everyone else present in the area. The computers that were used also had quiet speakers, which combined with the noisy environment caused some issues for the students, leading to the subjects constantly asking for repetition and clarification. This in turn, affected the PSM ratio due to the learners displaying many more mechanisms related to the perceived deficiency of others than what would occur otherwise.

The meetings took place over the telecollaborative medium Zoom, where we created meeting-rooms and shared the links with the teachers. The students would then join the same rooms and talk over the computer. The Norwegian school did not have access to Zoom on their own computers, leading to them borrowing equipment from us. Zoom was used as it offered a simple solution in the form of joinable links, as well as good noise-reduction audio processing.

We have opted for the observation method of participant observation. This entails that we inserted ourselves into the environment that we studied. Our roles during the conversation were thus not only researchers but also pedagogical, due to the assisting nature of our presence. We sought to create comfortable situations for the subjects through forming relations and becoming familiar to them.

Ahead of the online conversation we visited the school a few times to present the project to the students and inform them what they were to do. We visited the school the first time in the very beginning of 2022, and the conversations themselves took place in late March. This means that they got several weeks' notice, including a brief presentation, and the task to prepare interview questions. This also entailed that the pupils were growing familiar with us and knew who we were and what they could expect when seeing us.

During the observation of the online conversations, we sat near the students, attempting to not be in their field of view. However, we acted as teachers. If a student had a question or sought help conceptualizing a sentence, we would assist them.

3.3 Ethical Concerns and Limitations

There are a multitude of limitations and ethical concerns to consider when conducting research, and for our study we have applied three separate methodologies, meaning there is an increased amount of considerations to make. These concerns are of great importance to allow for as reliable and valid data as possible for the study. Due to the focal point of our study being minors, the pupils' safety and comfortability is of the highest priority.

Landsberger's Hawthorne effect refers to the studied subjects' awareness of being observed and the idea that this alters their behaviour and choices during the observation period. This affects the credibility of the situation and thus also the collected data. Mulhall (2002, p. 308) claims that this effect is overemphasized and that the subjects will be far too busy performing the action to maintain a behaviour radically different from their normal one. Our study focuses on specific situations in which the subjects are in a new and different setting from what they are used to. We will not look at the pupils' usual attitude or actions during an ordinary lesson, meaning the role of the subject has changed from what it usually is. With this in mind, there are a multitude of factors affecting the way the subjects are acting that may differ from their usual way of being. There are linguistic restrictions, social challenges and digital challenges making the Hawthorne effect only one of many factors, but it still remains a factor to consider when analysing the data. A similar effect to Hawthorne may also occur during interviews wherein the pupils may alter their statements and attitudes based on what is being uttered by the other participants in the group, or by the fact that they feel like certain thoughts, reflections and feelings are expected of them.

Schensul, Schensul & LeCompte (1999) point out how all researchers must expect to be excluded at some point in the research process. In these instances, it is important to recognize what this exclusion means to the research process. During the observational period we will visit the schools on only a few occasions, possibly leading to the subjects being uncertain or threatened by our presence. This in turn may alter their behaviour during the observed conversations and interviews entailing that it is of importance that we reflect on both the participating and the non-participating subjects.

Dewalt, Dewalt, and Wayland (1998) state that the researcher must decide to what extent they will participate or intervene in the studied community. In regard to observation, we assume that our participation will be quite restricted, wherein we will only intervene if the subjects actively ask us questions relating to the online conversation. With us assisting the subjects, we may remove other participants' opportunities to provide this assistance, thus negatively affecting our data. However, researcher participation will also strengthen our familiarity with the subjects, meaning they are less likely to feel frightened by our presence.

Schensul, Schensul, and LeCompte (1999) also suggest that observation is filtered through one's interpretive frames and that "the most accurate observations are shaped by formative theoretical frameworks and scrupulous attention to detail" (p. 95). The quality of the observation thus depends on the researcher's skill to observe, document, and interpret what has been observed. Due to us only actively observing visual PSM such as hand gestures during the actual conversation, there should not be a problem in noticing these. The observational schematic regarding the non-visual PSM will be filled in whilst analysing the transcriptions of the audio recordings. This means that as long as we have transcribed correctly, the PSM can be found easily by analysing the transcriptions.

There are several ethical concerns related to audio recordings as observation aids. In order to be able to collect this data, an application through NSD (Norwegian Research Centre) is a necessity, where strict guidelines are to be followed and specific tools for data collection used. Audio recordings also produce vast amounts of data that is difficult to analyse and especially for continuous monitoring it is necessary to sample the listened material (Ciesielska & Boström, 2017). It is also of great importance that sensitive data is censored or omitted completely from the transcriptions, keeping the identities of the subjects as hidden as possible, especially due to them being children.

Confidentiality refers to the agreement between researcher and subject about what the data from the research will be used for. It often involves the importance of keeping identity-revealing information strictly under keep (Postholm & Jacobsen, 2011, p. 250). The observational part of this research will in no way reveal any sensitive information due to its quantitative nature, but during the transcription of the conversations, there is a need to ensure that names, locations and other sensitive data are concealed. The interviews as well are in need of a cautious and alert approach to the content of the data collected and the analysis. This study is not interested in the traits or backgrounds of the subjects, but solely in their

linguistic prowess and actions during the telecollaborative project. The issue of confidentiality should thus be of no concern to us.

Postholm & Jacobsen (2018) also pointed out how the participants of a study should fully understand the research they are partaking in (p. 249). As stated previously, our subjects were unable to fully understand what the study's focus and purpose was, leading them to only have a minor grasp of what the researchers' presence meant. It is impossible for us to ensure that every participant understands every part of our study and seeing as there is a low risk of our participants getting their personal data leaked or coming to harm in any way there is a reduced focus on this aspect of the ethical aspect of our study.

Informed consent means that the research subject is informed of the study's purpose and about the main features of the design, as well as potential risks and advantages of participating in the study. This also ensures that the subjects participate voluntarily and informs them of their right to withdraw from the research at any time. All participants, including their guardians, have been informed of the study's aim and relevance, their rights as participants, and how their data will be processed. They have all received consent forms outlining their options (appendix 3). During the actual data-gathering period the subjects were divided based on whether or not they consented. Most of the pupils seemed overly ecstatic about the opportunity to converse with someone from a different country, and their guardians not signing the consent form would mean that this opportunity would be taken away from them. This may have led to some of the subjects agreeing to partake in the research without realizing that research is taking place at all. Factors like this makes it that much more important that we actively present our research to the pupils and explain what exactly is taking place.

4 RESULTS AND ANALYSIS

In this chapter, the data collected during the study will be presented. The results will be presented based on the research question regarding what type of communicative strategies Norwegian 7th graders use during telecollaboration. In each of the following sections, data correlating to the topic was collected from either observations, interviews, or transcriptions of the audio-recorded conversations.

This chapter will also look at the results with the preparatory work involved in the project, the conditions in which it took place, and observations made during the process. It will explain how we went about transcribing and analysing the data. Finally, it will reflect on the most significant data collected both during observation, interview and analytical part of the data collection process.

4.1 Communicative Strategies

The research question relates to the strategies employed by EFL learners when their linguistic competence was insufficient, leading to them using CS. The data relevant to this research question was collected through observations and a schema in which both audio and visual strategies were noted. The subjects were unaware of the different communicative strategies we were looking for, but the classes had a dedicated talk on communication etiquette, strategies and mannerisms leading up to the actual conversations. As mentioned during the theory section, Bøhn and Myklevold (2018) discovered that if the learners are instructed in the usage of communication strategies, the employment of such tools will most likely increase. This could have led to the pupils being more aware of how they acted during the conversations, what words or phrases they used and in what ways they used their bodies or faces. The teacher's insistence that the pupils practice their communication skills, may have causes the students to use a wider array of PSM and thus also greatly affected the data collected.

4.2 Data Visualization

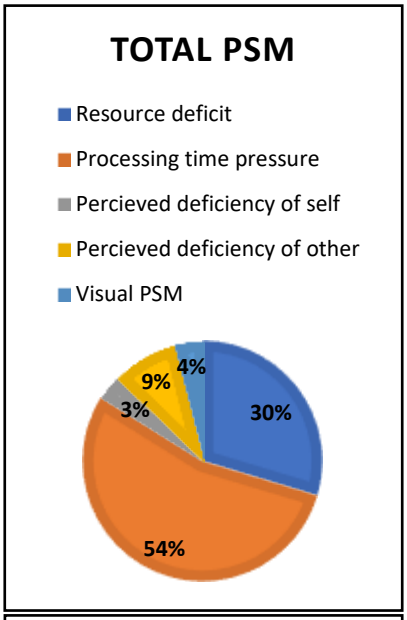
We gathered our data based on a schema (Appendix 1) consisting of several possible PSM used during the pupils' conversations. The categories prevalent in this schema consisted of resource deficiency, processing time, self-repair, other-repair and visual aids. These categories display the students' proficiency in the English language and the strategies they employ when their linguistic capabilities are overly exerted.

The PSM usage of the different groups of subjects is shown in pie charts (Figure 1, figure 2) detailing the relation between how often the mechanisms were used. The pie charts thus display a percentage value representing how many of the total number of PSM fall under the different categories. There is a total of nine pie charts showcasing the usage of the different categories of PSM employed by each of the eight groups and the total number of PSM all the groups combined used. The reasoning behind using the pie chart is because it clearly shows what we are interested in and is easy to read and understand. It displays the data we have collected in a visual and organized manner, focusing on the fractional significance of each data category. The pie charts are based upon the raw data presented in Table 1, which shows data in a quantitative manner.

To display the employment of the individual PSM we have used bar charts (Figure 3-7) each representing the PSM categories. Based on the number of PSM categories there are a total of five bar charts showcasing which particular PSM are used the most within the different categories. The reasoning behind using bar charts to display the specific number of uses is that it compares the different data and shows a clear distinction between the usage of mechanisms. This makes it easier to note the most common PSM, while also being organized and user-friendly based on the number of sections needed.

The conversations were recorded and transcribed, before being analysed for problem solving strategies. The transcriptions were anonymized by giving each participant a letter representing them and redacting sensitive information. There was thus no revealing information shared through the transcriptions, and the subjects were at no risk of exposure.

Figure 1
PSM All groups



Resource deficit – 30%
Processing time pressure - 54%
Perceived deficiency of self – 3%
Perceived deficiency of other – 9%
Visual PSM – 4%

Table 1

Problem solving mechanisms used by participants - results

		Group 1	Group 2	Group 3	Group 4	Group 5	Group 6	Group 7	Group 8	TOTAL
Resource deficit	Message abandonment	4	4	0	3	8	16	10	7	**52**
	Message reduction	1	1	1	3	6	21	28	16	**77**
	Message replacement	0	2	3	1	2	0	0	2	**10**
	Code switching	11	8	0	4	8	12	22	4	**69**
	Approximation	0	3	0	2	0	0	0	0	**5**
	All-purpose word	0	2	0	0	6	7	11	5	**31**
	Complete omission	0	0	0	0	7	7	8	4	**26**
	Literal translation	0	4	2	0	0	6	3	0	**15**
	Foreignization	0	0	0	0	0	3	0	2	**5**
	Restructuring	4	2	0	0	5	3	0	3	**17**
	Circumlocution	2	1	1	1	1	2	4	3	**15**
	Appeal for help - direct	3	6	1	2	1	3	6	2	**24**
	Appeal for help - indirect	0	1	0	5	4	3	6	4	23
	Total	**25**	**34**	**8**	**21**	**48**	**83**	**98**	**52**	**369**
Processing time pressure	Unfilled pause	8	8	14	26	13	8	0	23	**100**
	Umming/erring	33	29	19	25	54	53	113	35	**361**
	Sound lengthening	3	13	18	9	5	9	5	3	**65**
	Filler words	4	4	0	0	21	1	11	4	**45**
	Self-repetition	9	6	2	3	11	9	9	5	**54**
	Repeating other	1	3	0	0	10	20	10	6	**50**
	Total	**58**	**63**	**53**	**63**	**114**	**100**	**148**	**76**	**675**
Perceived deficiency of self	Error repair - self	8	4	3	5	2	4	4	0	**30**
	Comprehension check	0	0	1	0	3	0	1	2	**7**
	Own-accuracy check	0	0	0	0	2	0	2	0	**4**
	Total	**8**	**4**	**4**	**5**	**7**	**4**	**7**	**2**	**41**
Perceived deficiency of other	Asking for repetition	3	3	0	3	2	4	5	6	**26**
	Asking for clarification	2	3	0	2	5	3	5	3	**23**
	Asking for confirmation	3	5	1	1	6	7	5	3	**31**
	Other repair	1	0	4	1	4	8	3	0	**21**
	Feigning understanding	0	1	0	0	0	1	0	0	**2**
	Guessing	0	0	0	0	4	3	1	0	**8**
	Total	**9**	**12**	**5**	**7**	**21**	**26**	**19**	**12**	**111**
Visual PSM	Hand-gesturing	2	1	1	0	0	0	0	0	**4**
	Miming	0	1	0	0	0	0	0	0	**1**
	Display item/image	0	1	0	1	0	4	0	0	**6**
	Total	**5**	**21**	**4**	**5**	**4**	**5**	**3**	**2**	**49**
Total PSM		105	114	74	101	194	218	275	144	**1225**
Total Words		1678	1820	1080	1478	809	994	1399	643	**9901**
PSM ratio		0.0626	0.0626	0.0685	0.0683	0.2349	0.2183	0.1944	0.2208	**0.12**
	Confirming look	*3*	*18*	*3*	*4*	*4*	*1*	*3*	*2*	***38***

Note. *This table shows the results from the observations and analysis. Group 1-4 and 5-8 were transcribed by different authors, leading to slightly different results in terms of number of PSM and word count. This is due to miscommunication between the researchers, where groups 1-4 were analysed by one researcher and 5-8 by another. The word-count found in the first four groups are much higher than in the other groups, the reasoning for this is that one researcher transcribed all the Norwegian statements uttered between the Norwegian participants, whilst the other researcher only transcribed the Norwegian parts if they were relevant to the conversation. The total amount of PSM counted suffered from the same issue as the word-count, where the researcher counting for groups 1-4 only counted the PSM when they occurred in separate statements, and the researcher counting PSM for groups 5-8 counted them whenever they occurred. The imbalance occurring where group 1-4 had the highest word-count and lowest PSM-count and groups 5-8 having the lowest word-count and highest PSM-count, led the first four groups to having a massively lower PSM-ratio than the last four groups.

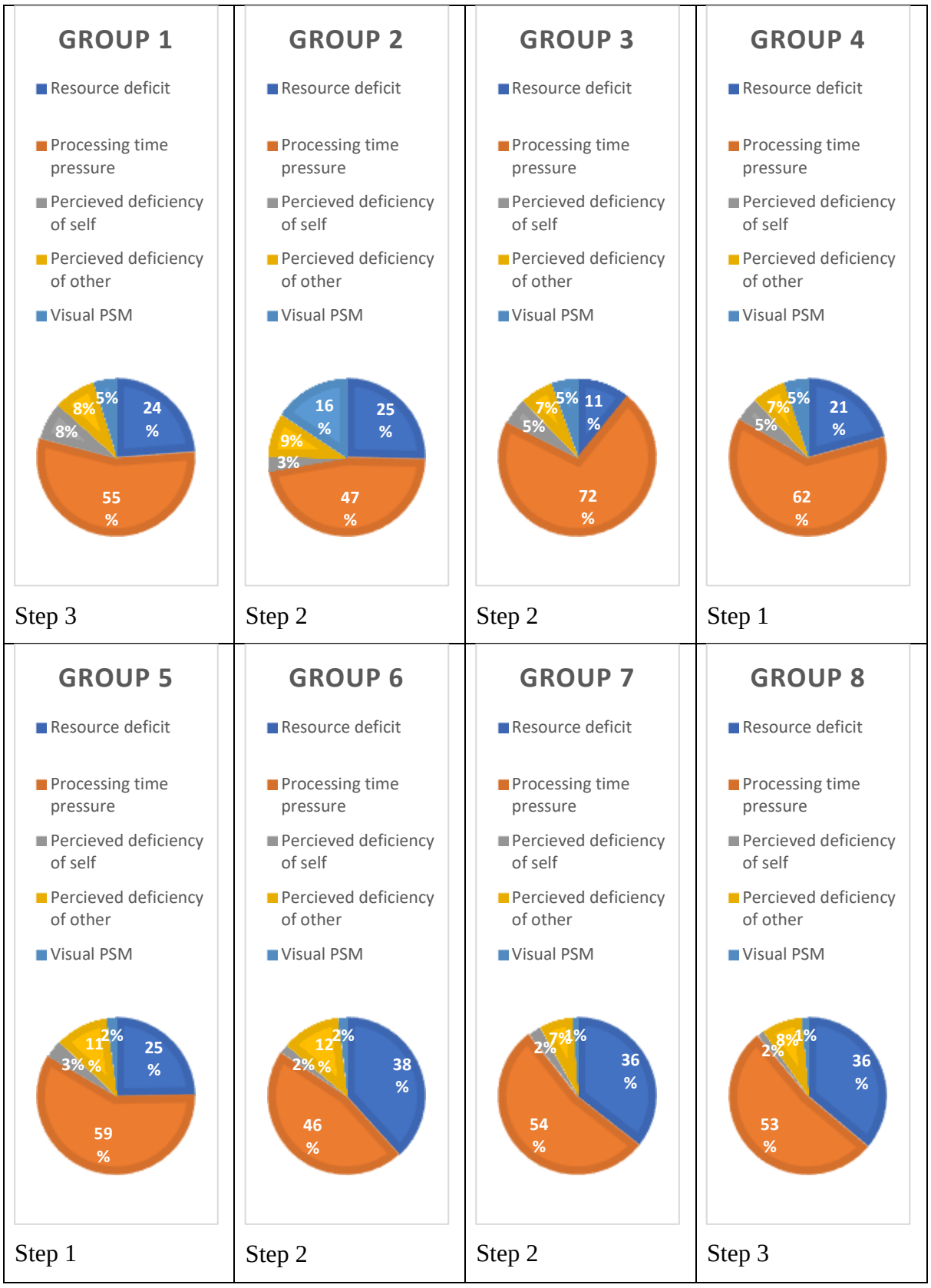
The PSM are sorted by the categories presented in section 2.4. Under each category we have gathered the different PSM allowing us to easily identify the category whilst noting down the employment of specific mechanisms. The base for our data is mostly the count detailing the total amount of PSM found under each category as well as the relation between the different categories. The aim was to be able to use the PSM ratio collected at the bottom, however due to the massive differences between groups 1-4 and 5-8 these numbers are incompatible.

Confirming look, as it is a visual PSM we noticed and added later, has been placed on the bottom, but is still included in the total tally of visual PSM. Due to this mechanism being identified whilst the conversation took place, the count was noted down on a separate piece of paper from the rest. This meant that confirming look did not have a designated spot on the observation schematic (appendix 1), leading to it being placed in a spot of its own in the table.

Group 3 and 6 had shorter conversations than the other groups due to having to end the conversation four minutes earlier than planned, meaning the data was not affected.

Figure 2

Problem solving mechanisms by groups and percentage – Pie Charts



Note: Step 1 – Group 4 and 5 | Step 2 – Group 2-3-6-7 | Step 3 – Group 1 and 8

Group 1: RD-24%, PTP-55%, PDS-8%, PTO-8%, VPSM-5%. Group 2: RD-25%, PTP-47%, PDS-3%, PTO-9%, VPSM-16%

Group 3: RD-11%, PTP-72%, PDS-5%, PTO-7%, VPSM-5% Group 4: RD-21%, PTP-62%, PDS-5%, PTO-7%, VPSM-5%

Group 5: RD-25%, PTP-59%, PDS-3%, PTO-11%, VPSM-2% Group 6: RD-38%, PTP-46%, PDS-2%, PTO-12%, VPSM-2%

Group 7: RD-36%, PTP-54%, PDS-2%, PTO-7%, VPSM-1% Group 8: RD-36%, PTP-53%, PDS-2%, PTO-8%, VPSM-1%

4.3 Presentation of Results – Primary Session

During this sub-section the data collected throughout the entire project will be presented. We will thus showcase the data collected from the observational and transcriptional phases of the project displayed in the pie-charts and bar-charts as well as the answers provided by the subjects during the interviews. Lastly, additional observations will be mentioned, along with our experiences from the secondary session.

4.3.1 Overall PSM Usage

Resource deficiency entails that the pupils lack the knowledge needed to communicate what they want directly. This leads them to employ strategies where they use the knowledge they have available to seek assistance or try to make themselves understood. This PSM category was used 30% of the time (figure 1), entailing that the subjects' competency and proficiency is very much relevant for how they communicate during authentic EFL situations. This PSM was used the second most, however, it also had a huge span when considering the individual groups. The lowest scoring group used it 11% (figure 2 – group 3) of the time whilst the highest used it 38% (figure 2 – group 6) of the time.

Processing time mechanisms implies that the pupils delay their utterances in order to get their thoughts and words in order to correctly phrase whatever they are trying to express. They can create more processing time by filling the conversation with unnecessary sounds, words or by simply staying silent. Through analysing the pupils' conversations this is by far the most prominent strategy employed throughout the project. All the groups had this PSM-category as their most used, showcased by reaching 54% (figure 1) of the total PSM usage of the eight groups. Six out of eight groups had more than 50% (figure 1) processing time PSM, with the highest group scoring a significant 72% (figure 2 – group 3) and the lowest 46% (figure 2 – group 6). This implies that a vast majority of the pupils have a high level of competence, however, struggle with the actual encoding and construction of the English language. It also shows the fact that time-processing is the PSM category with the biggest span.

The perceived deficiency PSM were divided into two separate categories, deficiency of self (PDS) and of others (PDO). These mechanisms imply that the learners display an awareness regarding their own or other learners' linguistic imperfections leading to them correcting or questioning their own or their peers' statements. As we hypothesized, none of these mechanisms were among the most employed during the conversations, and there was a ratio-difference where mechanisms related to PDO were more prominent than those related to PDS. When looking at the total usage of PSM, those related to PDO occurred 9% (figure 1) of the time, whilst PSM related to PDS only happened 3% (figure 1) of the time. This means that the perceived deficiency of others is the least used category of PSM. When considering each individual group, PDS was the least used out of these two categories in seven out of eight groups, wherein the last group had an equal amount of PDS and PDO related PSM (figure 2 – group 1). Looking at the PDS category the group with highest ratio used this PSM category in 8% (figure 2 – group 1) of their PSM employment, whilst three groups used PDS the least, doing so 2% (figure 2 – group 6, 7, 8) of the time. The PDO on the other hand never reached equally low numbers, with the lowest groups employing the PSM 7% (figure 2 – group 3, 8) of the time and the highest group doing so 12% (figure 2 – group 6) of the time.

The **visual PSM** category was the second least used, with only perceived deficiency of self PSM having a lower number of employments. This led to the visual PSM category only amounting to a total of 4% (figure 1) of the total PSM usage. This category was constructed by us based on a hypothesis assuming that the learners would use tools such as gestures or miming to get their points across. Contrary to our assumptions this category was almost completely omitted by seven out of eight groups (figure 2), with the last group differing significantly from the rest. The group differing from the others had the highest ratio of visual PSM used with 16% (figure 2 – group 2). On the other end of the scale, we had groups who very rarely used this category, leading to two group reaching only 1% (figure 2 – group 7, 8) and another two groups with 2% (figure 2 – group 5, 6) visual PSM employment. To clarify, this does not entail that the participants in these groups did not employ any visual aids during the conversation, however it does mean that the amount they did use was not sufficient to affect the percentage in a significant manner.

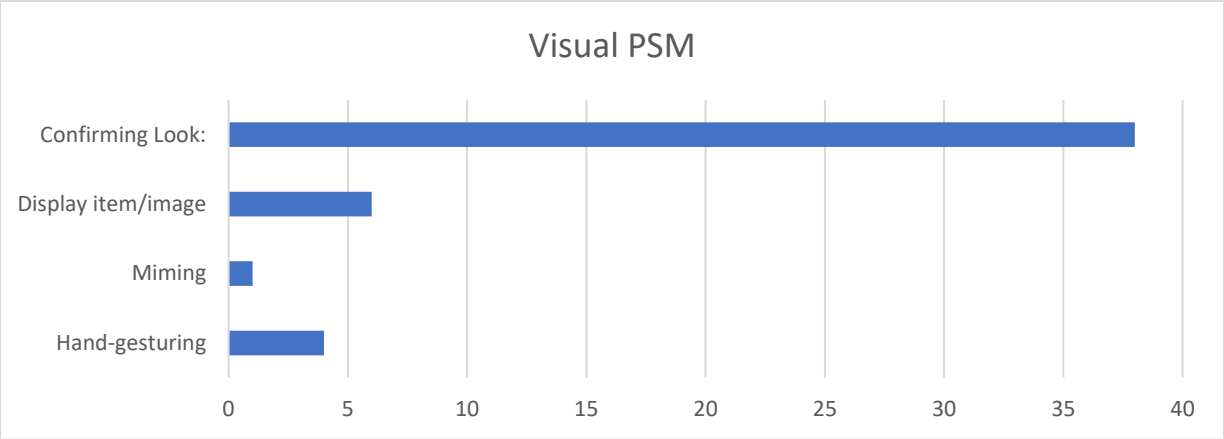
4.3.2 Specific PSM Usage

Visual problem-solving mechanisms are a group of communication strategies we made as a hypothesis based on the idea that the students would use visual gestures as way to compensate for lacking proficiency. These PSM require the interlocutors being able to see

each other, something the use of online video conversations would allow. We expected the participants to use these PSM often. However, these PSM were one of the two least used categories. Most students sat very still during the conversations and focused on asking and answering questions.

Figure 3

Visual PSM – bar chart



Originally, we only had “displaying image”, “miming”, and “hand-gesturing” as the visual PSM we observed for. However, we noticed that the participants would look towards us for confirmation or to indirectly ask for help, giving us a “confirming look”, which we added to the list of visual PSM. As one can see in figure 3, this mechanism was by far the most used one with 38 occurrences, entailing that the visual PSM most prominently used was not used to further the conversation, but rather to seek assistance from “outsiders”. There is a significant difference between the most employed and the second most employed mechanism, where displaying of items or images only took place six times (figure 3). This PSM was exclusively used when the participants were trying to share their complicated social media usernames (example 1), and not to expand upon the conversation or assist linguistically. Hand-gesturing and miming were both used as supplements to the actual conversation. Hand-gestures took place four times (figure 3) throughout the eight conversations. The pupils would use this to point at either other pupils or items whilst talking about these or they would wave their hands to greet or signalize goodbye. The final visual PSM was the miming one, which occurred once (figure 3) during the conversations, where a subject performed a dance related to a game they were trying to talk about.

Gutt 2: Uhm'eh - point, like eh, dot. - (umming)

Jente 1: Bare skriv det and-- show them

Gutt 2 writes down their username and shows it to the camera (display item)

Gutt 2: Sånn, here is my name (code switching)

Gutt 1: You're not sho'ing it

Gutt 2: Yes I am! Yes I am

Example 1

Perceived deficiency PSM were used the least out of Dörnyei & Kormos' (1998) PSM. These PSM require the user and interlocutor to analyse and be aware of their own and others' language competence.

Figure 4

Perceived deficiency of self – bar chart

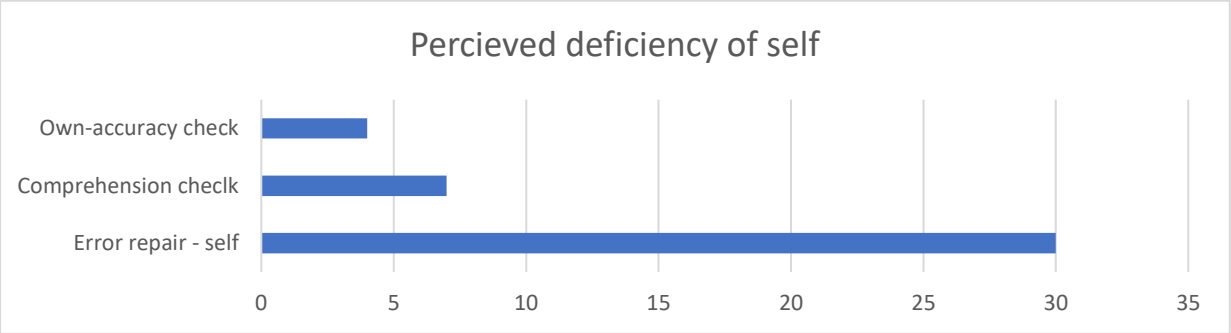
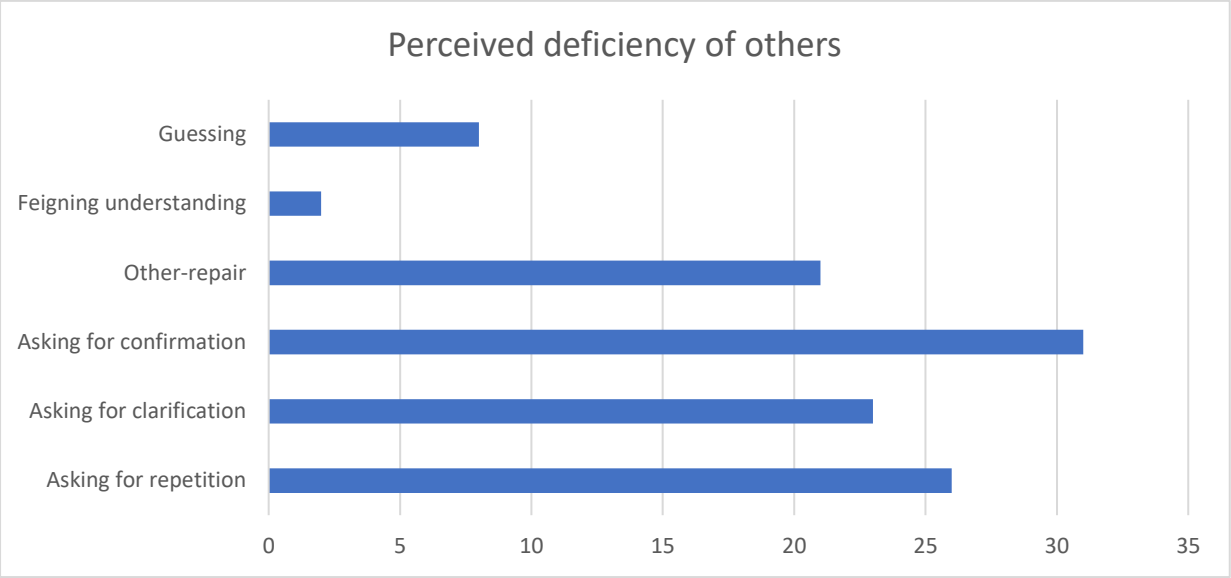


Figure 5

Perceived deficiency of others – bar chart



When considering **perceived deficiency of others**, there is a significant difference in the PSM employment. The mechanisms revolving around asking questions were the three most prominent ones (figure 5). There was no significant difference between the asking for repetition and clarification, with repetition occurring 26 times (figure 5) and clarification 23 times (figure 5). Asking for clarification took place when the subjects failed to understand something. These questions would occur whenever the pupils were faced with themes or terms they were unfamiliar with, leading to them needing an elaboration. The asking for repetition mechanism usually took place whenever the pupils failed to hear what was being said rather than when they failed to comprehend something. This was most likely due to the poor audio quality of the speakers and the noisy environment. Asking for confirmation was used slightly more often than the other two being the most used perceived deficiency PSM with 31 occurrences (figure 5). Similarly, to the asking for repetition mechanism, this was mostly used whenever the subjects failed to hear something. This mechanism was used when they repeated what they assumed they heard in order for their conversation partner to either confirm or disconfirm the assumption. The least employed PDO mechanism was feigning understanding and was only used twice (figure 5) throughout all eight conversations. These took place when the subjects were met with terms or topics that were unfamiliar to them, leading to them expanding upon these with wrong information and false statements. The guessing PSM occurred eight times (figure 5) and in similar situations as the feigning understanding, where the pupils used their previous knowledge to assume what their

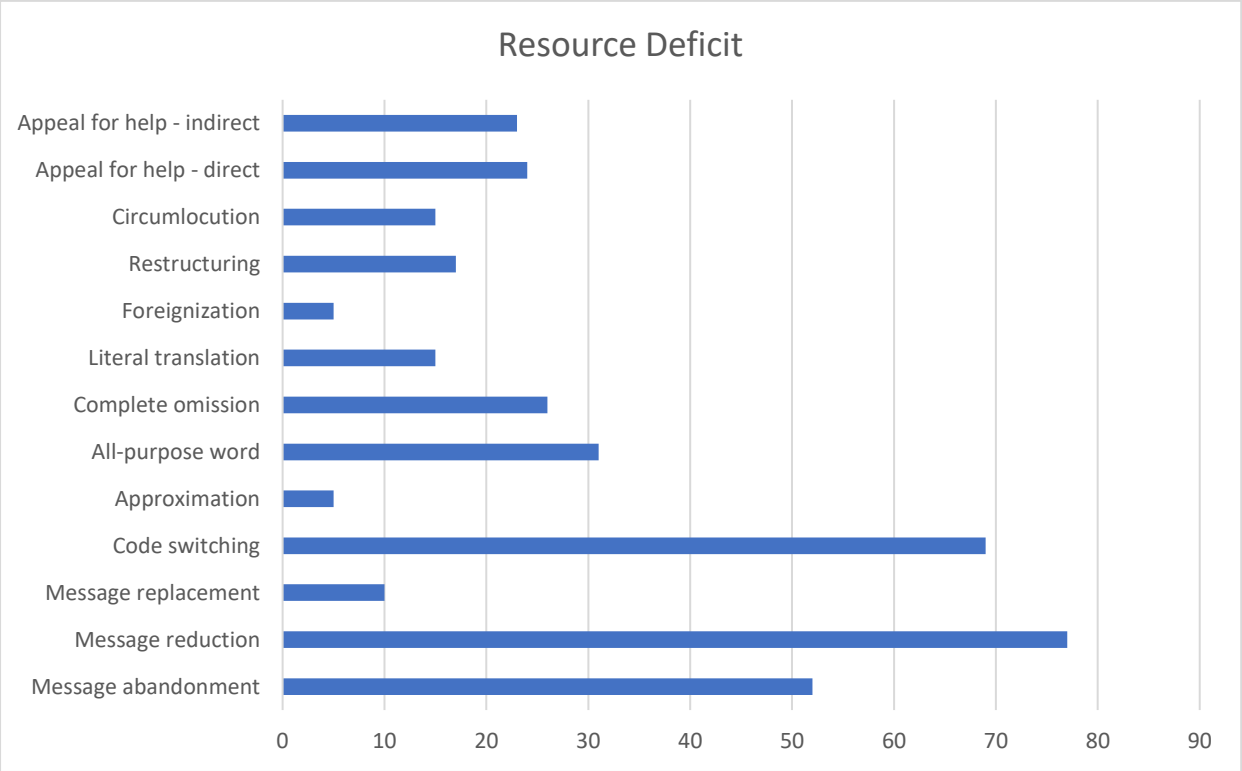
conversation partner was talking about. What made these two situations differ was that the pupils feigning understanding were putting up a façade displaying knowledge that were false, whilst those guessing were more uncertain and exploratory. The last PDO is the other repair and was the most used PDO mechanism when excluding the three related to asking questions. This one occurred 21 times (figure 5), and interestingly almost exclusively took place between the Norwegian learners, meaning they rarely corrected their Austrian counterparts. This entails that this mechanism was mostly used to assist their fellow pupil to correctly phrase themselves, rather than simply showcasing a superior knowledge of language.

Regarding the **perceived deficiency of self**, there were only three types, two of these had insignificant numerical differences, whilst the last one differed severely. The two that had similar numbers were own-accuracy check and comprehension check. Own-accuracy checks took place four times (figure 5), whilst comprehension checks happened seven times (figure 5). These occurred whenever a pupil constructed an utterance and displayed an uncertainty towards the linguistic or informative accuracy. These PSM were quite similar however the focus is slightly different with the comprehension check primarily focusing on the subject's use of linguistic knowledge, and the own-accuracy check being applied whenever the content of the statement being uttered is in question. The most prominent PDS mechanism by far was the error repair of self which was employed 30 times (figure 5). These were instances where the learners uttered a statement, analysed their own language before rephrasing it in order for the language to be more precise or correct.

Resource deficit PSM were used the second most (figure 1). These were used when the communicator lacked sufficient proficiency to communicate what they wished, leading to them using alternative methods to get their message across.

Figure 6

Resource deficit PSM – bar chart



In comparison to the previous three categories there were much higher numbers related to resource deficiency. The most common mechanisms used were message reduction, code switching and message abandonment. Message reduction occurred whenever a subject realized they were unable to complete their statement in a satisfactory manner, leading to them altering their utterance to better fit with their competence level. This mechanism was observed 77 times (figure 6) and was thus the most prominent resource deficiency mechanism. Code switching was the second most used with 69 occurrences (figure 6). This mostly took place between the Norwegians, however, also happened when the participants found problems with their vocabulary leading to the usage of L1 words or phrases. Message abandonment was observed 52 times (figure 6) and was somewhat similar to message reduction, however, took place when the subject not only altered their utterances, but also gave up on trying to rephrase it. Apart from these three we noted the most interesting finds as being circumlocution, approximation, and appeal for help. Circumlocution and approximation are according to Bøhn and Myklevold (2018, p. 186) two of the mechanisms that requires more communicative proficiency. Circumlocution took place 15 times (figure 6) and approximation was used five times (figure 6) by our Norwegian subjects. Similarly, to the

message reduction these PSM also occurred when the learners were unable to complete an utterance as intended. Where message reduction and circumlocution differed, however, was when instead of the subjects reducing the utterance, they expanded upon it and used their TL competence to get their message across in a more complicated manner. Approximation also differed slightly from the message reduction, by the subjects forgetting certain words in their utterances. These were identified by the participants employing terms with nearly, but not exactly the same meaning as the intended word.

Group: Hei - hallo

Gertrude: Can you uhm say uhm hei'in uhm - - - (umming, code switching)

Thor: Austria (approximation)

Gertrude: -Austria? (approximation)

Thor: Can you say hei in Austria? (code switching, approximation)

Example 2

In this example Gertrude wanted to ask if the Austrian pupils could say "hello" in German, not remembering or knowing the word for German, her peers substituted the word "German" by "Austria". Exemplifying the PSM approximation.

Appeals for help were also mechanisms the pupils employed regularly, both direct and indirect. The indirect appeals were counted to take place 23 times (figure 6) and were characterized by certain students gazing at us or their teacher a lot after speaking, as if to ensure that what they said was correct. Students would also look at us midway through a sentence, indirectly asking us for help finishing it. Direct appeals for help occurred 24 times (figure 6), entailing that these two mechanisms were just as likely to occur. This type of appeal took place when the students would also ask each other for help directly and discuss various ways to formulate their sentences. The subjects also asked us and their teacher a variety of questions regarding translations and terms used by their Austrian conversation partners. These mechanisms were made readily available to the subjects by presence of both us and their teacher, meaning the pupils leaned more on the expertise of adults rather than on their peers' or their conversation partners'.

Tim: Twenty fiiiii'iive feb'ruar (sound-lengthening, code switching)

Simon: HEH februar

Laughs

Tim: Twenty five eh feb-ruary! (self-repair)

Laughs

Tim: De hører jo ikk- - they don't understand me when you laughing (code switching)

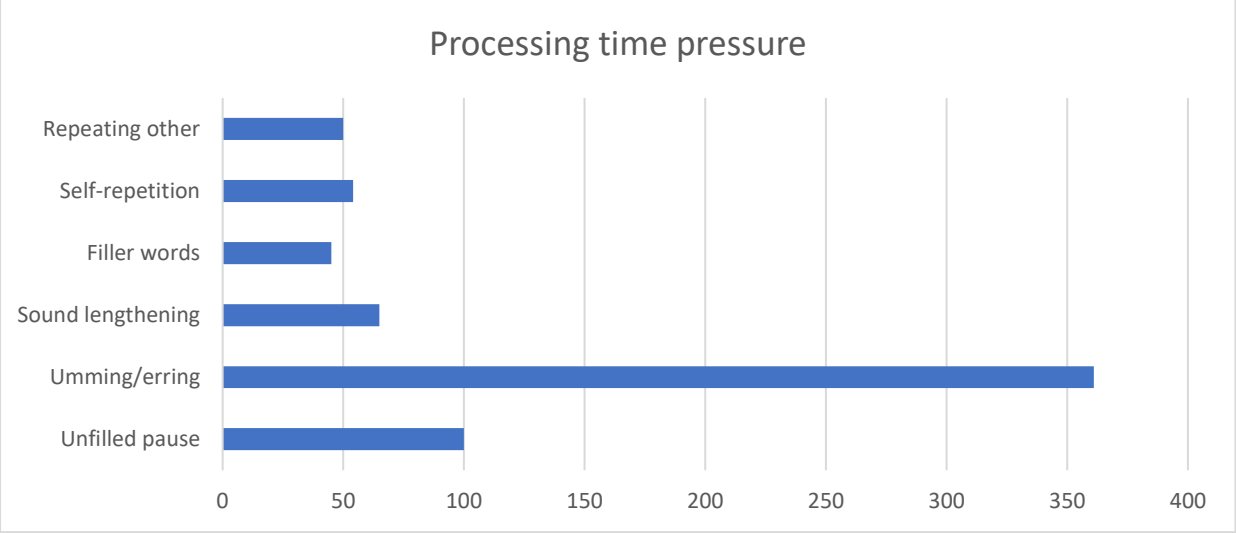
Example 3

In this example Tim slowly pronounces "February" in a Norwegian manner indicating they are unsure of their pronunciation. Simon notices this, commenting it hinting to Tim that it is wrong, where Tim then uses error repair, repeating themselves correctly.

Time processing PSM were used the most by all groups, ranging from being 46% to 76% of all PSM used (Figure 2). These PSM stall the conversation giving the communicator an expanded time-period to encode sentences (Dörnyei & Kormos, 1998).

Figure 7

Processing time pressure PSM – bar chart



The most common time processing PSM by a long shot was umming/erring, which every student used to some degree. This type of strategy accounted for almost half of time processing PSM used, amounting to 361 instances. These took place in most statements uttered by the pupils, and were identified by transcribing the conversations sound-accurately, and counting. Unfilled pauses were also prominent, but not nearly as much as umming, amounting to 100 occurrences. These were counted whenever the pupils would stay silent to collect their thoughts for more than three seconds and were marked in the transcriptions as "…". Other time stalling PSM such as sound lengthening and repetition were also common,

with lengthening observed 65 times, repetition of others occurring 50 times and repetition of self 54 times. Sound lengthening was counted when certain phonemes took longer than natural. They occurred when the pupils were pronouncing words they were uncertain with or when consciously lengthening words to grant an effect of friendliness or coolness, examples being lengthening greetings and funny words such as “taco”. The repetition of others mechanism was mostly employed whenever the subjects were assisting each other with pronunciation, when something clever was said or when something strange was stated. This entails that the pupils either used this technique to confirm or repair a peer’s statement, grant themselves a statement or a conversational recipe to adopt or when making fun of or critically assessing the utterances of their peers. The repetition of self PSM, took place whenever the pupils felt like they weren’t getting the attention they wanted, when their utterance was unheard and when they were overly excited about a topic. Based on this collected data the learners employed repetition of self as more of an attention seeking mechanism, rather than a time-processing one. The least employed time processing PSM was filler words, which still took place a significant amount of times with 45 occurrences. This PSM is quite interesting as it demands that the pupils have been exposed to enough of the TL to adopt linguistic habits and traits allowing them to naturally employ unnecessary but time-granting words to assist them in encoding.

> Synne: Ok, my’ehh (laughter) my name is Synne, ehm ehm I am 12 years old. And heh ok- I play handball and’yeah. (umming, filler word)
>
> Martine: Eeeh hello, my name is eeh Martine and eeh I am 12 years old and I play handball’yeah. (umming, filler word)

Example 4

In this example Synne and Martine are introducing themselves to the Austrians. Both use umming/erring to extend the time they have to encode their sentences. Interestingly, both participants explain “yeah” at the end of their sentences as a filler word, which could be due to them being friends or from learning from each other.

4.3.3 Data Analysis

Resource deficiency related PSM was quite popular with the subjects, being among the most employed. The group with the highest ratio of resource deficiency and with the lowest ratio was both from the same step, step 2. As previously stated, the highest group reached 38% (figure 2- group 6) resource deficiency, whilst the group with the lowest amount of resource

deficit PSM only used these 11% (figure 2 – group 3) of the time. Both these groups were thus considered to be not too confident nor too lacking in skills. Seeing as we put together pupils with the same basic English proficiency (steps), these results are quite interesting, where the step the pupils are placed in is of no significance to the results. There can be several possible explanations for this; the group with most resource deficiency may have taken more control over their conversation and challenged themselves more than the other group did. The pupils from the lower end of the scale may have kept their language simpler to ensure that they were understood and thus not taken any risks. Another possible explanation for the big difference is that the group may have encountered a very dominant or dormant conversation partner, granting them no room to speak freely or way too much room to ask questions and never answer any themselves. The collected data that displays this category as one of the most prominent may be somewhat misleading, due to this category having the most mechanisms attached to it. This may have led to us having more elements to identify and work with related to this compared to all other categories, and also entailed that we spent more time and attention towards these mechanisms. We noted that there was a delay with the software used, meaning that the students would begin talking, and before their audio got through to the other side, the counterpart would start talking, entailing that the two parts interrupted each other. These interruptions could be the cause as to why so many message-adjustment PSM were used. As for code switching, the students talked amongst themselves a lot. We noted some participants would default to speaking Norwegian after speaking with their mates, meaning they would speak in Norwegian to the Austrian counterpart before switching to English. Code switching could also be as common as it is due to L1 language processing being the most natural for the participants. The group employing the least resource deficit PSM (group 3) had a total of 1080 words spoken throughout their conversation, whilst the group with the highest amount of resource deficit PSM (group 6) spoke 994 words. This entails that there is no significant relation between the subjects' word count and their employment of resource deficit mechanisms.

Time-processing pressure PSM was the category with the highest total occurrences and also the greatest ratio difference between groups. Both the group with the highest and lowest ratio of time-processing PSM usage, were from the same step entailing that there is no correlation between the subjects' linguistic competence and their use of time processing mechanisms. The employment of time-processing mechanisms to this extent displays the pupils' oral fluency in a negative light, wherein they seem somewhat unable to express

themselves in a coherent and consistent way. However, seeing as these PSM's include different sounds and filler words they may not necessarily showcase a lack of fluency but rather just the pupils' natural language. The fact that this was by far the most used PSM-category, combined with the prevalence of umming/erring indicates that the students often required more time to process sentences. We noted that time processing PSM were used in nearly every longer sentence unless it was a repeated or repaired utterance, signalling a lack of linguistic proficiency in the subjects. They also occurred in between utterances, in these instances, they often occurred multiple times by different subjects before the conversation became coherent again, most likely in order for the conversation to not feel as awkward as complete silence would let on.

Similarly, to the resource deficiency there was no clear correlation between the word count of the least and most prominent time-processing PSM users. However, when looking at the relation between time processing PSM and resource deficit PSM there is a clear correlation between the groups. Groups 3 and 6 had the two opposite extremes regarding time-processing and resource deficiency. Group 3 had lowest ratio of resource deficit PSM with the highest amount of time-processing PSM. Group 6 on the other hand, had the highest ratio of strategies related resource deficiency matched with the lowest ratio of time-processing PSM. The pattern connecting the two PSM-categories, however, does not continue when regarding other groups' ratios. Meaning this correlation does not connect all the groups, and exclusively applies to the lowest and highest group.

The two **perceived deficiency** PSM-categories varied slightly in ratio. The ratio-difference between PDS and PDO may have several explanations. During conversations the pupils may have felt the need to assist their fellow conversationalist, leading to them correcting or asking questions that could be aiding. This instinct may arise due to the learners themselves being somewhat threatened by the unfamiliar nature of the conversational situation, thus assisting in a way they hope others will do towards them if they ever "embarrass" themselves linguistically. The subjects may not have been self-aware enough to notice the linguistic errors being uttered by themselves, this may be due to an inexperience with using the language orally, them being careless with their performance or that the pressure of being in an unfamiliar situation affected how they acted. The validity of this data is also questionable, seeing as the PSM that includes asking for confirmation, repetition and clarification are included in the PDO category. The collected data concerning PDO mechanisms could thus be a huge source of error, if one relates it to the fact that the subjects

were placed in noisy environments, with devices weak in regard to sound output. The students' may not have used too many perceived deficiency PSM due to instead focusing on the conversation and its content rather than their own or their peers' performance. This could be due to the unknown nature of the project, wherein the pupils used a new media to communicate with pupils they were unfamiliar with.

Contrary to our assumptions **visual PSM** were rarely used throughout the conversations. The pupils may have regarded the conversations as too unnatural based on the medium it occurred through, making the use of visual aids unreasonable for them. Another reasoning may be based around the learners' ages and experience, leading to their conversational skills not being developed enough for them to naturally implement visual aids when communicating. The group that did employ visual aids, may have had significantly more advanced communication techniques, another option is that they were insecure and thus sought assistance and confirmation through visual aids, instead of enhancing their utterances. They may also have had individuals that were more restless or energetic, leading to them acting out a lot more than their peers. When considering the group with the most visual PSM employment, group 2, these employed the most confirming looks by far with 18 out of 38 (table 1) instances, meaning they were either seeking a lot of attention from adults, uncertain regarding their performance or felt uneasy by the presence of unfamiliar faces. This group was also the only one to employ every visual PSM at least once, entailing that they were more bodily active than what was the norm.

There were also some additional observations we noted throughout the duration of the project. We hypothesized that the patterns of PSM in the most active speaker would spread to the other participants, making the variation reduced and thus affecting the PSM ratio. However, we noted that each student had their own pattern of which PSM they used. Some of the subjects relied more on some PSM than others. For example, in group 1, one participant ended up code-switching a lot, while the others barely did. This we theorize is due to varying degrees of English competence and experiences, which leads the students to use different PSM. The fact that the pupils placed in the same groups use differing mechanisms tells us that they are not affected by the people they are grouped with. A couple of the groups would laugh a lot during their conversations, a type of anxious laughter. The pupils employed this mechanism both when reacting to something they found amusing, when the conversation had stalled and when they were struggling to phrase their sentences correctly. This could be a mechanism the pupils employed in order to fill the silence, grant themselves more encoding-

time or simply a reaction to what was an unfamiliar and weird situation for them. Due to the nature of the laughter, one may consider it a time-processing PSM. Nearly every group ended up having a "group leader" who led the conversation and talked more than the others. This was not something we encouraged them to and occurred naturally once the conversations started. This entailed that some students barely talked, giving less accurate data and less practical experience for them. The group leader was also the most assisting person through the conversation, repeating for their peers, asking questions and putting an emphasis on allowing everyone on the group to feel included and involved in the conversation. Whilst casually discussing the experiment with the teacher, she shared that she noticed how the male participants were more confident and active than their female peers during the conversations. This is not something we noticed, nor do we have a focus on gender in our study, however it is still an interesting observation. She correlated this with the male participants having hobbies consisting of playing videogames and being social online.

4.3.4 Interview Results

The participants were interviewed to clear out some questions we had regarding their experiences surrounding the online conversations. The interviews were conducted the day after the conversations, to give the participants time to digest their experiences. Similarly, to the conversations these were also audio-recorded in order for us to later analyse the footage and note down the most important and interesting answers. The interviews were not transcribed because many of the pupils answered the questions in a similar manner, leading to us writing down answers that occurred several times, those that strayed from the norm and the general tone of the answers. The questions asked were themed around the students' expectations, experiences, and feelings having completed the online conversation (appendix 2). The aim was to gauge their previous experiences with authentic oral English communication, as well their feelings after the experiment.

All of the eight groups that were interviewed displayed a very positive attitude to online English conversations with foreign students, and said they were looking forward to the task. Several students expressed that they had previous experiences with authentic English conversations, through means of online gaming and travelling. They felt this experience helped them during the online conversation. One group expressed that they found it easier to speak English with the Austrians than their classmates.

The majority expressed that they found the meetings awkward at first and that it was difficult to get a conversation started. However, once they started asking their interview-questions, they found communication in English to be natural. All the groups felt that they would like more time than the 20 minutes they were given, saying they did not get sufficient time to get to know their counterparts. We noticed this too, as the conversations became more dynamic towards the end. Due to this many of the pupils expressed a wish to do another session, and to be paired with the same conversation partners in order for real relations to be formed. However, the subjects did not frown upon the idea of getting to know someone new, and some even preferred this to being with the groups they had already met. Some of the male subjects expressed a wish to be paired against mixed-gender groups or groups with certain genders. There was no correlation between the gender of the interviewee and the gender they wished to be paired with, some wanted to be paired with more males, some with more females. This wish was not expressed by any female participants. The Austrian groups were smaller than the Norwegian one's making a considerate size difference, which some of the interviewed groups commented was too large. The students also found the computers' speakers to be too weak in conjunction with the noisy environment and suggested that the conversation should be done elsewhere or with better tools.

The students stated that they were not anxious or scared of speaking English, something we attribute to their teacher's focus on oral performance. This led to the pupils being less hesitant during the conversations and allowed them to be confident speakers. The students found their preparation of making interview questions to be useful but would have liked to practice speaking ahead of the task, for example by asking each other their questions in class. We noted that the students from the lower steps were more interested in this idea than the students in higher steps.

Summarized, all eight groups found the online conversations to be a positive experience, and when asked, they said they thought it was a positive influence for their English learning. Everyone wanted to do another session of conversations, where roughly half would like new counterparts.

4.3.5 Secondary Session

We performed a second session of online conversations. This was done as a wish from the participants and was not originally planned. However, we still did it to collect additional data and to gauge how these conversations would go now that the students had already

experienced it. These conversations were recorded the same way as those conducted in session 1 and were due to be transcribed and analysed in a similar fashion as the previously collected data. However, due to massive amounts of data, time-restrictions and work overload we chose to not transcribe the entirety of the audio-recordings, leading to us transcribing only the mid-section of the conversation, where we theorized the most interesting parts of the conversations were located. This session's theme was "Easter", and the students were not instructed to prepare questions, but rather speak spontaneously.

During the conversations the topic of Easter was quickly abandoned or completely forgotten about by the subjects and the conversations for the most part was almost identical in content to the first session. The second session of online meetings was done over the course of three days. This was done due to scheduling conflicts due to the two schools having different schedules. However, this gave insight into the challenges of arranging meetings like these, as well as showcasing some of the extremes. The different groups were taken out from their regular classes to do the meetings, meaning they did not get proper preparations for the meetings. The groups did not speak with the same people as in the first session, most found this to be exciting.

We noted that the students who started first early in the morning struggled during their meetings. They were very silent and visibly not prepared for the conversations. They also said that they were not happy with their performance afterwards. In contrast, the students who had their meetings later in the day performed better and spoke more naturally. The Austrians were late for one of the meetings, leading to the Norwegian pupils actively waiting by the computer for their partners to join. This granted them time to plan for themes to talk about and group roles in a more direct way than their peers had the opportunity to.

5 DISCUSSION

This chapter of the thesis will discuss the results considering the theory presented in chapter 2. Discussing the factors which affect the online conversations, how they may affect the PSM used by the students, and what PSM usage means for their communication. The PSM used will be discussed further and compared to the results from other studies on the topic.

Seen in the light of language acquisition theories, authentic communication through online telecollaboration lends well to development of EFL competence. Through interactions with foreign students the learner will use their language in an authentic setting, monitoring their performance, evaluating themselves, and acquiring language in the process (Krashen 2013; Lightbown & Spada, 2019; Tran-Huong-Thu, 2009). There is a lot of evidence suggesting that using telecollaboration and eTwinning in education is effective. Online learning may greatly assist students in developing self-regulation strategies (Larson & Vontz, 2018; Shelton et al., 2017; Wei & Chou, 2020; Delen & Liew, 2016). The increased availability of ICT in Norwegian schools in recent decades (Utdanningsdirektoratet, 2020) has ensured that people are comfortable with the technology (Martha, Adi & Soepriyanto, 2018), which will lend well for telecollaboration to be successful. Performing telecollaborations and eTwinning should be feasible for the average teacher, considering Fortune, Spielman, and Pangelinan's (2011) findings regarding online teaching. Seen in the light of the LK20 curriculum's competence goals for ENG01-04 (Utdanningsdirektoratet, 2020), eTwinning projects and telecollaboration should prove especially relevant in terms of teaching oral proficiency. Communicating through a common L2 language is of great significance during such exchanges, being one of the main goals (Ayedoun, ey al. 2018). These factors in mind, authentic communication through telecollaboration satisfies several competence goals.

When using digital technology to achieve telecollaboration, it is crucial to have a clear purpose and learning goal in mind. Otherwise, the project may not have any learning potential (O'Dowd, 2005). In our case we had the goal of having students learn about students from another country. We followed O'Dowd's (2019) suggestion of having the learners work on a common task regarding local and global problems during the conversations, where we had them learn about each other through interview questions. We found that this topic worked well in engaging the conversations, and most of the students also expressed that they got to know their counterparts well, being satisfied with the task. For the

secondary session we strayed from O'Dowd's encouragement. We had thus not prepared the pupils in a similar manner to the first time, entailing that they had not constructed interview questions or been properly informed as to when the meetings were to take place. We noticed that there was a clear contrast in the proficiency and confidence of the learners between the two sessions. The lack of a framework or interview-guide for the pupils to use led the conversations to lack in substance and content. Arranging and performing the telecollaboration was fairly problem-free. The participating teachers were very cooperative and adapted their schedules to work with the online conversations. The main session went very well in regard to preparation and performing it. The students were given supple preparation including information about the project, preparing interview questions, and given brief instructions on CS by their teacher. This is somewhat similar to Bøhn & Myklevold's study (2018), wherein they instructed half their participants in using communicative strategies. Contrary to Bøhn & Myklevold, the teacher in our study did not share instructions specific in detailing the usage of the different PSM, but rather basic advice in keeping the conversations going. Bøhn & Myklevold found that the groups that received instruction in CS-usage had an increase in employment of such strategies, something to note in regard to the results' validity.

Another thing we noticed during the second session was regarding two group who had time to prepare in contrast to the other groups. This was caused by the Austrian groups being 40 minutes late, giving the learners time to structure their thoughts, the group dynamic and potential talking points. This also caused minor chaos and uncertainty, leading to some participants getting bored, and becoming restless both whilst waiting for the conversation to begin. Considering this, it both had a positive and negative effect on the learners, with some losing interest and focus whilst waiting. This affected the data collected during session two, where the imbalance between the conditions within the different groups made correlation between the data unreliable.

The most consistent issue during the telecollaboration had to do with audio. The audio problems stemmed from a noisy environment and poor computer speakers, which was the cause for many of the asking for repetition/clarification/confirmation PSM used during the meetings, as the students were often interrupted by people walking by. Technical issues are to be expected when using digital tools and must be taken into consideration when doing telecollaboration. Both the Austrian and Norwegian schools had plenty of access to digital devices, however, the two parts did not have access to Zoom. This emphasizes the

importance of considering that all parties need access to compatible platforms they can hold the meetings on. This may lead educators and researchers to stray from organizing online meetings similar to those we have implemented in this study, and rather keep the communication restricted to the written format. However, there are a plethora of common or free services such as Teams, BigBlueButton or Skype which could also be used. Considering this, the main challenge is communication and scheduling, trying to tie the ends and find possible solutions to issues like noise.

For optimal L2 acquisition the learner needs a willingness to communicate to produce the best possible L2 linguistical product (MacIntyre, et al. 1998). To achieve a WTC the learners need an optimal environment and to feel as little anxiety as possible. The main emphasis of an environment focusing on WTC is one where they are actively practicing the TL. This is why we focused on a telecollaborative project where the participants communicate in their TL with learners from foreign countries with the same linguistic challenges. Our project thus counteracts Ayedoun et al.'s (2018) issue detailing how learners rarely have the opportunity to produce utterances in their L2 during natural language production. Ayedoun et al. also detailed how the promotion of communication between individuals from different linguistic backgrounds strengthens the individuals' L2 communication. Connecting WTC and transnational telecollaboration led to great L2 learning environments for the participants in which they were encouraged to train their linguistic proficiency, whilst socializing in new and exciting learning situations. Our study has also taken into account Yashima (2002) and the requirements she stated when maintaining WTC in L2 learners. We allowed the pupils to control the conversation topics, we placed them in situations showcasing how the TL is necessary and we instilled positive attitudes toward international collaboration through the project. Based on the individuals, some may have felt more at ease knowing that assistance from adults was close by, whilst others may have felt that being monitored by adults affected their activity and ability to participate orally. We did not ask about this during the interviews.

The pupils fared well in the online conversations. The general reception was that online conversations were a positive learning experience, which coincides with theory which suggests use of digital tools in education increases motivation (Azmi, p. 111, 2017). Leading up to the conversations we had a positive tone and presentation about the project ahead of the conversations, presenting the project like a fun learning opportunity. This may have affected their perception of the project and given them a falsely positive opinion on it. Additionally,

having the interviews the day after the conversations may have given the participants time to discuss their opinions between themselves, mellowing out the more extreme opinions. In the interviews the participants reported that they did not feel anxious leading up to the meeting but did hesitate to speak at first. Despite this they quickly warmed up to the conversation and spoke freely. All the groups had successful conversations despite the anxious start.

During the secondary session we noted that the students were affected by level of preparation and time of day. Those that started early in the morning were notably anxious and barely spoke during the conversations. This coincides with Parcon & Reyes (2021) and Su (2021) who found that anxiety plays a significant role on L2 speaker's performance. It is unclear to what degree anxiety played a role, as the oral descriptions from the students and our observations cannot fully quantify to which degree anxiety affected them. However, considering the clear difference between the primary and secondary sessions, there is evidence that sufficient preparation is key for a successful meeting. The two groups performing their conversation in the morning were from step 1. This, of course may also be a deciding factor in the quality of the conversations, where a more proficient group may have had the competence to keep a great conversation with little to no preparation.

The students' ages were slightly mismatched, with some of the Austrian pupils being a year younger or a year older, due to the Austrian school having mixed age classes. This could have made the students hesitate in contacting each other (Bozdağ, 2018). Only some students took note of this, but they did not report this as being significant. However, there may still have been certain subconscious attitudes or feelings present in the participants. In the instances that the Norwegian pupils were older they may have seen themselves as somewhat superior in these instances and felt like their younger counterparts were more incompetent or childish just based on their age and not actual merits. The times the participants were matched with older partners, the opposite effect may have been garnered, where they may have felt threatened or lacking in comparison to their conversation partner. The mismatched ages may thus have had a great effect on the anxiety and confidence of the learners, or the learners may have completely disregarded this. However, it is hard to quantify the effect age variance had on their PSM usage.

The participants in this study successfully partook in authentic conversations, speaking their EFL in a spontaneous manner. Through this they met several hindrances in getting their messages across, leading them to use communicative strategies, problem solving

mechanisms. Ahead of the online meetings the students' teacher had given them brief instruction on communicative strategies. These instructions may have greatly affected the communicative strategies the students used during the meetings (Bøhn & Myklevold, 2018; Rabab'ah, 2016), though this cannot be proven without a comparative study looking at the students before and after the instructions. There was a great variety of problem-solving mechanisms being employed during their conversations. The most common of these were processing time pressure and resource deficit mechanisms. Processing time pressure mechanisms are used when the speaker needs more time to formulate sentences. The high prevalence of these mechanisms indicate that the speakers did not have sufficient time to process language or did not encode fast enough, yet still chose to keep the communication flowing (Dörnyei & Kormos, 1998, p. 386), showing confidence in their language. Umming/erring was especially common, being the most used PSM overall. The prevalence of these mechanisms could be due to the participants' age and degree of English proficiency. Parcon & Reyes (2021) and Su (2021) also found that use of non-verbal fillers such as umming/erring was common. Fox Tree (2010) claim that the employment of time-processing mechanisms like umming may not be a sign of lacking knowledge but may be subconsciously placed to assist the listeners. Reasoning that the speakers' trouble in encoding an utterance implies that it is also difficult to understand, meaning the umming is placed to signalize to the listener that they need to pay attention to the upcoming statement. In our study this can also be correlated with the fact that the learners speak in their second language, meaning the encoding may still result in mistakes in both structure, content, and pronunciation. The umming thus may be even greater of a signal to the listener for them to pay even more attention than is necessary in L1 communication. The prevalence of umming/erring could also be due to the students using those utterances to reply to their interlocutors, as a secondary channel (White, 1989).

Within resource deficit PSM code switching was common. This coincides with Parcon & Reyes (2021) findings with their study. We theorize that the use of L1 language was common due to the participants being in groups and having fellow L1 users nearby, allowing for code switching to take place more naturally. Code switching may also have been used as a form of indirect help, signalling to one's partners that they seek help encoding or with vocabulary (Example 3). Lexical PSM such as message reduction were also somewhat common, being used when students were unable to continue an utterance or were interrupted. This could be due to the students preferring to give up on their sentences rather than solving

the communicative issues. However, we did note that the students experienced many interruptions during their sessions both from technical issues, noisy environment, and within their own groups, which all could be to blame for the use of these PSM.

Perceived deficiency of self- and others were the two least used PSM if not counting visual PSM. Within these categories self- and other repair were common. The students would occasionally correct themselves and their groupmates when errors occurred. Asking for confirmation/clarification/repetition were used the most. These were prominent due to the poor audio environment and the students interrupting each other, causing them to ask for repetitions. The participants did also help each other quite a lot, both in suggesting vocabulary (example 1, 3) and ways to steer the conversation. The number of appeals for help and other repair is most likely related to this.

We opted for the learners' conversations to be occurring through video chat, granting the learners the opportunity to employ both visual and auditory strategies when communicating. The focus on both body language and oral language makes our study somewhat stand out, with Dörnyei & Kormos (1998) never including the visual category in their taxonomy and Rodriguez & Roux (2012) exclusively having "miming" as a visual communicative strategy in their study. This implies that our focus on four different visual PSM (figure 3) may have been superfluous, due to the PSM we noted not being included in other research. On the other hand, all the visual communicative strategies we included had the sole purpose of communicating during the conversation. With this in mind, the inclusion of these may have provided new and insightful data, because we combined communicational strategies with visual mechanisms in a different way than our forerunners. Visual PSM were used to a much lower degree than anticipated, totalling only 3% of all PSM used, most being the newer "confirming look" (figure 1). However, this coincides with Rodriguez & Roux' (2012) results of miming only being used 1% of the time in their study. Miming was used one time (Table 1) during all eight conversations. The participants would also use "display item" on occasion, to explain their complicated social media names which were easily misunderstood through the poor audio quality.

Huberman & Crandall (1982) stressed that whenever employing the singular case study it is essential that the researcher reflects over questions revolving around the relevance of the study, and whether or not it is of interest to others. With this in mind, it is of importance to see the studied class in relation to other classes, characterizing what is unique

about the class and what is similar to the norm. As discussed previously the class had a significant focus on oral activities like drama, where the learners used the TL during all their English lessons. This may stray from many other Norwegian classes, where there is a varied focus on both the usage of English orally in the Norwegian classroom and the activities taking place within the classroom. However, seeing as the curriculum has oral skills and the aim of having the learners be able to make themselves understood when abroad (Utdanningsdirektoratet, 2020) the data collected should be of interest to the English pedagogical field in Norway. There are higher standards regarding the competence of Norwegian school teachers leading to more and more classes using English as the primary language during English lessons and also employing more creative activities for developing the language. Relating this to our study there are many reasons for other educators than the one we collaborated with to implement online telecollaboration into the English education. The pupils found it interesting and felt like they got to use their linguistic knowledge for something valuable, while granting the teacher valuable insight into her pupils' linguistic strengths and weaknesses, allowing them to adapt future lessons based on what the learners needed to work with. The PSM-count of the eight groups will most likely be primarily of local relevance, however, also grants future research within the field the opportunity to conduct a comparative study to our data.

The studies we have based our project on, Bøhn & Myklevold (2018), Parcon & Reyes (2021), Su (2021) and Rodriguez & Roux (2012), had groups of participants that were older students of different nationalities. The difference in age and taught curriculum compared to this study's younger Norwegian participants makes the possible comparison less viable. Parcon & Reyes and Su researched college students with English as a primary focus, whilst our participants had lower levels of education and were not actively studying English as a primary focus. Rodriguez and Roux on the other hand, was studying beginner EFL learners, entailing that these had lower levels of knowledge and proficiency from our participants. The study most resembling ours was Bøhn & Myklevold, who studied Norwegian lower secondary learners' employment of different quality based PSM when instructed compared to when not instructed in how to use the mechanisms. Our study differs from this one due to our focus being primarily on the PSM-employment itself. Rather than correlating it to instruction or quality, we have focused on the categorization of the PSM. The different studies were also conducted in different countries, entailing that the linguacultural backgrounds grant dissimilar expectations and linguistic traits. In our study, there was a clear

notion towards using what Bøhn & Myklevold (2018) deemed as “lower-quality” PSM such as time pressure mechanisms and message reduction than “higher-quality” PSM like circumlocution. This may indicate a lower level of communicative proficiency, which could be due to their age and school level.

With these findings, it can be considered that the most common communicative problems the Norwegian 7th graders faced had to do with encoding time, noisy environment disturbing them, and lacking language knowledge. These are factors a teacher must have in mind when performing telecollaboration. Noisy environment is easy to circumvent by finding a suitable room or by using headphones. As for encoding time and lacking language knowledge, the teacher can give further training in grammar and vocabulary, or instruction in communicative strategies. As found by Bøhn & Myklevold (2018), these instructions give the speaker a broader set of CS to use, which will enhance their communicative performance. While our participants were not anxious, one should also take this into consideration when designing a telecollaboration.

6 CONCLUSION

In this study we have sought to answer the research question "What type of communicative strategies do Norwegian 7th graders use to solve communicative problems during online telecollaboration with foreign students?", by constructing a case study consisting of observations and interviews. The aim was to gauge what type of CS the students used during online conversations, and to then understand what type of communicative hurdles they would face during it. With this information we could see how to best optimize these online meetings for learning potential. The study used eTwinning as a platform to garner participants. The study is of local nature as it only looks at two 7th grade classes from the same school. The teachers were included in the design of the tasks. The collected data consisted of three hours of transcribed observations, as well as notes from subsequent interviews.

While there are many CS taxonomies, we chose to use Dörnyei & Kormos' (1998) taxonomy on problem solving mechanisms, with minor adjustments and simplifications. We looked at the ratio of what PSM are used to gauge what type of communicative hurdles students face the most during such telecollaborations.

The results (figure 1, table 1) show that Norwegian 7th graders need to use time processing mechanisms and resource deficit mechanisms the most during online telecollaboration. The time processing mechanisms accounted for 54% of PSM used, while resource deficit accounted for 30% (figure 1). Within time processing mechanisms umming/erring was the most used PSM, sound-lengthening and unfilled pauses were also used to a significant degree. These PSM were used by the students to give themselves more time to process sentences. Resource deficit PSM were more varied in use, having several PSM dominate. The most used were message reduction/abandonment, where the students would reduce their utterances to either move the conversation along or to disregard their original utterance. Another prominent resource deficit PSM was code switching, which would be used between the groups themselves, and in the beginning of sentences where the students would forget to "switch" to English. Perceived deficiency of self and other PSM were used to a lesser degree when compared to processing time mechanisms and resource deficit. PDO were used significantly more than PDS. Most of the occurrences of PDO were due to the poor audio environment, forcing the students to repeat themselves, where asking for confirmation/clarification/repetition has to be used. Self- and other-repair were used to a similar degree (table 1), other-repair was mostly used within their own groups rather than

onto the Austrians. It generally seems that the students were not too self-aware or critical over own performance, or instead focusing on their interlocutors' and peers' performance. We hypothesized that since the participants had access to video during the conversations, they would be using more visual forms of communication such as gesturing. However, the results showed that this hypothesis was wrong where the visual PSM category was the second least used one. Most of the visual PSM that were employed were the "confirming look", which did not further the actual conversation, but rather signaled that the participant was uncertain or needed assistance from adults. Most theory points to anxiety playing a large role student performance during oral encounters (MacIntyre, et al, 1998; Nashima, 2002; Ayedoun, 2018). However, while the students reported being anxious and shy at first, they did not find that speaking online to foreign students to be scary. Their performance did not seem to be reduced during the sessions either, as they spoke freely.

The prominence of resource deficit, processing time mechanism, and asking for repetition PSM indicate that the main hurdles the students face during telecollaboration had to do with EFL proficiency, either lacking oral speaking experience or lacking EFL knowledge, and also technical issues. There was also evidence that proper preparation played a large role in student performance, when considering the circumstances and comparing the main and secondary sessions. Overall, the students showed great English proficiency, holding proper conversations for 20 minutes, while eager to speak for longer. The students used all the various PSM throughout the eight groups, including the visual ones we hypothesized, though to varying degree. These findings are of great interest to English teachers who seek to employ telecollaboration through ICT in their lessons, as they can make considerations to avoid these hurdles.

6.1 Reliability and Validity

Instead of focusing on only one method of research we decided upon a multi-method approach implementing case study, interviews, and observations. This ensured a greater validity and reliability due to the opportunity to correlate the data collected with the different methods and cross-check. We were thus granted more insight and reflective opportunities regarding the linguistic, pedagogic, and psychological benefits garnered from the project. The recordings were transcribed sound-accurate, making seeing different PSM possible. The tasks and settings used in this project are easy to reproduce, meaning one can do similar studies on the same demographic to get broader and more accurate results.

We have based our linguistic focus and observation schematic on the taxonomy of Dörnyei & Kormos (1998), we have also pulled several parallels with other theorists such as Bøhn & Myklevold and Rodriguez & Roux. This entails that we have focused on reliable sources and ensured that our study is relevant and valid in the field of EFL communication.

The study we performed included numerous sources of error, with miscommunication between researchers, the preparation of the participants, technical difficulties, and a lack of a pilot study. The study could have been more reliable if we had the opportunity to conduct a pilot study, where we could have trained in observation and had the chance to refine the project and remove sources of error. However, due to scheduling and time constraints this was not possible. If we were able to remove the adults from the situation the data may have been severely different, with the learners not using PSM to the extent they did in this study. Confirming look and some request for help mechanisms would have been void. The potential feeling of threat of having strangers physically observing the participant would also be gone, allowing the learners more leeway and opportunities during the conversations. This, however, would have required us to video-record the learners, and due to their age, this is problematic due to ethical and privacy concerns. If the study were to be conducted again, we would have sought access to better equipment like headphones, and quieter surroundings, allowing the learners to sufficiently hear the conversation. They would thus be able to partake without employing as many PDO mechanisms, like asking for repetition as they did. This might also have reduced the amount of code-switching and repetition employments, massively altering the results. However, disruptive noises are something many schools may experience, for example if doing telecollaboration within the classroom. Meaning that these results showcase a real issue one can expect during online telecollaboration.

The original idea was for the pupils to not be familiar with communicative strategies and mechanisms, however their teacher dedicated some of their lessons to preparation for the linguistic aspect of the conversation. This entails that the participants may have been more knowledgeable than what we expected, also affecting the PSM-employment and results. As stated in 2.6.1 Bøhn & Myklevold (2018) found in their study that learners instructed in PSM employment had a greatly increased amount of these mechanisms compared to uninstructed individuals. This probably means that the participants in our study had a somewhat increased amount of PSM employments compared to what would have been the result without the instruction. However, this is hard to gauge without a comparative study looking at their PSM usage before and after the instructions.

When analysing the transcriptions there were slight miscommunications between the researchers leading to differing data. We differed both during the word-count and during the PSM-count leading to the results of the first four and the last four groups being incomparable. In order for the data to be directly comparable the only option we had was to see the eight groups as two separate studies, meaning the analytical opportunities was limited and there was difficulty in finding correlations between all the groups. This led to us simply disregarding the total PSM amount and the PSM-ratio itself, only focusing on the percent value of PSM employment found in each group. This allowed us to have comparable data by seeing the relational value between the different mechanism-categories rather than the specific PSM. This issue has granted us insight into the importance of communicating regarding every detail, because there is a huge variety of ways to process data. Some PSM were also easier to find in the transcriptions. Umming/erring and sound-lengthening both has visual indicators in the transcription to when they occurred, while more advanced PSM such as circumlocution needed to be analysed to be discovered. This could have led the time pressure PSM to be over-reported compared to other PSM.

We had originally not planned to include a second session of conversations, but when the participants displayed an interest in partaking in another round of conversations, we took the opportunity to gather more varied data. In comparison to the first session, these conversations were severely unorganized, took place over several days and the participants were uninformed as to what to talk about and when their conversations were to take place. This led to some of the learners being thrown into conversations when they were not in the least ready for it, making these conversations very lacking when compared to session 1. On the other hand, we also had an instance where the learners acquired way too much time for preparation during session 2 due to the Austrians arriving 40 minutes late for a conversation. This imbalance in the opportunities provided and the quality of the conversations led us to not include the data collected from this session in the results, but rather take note of the general content and performance of the learners.

6.2 Alternate Research Opportunities

There are many potential directions in which one can expand upon this study. Our study focused on the linguistic proficiency of Norwegian 7th graders during online telecollaborative efforts with an Austrian class. For the collaboration we focused exclusively on the pupils' linguistic competence according to their teacher, leading to the groups being divided based on competence steps 1-3. The data we collected were not based on the individual learner's

employment of PSM but rather the individual group's total PSM employment. Seeing as we excluded specific details about the learners during our study, we could have altered the focus in future potential studies. Virtual exchanges are also an excellent opportunity for cultural exchanges, meaning one could research its effect on learners' intercultural competence.

The participants' teacher noticed that there was a significant difference between the confidence and activity of male and female pupils, where male learners were more active. Considering this, one could look at the individual pupils' word count and PSM-employment in order to explore in what way gender may affect the data. There was a slight mismatch between the ages of the Norwegian and Austrian learners, due to the Austrian school having mixed-age classes. Previously in this MA we hypothesized how this may have affected the learners in various ways based on the age relation between the Norwegian and Austrian learners. We could thus have a study focusing on the attitudes, confidence, mannerisms, and oral activity with a focus on age-gaps, trying to find a correlation.

During the interviews we conducted we were informed by some of the participants that they had previous experiences with authentic EFL communication through playing video games and traveling. This could also be a factor to base a study around, wherein we divide the groups based on previous experiences in order to search for a correlation between personal life and EFL proficiency. Another thing we noted during the interviews is how some of the male learners wished to be paired with specific genders to speak with. We could have focused the study on how the gender of the conversation partner affect the way one acts, speaks, and participates in the conversation. This would demand that the same participants were to converse several times, but with different gendered groups. In order for the pupils to feel more independent and be forced to speak more, one could also conduct the experiment by having them hold the conversations one-on-one. This would grant completely different data- but would also grant a lot of significant data if the learners are willing to communicate in this manner. This type of study would rely more on the willingness of the participants than the one we conducted, seeing as there is a need for confidence, competence, and proficiency to converse in an L2 without support from peers. The amount of participants would in a one-on-one project most likely be greatly reduced, meaning the data collected would probably reflect only the most linguistically competent learners of the participating class.

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Appendix 1

Observation schematic:

Group _ _ _ _ Date _ _ _ _ _ _ Time _ _ _ _ _ _

PSM		Occurrences	Total
Resource deficit	**Message**		
	-abandonment		
	-reduction		
	-replacement		
	Code switching		
	Approximation		
	All-purpose word		
	Complete omission		
	Literal translation		
	Foreignization		
	Restructuring		
	Circumlocution		
	Appeal for help direct		
	indirect		
Processing time pressure	**Pauses**		
	Unfilled pauses		
	Umming/erring		
	Sound lengthening		
	Filler words		
	Self-repetition		
	Repeating other		
Perceived deficiency of self	Error repair - self		
	Comprehension check		
	Own-accuracy check		
Perceived deficiency of other	Asking for: repetition		
	clarification		
	confirmation		
	Other-repair		
	Feigning understanding		
	Guessing		
Visual	Hand-Gesturing		
	Miming		
	Display item/image		

Appendix 2

Interview Guide

- *Semi-Structured*
  - *How did you feel about cooperating with pupils from Austria?*
    - *Thoughts about doing this in the future?*
  - *Have you ever talked with someone who did not speak Norwegian before?*
    - *In what situations did this happen?*
    - *Did these situations prepare you for this cooperation?*
  - *Did you find it easier or harder to communicate in English during the cooperation?*
    - *Why do you think that is?*
  - *Was it easier or harder to cooperate with the Austrians than your fellow classmate?*
    - *In what way?*
    - *Why do you think so?*
  - *What did you find difficult with the cooperation?*
    - *Did you learn anything about yourself from this?*
    - *Did you learn anything about Austrian culture from this?*
  - *Was it more or less scary to communicate in English with someone who did not understand Norwegian?*
    - *Did you find it scary to talk with someone foreign using English?*
  - *Do you feel like the cooperation helped you become a better English speaker?*
    - *What have you learned?*
    - *In what ways have you become more/less comfortable in English?*
  - *Are you happy with how you worked during the cooperation?*
    - *Why are you pleased/displeased?*
    - *What would you have done differently if anything?*

Appendix 3

Vil du delta i forskningsprosjektet:

«Norske elever strategier for erstatning av manglende språkferdigheter under autentiske Engelsk-språklige situasjoner gjennom eTwinning»

Dette er en forespørsel til deg som foresatt om å la deres barn delta i et forskningsprosjekt fra to masterstudenter fra Høgskolen i Østfold der formålet er å utforske elevers kommunikative evner i autentiske engelsktalende situasjoner. I dette skrivet gir vi deg informasjon om målene for prosjektet og hva deltakelse vil innebære for ditt barn.

Formål

Dette er et forskningsprosjekt vi skriver i sammenheng med en masteravhandling vi arbeider med for å fullføre grunnskolelærerutdanningen vår ved Høyskolen i Østfold. Formålet med prosjektet er å utforske hvordan ulike engelskspråklige situasjoner påvirker barn og unges språklige ferdigheter, og hvilke strategier de bruker når de mangler språkferdighetene til å uttrykke det de ønsker på engelsk.

Hvorfor får ditt barn spørsmål om å delta?

Ditt barn får denne forespørselen ettersom de er en elev mellom 5.-10. trinn, og deres klasse skal delta i et samarbeidsprosjekt med en skole fra Østerrike.

Hva innebærer det for ditt barn å delta i prosjektet?

Dersom du velger å la ditt barn delta i prosjektet innebærer det at de skal delta i et samarbeidsprosjekt med elever fra en utenlandsk skole der all kommunikasjon skal foregå på engelsk. Dette samarbeidet skjer over videosamtaler, der elever i Norge og ved den utenlandske skolen arbeider med et felles prosjekt og skal dermed lage ett felles produkt. Klassen de samarbeider med er fra Østerrike.

Under dette prosjektet blir elevene observert og det vil bli notert ned hvilke språklige strategier som blir brukt i ulike situasjoner, og det vil også tas lydopptak. Vi skal ikke samle inn noen personopplysninger (kjønn, navn, alder etc.), men vi skal gjennomføre gruppeintervjuer med elevene for å undersøke hva de føler om et slikt samarbeid og om deres språklige utvikling gjennom prosjektet.

Frivillighet

Det er frivillig å delta i prosjektet. Dersom du velger å delta, kan du når som helst trekke ditt samtykke tilbake uten å oppgi noen begrunnelse, og få dine data og personopplysninger slettet. Det vil ikke ha noen negative konsekvenser for deg hvis du ikke vil delta eller senere velger å trekke deg. Du har rett på innsyn på prosjektet, det vil si om du vil se intervjuguide eller observasjonsskjema kan du det.

Databehandling

Under observasjonen blir det tatt lydopptak av samtalene elevene har med gruppen i Østerrike, samt blir et observasjonsskjema fylt inn. Det blir også tatt lydopptak av gruppeintervjuet. Lydopptakene blir transkribert og anonymisert, og det skal ikke være mulig å identifisere enkeltpersoner. Opptakene blir lagret på sikre enheter utlånt av Høgskolen i Østfold. Ved ønske om å klage på behandling av data og personvern har du rett til å klage inn til Datatilsynet: https://www.datatilsynet.no/

All data blir slettet innen prosjektets slutt den 15. mai.

Tusen takk for at dere velger å delta i vårt forskningsprosjekt. Om du har spørsmål eller ønsker innsyn, ta gjerne kontakt med oss, se informasjon under!

Med vennlig hilsen

Prosjektansvarlig

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Jeg har mottatt og forstått informasjon om prosjektet «Norske elever strategier for erstatning av manglende språkferdigheter under autentiske EFL(Engelsk som fremmedspråk-opplæring) situasjoner gjennom eTwinning» og har fått anledning til å stille spørsmål.

☐

Jeg samtykker til:

Å la mitt barn delta i det internasjonale samarbeidet

☐ Å la mitt barn delta i intervju

Jeg samtykker til at mitt barns data behandles frem til prosjektet avsluttes, ca. 15.5.2022

_____

(signert av foresatt, dato)

Barn 15 år og eldre kan samtykke selv. Jeg samtykker til at min data behandles fram til prosjektets avsluttes, ca. 15.5.2022

_____

(signert av barn over 15 år, dato)