Abstract

In this qualitative study, I explore uses and attitudes to the use of Google Translate among teachers and pupils in two Norwegian upper secondary schools, and what potentials and problems they see connected to its use in the language learning. By interviewing four teachers and four pupils at two different upper secondary schools in Norway, I have tried to find an answer to these questions.

The results show that there are varied attitudes to Google Translate as a translation tool, and, accordingly, varied answers to whether they see Google Translate as a useful tool in the language learning or not. However, all informants seemed to agree on a few things, e.g. that Google Translate can favorably be used to grasp the essence of a second or foreign language text, and it can also be used similarly to a dictionary, that is, by using it to look up single words. Furthermore, consensus was that Google Translate output of grammar was inaccurate and unreliable. Regarding use of Google Translate as a tool in a language learning context, some were inclined to see its usefulness and also some potential ways to include it, while others rejected it completely, and did not find it useful for any sort of purposes.

I discuss the findings in light of theories on translation in language learning generally, as well as theories on what we know about machine translation and Google Translate in language learning specifically.

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1 Introduction

1.1 Background and research focus

In the technological era we are currently finding ourselves in, the world is becoming ever more digitalized and robotized. Machines are taking over jobs performed by humans for decades and even centuries. In an article in *Dagbladet* (2017), it is claimed that something close to 900 000 Norwegian jobs can disappear over the next 20 years as a consequence of the entry of the robots into working life. This development has spread to the language discipline as well, including the field of translation. Michael Cronin (2013, p. 1) claims that translation is going through a period of revolutionary upheaval, and that the effects of digital technology and the internet on translations are "continuous, widespread and profound". And he is right; an enormous selection of online dictionaries, translation tools and apps has been developed to make translating between languages easier. An example of such a translation tool is Google Translate; a very popular one among pupils in school, because of its simplicity and ability to translate sentences, passages and whole texts at a time – not just single words. The quality of the translations, however, is somewhat more questionable. The Wikipedia definition[1] of Google Translate is as follows: "Google Translate is a free multilingual machine translation service developed by Google, to translate text." Interestingly, it also says that: "Google Translate supports over 100 languages at **various levels** and as of May 2017, serves over 500 million people daily" (my emphasis).

As is known, human languages are complex systems built up by words, structures and grammar, and to become fluent in a language, you need to have a comprehensive understanding of how this system is put together and how to use it. Additionally, various expressions in many languages are very context dependent, so it is therefore reasonable to assume that such a competence might be hard to transfer to a machine. This is something not all pupils seem to understand, as many of them use and trust machine translations, particularly Google Translate, uncritically. My personal experience is that this is something teachers struggle continuously in the English-speaking classrooms, therefore I decided to explore this topic further by focusing, in this thesis, on the use of digital translation tools as part of second language learning in schools, more specifically the use of Google Translate. Furthermore, not much research has, to my knowledge, been conducted in this specific area, which makes this topic even more interesting to dig into.

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[1] Accessed May 8th 2018 on: https://en.wikipedia.org/w   iki/Google_Translate

Before carrying out the study, I had, as a student of English and a teacher-to-be, my own perception about the use of Google Translate; namely, that it is handy and ok to use if you just know how to use it. First of all, this means using it similarly to a dictionary. I would never use it to translate larger units than single words or short, non-complex expressions. And even when using it merely like a dictionary it takes a good portion of critical awareness and tricks to make the best of it and avoid mistakes. You must for instance, in many cases, back-translate between target and source language, and read through the explanation of the word as well as the examples and synonyms provided by Google. You must also pay attention to the grammatical properties of the word you are looking for, because it is possible to be confused by words that can be used both as verbs and nouns, for instance, as well as verb tense, verb form, number and so on. This makes use of Google Translate challenging, as not everyone is aware of its limitations, people with low language proficiency in particular, and thus they trust the translations uncritically.

Due to my own interest in and perceptions of the topic, and the fact that the experiences of pupils and teachers on the subject have not been much studied, I decided this was something I wanted to explore. Therefore, my research question for this thesis became as follows: What kind of use and attitudes to use of Google Translate exists among pupils and teachers in upper secondary schools? Furthermore, and interrelatedly, I wanted to find out what potential advantages and/or disadvantages the informants could see connected to use of Google Translate. To answer these questions I did a qualitative study, interviewing in total four English teachers and four pupils taking English classes, at two different upper secondary schools. These informants shared of their time to tell me about their experience with and attitudes to use of Google Translate.

1.2   Thesis outline

I provide some theoretical background on the subject in chapter 2. The background I present consists in some general theories on respectively translation in language learning, machine translation, machine translation in foreign language learning, and Google Translate in language learning contexts. In chapter 3 I describe the methodology used to carry out this study, including an assessment of the research quality, more specifically the validity, reliability and generalizability of the study and its findings. The analysis is presented in chapter 4, followed by a discussion in chapter 5 where I discuss the results of the research in light of the theories already presented. Finally, in chapter 6 I sum up and point to some tendencies, draw conclusions and give proposals for further research on the subject. The

appendices include a reflection of the thesis' relevance for the teaching profession, the interview guides for the pupils and teachers, and a table in which I show how I have translated the informants' quotes that are included in the study from Norwegian to English.

2 Theoretical background

2.1 Translation in L2 teaching and learning

Cook (2010, p. xv) argues that for language learners, the art of translating should be "a major aim and means of language learning, and a major measure of success", as opposed to what has been tradition within language learning. He states that traditionally, translation in language learning contexts has often simply been assumed to be bad and even held up to ridicule. There were seemingly several reasons for this; pedagogical arguments such as a belief that translation was both dull and demotivating, and cognitive arguments like the idea that translation hindered successful language acquisition and processing. Other arguments were practical – that translation was not a skill that students would need in the real world. Strangely, as Cook points as, there existed very little research and good arguments to back up these beliefs. He, on his part, wishes to argue that translation has pedagogic advantages both for teachers and learners, as well as it is both a stimulus and aid in the cognitively demanding task of acquiring a new language, and that it also actually is a practical and much-needed skill to hold (2010, p. xvi).

Cook (p. 55) argues that for students, understanding and discussion of translation problems gives a unique insight into how a new language works and how it is similar and different from their own, and that this will enable them to use the language, whether on its own or when translating, with more confidence and success. According to Cook (p. 155), humans teach and learn by moving from the familiar to the unfamiliar, by building new knowledge onto existing knowledge, and that language teaching and learning are no exception to this general rule. Furthermore, he states that translation is just such a bridge between the known and the unknown, and that to burn that bridge hinders rather than helps the difficult transition which is the aim of language teaching and learning. He also claims that only through conscious awareness of differences and difficulties, students can become good translators themselves, and consider possible translations in the light of contextual factors, participant purposes and needs. Cook concludes this argumentation by stating that for these reasons, translation theory and studies are far from irrelevant to language learning, and should not be kept separate from it. Interestingly, in today's technological society, a great deal of translations, serving different purposes, are performed by machines, and if, as Cook suggests, translation were to take a bigger part in language learning, then perhaps it is reasonable to believe that so should focus on different aspects of machine translation.

2.2　Machine translation (MT)

2.2.1　A brief history of machine translation

The term "machine translation" (MT) refers to computerized systems responsible for the production of translations with or without human assistance (Hutchins 1994). In a review article, Hutchins (Ibid) presents a brief history of machine translation, from the early pioneers in the 1930s up until research in the 1980s.

Firstly, he states that the use of mechanical dictionaries to overcome the barriers of language was first presented in the 17th century, but that it was not until the 20th century the first concrete proposals of such were made. In 1933, the French-Armenian George Artsouni designed a storage device on paper type that could be used to find the equivalent of any word in another language, whereof a prototype was apparently demonstrated in 1937. In retrospect, however, the proposals of Russian Petr Smirnov-Troyanskii became more influential, as he presented a three-stage model of machine translation. Stage one consisted of a native-speaking editor in the source language who was to organize the words into their logical forms and to ensure the syntactic functions; in stage two the machine was to transform these sequences from the source to the target language. The final stage involved a native speaker of the target language, not familiar with the source language, to convert this output into the normal forms of his own language. Within a few years of these first proposals, researchers at different colleges and universities started exploring mechanization of bilingual dictionaries, and it was at MIT in 1951 the first full-time researcher in MT was appointed.

In a period labeled by Hutchins as 'the decade of high expectation and disillusion, 156-1966', research tended to polarize between empirical trial-and-error approaches with immediate working systems as the goal, and theoretical approaches, involving fundamental linguistic research and aiming for long-term solutions. By the mid-60s, MT research groups had established in many countries throughout the world, but many of these were shortlived and without no subsequent influence. In a review of MT progress, Bar-Hillel (1960, as cited in Hutchins 1994) criticized the prevailing assumption that the goal of MT research should be the creation of fully automatic high quality translation (FAHQT) systems producing results indistinguishable from those of human translators. He argued that it was not merely unrealistic, but impossible in principle.

In 1966, a report formed by the Automatic Language Processing Advisory Committee (ALPAC) concluded that MT was slower, less accurate and twice as expensive as human translation, and that "there is no immediate or predictable prospect of useful machine

translation" (as cited in Hutchins 1994, p. unknown). It saw no need for further investment in MT research. The report was widely condemned as narrow, biased and shortsighted; however, the influence of it was profound. It brought an end to MT research in the United States for over a decade, and MT was for many years perceived as a complete failure.

In what Hutchins refers to as 'the quiet decade' from 1967-1976 in the US, the focus of MT activity shifted from US to Canada and Europe where various researches on the field were carried out. During the 1980s MT advanced rapidly on many fronts; new operational systems appeared, the commercial market for such expanded, and MT research diversified in many directions. At the end of his 1994 review article, Hutchins reports that until recently, MT has dealt exclusively with written text, but now research on the desire for automatic speech translation has started.

It is safe to say that the development of MT systems continued to evolve rapidly after the early 1980s, and today free online MT systems such as Google Translate and Babelfish faces great popularity. Harold Somers (2013, p. 1) claims that although there still does not exist any flawless MT system fulfilling the early promise of "fully automatic high-quality translation of unrestricted text", the technology of MT has now reached a stability and maturity, where developers and experienced users well understand its capabilities and limitations. The technology of Google Translate, however, has been criticized and ridiculed for its accuracy, as reported on the Google Translate Wikipedia[2] page, despite the fact that it looks for patterns in millions of documents to decide on the best translation of a word or phrase. This reveals that even though almost one hundred years have passed since the first proposals for machine translations were made, it is still hard to develop machine translation systems that generate satisfying output, which again illustrates how complex languages, and thus translation of such, really are.

2.2.2 Machine translation in foreign language learning

Ana Niño addresses the use of MT and free online MT in foreign language learning in an article from 2009, with focus on language learners' and tutors' perceptions of its advantages and disadvantages. The article identifies four dimensions of MT for educational purposes. The first (p. 242) is MT output as a bad model or source of language errors to be corrected by language students. Somers (2003, as cited in Niño 2009, p. 242) pointed out that this use could actually "bring out subtle aspects of language differences" and "reinforce learners' appreciation of both L1 grammar and style". The second dimension (p. 242) is use of MT as

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[2] https://en.wikipedia.org/wiki/Google_Translate

a good model, through the use of translation memories, i.e. databases with aligned or semi-aligned text segments in multiple language pairs, in combination with other corpus-based language resources. Other authors (DeCesaris 1995; Shei 2002a, as cited in Niño, p. 242) have also recommended the use of translation memories in the language class, as an autonomous resource to check for phraseological and grammatical correctness into the target language. The third dimension (pp. 242-43) of MT usefulness for educational purposes is for vocational use, that is, to generate data for language-skilled professionals in the translation industry. As Niño explains, professional translators need to gain insight into the intricacies of the translation art and be updated on the use of Computer-Aided Translation (CAT) tools, such as translation memories or MT systems. The professionals also make use of translation quality assessment of human or MT output (MT evaluation). Finally, Niño recognizes the fourth dimension of MT to consist in its usefulness as a "CALL" tool[3] to test the students' knowledge of the target language (p. 253).

Niño also addresses the strengths and weaknesses of using MT, and free online MT in particular, from the language learning point of view. About use of free online MT, Niño says the following:

> Free online MT is the most accessible form of MT, although it is not the most representative sample of MT performance, and it is mostly used for assimilation purposes […], to get the gist of what a foreign text says, but not so much for dissemination purposes where output of higher linguistic quality is often required. Unfortunately not all students are aware of these two main uses of MT and of the fact that free online MT is not particularly suited for the latter.
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> (Niño 2009, p. 245).

However, she recognizes several strengths of free online MT, and among these are the fact that it is widely available online as a language resource, as well as the immediacy of it; you just have to select the source and target language and then you are just a mouse-click away from immediate output. Free online MT systems are also able to translate into a selection of different languages, which is clearly an advantage. Furthermore, its ability to translate short lexical units works reasonably well, especially compared to compounds, longer phrases and complex grammatical structures. She claims that it also works reasonably well for not so complex texts such as weather reports or technical manuals.

On the other hand, she addresses some of the main weaknesses connected to free online MT (pp. 245-46). One of them is the issue of literal translation, that is, literal translation of

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[3] The author does not explain the concept of "CALL" tools in the article, thus the concept is not discussed any further here.

proper names, terms and collocations, prepositions, determiners or connectives, into nonsense phrases or sentences with various word and word order errors. Another problem is that it often leads to grammatical inaccuracies, especially for beginner or intermediate students who use MT as phrase or sentence dictionaries, where grammar knowledge is needed to express something specific correctly in the target language. Niño reports that students with a stronger command of the language do not use these systems as grammar references, because they are aware of these grammatical inaccuracies. Furthermore, she mentions discursive inaccuracies in relation to e.g. connectives and co-reference when translating texts rather than smaller units such as sentence, and that spelling errors such as punctuation and capitalization errors, letter omissions or unnecessary letters may occur. She reports that MT generally is unable to account for cultural references, which involve human knowledge as well as extralinguistic issues such as context, connotation, denotation or register. Lastly, she points out that extensive use of MT in L2 learning may foster an unnatural habit of first translating and then writing in the L2.

Niño suggests that in language classes, students with a low proficiency of the target language especially can be shown instances of what free online MT can and cannot translate so that they are made aware of the uncertainty of relying on these systems as the only resource of their foreign language writings (p. 246). Similarly, students can be provided with examples of good writing and translation into the target language, and be presented with more reliable online resources to check the correctness of their work. In this way, the students may come to realize that the MT output is often of a worse linguistic quality than what they are actually capable of doing themselves.

The results of a survey on language learners' and tutors' perceptions on the use of MT for foreign language teaching and learning was that the use of MT in foreign language learning was perceived as an innovative and positive learning experience both by language tutors and language learners (p. 253). Emphasis was put on the practical value of using MT output for assimilation purposes and on the instructional value of introducing language students to MT, teaching them about the potentials and limitations connected to it, with a view to understanding the deficiencies of free online MT output as well as raising their awareness as to the complexity of translation and language learning.

2.3 Google Translate in language learning contexts

Jonathan Benda (2013) explored the use of Google Translate in Taiwan, where English is not a language of local communication. In his article, Benda presents different existing views on

the ethics of ESL students using translation technologies, such as Google Translate, for essay writing. J.L. McClure (2011, as cited in Benda 2013) suggested that if it would not be appropriate to give an assignment to a human translator, then neither would it be appropriate to use a digital translator, and he followed this view up by stating that: "I don't know how such a patchwork approach could help someone in acquiring fluency in writing full sentences and paragraphs and essays in English" (p. 318). Ann Amicucci (2011, as cited in Benda 2013, p. 318) claimed that the appropriateness of using translation technology depends on the purpose of the course in which the student is enrolled. A relevant question was also raised by Doug Dawns (2011, as cited in Benda 2013, p. 318): "At what point does humanity acknowledge computer-assist as a 'built-in' part of linguistic competence?" And as Christopher Thaiss (2011, as cited in Benda 2013, pp. 318-19) noted: "Knowing that our students, as perhaps we ourselves, will use such tools more and more in order to communicate translingually, our task as teachers adds yet another dimension". Pennycook (2008, as cited in Benda 2013, p. 319) calls for "translingual activism" to be part of English language teaching. He argues that an English classroom need not, or should not, be a place that leaves out or ignores other languages, and particularly not students' mother tongues or home languages.

As an English teacher at a university in Taiwan, Benda experienced how students made use of machine translation as a language learning strategy. When writing a text, he told the students to "just use the English you already know" and discouraged the use of translation tools such as electronic dictionaries or Google Translate, because his main aim at first was to help students increase their English fluency. Later on, Benda had the impression that the students probably had been making use of machine translation to compose their texts either way, and felt that they had not been doing their job, and here he quotes Harris (2010, as cited in Benda 2013, p. 321): "MT should not be a Second Language shortcut". When asking the students about the suspected use of machine translation, he could barely get an answer, because the students embarrassingly denied it or was afraid they would be punished for it. However, some students expressed frustration at the idea of starting out by writing in English rather than writing in Chinese and then translating it.

These experiences led Benda to think about alternative ways to perceive and make use of students' use of machine translations in their writing. Rather than seeing it as a sign of laziness or cheating, he started to think about how he could help them make more effective use of this technology, so that they would be more able to produce texts that did not show the typical errors and signs of the MT' difficulty with ambiguity and translation of idiomatic expressions and so on. To support this view, Benda quotes Godwin-Jones (2011, as cited in

Benda 2013, p. 325), who argues that: "instead of discouraging use of a tool such as Google Translate, teachers might discuss its use, point out how it works […] and illustrate its benefits/problems with some sample translations". Benda carried this out by showing students examples of a text that had been translated from Chinese to English by Google Translate, asking them to see what kinds of corrections might needed to be made to the English. This approach called *post-editing,* is what Niño (2009, p. 243) describes as "correction of the raw MT output into an acceptable text for a particular purpose." Another approach described by Niño (Ibid) is *pre-editing*, which she explains as "modification of the source text until appropriate MT output is obtained." This involves being aware of potential difficulties caused by formulations and idiomatic features that does not translate easily into the target language. However, as Benda (2013, p. 326) points out, what might cause problems for Google today might not tomorrow, as it is in constant development.

Benda gave his Chinese students activities based on the approaches described by Niño (2009), and after going through with them, he reflected that through working with these kinds of activities, students can learn about writing, translation and language (p. 327). Furthermore, some of Benda's students drew some interesting conclusions as well. A couple of students called Yaoyu and Yiyun found that writing across languages through Google Translate required close attention to details of the language and avoidance of colloquial language that might "confuse" the translator (p. 327). Some other students wrote:

> When we write Chinese article, we often omit some word to make the article are read more smooth, but it also would let the translator confused. So, we need to add in more detail to let the translator easy to translate. More detail, more correct. And we also use comma to let the long sentence break into much smaller sentence, it also would let the translator easy to translate correctly   (Jiaxiang and Zhewei, as cited in Benda 2013, p. 327).

Benda claims that these examples show that students can become more aware of language differences both on the level of grammatical issues and on the level of how prose style might affect translatability. Another aspect of what this approach can provide students is the chance to reflect on the resources that they have available for writing, such as the resource of technology. Two students wrote that they could "[…] use online translators to translate and check the difference between them […]" (Xinyi and Jiayi, as cited in Benda 2013, p. 328).

While one student reported that working with Google Translate and discovering its deficiencies gave her the confidence to rather trust her own English abilities in the future, a student called Lixin reported that the exercise made him doubt the whole enterprise of machine translation. He wrote:

> I think it is hard to translate a language into another only by a 'machine', only the man can understand the meaning. And I find it hard to change the Chinese in a understandable version for the translate machine. Because it can't understand the meaning of it. Only the man who knows both language well can translate good   (Lixin, as cited in Benda 2013, p. 328).

The question that remains unanswered is whether use of MT, such as Google Translate, for translating large amounts of text interferes with the development of language fluency, or if it may be a tool for developing language learning strategies. Benda questions whether students in EFL classes really need to acquire fluency in writing a much as they might need a set of linguistic tools and resources that they can draw on, when and if needed, to develop as autonomous English users.

3   Methodology

My research is based on data collected through interviews with four teachers and four students at two different upper secondary schools, a qualitative approach that generates semi-structured data, because the respondents are given some or a lot of freedom when answering, and not necessarily all questions are answered (Saldanha & O'Brien 2013, p. 21).

There are both professional and practical reasons for why I chose a qualitative approach to my study. I considered the practical opportunities for implementing different sorts of methods, such as a quantitative questionnaire, interviews, observations or focus groups. With regards to my research question being a study of use and attitudes to use of Google Translate in the second language learning, among teachers and students in upper secondary school, I concluded, after a consideration of the different possible research methods, that interviews would be the most fruitful approach. As Saldanha and O'Brien (2013, p. 169) point out, the main benefit of interviews is that they give privileged access to a person's thoughts and opinions about a particular subject, which are difficult to access through other methods. Thus, since I was interested in exploring the attitudes to and experiences with Google Translate as a tool in English language teaching/learning contexts among teachers and pupils, I decided going for interviews.

3.1   Sampling

When recruiting participants for research, there are some ethical considerations to take into account. Requirements of informed consent and confidentiality are basic demands which must be fulfilled (Saldanha & O'Brien 2013, p. 179), but in cases of direct contact with participants, it is likely that ethical authorization will be required from the institution to which the main researcher is affiliated and possibly from other organizations, such as the participants' employers (Saldanha & O'Brien 2013, p. 179) or NSD (Norwegian Center for Research Data). In instances where participants are underage, the researcher needs permission from parents or guardians to go through with the interview.

In my study, I knew that this could lead to some potential challenges, since some of my participants could possibly be underage. However, according to NSD's guidelines[4], children may give their own permission to participate in a study where no sensitive information will be shared at the age of 15[5]. On this basis, I decided to recruit participants at upper secondary level,

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[2] http://www.nsd.uib.no/personvern/meldeplikt/vanlige_sporsmal.html

to avoid the ethical issues of interviewing pupils below age 15. Furthermore, I also found it more relevant to interview pupils at upper secondary level because I assumed that they could possibly provide more reflected and detailed answers between the ages of 16-19 than what pupils of 12-15 might be able to. On the teacher side I figured I could get useful answers both at lower and upper secondary school level, but for reasons of convenience I decided to recruit teachers and pupils at the same schools.

Although it is possible, in theory, to apply random sampling methods in large studies based on interviews, the aim of interviews is rarely to generalize to wider populations but rather to provide rich and diverse information from key participants (Saldanha & O'Brien 2013, p. 180). To achieve this goal, purposive sampling, where participants are selected on the basis of principled criteria so as to cover the key aspects of the research question, is more effective. So when recruiting participants I decided going for the purposive sampling method, approaching potential candidates who fulfilled a few pre-defined criteria directly, combined with what Saldanha and O'Brien call convenience and snowball sampling (2013, p. 34). Convenience sampling is carried out by recruiting the research participants that are most easily accessible, while snowball sampling means that the participants you have recruited in turn recruits other participants. In practice, this means that I first recruited two teachers who I knew fulfilled my pre-defined criteria, and who also were easily accessible, and then I asked these two to ask among their peer colleagues if anyone could be willing to participate. Furthermore, it was also the teachers who recruited my pupil participants from classes of their own whom they figured could possibly be willing to participate, as well as being able to reflect upon the subject. My criteria for the teachers were that they needed to be teachers of English, with at least one year of teaching experience in the subject. For the pupils, my criteria were that they needed to be 15 years or older and currently taking English lessons at some level. These pre-defined criteria were necessary for the participants to be able to reflect upon and, most likely, have personal experience with the topic in question; namely the use of Google Translate.

As Saldanha and O'Brien (2013, p. 169) point out, interviews are time consuming not only for the researcher who needs to conduct, transcribe and analyze the data, but also for the participants, who must be willing to take the time to participate. This aspect was taken into consideration when I decided to go through with interviews and in the process of recruiting participants. In my selection I therefore ended up with four teachers and four pupils from two different upper secondary schools, respectively two pupils and two teachers from each of the schools; one city school and one small-town school. The selection of schools was also primarily

convenience based, since these were two schools that I had different connections to. Interview appointments were made directly with both teachers and pupils.

For the sake of tidiness, I have chosen to present the informants in tables below.. The teacher informants were as follows:

Teacher	Age	School	Subjects	Teaching experience
Christine	53	Small town school	English, German, Spanish	30 years
Hanna	36	Small town school	English, History, Social Science	8 years
Lisa	37	City school	English, German	6-7 years
Martin	40	City school	English, Spanish, History, Music	Roughly 10 years

The pupil informants were as follows:

Pupil	Age	School	Year and field of studies
Robert	15	Small town school	1st year of General Studies
Anna	18	Small town school	3rd year of General Studies w/English specialization
Emilie	17	City school	2nd year of General Studies w/English specialization
Ida	17	City School	2nd year of General Studies w/English specialization

An interesting aspect to point out is that, as illustrated in the table, teacher informant Christine is the one with the most teaching experience by far, and she also works as a translator alongside her teacher job. Hence, there is a slight overweight of quotes by Christine in the analysis and discussion, because she obviously had the advantage of a larger insight into the topic in question.

3.2   The interviews

The ideal of the interview is a free and informal conversation, however, a certain structure and progress is expected by most interviewees (Tjora 2010, p. 94). The interview guide that I designed was therefore divided into three categories as suggested by Tjora (2010, pp. 96-97): introduction questions, reflection questions and final questions.

The interviews were initiated with an explanation of the use of audio recorder, the routines for anonymization and confidentiality, and a presentation of the purpose of the

interview for the informants. I then moved on to the introduction questions with the aim of 'warming up' with some simple, specific questions that are informal and easy to answer, such as the participants' age, how long they had been working as a teacher or what year the pupils were in at school. Such questions have the potential to establish trust and create a good and relaxed tone for remaining interview (Ibid p. 97). The main part of the interview consisted of what Tjora calls reflection questions (p. 97), where the aim was to attain the possible answers to my research question. In this part I had prepared several open questions and possible follow-up questions, where the aim was that the interviewee could speak freely and with fewest possible interruptions from me. In some cases I needed to ask more follow-up questions, while in others the informants answered my questions without me posing them. Towards the end, I posed some final questions, to sum up and round off the interview. According to Tjora (2010, p. 97), such a round-off helps normalizing the situation between the interviewer and the informant, who normally would not talk so personally to each other. In this part I also reminded the informants about the confidentiality and that the audio recording would be destructed, and then I thanked them for their time and participation.

When designing the interview guide, I had in mind to eliminate the questions that I discovered did not have any relevance to answer the research question, which made me end up with a relatively short but concise interview guide. By asking follow-up questions I tried to grasp important details, as recommended by Rapley (2001, p. 315).

The aim for the interview situation was to construct a conversation with emphasis on the informants' own thoughts and experiences about Google Translate. To make this possible, I tried to ask open and neutral questions without being leading. By doing this I wanted to signal to the informants that it was their thoughts that were interesting.

3.2.1 The interview situation

All interviews were carried out in classrooms and meeting rooms at the respective schools. In line with Tjora's (2010, p. 104) recommendations, I wanted to create a safe and relaxed atmosphere, something I consider to be fulfilled when teachers and pupils all were interviewed in familiar surroundings in the respectable school environments, and where no one could hear what was being said. Tjora (2010, p. 106) points out that even though where the interview takes place might seem like a small detail, it is important to remember that we all appreciate safe surroundings in unfamiliar situations.

All informants consented to the use of an audio recorder. As Saldanha and O'Brien (2013, p. 186) denote, it is generally agreed that for interviews to be really useful they need to recorded,

because taking notes presents a problem of fidelity, does not capture nuanced responses and disrupts the interviewing process. By using an audio recorder, the researcher is also free to take small notes of other things, such as body language and facial expressions, whenever that might seem relevant.

During each interview one informant and myself were present. I turned on the audio recorder, and then I concentrated on asking questions and steering the conversation forward, striving for a natural flow. I also tried to jot down follow-up questions that came to mind during the interview. Such questions are useful to pick up on topics that brought up, and they are especially important to clarify potential misunderstandings or confusions.

The length of the interviews was very variable, as expected. The interviews with the teachers varied between 15-25 minutes, with one exception, which lasted around 8 minutes. This interview was the shortest because the informant did not have much experience with Google Translate herself and did not allow her pupils to use it at all, hence her answers were shorter than those of the others. I do not consider this to be problematic in regards to the collected data in general; it rather confirms the differences in experience and attitudes, which is what I was looking for. The interviews with the pupils were generally shorter, as they lasted about 7-10 minutes per interview.

Saldanha and O'Brien points out that a crucial decision to be made when doing interviews is which language to use, when the interviewer and the interviewee could possibly choose from several ones (2013, p. 177). In my case, all the informants were native speakers of Norwegian, with English as a second language. The interviews could therefore be carried out either in Norwegian or English. The crucial element for deciding which language to perform the interviews in was related to level of proficiency. I decided to do the interviews in Norwegian to ensure as natural an environment as possible for the interviewees, especially with regards to the pupils. I was afraid that if the informants were forced to speak English, I would not get access to all the potential information that they would have been able to share in Norwegian. For me this was unproblematic, even though this results in what Saldanha and O'Brien (p. 177, 2013) call "an extra layer of interpretation" when analyzing the data in another language and translating quotes to be used in the report. Translation of transcripts that will be used to make inferences about someone's attitudes, knowledge and opinions impose obvious threats to the validity of the results (Saldanha & O'Brien 2013, p. 177). This will be discussed further in the section concerning validity.

3.2.2 Transcription and coding

All the interviews were transcribed soon after they were completed. In advance, I decided on how detailed the transcriptions should be, and that I would convert the interviews into standard Norwegian to ensure anonymity of the informants (more about anonymity in chapter 3.3). I was careful to transcribe pauses, laughter and other non-verbal expressions for emotions. In this way, one can make sure that most of the context for the interviews and each individual statement is preserved. I also transcribed my own questions and follow-up questions, because the exact wording in these might possibly mean a lot for the answers being attained (Rapley 2001, p. 305-6). The interviewer's pauses, response and body language might influence how the informant chooses to answer. Lack of response might indicate a wish for more thorough answers, and the same goes for non-verbal signs such as nods or smiles.

Interview transcripts are artificial constructs of communication between two people (Kvale & Brinkmann 2015, p. 205), and a lot of information is lost in the transcription process. As pointed out by Kvale and Brinkmann (2015, p. 212), there exists no objective translation from oral to written language. Neither is it easy to say beforehand what level of detailing it will be useful to aim for in the transcript when it comes to pauses, fillers, stuttering, body language etc. Therefore, Tjora (2010, p. 126) recommends to be more detailed in the transcription than what might feel necessary, and then rather cutting down on the details in extracts to be used in the text than transcribing in too little detail.

After finishing all transcriptions, the informants' statements were coded according to the categories outlined in the interview guide. These categories were Google Translate general experience, -classroom experience, -attitude, and -potentials and problems. It was a bit hard to distinguish clearly between some of these codes, because several of the informants' answers fell into more than one of the categories. For instance, the informants' attitudes in many cases came across through their descriptions of their experience with Google Translate and their reflections of potentials and problems connected to it. However, I have done my best at keeping the categories separated, and in chapter five the topics that evolved in these categories will be further concretized.

3.3 Anonymization and ethics

According to Kvale and Brinkmann (2015, p. 102), four ethical considerations must be taken into account when the source of data is human: the informed consent, confidentiality, consequences and the role of the researcher. Informed consent involves that the informants must be familiar with the purpose of the interview and the study's overarching goals. The informants

should also be aware of their option to withdraw from the project, and that it is up to them whether they would like to answer the questions being posed. The informed consent is a 'floating' measure on what is considered good research ethics, because it is impossible to plan or control where the conversation might possibly lead. The informant cannot at all times be informed of or consent to everything that goes on. Instead, one should aim for a common agreement in advance and during the interview. The interviewees are, as already mentioned, free to withdraw or not answer some of the questions at any time. The informants are aware that the interviews will be analyzed, but they are not able give informed consent to exactly how the researcher will interpret the collected data.

Confidentiality is all just about protecting the identity of the informants, meaning that the information that is collected remains between the interviewer and the interviewee, something which is rarely the case in qualitative studies. Saunders et al. (2014, p. 617) suggest using the term anonymization rather than confidentiality, something which I have decided to stick to. Anonymization generally happens by using pseudonyms, and by the help of different methods for hiding information about time, place and other persons. Instead of calling my informants teacher 1, 2, 3 and 4, and likewise pupil 1, 2, 3 and 4, I have chosen to give them fictive names, respectively: Christine, Hanna, Lisa and Martin, and Anna, Robert, Ida and Emilie. This enhances the reading experience and makes it easier to separate the informants from each other. The informants are also given a stronger identity when names are used instead of titles and numbers, and their messages and voices become more significant (Kitzinger and Samuel 2014, pp. 6-7).

Anonymization of place names can, according to Saunders et al. (2014, p. 623), lead to decontextualization. However, in my case I have nevertheless chosen to denominate the schools as "the small town school" and "the city school", both of which is located in mid Norway, because I do not find further location relevant for this study. In addition, this is a measure I have taken to actively ensure the anonymity of the informants, since, in a small town in particular, an upper secondary school might be easy to recognize. Any possible language characteristics, such as dialects or other features, are normalized to Norwegian standard in the transcription process, so that the informants cannot be identified on the background of language characteristics. Since quotes that are to be used in the text must be translated into English, this provides another layer of anonymity as well.

After transcription, all of the recordings have been destructed to maintain the informants' anonymity.

3.4　Research quality

According to Saldanha and O'Brien (2013), undertaking a research project also includes undertaking to make some contribution to the knowledge that already exists about a topic. To ensure that a contribution is made, the research should meet certain quality criteria: validity, reliability and generalizability, each of which I will discuss further in this section.

3.4.1　Validity

A consideration of the research validity revolves around whether the generated data actually provides the necessary basis to answer the research question (Saldanha & O'Brien 2013, p. 28). In my case, this regards the use and attitudes to use of Google Translate among teachers and pupils in the language learning process in upper secondary school. It is up to the researcher to interpret and consider the data generated in the interview process. Qualitative research is characterized by researcher subjectivity, or what Saldanha and O'Brien (2013, p. 29) call the researcher personal attribute effect. My selection of data and theory is affected by my viewpoint, knowledge and experience, and my own perception of and experience with the respective schools and interviewees will affect the way that I analyze the informants' statements. In addition, my characteristics as a researcher might also influence the participants' responses (Saldanha & O'Brien 2013, p. 30). However, being aware of the possibility of researcher bias in itself is of help in trying to avoid it.

Another possible threat to validity is recognized by Saldanha and O'Brien (p. 30) as the researcher unintentional expectancy effect, meaning the possibility that the participants give the responses they believe is expected by the researcher, or that the researcher wishes to hear. This threat may be strengthened through the formulation of leading questions, for example, something that it is highly desirable to avoid for enhancing research validity. Thus, I have strived to formulate open questions, to encourage free and unrestrained answers.

According to Tjora (2010, p. 179), validity is strengthened through openness around how the research is carried out, by explaining the choices that has been made in the process and being sensitive to the factors that are significant and able to affect the study in different ways. One such factor in my research is the sample of pupil participants. As already stated, these were recruited through their respective teachers, who were asked to find pupils who they believed to be reflected enough to discuss the topic in question. This resulted in what I will classify as four high proficiency pupils, making the outcome of the interviews more predetermined than if the sample was more randomized. By this I mean that these high proficiency pupils are more likely to actually be aware of the limitations of the tool in question, than what I would have expected

from pupils with lower proficiency in English, making it possible to predict what the outcome of the interviews would be. In other words, if any low proficiency pupils had participated, it is likely that I would have heard of some quite different attitudes to use of Google Translate than those of my actual informants. This argument indicates that my sample of informants is not necessarily representative for the majority of pupils.

Another factor that might have affected my study in a particular way is the language issue; choosing to do the interviews in Norwegian, while writing the thesis in English, and consequently needing to translate parts of the transcripts from Norwegian to English. This is potentially problematic because loss of meaning is always at risk when translating. However, in my study I have chosen only to translate the parts of the transcripts where I have quoted the informants directly, which only makes up a small part of the analysis in total. In these translations I have tried to stay as close to the original statements as possible, without risking loss of meaning. My aim for the analysis has been to convey the informants' attitudes and experiences in words that safeguard them from violations and misinterpretations of their statements, despite the transfer from one language to another. I am aware of the threat to my research validity related to sampling and language; however, I believe the awareness itself, as well as openness around the choices I have made, make the validity good nonetheless.

3.4.2 Reliability

Saldanha and O'Brien's definition of reliability (2013, p. 35) refers to the extent to which other researchers could generate the same results and come to the same conclusion if investigating the same questions, using the same data and methods at a different time. However, one cannot expect the exact same results from different researchers, although the results should at least be similar (Matthews and Ross 2010, as cited in Saldanha & O'Brien 2013, p. 35). To increase reliability, the researcher should be able to convincingly demonstrate that the data collection and analysis methods used are dependable and transparent, and, consequently, that the results are credible (Ibid, p. 35).

With help of audio recorders and accurate transcriptions, one can to a certain extent hedge against possible quotation errors, and by being able to cite the informants correctly they are provided with a stronger voice and identity (Tjora 2010, p. 178). However, qualitative research involves a certain risk of misrepresenting informants' statements. This is something I have tried to avoid by posing follow-up question whenever necessary, in addition to summing up the main points from the interview together with the informants and asking them to confirm whether they agree to what has been said and if there is anything they would like to change or

add. To strengthen the reliability of the research I have included the interview guide in an appendix, and I have also tried to explain how I worked in the process of designing it and how I benefitted from it during the interviews.

As a researcher within the qualitative discipline I, myself, am the most important tool in the data collection, and as a consequence of this I must consider my own reliability. Tjora (p. 178) suggests a reflection on the question: would the findings be the same if they were collected by another researcher? This question is difficult to answer clearly, but awareness of the role that I as a researcher play in constructing the data I collect is crucial. As Kvale and Brinkmann (2015, p. 51) recommends, I have tried to take on a role as a 'naïve researcher', where I have strived to avoid preconceptions, and to be open to new and unexpected aspects around the topic. Individual factors such as chemistry between the involved persons, time, place and context are nevertheless difficult to control.

A last important aspect to consider regarding the research' reliability is transparency (Tjora 2010, p. 188). Transparency involves openness around the process and completion of the study, problems that have arisen along the way, decisions that have been made; as well as openness and clarity around the theories and earlier research (Ibid, p. 178) that have been used for providing support to my findings and analysis. These points have been accounted for, and I therefore consider the transparency to be good.

3.4.3 Generalizability

Because interview and focus group studies often are limited by the time aspect, such studies often rely on small numbers of participants, which again does not often constitute representative samples of the population. Hence, results obtained from interviews and focus groups can rarely be generalized to a wider population.

Generalization is a contentious issue within fields of social research. According to Kvale and Brinkmann (2015, p. 289) the question of generalizability is more about contextualization than whether a case will be valid in another time and place. My findings can therefore be seen as valid under certain circumstances. Qualitative studies do not provide basis for statistical generalization, but an analytic generalization might prove useful, holding certain transferability to similar studies. To strengthen the possibilities of such analytic generalization, I let previous research and theory support the findings.

Moderate generalization means that the researcher describes the situations where the results can possibly be valid (Tjora 2010, p. 181). In my analysis of the generated data, I have focused on the teachers and pupils at upper secondary schools' attitudes to and experience with

the use of Google Translate, and the findings are therefore likely to be relevant for teachers and pupils at other schools and in other school levels as well. However, with a small sample like mine, the generalization potential is of course limited. But my intention with this study is not to generalize in a very wide sense; I would rather use my informants' statements to point to a few characteristics within the attitudes and experiences of teachers and pupils regarding this translation tool that might potentially have some transferability to teachers and pupils in other schools.

4   Analysis

In this section I will present the most relevant findings from my research. The aim of this chapter is to find an answer to my research question: what kind of use and attitudes to use of Google Translate exists among pupils and teachers in upper secondary school?

The analysis is divided into two main sections, where in the first one I present the findings among the teachers, and in the second one I present the findings among the pupils. Furthermore, I have structured the analysis on the basis of the questions from the interview guide, so the two different main sections are divided into subsections where I deal with the overall topics of these questions. For convenience, Google Translate will hereafter be referred to as GT.

4.1   The teachers' experiences with and attitudes to GT

4.1.1   GT – personal experience

The teacher informants share many similar experiences with the use of GT. All of them report of instances where they have used it themselves, but for different purposes. Regarding the teacher informants' own use of GT, Hanna states that she does not really have much personal experience with it, and that she never uses it for English/Norwegian purposes. She is merely inclined to use it to look up words in languages that she does not at all understand she says, like Spanish or Finnish, just "to get a certain sense of the meaning of it". Lisa says that she may use GT herself from time to another, just to look up words, because it is very quick and easy to use. She also states that she sometimes 'Googles' the expressions that she is looking for; that is, she puts an expression into Google's search engine, and then assesses the different sources and number of hits on whether the expression may be applied or not.

Christine says that she cannot remember the last time she used GT for translation purposes herself. As she has an extra job as a translator on the side of being a teacher, she is in possession of other tools that she prefers to use if she needs to look up a word, or as she says, to see the word in a context, if she feels unsure of how the word is to be used. She mentions that she might have used GT once, a long time ago, to get a rough understanding of something written in Dutch, as she has Dutch relatives. In her own words, she sums up her thoughts on using GT: "I can see the usefulness of such a tool, if you just want to catch the idea of what something is all about. But it is not a precise tool in language contexts; it is not suitable for such usage, in my opinion."

Martin's personal experience of using GT is limited to using it merely for fun, or as he says, for "translating something from Norwegian to Chinese or Korean, and back again a few times; then you get absurd poetry." He says that he never uses it for translating words or phrases, as he prefers using 'Ordnett Pluss' or regular dictionaries. 'Ordnett Pluss', more commonly referred to simply as 'Ordnett', is a computer program that serves the same function as a dictionary. This is the tool that the pupils are encouraged to use in second- and foreign language classes at the schools in question.

4.1.2   GT – classroom experience

All the teacher informants have experienced reading through pupil papers, where they have reacted to a rather odd and baffling language, due to questionable translations from Norwegian into English or other foreign languages. All four seem to agree that GT is not their preferable translation tool, neither for their own usage nor the pupils'. They all prefer that the pupils stick to the recommendation of using Ordnett to look up or translate single words.

Teachers Martin and Christine report that they mostly experience that pupils nowadays use GT as a helping tool in other foreign language classes they attend to, like Spanish and German classes. This is probably because many pupils are far more competent in English compared to other foreign languages, and they are therefore more likely to use other dictionaries to look up single words they need to translate between English and Norwegian, because, as opposed to other foreign languages, they are competent enough to construct English sentences themselves with this kind of support. The English teaching starts much earlier in the pupils' school years than that of other foreign languages, and they are also influenced by the English language in many other areas of their lives, especially through the different media they are exposed to. So it is safe to say that most Norwegian youngsters are far more competent in English than in other foreign languages. Hence, when it comes to other languages they tend to lean to GT to translate larger units of text, such as sentences or whole passages, because their language proficiency is much lower than that of English, making writing harder. So instead of looking up single words they are unsure of, they paste whole sentences or passages into GT and let the machine do the job.

Hanna does not have any examples from classroom use of GT. As she puts it, she has not encouraged it, nor does she allow it. If she sees any pupils use it, she reminds them that they are not allowed to use it for writing texts, nor in tests or exams. She rather encourages them to use the dictionaries that they are allowed to use in all these situations, and because

she feels that Ordnett is much better than GT. She explains that

> [in Ordnett] you get the meaning of the words, and you see the context the word is used in […], one word may belong to different word classes and have many different meanings. So you get much more out of it, than you do in Google Translate. Also, you get to see the words used in expressions, so it is a completely different way to look up words, than that of Google Translate. (Hanna)

Lisa, who told me that she sometimes 'Googles' expressions rather than putting them into GT, says: "I have actually told the pupils this as well, that 'if you are not quite sure whether you can write it like this, then you can just Google it, and then you'll see, are these serious webpages'. But then we are talking about a high level of proficiency."

Martin tells that as a Spanish teacher he has a lot of experience with use of GT, and that these are mainly negative experiences. He explains: "by this, I mean that [the pupils] hand in texts that they do not understand themselves, they use verb forms that they have never even heard of, and which they perhaps will never learn, and also, partly absurd sentences may appear."

4.1.3   GT - potentials and problems

Some of the teachers see potential ways of using GT in the classroom, while others reject it completely, hence, there is a slight disagreement between the informants when it comes to what extent they see GT as a useful tool. All the teachers agree that the pupils should get used to and learn how to use the digital dictionary Ordnett Pluss, which is the only allowed (digital) dictionary[6] for the exams. However, both Christine and Martin mention that they sometimes use GT in plenary with the pupils to model how bad some translational outcomes can be, aiming for a deterrent effect on them. So this is an example of a potential way of using GT, according to these two.

Furthermore, several mention the potential to understand the essence of a foreign language text by using GT as translation tool. Christine says that she is inclined to see the usefulness of GT for the pupils, for example by translating entire texts from the foreign language in question to Norwegian, to get a grasp of what the text is all about. She says that she sometimes actually has suggested for pupils to use GT for this purpose. But she emphasizes for her pupils that it is not a 'writing tool', meaning that she does not want them

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[6] As of fall 2016. The terms for the exams in upper secondary schools are under revision in the various county councils for the time being; hence it might possibly be allowed to use other online dictionaries today.

to use it to produce text. She follows this up with: "I say to them that it is much better to write a bad text produced by yourself, than a terribly weird one produced by Google Translate".

Christine and Lisa also agree that it is OK to use GT to look up single words, as in a dictionary. Christine elaborates: "I have said that if you only have short phrases, one or two words, it will serve mostly the same purpose as a dictionary […]. But you need to be aware that the longer the phrases are, the bigger the chances are that the outcome won't be good." She also points out that what type of text you want to translate is a relevant factor:

> Technical texts, for instance, can become quite good, because in those one word will, for the most part, be equal to another word [in the other language]. And then you can try to make a translation tool translate a poem; which will not be very good. So it is very dependent on text type. (Christine)

Lisa says that she encourages her pupils to use GT only to look up single words, if they absolutely feel like using this website, but that she prefers that they use other tools, such as Ordnett or 'Merriam-Webster'. However, Lisa mentions another function that she does find useful in GT, namely the ability to listen to the words' pronunciation: "that function is useful I would say, absolutely. How is this pronounced, type in, and then listen. It is perfect for such use, I can imagine." But she emphasizes that she is still skeptical of letting the pupils loose with GT. She suggests that it might be useful for the pupils who are already at a sufficient level, language-wise, implicating that a certain critical sense and language proficiency is necessary for GT to be useful. Furthermore, Lisa adds that she sees the ease of it as an advantage: "I consider it to be quick and easy for the pupils, I think that is why it is so tempting to use it, as well. It's a small amount of text. The only thing you need to do is type in and then you get an answer". But as Lisa also points out, not everyone is able to be critical to the given answers – so even though GT might be quick and easy to use, this is not necessarily an advantage for the pupils.

Martin points out that GT might potentially, if nothing else, be used to demonstrate how complex languages are:

> I think there are many pupils who have this strange idea that translating is a mechanical process that can be done word by word, and in some cases this might be true, but not when the languages belong to different language families, especially not then, but this also applies to Norwegian and English. So [Google Translate] can perhaps be used to illustrate how complex languages can be. (Martin)

He also adds that sometimes the tool is able to translate complex sentences in an impressive manner, while other times it is completely mistaken. So using GT demands a certain critical sense and control of the languages in question. To the question of whether he thinks that the pupils are in possession of the critical sense that is needed to use GT in a sensible way, Martin reflects as follows:

> That's a good question, and I think it varies a lot between the pupils. I once asked in a Spanish class, whether [Google Translate] is a useful tool, where someone said yes, it absolutely is, while others laughed them off and said of course it isn't. So the conscious, perhaps 'clever' ones will understand that this has its great limitations, while the less conscious, perhaps 'weaker' ones, they will probably believe this is a useful tool that can get them through school.
>
> (Martin)

When it comes to the problems connected to using GT, the teachers come up with more examples, some of which have already been mentioned. Christine has experienced big differences from class to class regarding problematic use of GT. She says that pupils in some of her classes have seemingly believed that they could write whole texts with GT, whereas she consequently has spent much time striving for a change in this attitude. She adds that she feels like this problem has improved over the years, something she suggests might be due to a bigger focus on this topic in lower secondary schools. Furthermore, she remarks that uncritical use of GT is a tendency seen more often with low proficiency pupils, confirming the reflections made by Martin:

> They use it for what it's worth, and then they hand in a text, you know, which they think is really good. And then you get many words and expressions that you know the pupil is not familiar with, and then I do not think that the learning outcome is very good. It is much better to try and fail on your own, but then at least learn from your own mistakes. Because the pupils do not learn from mistakes made by Google Translate. So this is where the problem lies.
>
> (Martin)

Lisa too agrees that one of the biggest challenges with use of GT is when the pupils believe they can put whole sentences into it for translation. She feels that by doing this "they do not get an understanding of how the language really is". She also recalls another problematic usage that she has experienced, where the pupils have figured out a 'smart' way to use GT when they write texts, and at the same time avoid the plagiarism control. She explains:

> Actually, one thing that I see quite a lot, is that when they are going to write about something, a project or so, they use the Norwegian Wikipedia, and they find the text they want to use there, and then you don't get the plagiarism right, not in the same way. And then they paste the text into Google Translate, and get it translated into English […]. And then they have, in a

very simple way, written an assignment.   (Lisa)

What Lisa is trying to explain here is that when writing an English assignment, the pupils find the text they want to use in Norwegian Wikipedia and use GT to translate it into English before they paste it into their assignment. They do this rather than copying the text directly from the English Wikipedia, because that would be disclosed by the teachers' plagiarism control, while with this approach they are able to avoid it.

Martin adds that another problem is that it is impossible for the pupils to know if what they get from GT is correct, and if you *were* able to guarantee that what you get is correct, then it would still just be an easy way out, rather than actually learning to master the language. Moreover, he thinks that using GT quickly becomes a habit, leading to replacement of both other (and better) dictionaries such as Ordnett, as well as the ability of thinking for yourself and using your own knowledge of the language and grammatical rules for writing. He also emphasizes that he thinks the biggest problem is when pupils in other foreign language classes, such as Spanish, use GT and then present sentences that they do not understand themselves and that are completely wrong. He adds that this problem is not exclusively a problem for the pupils themselves, but also potentially for the teachers, who may be fooled by texts that are not really written by the pupils themselves.

> You may fool the teacher, because if the teacher's not able to reveal it, like the Spanish teacher I told you about, who didn't reveal it, then it also affected the teacher, because the teacher gave [the pupil] a good grade, even though he shouldn't have. So this 'you only fool yourself' thing is only half the truth […]. If it's at a beginner's level, you see through it at once, but if it's at a higher level, no matter what language, you can't always see it.   (Martin)

4.1.4 Attitudes to use of GT

Christine explains that she does not really have faith in machine translation in any situation, when it comes to what she calls "connections and links within languages, and transfers of such". She says that if you use a machine to translate a text, you must adjust it afterwards yourself, regardless:

> I have actually proofread texts that have been machine translated. And you need a human to adjust it. But of course, it might increase the speed. If you are going to translate hundreds of pages, let us say, handbooks or something, then I think it might increase the speed. But the last touch must be made by a human being.   (Christine)

From this statement it is possible to interpret something about her overall attitude to the subject, namely that she is first and foremost skeptical to machine translations in any form. As she puts it herself, she feels like the last touch must be made by a human being to ensure the best possible translation from one language to another. From her statements on use of GT in a language-learning context, it sounds reasonable to interpret that Christine's attitude towards GT is not completely dismissive, as she does see some degree of usefulness to it as long as it is used wisely. At the same time, it is probably an exaggeration to say that she is positive to use of GT, as she, along with the other teachers, prefers that the pupils use their own knowledge of the language supported by the help you can get from a dictionary like Ordnett in the language learning process.

Lisa's attitude to use of GT is in many ways similar to that of Christine. She does not reject use the use of it, but she encourages the pupils to use it merely as a dictionary, and not to translate text and sentences uncritically. That is, she has an attitude that is neither entirely positive nor negative, but rather something in between.

Martin, on the other hand, says that he has found a potential way of working with GT in the classroom, by using it to model examples of bad translations for his pupils, but due to many negative experiences, such as cheating attempts in tests and assignments, it has become more of an 'object of hate' to him. He says:

> An important point to me is that I think that Google Translate, in worst case, is stupidifying for the pupils, because it makes the pupils stop thinking by themselves, and 'if I just put this sentence in here, I will get a sort of an answer'. And then you don't have to think […].
> (Martin)

So his attitude is that GT is not an OK tool for the pupils to use. To help avoid the use of it, he explains that at the beginning of the school year, he gives the pupils training in how to use the digital dictionary Ordnett Pluss. By making sure that they know how to use Ordnett, his hope is that the pupils will not fall for the temptation of using GT whenever they need language help. In a summary at the end of the interview, he states that he dismisses the use of GT completely, and that he conveys a clear message to the pupils that he does not want them to use it neither for English nor Spanish purposes.

Similar to Martin, Hanna also has an absolutely dismissive attitude towards use of GT. She says in her own words that neither does she allow it in any way for the pupils, nor does she ever feel the need to use it herself. Through these statements, Hanna expresses herself that she has a negative attitude to use of GT, something that also shines through by her brief and concise answers in the interview, leaving little doubt about her attitude.

Summarized, there are some differences in the attitudes to use of GT among these teachers. Two of the informants have a negative attitude to it, saying that they completely reject the use of it, while the other two are somewhere in between negative and positive; not positive to uncritical carte blanche, but not as negative as being completely dismissive either. However, a commonality for all of them, independent of their attitude to GT, is that they prefer that the pupils use other tools, particularly Ordnett, which is in accordance with school policies.

4.2   The pupils' experiences with and attitudes to GT

4.2.1   GT – personal experience

The pupils share many of the same thoughts on and experiences with GT. All of them say that they have used it, and still use it from time to another, to look up single words. At the same time, all of them express critical awareness around the use of GT, and they explain that they do not use it to translate sentences between Norwegian and English because the outcome is rarely any good. Anna says that in her experience, you get bad results from translating entire texts into English. And, interestingly, she also says that she does not find it necessary to use GT for English purposes, because this is a language she knows.

Emilie's experience is that GT translates too 'directly'. She says that "if I say [in Norwegian] 'I need to wash my clothes', it becomes 'me washing machine', you know." She says that she is however inclined to use it to look up single words, or to double-check words or phrases she is unsure of, without explaining any further exactly how she does this.

In Ida's experience, GT is a bit underdeveloped and, as she puts it "you don't benefit from it to the extent that I feel you should, I think". She explains that lack of grammatical rules and reasonable sentence structure makes GT troublesome to use. In her own words, she says that "I have an OK experience with Google Translate, I won't say that it is *that* bad, and it is not *that* good either, but it is tolerable".

Robert tells that he is very familiar with GT, and that he used it a lot when he was in lower secondary school. His experience is that GT is easier and quicker to use than an ordinary dictionary in book form. But now that he is in upper secondary school, he is getting used to using Ordnett instead, which is the digital dictionary they are encouraged to use. However, in other contexts than school and classroom, he uses GT from time to another to look up words he is unsure of. He also remarks that sometimes it is easier to just look up a word in GT with your phone, rather than opening your computer to access Ordnett, which for

the time being is exclusively a computer program. The phone is something most people carry with them everywhere, every day, with immediate access to internet and GT, unlike the computer, which most people do not carry around quite as much, and in which you cannot necessarily access the internet as easily. Unlike the experience Ida has, about the grammatical problems of GT, Robert feels that it has improved in this area, although it is still not the best, as he puts it.

4.2.2 GT – classroom experience

Regarding the use of GT in classrooms, Anna confirms a method that some of the teachers spoke of as well, namely that the teacher used it to model how bad the outcome can be if you use GT to translate text. She has not experienced other ways of working with GT in the classroom. Emilie, on the other hand, cannot remember having worked specifically with GT in the classroom at any time. She too explains that the teachers prefer that they rather use Ordnett to look up words. However, she says that they sometimes use GT either way, and to the question of why they sometimes choose to go to GT instead of Ordnett, she says that this is mostly because it is so quick and simple to look it up on the internet.

Ida says that she has used GT when she has not found the word she was looking for other places. To the question of whether she has experienced that the teachers have demonstrated or worked with GT together with them at any point, Ida says that it has been very dependent on the teachers' attitude to GT. She says that in her Spanish class, the teacher completely disapproves of it, and that she gives the pupils a demerit if she discovers any use of GT. On the other hand, Ida says that her English teacher is more open towards use of GT, and that she thinks it is OK that they use it if they do not find any help in the other tools they have at hand.

Robert's experience is that GT is not something they use at upper secondary school; they mostly use Ordnett. He says that this is mainly because the teachers say that to use GT is a 'no-go'. He also believes that GT is best at translating single words, and as he puts it: "grammatically you must use something else".

4.2.3 GT - potentials and problems

A potential way of using GT according to Anna is to translate a word with several different translation tools, including GT, and compare the results. She says that to do a comparison can be useful, since you can sometimes get the wrong word for the context in question when you use machine translations or online dictionaries, and so comparing the different results can

help avoid this. Anna also uses the context argument *against* using GT, when asked what kind of problems are connected to the use of it:

> The texts can become quite strange. Because they can be put entirely out of the context you wanted to them to be in. Because words can mean different things in different contexts, the same word, you know. Some very weird sentences may appear, right. In a way that doesn't make any sense in a text. (Anna)

Emilie feels that GT is useful mainly for translating single words, especially simple ones who are not advanced in any way, to avoid any misunderstandings or ambiguities that may occur. She also mentions GT's function of listening to the pronunciation of words, especially for other foreign languages such as Spanish or French, as an advantageous way of using GT. Robert too mentions the pronunciation function as a potential way of using GT. He also adds that GT can be useful to look up words when you are vacationing in other countries for instance, and you deal with a foreign language. He tells an anecdote from when he was vacationing in Finland, and looked up a few words from the menu when ordering at a restaurant. When he was served, he says that his first reaction was thinking: "oh, so *that* was how they meant it". He reflects around this, saying that translating between languages is easier when the languages are familiar to you, as opposed to if you have no experience with a language at all, like in Robert's case; the Finnish language. Thus, he insinuates that having some sort of preconceptions of the target language is a great advantage when translating, especially if you are to use GT. Furthermore, Robert highlights another aspect of GT which he feels is better compared to that of Ordnett; the spectre of languages to choose among in the translation process. He mentions that while GT offers a huge number of languages to choose among, in Ordnett you can only translate between Norwegian, English, French, Spanish and German[7].

    Ida is skeptical of using GT for any purposes besides looking up single words. She emphasizes that it cannot be used to anything related to grammar or sentence structure. But to the question of whether she rejects it completely, she says:

> No, I don't. Google Translate can be used. It has its qualities; it really does, because it is available for everyone. For instance, for some people Ordnett is not available, and when you install it, it doesn't always work for everyone. And then there are other translation tools where it is required to have a user profile. And those who don't have a user profile can't have access. But if you use Google Translate then you do have access. So that is a great advantage. (Ida)

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[7] This is the selection of languages for the pupil-installed version of Ordnett as of fall 2016. It is possible that there exists a greater selection of languages for the program outside the pupil version.

The informants also have some thoughts around the problems connected to using GT. Emilie says that, in many cases, what you translate becomes comprehensible, but in most cases incorrect. She says that this is probably the main problem with GT; that it can be used to translate words, but not sentences. In this statement lies an expectation that you should be able to use GT to translate units larger than single words, because it is *possible* to do it; the problem is that it does not work in the desired way.

Ida says: "[the translation] can be incorrect, even though it seems correct. It has happened that you're writing a text, and the word seems very appropriate, but it really means something completely different." She also mentions the grammar, and explains that if you write a conjugated verb, it might be translated into infinitive, or there can be errors between singular and plural form etc. Robert agrees with Ida's opinion about GT being useful mainly to look up single words, because he feels that the sentences and grammar translated by GT are not reliable.

4.2.4 Attitudes to use of GT

There seems to be some differences in the attitudes to use of GT among the four pupil informants. To the question of whether she uses it to look up single words, Ida says "Yes, of course. I am sure I am not the only one who does that." This statement possibly says something about her attitude to use of GT. For her, using GT is a matter of course; even though she is aware of its limitations, she obviously feels that the easiness and availability of the tool makes it worth the use anyway. However, she has also explained that GT is not her preferable tool to go to when she is looking for help, but that she has used it when she has not found what she was looking for other places. From this explanation, one can understand that Ida does not trust machine translation tools or dictionaries uncritically, and as this obviously applies to using GT as well, she has probably found a way to use it that works for her.

Anna's attitude to using GT becomes visible through some of her answers in the interview. She mentions the pronunciation function of GT, and when asked if she has ever used it herself, she says: "Yes. But in English [GT] is like, fine enough, but in Norwegian it is really not good." In addition to this, Anna also expresses skepticism towards using GT for any sort of purposes, as she prefers other tools. So even though it is not explicitly stated, it is safe to say that Anna generally has a negative attitude to use of GT.

Emilie feels that GT can be used mainly to look up "the small words you are looking for", probably referring to some sort of core vocabulary or glossary that, in theory, should be

easily translatable, to avoid using the wrong words. An interesting habit that Emilie explains is that if she is unsure of a word, she uses a website called TriTrans, which is an online dictionary with languages Norwegian, English and Spanish, to find that particular word, and afterwards she types it into GT to listen to the pronunciation of the word. Hence, she thinks the pronunciation function is useful, but she does not really trust its translation function. From this one can interpret something about her attitude towards GT: it is neither entirely positive nor negative. She is positive to using if for a few selected things, while she is negative to using it for others, such as translating larger units.

Robert's attitude seems to be quite similar to that of the others; he has become used to using Ordnett for most purposes, but he is inclined to use GT 'on the go' or for quickly looking up words with his phone. This means that he does not reject use of GT; he is open for using it because of the advantages previously mentioned, but he strives for using Ordnett rather than GT. With this in mind, it is reasonable to claim that he has a more or less positive attitude to use of GT.

To sum up, it appears to exist different attitudes to use of GT among the pupil informants. It seems to be Anna who is in possession of the most negative attitude, while the three others' attitudes seem to be somewhat more mixed. While Anna prefers other tools for all sorts of purposes, the three others' attitude to using GT like a dictionary is generally positive, while there are mixed responses for other types of usage.

5 Discussion

I set out, at the beginning of this thesis, to answer some questions about the use and attitudes to use of Google Translate among pupils and teachers in upper secondary school. These questions were answered in the interviews with the informants and presented in the previous chapter. This chapter is divided into subsections according to the topics and tendencies that evolved in the previous one. The main topics that I will discuss are use of GT as a dictionary, use of GT for longer texts, and GT for pupils with high and low language proficiency. Lastly I take a look at the informants' general perceptions of working with translation in the classroom.

5.1 Using GT as a dictionary

One of the main findings in the analysis was that all informants agreed that GT was OK to use like a dictionary, although most of them still preferred others; Ordnett in particular. This perception of a potential way to use GT corresponds to what is reported by Niño (2009), namely that most MT works reasonably well for translating short lexical units. Some of the informants also said that they occasionally used GT output to compare to the output they had achieved from other sources, or the other way around; they used GT like a dictionary and then they quality-checked the output with that of other sources. This approach is described by Niño (Ibid) as *MT as a good model*; that is, using MT output in combination with other corpus-based databases, such as digital dictionaries.

While most of my informants preferred using Ordnett instead of GT for finding or translating words, several of them had a theory on why some pupils still seemed to prefer GT for this purpose, and that is because of what Niño (Ibid) calls the MT's immediacy; you type in a word, phrase or even sentence and then you are just a mouse-click away from a, seemingly, very concise output. Teacher Lisa and pupil Robert both reported that they thought maybe some pupils preferred GT because, unlike in Ordnett, you get a very precise outcome, without having to choose between many different synonyms. However, the fact is that GT also provides synonyms, rough grammatical properties of the word (word class) and several examples of the word in context. The difference lies in the design of the programs; in GT the immediate translation is emphasized at the top and you have to scroll down the page and extend to see more information, such as alternative synonyms and examples, if you wish to see them. In Ordnett, more of this information pops up at once, and for some pupils this might seem more overwhelming and confusing than actually helpful. The assumption that some

pupils prefer GT for this reason leads me to believe that GT's design seems more appealing than that of Ordnett to pupils with a low proficiency in English. This is something I will discuss further in section 5.3.

5.2   Using GT for longer texts

Another main finding was that most of the informants agreed that a useful way to use GT was to translate entire second- or foreign language texts just to get a grasp of its essence, which is also mentioned by Niño (2009) as a useful approach to MT. This is confirmed by Somers (2003, as cited in Niño 2009) as well, who claims that such usage can make pupils aware of how subtle aspects of language and grammar can be hard to translate. Translating the other way around, however, from L1 into L2 or foreign language, is rarely useful for any immediate purposes, because the raw output presents a number of problems in aspects of language, structure and grammar, something which all my informants seemed to be aware of. The informants mention problems such as the translation being too literal, grammatical inaccuracies and outcome that is just plain nonsense, all of which are recognized as MT weaknesses by Niño (Ibid) as well. The question is, however, whether this kind of output can serve any other purpose than being used 'as it is'. Here, both teacher informants Christine and Martin suggest what Niño (Ibid) refers to as *MT as a bad model*: namely illustrating how strange this output can be in terms of language and grammar, and thus raising the pupils' awareness as to the complexity of translation and language learning.

However, Niño (Ibid) also mentions the potential of using such MT output as a source of language errors to be corrected by the pupils, an approach that generally does not seem to be in focus of the teacher informants, except for Christine, who mentioned that "[…] I sometimes give them translations, because I think it is a very good way to check what they have learned, for instance from grammar [lessons]".

Another interesting observation by Christine was that she thought using GT to translate technical texts could work out well, because as she said, in such texts one word in the source language will often be equal to another in the target language. This view corresponds to what is reported by Niño (Ibid), who claims that MT works reasonably well for not so complex structured texts such as weather reports or technical manuals. Along with a text illustrating the *MT as a bad model* concept, an example of a reasonable translation of a technical text could probably be used productively in the classroom, to compare and illustrate what sort of text that can and cannot easily be translated into another language. This is confirmed by Benda (2013), who found that the GT practices he carried out with his Chinese

students showed that through this type of activities students can become more aware of language differences both on the level of grammatical issues and on the level of how prose style might affect translatability. Furthermore, Niño (Ibid) argues that with such an approach, pupils may come to realize that the MT output is often of a worse linguistic quality than what they are actually capable of doing themselves, and this perception was also confirmed by some of the students in Benda's (2013) GT project. Interestingly, this seems to be the message that Christine wishes to convey to her pupils as well, as she stated during the interview that: "I say to them that it is much better to write a bad text produced by yourself, than a terribly weird one produced by Google Translate." Martin expresses the same kind of thoughts, as he says that he thinks too much use of GT may turn out to be 'stupidifying' for the pupils, because it makes them unable to think for themselves.

To sum up, there are several potential approaches to, as well as reasons for, working with translation and GT in the classroom. Godwin-Jones (2011, as cited in Benda 2013, p. 325) sums this view up pretty well by saying that: "instead of discouraging use of a tool such as Google Translate, teachers might discuss its use, point out how it works […] and illustrate its benefits/problems with some sample translations". The question is, therefore, why do the teacher informants seem not to see the usefulness of working with translation generally, and GT specifically, in the classroom? I will come back to this question in section 5.4.

5.3   GT for high and low proficiency pupils

What I think was the most interesting, although not really surprising, finding, was that the informants confirmed my perceptions about how different GT is perceived by pupils with high and low proficiency in English. As I already discussed in the Methodology chapter, it seems as if all my four pupil informants fell into the category of high proficiency pupils. This probably occurred as a consequence of my selection criteria, but it also shone through in their statements in the interviews. For instance, pupil informant Anna told me that she did not feel the need to use GT to translate text, because English was a language she *knew,* and that "I sort of know [the language] better than what Google Translate does". This corresponds to what Niño (2009) reports on students with a stronger command of the language; that they do not use these systems as e.g. grammar references, because they are aware of the grammatical inaccuracies. All of the pupil informants mentioned inaccurate grammar as one of the main reasons for why they did not use GT to translate more than single words.

On the other hand, as I already have accounted for, there were no low proficiency pupils participating in my study to speak for themselves. However, the observations made and

retold by the teacher informants, I would argue, largely confirms my perceptions. For instance by Martin who reports that he has experienced that pupils have handed in texts that they could not possibly know the meaning of or that did not make any reasonable sense, as well as experiencing that those who made good use of GT were pupils who clearly believed that GT is a helpful tool to 'get them through school'.

A concept mentioned by several informants is that having enough knowledge of the language to be able to distinguish good or bad translations from one another is essential. This is probably what Harold Somers (2013, p. 1) has in mind as well, as he thinks that the technology of MT has now reached a stability and maturity, where "developers and experienced users well understand its capabilities and limitations". If you think of low proficiency pupils as the opposite of what Somers calls *experienced users*, then MT (and GT) obviously poses a problem for pupils with low language proficiency. Pupils within this category has a tendency to accept the output of GT more or less uncritically, just like Martin reported of as well.

I think this is one of the main reasons why the teacher informants express skepticism to GT in the classroom; if they provide an opening to use of GT, then some high proficiency pupils will be able to use it constructively, while many less proficient pupils will fall into the many traps of it. For the latter, GT in many cases seems more 'user friendly' than other sources such as Ordnett; first of all because it is able to translate larger units than Ordnett, but also because, as previously mentioned, it seems more manageable.

An approach to working with GT in language classes, especially for students with a low proficiency of the target language, is proposed by Niño (2009). She suggests they can be shown instances of what free online MT can and cannot translate so that they are made aware of the uncertainty of relying on these systems as the only resource of their foreign language writings.

5.4   Working with translation in the language classroom

The teachers reported that none of them spent considerable amounts of time working with translation in their classrooms, and in instances where they did it was mainly with focus on how to use Ordnett. This was also confirmed by all the pupil informants, who reported that the only focus on translation in the classroom they could remember having experienced was connected to use of Ordnett or other dictionaries. Christine figured that the main reason for not focusing more on translation in the classroom was that it is not a part of the subject curriculum. Due to these findings, it seems reasonable to speculate whether the old attitudes

to use of translation in the language teaching that Cook (2010) reports of still to some extent mark the L2 curriculum in Norway, and hence the teachers as well.

However, although nothing *explicit* is stated about use of translation in language teaching/learning context in the English subject curriculum for upper secondary school, it *does* say in the competence aims for language learning and written communication that the pupils should, respectively, be able to: "evaluate different digital resources and other aids critically and independently, and use them in own language learning" and to "evaluate different sources and use contents from sources in an independent, critical and verifiable manner" (Utdanningsdirektoratet 2013). I would argue that these formulations provide an opening for working with different forms of translation as an approach to language learning despite the fact that the term translation is never mentioned in the curriculum.

Christine reported that she gave her pupils translation practices every now and then, because she thought it to be an expedient way to test the pupils' vocabulary and grammar knowledge. This view is in accordance to what is reported by Cook (Ibid) who says that working with translation gives a unique insight into how a new language works and how it is similar and different from their own. Also, interestingly, when reflecting around her own practice of using translation in the classroom, Christine told me that our conversation on the subject inspired her to start focusing more on this in her teaching. In that case, more focus on translation in the language learning may advantageously include working in various ways with Google Translate. This assumption is also supported by Niño's (2009, p. 253) results of a survey on language learners' and tutors' perceptions on the use of MT for foreign language teaching and learning: namely that the use of MT in foreign language learning was perceived as an innovative and positive learning experience both by language tutors and language learners.

6 Conclusion

In this thesis I aimed to explore uses and attitudes to use of Google Translate among teachers and pupils in upper secondary school. To answer this, I interviewed four teachers and four pupils at two different upper secondary schools in Norway. What I found out was that there was a mix of positive and negative attitudes to use of Google Translate, with various reasons behind these. However, all informants seemed to agree on a few things, e.g. that GT can favorably be used to grasp the essence of a second or foreign language text; and it can also be used similarly to a dictionary, that is, by using it to look up single words. Furthermore, consensus was that GT output of grammar was inaccurate and unreliable. Regarding use of GT as a tool in a language learning context, some were inclined to see its usefulness and also some potential ways to include it; although a little skeptical, and not really enthusiastic about the thought of it. Others rejected it completely, and did not find it useful for any sort of purposes.

Summarized, at this point it is possible to point to a few potential reasons for why none of the informants seemed to value neither translation nor use of Google Translate as approaches in a language learning context. First, because of the absence of the subject being mentioned explicitly in the curriculum, as reported by Christine. Second, because there was a general consensus that Google Translate output is mostly unreliable and thus not really useful. Third, I would argue, because of what seems to be lack of inspiration on how to implement GT output in a meaningful and educational way in the language teaching.

Furthermore, I conclude, on the basis of what I have experienced and observed through this study, that there exists several potential ways to include productive work on translation in general, and machine translation such as Google Translate in particular, to a much larger extent in the second- and foreign language learning classroom than what the informants in my study report of. Like Cook (2010, p. xvi) argues, translation has pedagogic advantages both for teachers and learners, as well as it is both a stimulus and aid in the cognitively demanding task of acquiring a new language, and that it also actually is a practical and much-needed skill to hold. Also, as reported by Niño (2009, p. 253), use of MT in foreign language learning can be perceived as an innovative and positive learning experience both by language teachers and language learners, as it potentially becomes a variation to the regular classroom teaching.

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Appendix I: The study's relevance for the teaching profession

As this thesis was written as part of the five year teacher's education at NTNU, I would like to make a few reflections on how the thesis' topic and its results might be relevant for my future job. First of all, since my data is generated among pupils and teachers, and the aim of the study was to explore use and attitudes to use of Google Translate among these, I think the relevance to my future job as an English teacher is rather self-explanatory. This translation technology has 'revolutionized' writing for many uncritical pupils who struggle with English, since they are now able to write anything Norwegian in Google Translate and then receive – in the eyes of many pupils – a fully acceptable outcome in English, to be applied in whatever context they need it for.

However, through the information I gained in interviews with some of the teachers, I got the impression that this problem is not quite as big as it used to be. The teachers suggested that this might be because technology has become better – meaning Google Translate has improved their Norwegian-English translations, or simply that there is a bigger awareness of the problems connected to uncritical use of Google Translate among pupils.

On the other hand, the teachers seemed to agree that the critical awareness of using Google Translate varies a lot between the high and low proficiency pupils. This view corresponds with my personal experience as well. The pupil informants in this study were recruited through their respective teachers, who pointed out those whom they believed to be willing and reflected enough to participate. All these informants gave reflected answers to my questions, something which spoke of a conscious attitude to use of Google Translate. This experience told me that these fell into the category of high proficiency pupils. In comparison, I would like to refer to my job as a substitute teacher in English, where I was teaching two small groups of pupils who received facilitated teaching due to language and learning challenges. Among these I experienced use and attitudes to use of Google Translate of a completely uncritical manner, far from what my pupil informants in this study spoke of. This of course led to many tasks and texts being 'slaughtered' due to misuse of Google Translate.

This particular classroom experience combined with the findings from the research I did in this study is something that I think both can and will be interesting to explore further in my job as a teacher. Google Translate is so easily accessible and, as my experience from being an English teacher shows, it is the obvious first choice as a helping tool among the pupils with low proficiency in English. This empirical fact alone is reason enough to bring the topic of this study with me into my future career, because it confirms that use of Google

Translate still needs to be focused on in the English teaching classroom, especially within groups such as the two I recently was teaching.

Through this study I have gained deeper insight into use and attitudes to use of Google, Translate and what potentials and problems this program has to offer both pupils and teachers in upper secondary school. This will hopefully be a valuable guidance for me in my future job as a teacher, and perhaps also for peers of mine.

Appendix II: Interview guide teachers

Hei, mitt navn er Vilde, jeg går på lektorstudiet med engelsk som hovedfag ved NTNU, og jeg er for tiden masterstudent ved institutt for språk og litteratur. Jeg skal skrive masteroppgave om bruk og holdninger til bruk av Google translate som oversettelsesverktøy i andrespråkslæring.

Alt som blir sagt i intervjuet er konfidensielt, og du vil selvfølgelig være helt anonym. Det er likevel helt i orden hvis det er spørsmål du ikke ønsker å svare på, og du står fritt til å trekke deg når som helst under intervjuet, også når intervjuet er ferdig.

Er det i orden at jeg bruker opptaksutstyr for å ta opp intervjuet? Opptaket blir selvfølgelig slettet etter at oppgaven er vurdert.

Tusen takk for at du stiller opp!

Før vi kommer i gang med selve temaet, skal jeg stille deg noen bakgrunnsspørsmål.

TIL LÆREREN

6   Innledningsspørsmål

1.   Hvor gammel er du?
2.   Hvor lenge har du jobbet som lærer?
3.   Hvor lenge har du jobbet på denne skolen?
4.   Hva er stillingen din ved skolen?
5.   Hvilke fag har du? / Hvilke fag underviser du i?

7   Hoveddel og refleksjon

1. Hvilke erfaringer har du med Google Translate?
2. Bruker dere noen gang Google translate i klasserommet?
    a.   Hvorfor/hvorfor ikke?
    b.   Hvis ja, hvordan?
3. Jobber du på annen måte med oversettelse i engelskundervisningen?
    a.   På hvilken måte?

4. Benytter dere andre typer digitale oversettelsesverktøy?

    a. Hvis ja, hvilke?

5. Bruker du Google translate selv (på privaten)?

    a. I så fall, i hvilke tilfeller?

6. Kan du fortelle litt om hvordan du bruker/har brukt Google translate, helt konkret.

7. Hvilke (digitale) oversettelsesverktøy foretrekker du å bruke selv?

8. Kan du tenke deg noen potensielt nyttige bruksområder for bruk av Google translate?

9. Kan du tenke deg noen problemer ved bruk Google translate?

8 Avrundingsspørsmål

    1. Oppsummere funn

    2. Har jeg forstått deg riktig…?

    3. Er det noe du vil legge til?

    4. Tusen takk for hjelpen.

Appendix III: Interview guide pupils

Hei, mitt navn er Vilde, jeg går på lektorstudiet med engelsk som hovedfag ved NTNU, og jeg er for tiden masterstudent ved institutt for språk og litteratur. Jeg skal skrive masteroppgave om bruk og holdninger til bruk av Google translate som oversettelsesverktøy i andrespråkslæring.

Alt som blir sagt i intervjuet er konfidensielt, og du vil selvfølgelig være helt anonym. Det er likevel helt i orden hvis det er spørsmål du ikke ønsker å svare på, og du står fritt til å trekke deg når som helst under intervjuet, også når intervjuet er ferdig.

Er det i orden at jeg bruker opptaksutstyr for å ta opp intervjuet? Opptaket blir selvfølgelig slettet etter at oppgaven er vurdert.

Tusen takk for at du stiller opp!

Før vi kommer i gang med selve temaet, skal jeg stille deg noen bakgrunnsspørsmål.

TIL ELEVEN

9   Innledningsspørsmål

6. Hvor gammel er du?
7. Hvilken studieretning tar du?
8. Hvilket klassetrinn er du på?
9. Tar du grunnleggende engelsk eller fordypning?

10 Hoveddel og refleksjon

10. Hvilke erfaringer har du med Google Translate?
11. Bruker dere noen gang Google translate i klasserommet?
   a. Hvorfor/hvorfor ikke?
   b. Hvis ja, hvordan?
12. Jobber du på annen måte med oversettelse i engelsktimene?
   a. På hvilken måte?

13. Benytter dere andre typer digitale oversettelsesverktøy?

    a. Hvis ja, hvilke?

14. Bruker du Google translate selv (utenfor skolen)?

    a. I så fall, i hvilke tilfeller?

15. Kan du fortelle litt om hvordan du bruker/har brukt Google translate, helt konkret.

16. Hvilke (digitale) oversettelsesverktøy foretrekker du å bruke selv?

17. Kan du tenke deg noen potensielt nyttige bruksområder for bruk av Google translate?

18. Kan du tenke deg noen problemer ved bruk Google translate?

11 Avrundingsspørsmål

    5. Oppsummere funn

    6. Har jeg forstått deg riktig…?

    7. Er det noe du vil legge til?

    8. Tusen takk for hjelpen.

Appendix IV: original and translated quotes

The teachers

Informant	Original quote	My translation
Hanna	Og for det andre så synes jeg at den ordboka vi har, som ligger på elev-PC'ene er mye bedre da, for der får du opp betydningene av ordet, og så ser du konteksten ordene er brukt i, og så som jeg sa de forskjellige betydningene, altså, ett ord kan jo være forskjellige ordklasser og ha mye forskjellige betydninger. Så man får opp mye mer der da, enn du gjør på Google Translate. I tillegg så får du opp ordet brukt i uttrykk, så det er en helt annen måte å slå opp ord på, enn Google Translate, da.	[in Ordnett] you get the meaning of the words, and you see the context the word is used in […], one word may belong to different word classes and have many different meanings. So you get much more out of it, than you do in Google Translate. Also, you get to see the words used in expressions, so it is a completely different way to look up words, than that of Google Translate.
Lisa	Så det har jeg faktisk også sagt til elevene da, om du ikke er helt sikker på om du kan skrive det sånn, da kan du bare google det, og så ser du, er det seriøse websider dette her. Men da er vi oppe på et litt høyt nivå, da.	I have actually told the pupils this as well, that 'if you are not quite sure whether you can write it like this, then you can just Google it, and then you'll see, are these serious webpages'. But then we are talking about a high level of proficiency.
Martin	Det har hendt at jeg har oversatt noe fra norsk til kinesisk eller koreansk og tilbake igjen et par ganger, da får du absurd poesi.	[…] translating something from Norwegian to Chinese or Korean, and back again a few times; then you get absurd poetry
Martin	Med det mener jeg at de kommer da og leverer tekster som de ikke forstår selv, bruker verbformer som de aldri har hørt om, kanskje aldri kommer til å lære, og dessuten kan komme til dels absurde setninger.	By this, I mean that [the pupils] hand in texts that they do not understand themselves, they use verb forms that they have never even heard of, and which they perhaps will never learn, and also, partly absurd sentences may appear.

Christine	Men jeg ser jo nytteverdien av et sånt verktøy, hvis du bare skal få en forestilling av hva det handler om. Men det er jo ikke et, som et presist verktøy i språksammenheng, så egner det seg ikke helt, synes ikke jeg da.	I can see the usefulness of such a tool, if you just want to catch the idea of what something is all about. But it is not a precise tool in language contexts; it is not suitable for such usage, in my opinion.
Christine	Så jeg sier at det er mye bedre å skrive en dårlig tekst som du har produsert selv, enn en helt forferdelig rar tekst, som Google translate har produsert.	I say to them that it is much better to write a bad text produced by yourself, than a terribly weird one produced by Google Translate.
Martin	Et viktig poeng for meg med elevene er at jeg synes i verste fall at Google translate er fordummende, fordi det får elevene til å slutte å tenke selv og at hvis jeg bare skriver inn den setningen her, så får jeg på en måte et svar. Og da slipper man å tenke […]	An important point to me, is that I think that Google Translate, in worst case, is stupidifying for the pupils, because it makes the pupils stop thinking by themselves, and 'if I just put this sentence in here, I will get a sort of an answer'. And then you don't have to think […].
Christine	Ja, altså, der har jeg sagt at hvis du bare har korte små fraser, ett eller to ord, så fungerer det stort sett like bra som ei ordbok. Så hvis du er veldig glad i å bruke det, så er det jo for så vidt greit det. Men man må være obs på at jo lengre frasene blir, dess større er sjansen for at det ikke blir bra.	I have said that if you only have short phrases, one or two words, it will serve mostly the same purpose as a dictionary […]. But you need to be aware that the longer the phrases are, the bigger the chances are that the outcome won't be good.
Christine	Men det viser seg jo at hvis du har, for eksempel, det kommer an på teksttype, for eksempel tekniske tekster, så kan det bli ganske bra. For der vil det stort sett, der vil stort sett et ord tilsvar et annet ord i språket. Så kan du jo prøve å få et oversetterprogram til å oversette et dikt, det blir ikke så veldig bra, he he. Så det har veldig mye med teksttype å gjøre.	Technical texts, for instance, can become quite good, because in those one word will, for the most part, be equal to another word [in the other language]. And then you can try to make a translation program translate a poem; which will not be very good. So it is very dependent on text type.

Christine	Jeg har faktisk korrekturlest tekster som har vært maskinelt oversatt. Og du må ha et menneske til å justere det. Men det kan få opp farten veldig, ja. Hvis du skal oversette hundrevis av sider, la oss si, brukermanualer til noe. Så tror jeg at det kan få opp farten. Men den siste hånden på verket må legges av et levende menneske, he he.	I have actually proofread texts that have been machine translated. And you need a human to adjust it. But of course, it might increase the speed. If you are going to translate hundreds of pages, let us say, handbooks or something, then I think it might increase the speed. But the last touch must be made by a human being.
Lisa	Ja, det er jo nyttig da, vil jeg si. Absolutt. At de bare kan skrive inn et ord, og så få… det er jo veldig lett, da. Hvordan uttales det her, skriv inn, og så få høre. Det er jo perfekt, til sånn bruk, kan jeg se for meg.	That function is useful I would say, absolutely. How is this pronounced, type in, and then listen. It is perfect for such use, I can imagine.
Lisa	Google er jo veldig kjapp hvert fall, jeg opplever den som kjapp og enkel for elevene. Det er derfor det er så fristende også, tror jeg. Det er lite tekst. Det eneste du trenger å gjøre er å skrive inn, og så får du svar.	I consider it to be quick and easy for the pupils, I think that is why it is so tempting to use it, as well. It's a small amount of text. The only thing you need to do is type in and then you get an answer.
Martin	Jeg tror det er mange elever som har en merkelig oppfatning av at oversettelse er en mekanisk prosess som kan gjøres ord for ord, noen kan tro det, og i enkelte tilfeller så er det litt sånn, men ikke når språkene er fra forskjellige språkfamilier, spesielt ikke da, men det gjelder også bare norsk og engelsk. Men det kan kanskje brukes for å vise hvor komplekse språkene kan være.	I think there are many pupils who have this strange idea that translating is a mechanical process that can be done word by word, and in some cases this might be true, but not when the languages belong to different language families, especially not then, but this also applies to Norwegian and English. So [Google Translate] can perhaps be used to illustrate how complex languages can be.
Martin	Ja, det er et godt spørsmål og jeg tror det varierer avhengig av elevene. Jeg stilte spørsmål en gang i en spanskklasse om det	That's a good question, and I think it varies a lot between the pupils. I once asked in a Spanish class, whether

	er på en måte et nyttig verktøy, og da var det noen som sa ja, det er det absolutt, og andre som bare lo litt av dem og sa at selvfølgelig er det ikke det. Så de bevisste, kanskje de flinke elevene de vil nok skjønne at det her har sine store begrensninger, mens de mindre bevisste, og kanskje litt sånn faglig svakere elever, de vil antageligvis tro at dette er et veldig nyttig verktøy som kan få dem i gjennom skolen.	[Google Translate] is a useful tool, where someone said yes, it absolutely is, while others laughed them off and said of course it isn't. So the conscious, perhaps clever, ones will understand that this has its great limitations, while the less conscious, perhaps 'weaker' ones, they will probably believe this is a useful tool that can get them through school.
Christine	Særlig litt svake elever har hatt en tendens til å bruke det for det det er verdt, og så leverer de en tekst da vet du, som de selv tenker er så bra. Så har du da masse sånne ord og uttrykk som du vet at eleven ikke har peiling på, og da tenker jeg at da er ikke læringsverdien så veldig stor. Det er mye bedre å prøve å knote selv og så gjøre masse feil, men hvert fall lære å feilene sine. For de selv lærer ikke av feilene som er gjort av Google Translate. Så det er der det ligger.	[…] they use it for what it's worth, and then they hand in a text, you know, which they think is really good. And then you get many words and expressions that you know the pupil is not familiar with, and then I do not think that the learning outcome is very good. It is much better to try and fail on your own, but then at least learn from your own mistakes. Because the pupils do not learn from mistakes made by Google Translate. So this is where the problem lies.
Lisa	Og jeg ser jo faktisk en del da, som går på…som skal skrive om ting, et prosjekt, så går de på den norske Wikipediaen, og så finner de teksten der, for den er jo ikke likens som på den engelske Wikipediaen, og da blir det jo ikke plagiat, sant, på samme måte. Så tar de og limer det inn i Google Translate, så får de det på engelsk, og det får du heller ikke treff på sant, for at det… ja. Så da har de, på en veldig lett måte da, skrevet en oppgave.	Actually, one thing that I see quite a lot, is that when they are going to write about something, a project or so, they use the Norwegian Wikipedia, and they find the text they want to use there, and then you don't get the plagiarism right, not in the same way. And then they paste the text into Google Translate, and get it translated into English […]. And then they have, in a very simple way, written an assignment.

Martin	Du kan lure læreren, for hvis ikke læreren klarer å gjennomskue det, som jeg fortalte tidligere, om den spansklæreren, som ikke gjennomskua det, da gikk det også utover læreren, for læreren ga en høy karakter, selv om han ikke burde gjort det. Så den om at han bare lurer seg selv, det er bare halvparten av sannheten, fordi læreren kan også bli lurt, og det er ikke alltid man klarer å gjennomskue det. Hvis det er på nybegynnernivå så skjønner du det med en gang, men hvis det er på et høyere nivå, enten, eller uansett språk, så er det ikke alltid man klarer å skjønne det.	You may fool the teacher, because if the teacher's not able to reveal it, like the Spanish teacher I told you about, who didn't reveal it, then it also affected the teacher, because the teacher gave [the pupil] a good grade, even though he shouldn't have. So this 'you only fool yourself' thing is only half the truth […]. If it's at a beginner's level, you see through it at once, but if it's at a higher lever, no matter what language, you can't always see it.
Christine	Ja, altså, jeg gir dem av og til oversettelser, fordi jeg tenker at det er veldig gode måter å se hva de har fått med seg for eksempel fra grammatikken.	[…] I sometimes give them translations, because I think it is a very good way to check what they have learned, for instance from grammar [lessons].

The pupils

Informant	Original quote	My translation
Emilie	Så for eksempel hvis jeg sier "jeg må vaske klærne mine" så blir det "meg vaskemaskin", ikke sant.	if I say [in Norwegian] 'I need to wash my clothes', it becomes 'me washing machine', right.
Ida	Men det er egentlig litt dårlig utvikla synes jeg, fordi at du får ikke så mye utbytte som du føler at du burde fått da, synes jeg.	[…] you don't benefit from it to the extent that I feel you should, I think.
Ida	[…] jeg har sånn ganske OK erfaring med Google translate, men jeg skal ikke si at det er så dårlig, og det er ikke så bra heller, men det er akkurat sånn midt på treet	I have an OK experience with Google Translate, I won't say that it is *that* bad, and it is not *that* good either, but it is tolerable
Robert	Grammatisk sett så må du bruke noe annet.	Grammatically you must use something else.

Ida	Jajaja, så klart. Jeg er vel sikkert ikke den eneste som gjør det.	Yes, of course. I am sure I am not the only one who does that.
Ida	Nei, det gjør jeg ikke. Google translate kan brukes. Det har sine gode kvaliteter, det har det jo, fordi det er tilgjengelig for alle. For eksempel for noen kan det jo ikke være tilgjengelig med Ordnett, og når man installerer det så går det ikke alltid til alle. Så er det jo andre oversettingsprogram hvor du faktisk må ha bruker. Og de som ikke har brukere har ikke tilgang. Mens hvis man bruker [Google] translate, så har man jo tilgang. Så det er jo en kjempegod fordel.	No, I don't. Google Translate can be used. It has its qualities, it really does, because it is available for everyone. For instance, for some people, Ordnett is not available, and when you install it, it doesn't always work for everyone. And then there are other translation programs where it is required to have a user profile. And those who don't have a user profile can't have access. But if you use Google Translate then you do have access. So that is a great advantage.
Anna	Ja, tekstene kan jo bli ganske rare da. For det kan bli satt helt ut av sammenhengen du egentlig vil at den skal være i. Fordi ordene kan jo bety forskjellige ting i forskjellige sammenhenger, samme ordet liksom. Så det kan jo bli veldig rare setninger av det, liksom. Sånn at det ikke gir mening i en tekst, da.	The texts can become quite strange. Because they can be put entirely out of the context you wanted to them to be in. Because words can mean different things in different contexts, the same word, you know. Some very weird sentences may appear, right. In a way that doesn't make any sense in a text.
Robert	Åjaaa, det var sånn de mente det.	Oh, so *that* was how they meant it.
Ida	Ja, det kan være feil, selv om det virker som om det er riktig. Det har jo hendt seg slik at når du for eksempel skriver en tekst, så kan det ordet høres veldig passende ut, men det betyr absolutt noe helt annet.	[the translation] can be incorrect, even though it seems correct. It has happened that you're writing a text, and the word seems very appropriate, but it really means something completely different.
Emilie	Ja, det kan jo hende at de bruker det da, hvis du har veldig dårlig tid på en innlevering for eksempel, at du bare må kjappe deg å skrive inn en setning og så får	Yes, it might happen that they use it, if you are in a hurry writing an assignment for instance, so you just have to type in a sentence and then it

	det bare være som det er. Men vi er klar over det, ja.	just have to be as it is. But yes, we are aware of it.
Anna	Jeg kan det liksom bedre enn det Google translate gjør.	I sort of know it better than what Google Translate does.