

Reading in CLIL and in regular EFL classes: to what extent do they differ in reading proficiency and strategy use?

How do CLIL and EFL students differ with regard to reading proficiency?

How do CLIL and EFL students differ with regard to reading strategy use?

Mari Skogen



Mastergradsavhandling ved Institutt for Lærerutdanning
og Skoleforskning
Engelsk fagdidaktikk

UNIVERSITETET I OSLO

Våren 2013

© Mari Skogen

2013

Reading in CLIL and in regular EFL classes: to what extent do they differ in reading proficiency and strategy use?

Mari Skogen

<http://www.duo.uio.no/>

Trykk: Reprosentralen, Universitetet i Oslo

II

Abstract

The present study examines whether Content and Language Integrated Learning (CLIL) and English as a Foreign Language (EFL) students at the 10th grade level of lower secondary school differ with regard to reading proficiency and reading strategy use. It is based on a mixed-methods approach using an IELTS reading test and a questionnaire, in combination with semi-structured interviews with teachers and students. Two lower secondary schools in Rogaland County were used as a sample for this study, with one CLIL class and one EFL class from each school.

The results from the IELTS test and questionnaire were entered into SPSS and analysed in form of descriptive statistics, and displayed in tables. The interviews were recorded, transcribed and analysed using six sets of codes, of which three were related to problems occurring when reading, reading strategy use and whether students were challenged when reading. These codes were derived from theory and research on the reading process, foreign language reading, reading strategies, second language acquisition and CLIL.

The findings of the study indicated that the groups differed with regard to levels of reading proficiency, motivation for reading and reading strategy use. The findings revealed that one of the CLIL groups scored markedly higher on the IELTS test and in their use of reading strategies when answering this test. Next, it was also evident that the teachers differed with regard to their teaching of reading and reading strategy use. One interesting difference was the level of difficulty of the texts used in class, and the extent to which the teachers challenged their students in reading.

In the discussion, I argue for the importance of working with vocabulary and exposing students to challenging texts in order to develop reading proficiency and increase motivation. I also argue for the importance of extensive teaching of reading strategies. I also argue that CLIL teaching can strengthen students' reading, depending on quality of instruction and amount of English use.

Sammendrag

Målet med denne studien er å undersøke i hvilken grad Content and Language Integrated Learning (CLIL) og English as a Foreign Language (EFL) elever på 10. trinn skiller seg fra hverandre når det gjelder lesing, med fokus på leseforståelse og bruk av lesestrategier.

Undersøkelsen er basert på en blanding av kvalitativ og kvantitativ metode, hvor en IELTS lesetest og et spørreskjema er brukt, i tillegg til semi-strukturerte intervjuer med lærer og elever. To ungdomsskoler fra Rogaland fylke utgjorde grunnlaget for utvalget, med en CLIL-klasse og en EFL-klasse fra hver av skolene.

Resultatene fra IELTS lesetesten og spørreskjemaene ble kodet inn i SPSS og analysert i form av deskriptiv statistikk, og fremstilt i form av tabeller. Intervjuene ble tatt opp, transkribert og kodet etter seks ulike koder. Tre av disse var relatert til problemer som oppstår ved lesing, bruk av lesestrategier og om elevene ble utfordret i lesing. Kodene var basert på teori og forskning om leseprosessen, lesing på et fremmedspråk, lesestrategier, tilegnelse av et andrespråk og om CLIL.

Funnene i studien indikerer at gruppene skiller seg fra hverandre når det kommer til graden av leseforståelse, motivasjon for å lese og bruken av lesestrategier. I tillegg framkom det også at lærerne skilte seg fra hverandre i hvordan de underviste i lesing og bruken av lesestrategier. En interessant forskjell var vanskelighetsgraden på tekstene brukt i undervisningen, og i hvor stor grad lærerne utfordret elevene sine i lesing.

I diskusjonen argumenterer jeg for viktigheten av å jobbe med vokabular og utfordrende tekster for å utvikle elever til motiverte lesere og bedre deres leseforståelse. I tillegg argumenterer jeg for viktigheten av omfattende undervisning i lesestrategier. Jeg argumenterer også for at CLIL-undervisning kan bidra til økt leseforståelse hos elevene, men da avhengig av kvaliteten på undervisningen og hvor mye engelsk som blir brukt.

Acknowledgements

Many people have helped and supported me through this process.

First and foremost, I would like to thank my supervisor, Associate Professor at the University of Oslo, Glenn Ole Hellekjær, for his interest, suggestions and invaluable comments. You have encouraged me to work hard, but also to rest when necessary. Needless to say, this could not have been done without you.

I would also like to express my gratitude towards the teachers, principals and students taking their time to help me with this thesis. The information you provided me with is invaluable.

On a more personal level, I would like to thank my good friends Marte and Marita for always being there for me. A special thanks to my dear friend Mari for your never-ending advice, support and care. The other members of *lunsjgjengen* also deserve a big thanks for six years of interesting conversations.

Another big thank you goes to my family, Mum, dad and Pål, for your support, morally and financially, throughout these years. Thank you for believing in me.

Last, but closest to my heart, thank you Tarjei for being my proofreader, my personal IT-manager, and my coach. Thank you for taking such good care of me.

Table of Contents

1	Introduction	1
1.1	Motivation	1
1.2	Why reading proficiency and reading strategy use?.....	2
1.3	Why CLIL?.....	3
1.4	Related research.....	3
1.4.1	Research on reading, reading strategies and pressure to learn conducted in a Norwegian context	3
1.4.2	Research on reading in CLIL conducted in a Norwegian context	4
1.5	The research statement	6
1.6	An outline of the thesis	7
1.7	Definitions	7
2	What Does The Syllabus Say?	9
2.1	The L97.....	9
2.2	The LK06.....	10
2.2.1	Reading as a basic skill	10
2.2.2	The Quality Framework	11
2.3	The English syllabi in 1997 and LK06.....	11
2.3.1	The English syllabus from 1997.....	11
2.3.2	The English syllabus in LK06.....	12
2.3.3	Comparisons between L97 and LK06.....	13
2.4	The syllabi in Social Studies	14
2.4.1	The L97	14
2.4.2	The LK06	14
2.4.3	Comparisons between the two syllabi.....	15
2.5	The syllabi in Religion, Philosophies of life and Ethics.....	15
2.5.1	The L97	15
2.5.2	The LK06	16
2.5.3	Comparisons between the two.....	16
2.6	Summing up.....	16
3	Theoretical Framework	18
3.1	What is reading?	18
3.2	The reading process	19

3.2.1	The Bottom-up and Top-down models of the reading process	19
3.2.2	The Interactive Models.....	20
3.3	What makes a proficient reader?	23
3.3.1	What is a reading strategy?	23
3.3.2	Becoming a strategic reader	24
3.3.3	Ways of reading	24
3.3.4	Other components influencing reading proficiency	25
3.4	Reading in a foreign language	26
3.4.1	Transfer	26
3.4.2	Other factors influencing foreign language reading.....	28
3.5	Pressure to learn.....	28
3.5.1	Pressure to learn through extrinsic motivation.....	29
3.5.2	Pressure to learn through Input+1	30
3.6	Reading proficiency and learning pressure	31
3.7	Why CLIL?.....	32
3.7.1	Reading in CLIL.....	32
3.7.2	CLIL and pressure to learn.....	33
3.8	Chapter summary.....	34
4	Method	35
4.1	Selecting a problem	35
4.2	Reviewing the literature.....	35
4.3	Designing the research.....	36
4.3.1	What methods would best answer the research questions?.....	36
4.3.2	What data would best answer the research questions?.....	37
4.3.3	The IELTS test	38
4.3.4	Constructing a survey.....	38
4.3.5	Interviews	40
4.3.6	Sampling for informants.....	41
4.4	Collecting the data	41
4.4.1	The IELTS test and the questionnaires	41
4.4.2	Interviews with the students	41
4.4.3	Interviews with the teachers	42
4.4.4	The informants	42

4.5	Analysing the data	43
4.5.1	Reducing and displaying data from tests and questionnaires.....	43
4.5.2	Reducing and displaying data from interviews	43
4.5.3	Comparison and integration of data	44
4.6	Validity	45
4.6.1	The validity of the interviews.....	45
4.6.2	The validity of the IELTS test and questionnaire	46
4.7	Reliability	47
4.7.1	The reliability of the interviews	47
4.7.2	The reliability of the IELTS test and the questionnaire	48
4.8	Transferability or external validity	48
4.9	Chapter summary.....	49
5	Results and Analysis	50
5.1	More about the sample	50
5.1.1	Gender distribution.....	50
5.1.2	Other factors of interest.....	51
5.2	Grades from the CLIL groups and the EFL groups.....	52
5.2.1	Analysis of the presented tables	53
5.3	Results regarding reading proficiency	54
5.3.1	Results from the IELTS reading test	54
5.3.2	Results from the questionnaire: items about the students' motivation taking the IELTS test	55
5.3.3	Results from the questionnaire: items about the respondents' reading of English texts	57
5.3.4	Results from the interviews.....	59
5.4	Results regarding reading strategy use	62
5.4.1	Responses from the questionnaire: students' use of reading strategies when reading a text	62
5.4.2	Results from the questionnaire: students' use of reading strategies on the IELTS test	65
5.4.3	Responses from the interviews.....	65
5.5	Comparing the CLIL and EFL groups.....	67
5.6	Chapter summary.....	68
6	Discussion	69

6.1	How do CLIL and EFL students differ with regard to reading proficiency and reading strategy use?	69
6.2	How and why do they differ in reading proficiency?	71
6.2.1	Different approaches to working with vocabulary	71
6.2.2	Working with texts	72
6.2.3	Students motivation: items and interviews.....	74
6.3	How and why do they differ in reading strategy use?	75
6.3.1	The link between reading proficiency and reading strategy use: respondents' use of reading strategies on the IELTS test	75
6.3.2	Use of reading strategies when reading English texts	76
6.4	The findings: results of having CLIL teaching?	78
6.5	Some final remarks on validity.....	79
6.6	Chapter summary.....	80
7	Conclusion.....	81
7.1	Implications of the findings	81
7.2	Suggestions for further research	82
7.3	Concluding remarks.....	83
	References	84
	Appendices	87
	Appendix A: Cover Letter.....	88
	Appendix B: IELTS Reading Test	89
	Appendix C: Questionnaire	94
	Appendix D: Semi-structured Interview Guide.....	100

List of Tables

Table 5.1: A table showing gender distribution among the respondents from school 1 and school 2. N=75	51
Table 5.2: A table showing the frequency and percentages of respondents' first language. N=75.....	52
Table 5.3: A table showing the means and standard deviations of the grades in written English from the two CLIL groups and the two EFL groups. N=75.....	53
Table 5.4: A table showing the means and standard deviations of the grades in oral English from the two CLIL groups and the two EFL groups. N=75.....	53
Table 5.5: A table showing the results from the IELTS reading test. N= 75	55
Table 5.6: A table showing the five items about respondents' motivation when the IELTS reading test. SD= standard deviation. N=75.	56
Table 5.7: A table showing the seven statements about the respondents' reading of English texts in their respective courses. SD=standard deviation. N=75.....	57
Table 5.8: A table showing the ten statements from the questionnaire concerning reading strategy use. SD=standard deviation. N=75	62
Table 5.9: A table showing the respondents' use of reading strategies on the IELTS reading test. SD=standard deviation. N=75	65
Table 6.1: A table showing the results from the IELTS reading test. N= 75 (Table 5.5 reproduced for convenience).....	69

1 Introduction

The present study investigates whether, and to what extent, lower secondary school EFL students and CLIL students differ with regard to English reading proficiency. It attempts to isolate factors that contribute to variation in the students' reading proficiency and their reading strategy use. However, this study has a history, which I will outline below.

1.1 Motivation

During my teacher education practice period, I taught English in a Vg1 class at the upper secondary programme for General Studies. I was there for eight weeks, and during six of these weeks, the students were to read and work with a novel. For me, a fond reader of English, I believed this would be a fun and interesting project. However, already during the first week I experienced frustrated and unmotivated students. Their teacher had chosen the novel they were to read, and all students were to work with it. A number of students had trouble understanding the novel; they struggled with its length, difficult language and vocabulary, and found it either boring or too difficult to understand. Some students expressed that they had too little time to complete the novel, seeing as they read English more slowly than they read Norwegian. Other students, however, said that they found the novel too easy. This resulted in five students completing the novel after only two weeks of reading, while 23 of 28 students did not complete the novel at all.

As a future teacher I experienced these weeks as frustrating, both for the students and me. It was evident that the five students completing the novel hardly faced challenges when reading, while the rest of the group faced too many. Furthermore, neither group was given the opportunity to further develop their reading proficiency. This made me realize the importance of students reading at their level of proficiency, and that lacking challenges, or facing too many of them, can be devastating for developing students' reading proficiency. There and then, I also found myself at loss when it came to helping the students. Having seen the students struggle with long, difficult passages containing unfamiliar vocabulary, I wanted to learn more about how I as a teacher could help them improve their reading. This ended in a paper on how to differentiate reading education when reading novels. After the practise period, I began to read more about how to teach reading, and this sparked my interest in reading strategies.

My interest for CLIL, also known as Content and Language Integrated Learning, started with a lecture held by Glenn Ole Hellekjær in a course on English didactics in connection with my PPU-programme (one-year undergraduate teacher training programme). As a teacher student devoted to English, both as a subject and a language, I am interested in different approaches to teaching English to Norwegian students, and thus found CLIL very exciting. Hearing how it could lead to better skills in both oral and written English, among them reading proficiency, I was intrigued to learn more about CLIL.

Next, in a master's level course on English didactics my interest for reading and CLIL were merged into what became a pilot study for this thesis. The pilot addressed only the CLIL-side of reading and asked, "How is reading focused on in CLIL?" (Skogen, 2012) with regard to the teaching of reading and reading strategies. From this study, I found that the teachers did not focus on reading or reading strategies, while the students badly needed to improve their reading strategy use to develop their reading proficiency. In addition, I found that the students mostly read Norwegian texts in one of the CLIL classes, which of course did not challenge them with regard to their English (hereafter referred to as L2) reading proficiency. My findings in the pilot also made me interested in doing further research on CLIL and reading. Below I start with an overview of the context of this project.

1.2 Why reading proficiency and reading strategy use?

With the National Curriculum for Knowledge Promotion in Primary and Secondary Education and Training (hereafter referred to as the LK06) came a renewed focus on teaching reading and reading strategies. One reason for this was the results of the Programme for International Student Assessment, or PISA, surveys after 2001 (Frønes & Narvhus, 2010). These results showed that Norwegian students were below the OECD-average in reading and the use of reading strategies. Consequently, the LK06 introduced the five basic skills: being able to express oneself orally and in writing, being able to read, having skills in mathematics, and being able to use digital tools (Utdanningsdirektoratet, 2012). The importance of teaching reading thus became strengthened, and not limited to the language subjects: these skills are to be taught across the curriculum and are integrated into the competence aims for every subject.

1.3 Why CLIL?

In 2005, the Ministry of Education and Research implemented a strategy plan called “*Language Opens Doors (Språk åpner dører)*” (Kunnskapsdepartementet, 2007). This plan focused on strengthening the teaching of second and foreign languages. The strategy also mentions CLIL as a teaching method to strengthen internationalization as well as improving the depth and variety in the teaching of L2 and other foreign languages. The LK06 also emphasised a wider approach to the teaching of English in a world where globalization and internationalisation is important. In other words, it became even clearer that CLIL could be a good alternative for students in their language learning, which I will elaborate on below.

1.4 Related research

In the following section, I provide a brief overview of some of the research that has been conducted in Norway on reading strategies and on what I have called *pressure to learn*, both in a regular EFL classroom and in a CLIL classroom.

1.4.1 Research on reading, reading strategies and pressure to learn conducted in a Norwegian context

In a recent article by Hellekjær (2012) he compared reading scores from 2002 with scores from 2011. He used participants with Vg1, Vg2 and Vg3 English courses in the final year of the General Studies line – college preparatory classes. He found that the overall reading scores had improved from the 2002 scores to the 2011 scores. While this is a positive result, he also found that participants with English as a programme subject in the Vg3 classes did not score higher than did students with Vg1 level courses only. According to Hellekjær, a low level of ambition in the teaching of the English programme subjects, as well as a lack of variation in their content and teaching methods could explain this. A lack of focus on improving reading proficiency, including the use of reading strategies, could also explain these scores. Another explanation was that the students were not being challenged by new subjects, text types and new vocabulary (Hellekjær, 2012)

In her master’s thesis, Faye-Schjøll (2009) provided at least part of the explanation for this situation. She examined reading in upper secondary school: what they read, if reading strategies were taught, and the teachers’ attitudes towards the teaching of reading and reading

strategies. On the basis of data collected from interviews with twelve English teachers, she found that there was little reading being done in these informants' classes, and that they mostly used textbooks. She also found that of the twelve teachers only three taught their students about reading strategies, two in a separate course while one integrated it into his teaching. Those who did not teach reading strategies, explained this with lack of time, and did not even consider it necessary to teach reading strategies in English since they claimed that the students learned about this in their Norwegian-classes. Faye-Schjøll found neither of the reasons valid (2009). All of the informants did, however, regard reading and reading strategies as important skills for English as a subject.

In another recent study, Bakke (2010) conducted a study on EFL teachers' attitudes towards reading and how reading was taught in their classes. Her data consisted of interviews with ten teachers working in lower secondary schools in Norway, and when asked about how they taught reading strategies, not one of the teachers mentioned reading strategies. Additionally only one of the ten teachers included systematic reading instruction in their teaching. Additionally she observed a strong lack of appropriate reading materials for the students. After her study she was, as was Faye-Schjøll, left with the impression that though teachers were aware of the importance of reading, they had not included systematic reading instructions, including reading strategies, in their teaching.

1.4.2 Research on reading in CLIL conducted in a Norwegian context

Below I will give a brief overview on some of research conducted on reading and CLIL in Norway.

In an early article by Hellekjær (1996) about introducing students to CLIL instruction, he looked at how this type of instruction differ from ordinary subject matter and foreign language (FL) instruction. The suggestions made were based on his experience with three years of teaching CLIL history at the upper secondary level, in addition to his research. In his article he argued for gradually introducing students to the target language for them to adjust to the situation. As for reading, the problems students faced were often related to lack of background knowledge, in addition to language problems. As for language, these problems could be solved with handing out word lists. Problems with lack of background knowledge could be solved with strategies like pre-reading, or adjusting the level of texts. Hellekjær also

argued for the use of reading strategies to improve students reading. He stressed that it is important for teachers to convince their students that word-by-word reading and overuse of dictionaries is counterproductive: understanding the gist of a text is sufficient at first, and that comprehension will improve with practice (Hellekjær, 1996). In addition to this, students needed to learn different ways of reading a text, for example skimming a text before reading it systematically and in detail. Hellekjær (1996) also stressed the importance of the teacher in a CLIL classroom; having structured, predictable and well-prepared teaching was important for smoothing students transition to a CLIL instruction.

In his doctoral thesis, Hellekjær (2005) looked at whether, and to what extent the reading instructions in upper secondary school prepare the students for higher education. He collected data in form of surveys and IELTS reading tests from 178 upper secondary level respondents with EFL instruction only, and 39 students that had a CLIL subject in addition to an EFL subject. Here he found that the students with a CLIL subject scored markedly higher on the IELTS test. He argues that this is because CLIL courses, unlike EFL instruction, are particularly effective in teaching respondents to read for overall meaning instead of detailed understanding, as well as using the context to understand unfamiliar words when reading.

In another recent study, Hellekjær & Hopfenbeck (2012) compared test results from a study conducted in 2002 with a study from 2011. The study sought to compare reading skills over time using the same IELTS test in both studies, in addition to this they used a questionnaire. The respondents from 2002 were students at Vg1, Vg2 and Vg3 level in college preparatory classes. A total of 217 students where 177 students had had regular EFL subjects, and 39 had had a CLIL subject. The respondents from 2011 comprised 467 respondents, with 324 having a regular EFL subject and 138 having had a CLIL subject or attending International Baccalaureate. The results from the 2002 study show that the CLIL respondents scored markedly higher on the IELTS test than did the EFL respondents. This was not, however, the case with the 2011 study. But, the scores did indicate that CLIL teaching where at least 50% is in English, unlike EFL teaching, is an efficient way to go to improve one's reading skills in English (Hellekjær & Hopfenbeck, 2012). The results also showed that the CLIL teaching must be of good quality and volume, and comprise at least 50% of the course, as closer analysis revealed this was part of the reason for many of the CLIL respondents from 2011 not scoring higher than the EFL group on their IELTS test. Regarding reading strategies, the

study showed that the CLIL and IB respondents more consciously used reading strategies and benefited from this on the reading tests.

Similarly, a recent study conducted by Brevik and Moe (2012) looked at effects of CLIL teaching on language outcomes. Their participants were four CLIL schools in Bergen and Oslo, as well as a control group consisting of 10 classes from nine schools from different parts of Norway. They were tested on listening and reading proficiency. In reading, the test included finding specific information and understanding details, understanding main points, understanding text coherence and inferencing (Brevik & Moe, 2012). Brevik and Moe also found that CLIL instruction has a positive influence on reading proficiency.

1.5 The research statement

When seen together, the research outlined above show that there is a need for improvement in the teaching of reading in Norwegian EFL classes, with regard to reading proficiency as well as reading strategy use. Moreover, it shows that EFL teaching can fail to enhance students' reading proficiency in English. It also shows that CLIL teaching can be beneficial for developing reading proficiency and reading strategy use. The research question for this study is thus as follows:

Reading in CLIL and in regular EFL classes: to what extent do they differ in reading proficiency and strategy use?

This is a fairly large and complex research statement, and I have therefore decided to break it down into two more manageable subquestions:

1. *How do CLIL and EFL students differ with regard to reading proficiency?*
2. *How do CLIL and EFL students differ with regard to reading strategy use?*

The purpose of question 1 is to see whether the two groups differ in reading proficiency, both on an IELTS reading test and on various factors regarding their reading of English texts. Part of this will also involve finding out how teachers teach reading in the two groups. When it comes to reading strategies, it is said that a proficient reader is a strategic reader, and using reading strategies is thus a part of reading proficiency. I have however decided to treat

reading strategies as an isolated factor, and therefore examine how this is taught by teachers and how they are used by the students in the two groups.

1.6 An outline of the thesis

The present thesis comprises seven chapters. This introductory chapter, Chapter 1, provides the rationale for the study. Chapter 2, “What does the syllabus say” provides an overview of Norwegian EFL instructions and syllabi with particular focus on reading proficiency and reading strategies. It will also present the curricula for the subjects English, Social Studies and RLE for the 10th grade, seeing as these are the subjects applied by the students in this study. Next, Chapter 3, “Theoretical framework” provides a general overview of reading in a first and foreign language, as well as theory on reading strategies, pressure to learn and CLIL. Chapter 4, “Method” comprises sections on the research design, sample, tests, interviews, and the questionnaire used in this study. There are also sections on the study’s validity and reliability. Chapter 5, “Results and analysis” presents the findings of this study, which are further discussed in Chapter 6, “Discussion”. Finally, Chapter 7, “Conclusion” sums up with implications for the study’s findings and suggests further research.

1.7 Definitions

Some definitions that are central for this study are explained below.

CLIL: Content and Language Integrated Learning

EFL: English as a Foreign Language

L1: students’ first language

L2: The foreign language taught to the students, in this study English

RLE: abbreviation for the subject Religion, Philosophies of life and Ethics

Social Studies: a subject taught at primary and lower secondary schools in Norway, comprising the disciplines of History, Geography and Sociology

Students or respondents: used interchangeably and refers to the students participating in the present study

LK06 or curricula: used interchangeably, and refers to the current curricula in Norwegian schools: National Curriculum for Knowledge Promotion in Primary and Secondary Education and Training (education reform introduced in 2006)

Subject curricula: the curricula for the three subjects of interest in this study: English, Social Studies and Religion, Philosophies of life and Ethics at the 10th grade in lower secondary

Reading proficiency: students' level of reading that will be further defined in Chapter 3, "Theoretical framework"

Reading strategy: a reading strategy is in this study defined as a tool used consciously and strategically by the reader

Other relevant terms used in this thesis will be explained consecutively where relevant.

2 What Does The Syllabus Say?

As mentioned in the Introduction, the PISA-scores from 2001 in which Norwegian students scored below the OECD-average for reading and the use of reading strategies, led to these areas gaining renewed focus with the LK06 curriculum.

Several laws, reforms and national curriculums have affected the teaching of reading in Norwegian schools. Mentioning all of them here fits neither the purpose nor the scope of this thesis, but a brief historical view of the curriculum from 1997, The Curriculum for the 10-year compulsory school in Norway (hereafter L97), can provide us with a better understanding of the present curriculum, and the changing views on reading.

In the following sections, the notion of curriculum describes the entire legal document issued by the government containing guidelines for the teaching, in this passage comprising the L97 and the LK06. Curricula contain, amongst other documents, subject specific syllabi, in LK06 also called subject curricula, for each subject taught in Norwegian schools.

The following sections will give an overview of the role of reading and reading strategies in three different syllabi: the syllabi for English, the syllabi for Social Studies and the syllabi for Religion, Philosophies of life and Ethics (hereafter RLE), all at the 10th grade level. These are the syllabi taught to the students participating in this study and therefore presented here. The role of reading and reading strategies in the L97 will be compared to the LK06. I start with the English syllabi, before moving on to Social Studies and RLE.

2.1 The L97

The L97 followed the M87, and was a curriculum for primary and lower secondary schools in Norway, introducing the ten-year compulsory school in Norway. It consisted of three parts:

1. the Core Curriculum for primary, lower and upper secondary, and adult education
2. principles and guidelines for compulsory education
3. subject syllabuses (Kunnskapsdepartementet, 1999).

The L97 was an activity-based curriculum, with the syllabi containing detailed plans for what the students should learn, requirements for classroom activities, and students' progression.

2.2 The LK06

The LK06 covers primary, lower secondary and upper secondary education and training, and is the current curricula in Norwegian schools. It comprises the following five components:

1. the Core Curriculum
2. the Quality Framework
3. the Subject Curricula
4. distribution of teaching hours per subject
5. individual assessment (Utdanningsdirektoratet, 2013)

The Quality Framework and the Subject Curricula are the most relevant in this context. "The Quality Framework summarises and elaborates on the provisions in the Education Act and its regulations, including the National Curriculum, and must be considered in light of the legislation and regulations" (Utdanningsdirektoratet, 2013). In this framework we find a section about motivation for learning and using learning strategies. In the subject curricula, the learning goals of each subject are expressed in form of competence aims, which specify what students should be able to do.

The English syllabus will be further elaborated upon in an own section. But first it is necessary to look at the position of reading as a basic skill.

2.2.1 Reading as a basic skill

With the LK06 five basic skills were introduced, these were:

1. being able to express oneself orally
2. being able to express oneself in writing
3. being able to read

4. having skills in mathematics
5. being able to use digital tools (Utdanningsdirektoratet, 2013).

Being one of the five skills, this clearly stresses the importance of reading in the LK06, and not only in language subjects. Indeed, reading, as the other basic skills, are to be taught across the curriculum and integrated into the competence aims for every subject. The LK06 thus paved way for a renewed focus on reading, and, as we will see, for reading strategy use.

2.2.2 The Quality Framework

The Quality Framework comprises the Learning Poster and seven specific areas that can be further developed in school and in teaching. Of them is “motivation for learning and learning strategies” (The Quality Framework, 2006, p. 3). In short this states the importance of using learning strategies, including reading strategies, and the need for knowledge about such strategies. In other words, teachers should teach strategies in a manner that makes the students use them, both at school and outside it. As with the basic skills, the framework complements the subject syllabi, and should be included in the teaching of all subjects.

2.3 The English syllabi in 1997 and LK06

Below the English syllabi from L97 and LK06 are outlined and compared with regard to reading and reading strategy use.

2.3.1 The English syllabus from 1997

The L97 English syllabus was structured with one part called “Common aims for the subject”, and four learning objectives:

1. encounter the language in its oral and written use
2. using the language
3. knowledge about the English language and its cultural relation
4. knowledge about one owns learning of the language (Kunnskapsdepartementet, 1999)

The syllabus was separated into sections for grades 1 to 4. 5. to 7, and 8 to 10. The last section will be focused on here, seeing as it covers the classes used in this study. For grade 10 the focus lies heavily on the texts students are to read. Under objective 2, a number of authentic texts from different time periods are listed, among them novels, plays, song lyrics, movies, newspapers and so on. Additionally the students are to read one novel of their own choosing, and a short story or prose, and discuss their understanding of them (Kunnskapsdepartementet, 1999).

2.3.2 The English syllabus in LK06

The English syllabi consists of six parts:

1. overall objective for the subject
2. main subject area
3. teaching hours
4. basic skills
5. competence aims
6. assessment

The competence aims are structured according to the subject's three main areas:

1. language learning
2. communication
3. culture, society and literature

The overall objective for the English subject is the same for the 10th grade and the Vg1, and mentions the importance of being able to read in the English language, as well as using different learning strategies. Strategies that can help the students to learn a second language, and to understand as well as being understood is seen as important in order to gain knowledge and skills in the learning process (Utdanningsdirektoratet, 2013). The description of reading as a basic skill in English is as follows:

Being able to read English is part of the practical language competence and means being able to read and understand, to explore and reflect upon increasingly more demanding texts and thus gain insight across cultures and disciplines. Developing reading skills in English also improves general reading skills (Utdanningsdirektoratet, 2013).

We find reading and reading strategies in the following competence aims listed under the main area of Communication:

- understand oral and written texts about a range of topics
- read and understand texts of different length and various genres
- use different listening-, speech-, read- and writing strategies adjusted to goal and situation

And one in the main area Culture, society and literature:

- read and discuss a selection of literary texts in the genres of poems, short stories, novels and plays from the English-speaking world

2.3.3 Comparisons between L97 and LK06

As is evident from this above quite brief analysis of the L97, the focus lies on the students gaining knowledge of various texts and genres. The syllabus says nothing about reading strategies or strategies in general. It says that students are to discuss what they have read, but mentions nothing about taking notes or learning vocabulary, or reading for different purposes. Additionally there is no mentioning of differentiation or adjusting reading material. In it lies a presumption that all students are at the same level when it comes to reading, and that they develop at the same pace. It also presupposes that all students have mastered learning how to read, so that they now can read to learn. In the LK06 on the other hand, reading and reading strategies are to play a complex and prominent role in teaching in general as well as in the specific subjects. As a basic skill, reading in English requires increasingly more demanding texts, and developing of reading skills. The English syllabus describes different types of reading material the students are to read, as well as the importance of using reading strategies adjusted to the goal and situation of the reading.

This brief overview shows us how reading and reading strategy use received less focus in the L97 curricula. This can be seen as a one of the reasons for the results of the PISA-surveys, as well as helping us understand the formulation and foundation of the strengthened position for reading and reading strategies in the LK06.

2.4 The syllabi in Social Studies

Here the syllabi in Social Studies and English for the 10th grade will be presented, and compared.

2.4.1 The L97

For primary and lower secondary school the subject Social Studies comprises the main subject areas of History, Geography and Sociology. In the introduction to the syllabus, there is a focus on students using materials like historical sources, stories and other kinds of presentations (Kunnskapsdepartementet, 1999). One of the aims is to develop the ability to read and interpret maps, tables and other sources of information found in the school libraries. In the general aims for the subjects, the focus lies on knowledge about certain topics that the students are to develop and acquire. There is no specific focus on how they can acquire this knowledge. The subject's objectives and main elements are divided between the branches of History, Geography and Social Science. Here there are also many objectives about what the students should be able to account for, work with, and study. There is, however, no mentioning of how and what they should read in order to gain this knowledge.

2.4.2 The LK06

As a basic skill

being able to read in social studies means to read, examine, interpret and reflect on factual prose texts and fiction containing increasing levels of difficulty in order to experience contact with other periods, places and people. Being able to read also means processing and using varied information from images, film, drawings, graphs, tables, globes and maps. To understand and participate actively in the society we live in, it is also necessary to be able to read and collect information from reference books, newspapers and the internet, and to assess this information critically (Utdanningsdirektoratet, 2013).

In the competency aims we find these two covering reading:

- search for and select sources, assess them critically and show how different sources might present history differently
- read, interpret and use printed and digital maps and be able to use map scales and read map legends

2.4.3 Comparisons between the two syllabi

In the L97 it was evident that there was a focus on the material the students were to read, for example historical sources, maps and tables. In addition to this there were a number of requirements for the knowledge the students were to gain, while there were no examples on how the students could gain this knowledge. It appeared as though reading was not a specified activity in Social Studies in this curriculum, and there was no mention of reading strategy use. In the LK06 however, the basic skills implemented for each subject introduced reading as a specified activity in Social Studies. There are suggestions for how the students should read, what kinds of sources and material, as well as why they should be able to read different material. Clearly, the role of reading in Social Studies was strengthened from the L97 to the LK06.

2.5 The syllabi in Religion, Philosophies of life and Ethics

As with the previous sections, this section presents the syllabi for the 10th grade in Religion, Philosophies of life and Ethics, in the L97 and the LK06, with focus on reading and reading strategy use.

2.5.1 The L97

In the L97, the name of this subject was “Christian Knowledge and Religious and Ethical Education”. In the approach to this subject, there was a focus on hymns, songs and texts from the Bible that were to be taught to the students. This was also evident in the objectives and main subject elements, where “literary genres in the Bible” were one of the aims to be

covered. In addition to this, students were to obtain knowledge of prominent stories in Greek mythology, were a number of examples of texts were outlined.

2.5.2 The LK06

With the LK06, the subject changed name to Religion, Philosophies of life and Ethics. As a basic skill, reading in RLE involves experiencing and understanding written texts. “Reading is used to gather information, interpret what one reads and reflect on this, and use facts and analytical skills when encountering stories and subject matter from traditional means of communication and in modern multimedia channels” (Utdanningsdirektoratet, 2013). In the competence aims after year level 10, there is a clear focus on working with various texts, for example:

- identify central biblical texts, and explain the relationship between the Old and New Testaments
- discuss and elaborate on selected biblical texts from the Prophets, the poetic biblical texts in the Bible, the Words of Wisdom, one Gospel and one of the Letters of Paul, and explain the distinctive characteristics and main ideas of these
- discuss and elaborate on selected texts from Jewish written traditions, selected texts from Islamic written traditions, selected texts from Hindu written traditions and selected texts from Buddhist written traditions

2.5.3 Comparisons between the two

In the L97 the focus was on what kinds of texts the students were to read, with a number of specified texts being included on the syllabus. In the LK06, however, the focus was on how, why and what the students should read. Again, the introduction of the basic skills strengthened the focus on reading and reading strategy use in this syllabus.

2.6 Summing up

This chapter has an outline of the L97 curriculum preceding the current curriculum LK06. While reading in the L97 focused on what texts types should be read, the LK06 focused on how the students should read, what texts and also why they should read. Clearly, the position

of reading and reading strategy use has been strengthened with the introduction of the LK06, and especially through the basic skills and the Quality Framework.

In the following chapter theory on reading and reading strategy use will be presented.

3 Theoretical Framework

In this chapter I present the theoretical framework on which the present study is based. I start by presenting what reading is, and then move on to look at the bottom-up, top-down and interactive models of the reading processes. Next, I present theory on what makes a proficient reader including reading strategies, ways of reading, vocabulary and motivation. I then look at reading in a foreign language. Theory on pressure to learn is also presented. A section on how CLIL works as a method regarding reading and pressure is also included. Finally, a chapter summary is provided.

3.1 What is reading?

Reading is a complex process, which involves several components. When learning to read, the focus lies on the decoding of letters into words. At this level, not being able to fluently decode words is the most common reason for poor reading proficiency (Bråten, 2007). At the next level of reading, however, more components come into play and affect reading proficiency (Bråten, 2007). According to Bråten reading is “an active creation of meaning in an interactive process between the information given in the text on the one hand, and the knowledge of the reader on the other” (Bråten as cited in Hellekjær, 2005, p. 21). This definition moves beyond the decoding of words, and focuses on the interaction that takes place between the reader and the text, and more importantly: what the reader brings to the texts. Two other researchers, William Grabe and Fredricka L. Stroller (2002), define reading as “a way to draw information from a text and to form an interpretation of that information” (Grabe & Stroller, 2002, p. 4). However, as the researchers themselves points out, this definition is insufficient: it does not tell us about the complexity of the reading process, or what is required from a proficient reader (Grabe & Stroller, 2002). As for the reading process, it will be described in Section 3.2 below, while what is required to be a proficient reader will be discussed in Section 3.3.

To sum up, the researchers defines reading as an interactive process between the reader and the text. Decoding of words is an important component, but a proficient reader must also be able to draw on his background knowledge to interpret the text, and move beyond the written word.

3.2 The reading process

Reading is a complex concept, and there are several existing models describing the reading process. Older research emphasizes two main models of the reading processes; the Bottom-Up and Top-down models (Alderson, 2000; Barnett, 1989; Grabe, 1999; Grabe & Stroller, 2002; Hudson, 1998). In newer research, on the other hand, a more common approach to reading is the Interactive model. This model draws upon features from both of the Bottom-Up and Top-down models to describe the reading process. Understanding these processes is important when working with reading, and they will therefore be presented in more detail below.

3.2.1 The Bottom-up and Top-down models of the reading process

Bottom-up

The bottom-up reading process involves the decoding of words, and is actually the most fundamental process involved in reading comprehension. The bottom-up approach views reading as a serial process, suggesting that reading follows a mechanical pattern (Alderson, 2000; Grabe & Stroller, 2002). Here the “reader begins with the printed word, recognises graphic stimuli, decodes them to sound, recognises words and decodes meaning” (Alderson, 2000, p. 16). Each of these components involves sub-processes, which take place independently of each other. The sub-processes build upon prior sub-processes, but higher sub-processes cannot feed back into components lower down (Alderson, 2000). To give an example, this means that identification of meaning does not lead to letter recognition. The sub-processes thus follows a linear fashion. Grabe and Stroller (2002) describes the bottom-up process as process where “the reader creates a piece-by-piece mental translation of the information in the text, with little interference from the reader’s own background knowledge” (2002, p. 32). In other words, the bottom-up process refers to explicit reading, encompassing the explicit information in the text only. The reader has the role as a passive decoder, processing each word letter-by-letter, each sentence word-by-word and each text sentence-by-sentence (Alderson, 2000; Grabe, 2009; Grabe & Stroller, 2002; McNamara, 2007; McNamara, Ozuru, Best, & O’Reilly, 2007).

Top-down

In the top-down model on the other hand, the reader's contribution to the texts plays an active role in the reading process (Alderson, 2000; Grabe & Stroller, 2002). The reader has expectations about the text information, and samples enough information from the texts to either confirm or reject these expectations (Grabe & Stroller, 2002). Goodman (as cited in Alderson, 2000) calls the reading process a *psycholinguistic guessing game*, in which the reader guesses or predicts the text's meaning based on minimal textual information and maximum use of existing background knowledge. Smith (as cited in Alderson, 2000), claims that

... in the top-down reading process, non-visual information transcends the text, and includes reader's experience with the reading process, knowledge of the context of the text, familiarity with the structures and patterns of language and of specific text types, as well as generalised knowledge of the world and specific subject matter knowledge (Smith as cited in Alderson, 2000, p. 17).

To sum up then, we can say that in the top-down process the reader elaborates on the text and adds his or her own experiences and knowledge to it. Thus, the reader brings as much to the text, as he gains from it.

While the two models presented above, still are reckoned as important models, they belong to the older research on reading processes and "do not clarify more recent research advances" (Grabe & Stroller, 2002, p. 31). Newer research tends towards interactive models.

3.2.2 The Interactive Models

Interactive models combine features from both the bottom-up and the top-down models, referring to these two as lower and higher levels of processing. In the following account of the interactive models, these two terms will be used. The current modified interactive model considers reading as an interactive process, where the lower-level process draws upon the higher-levels.

Lower-level processing

Lower-level processing begins with decoding, the process of extracting lexical information from graphic displays of words (Koda, 2004). It comprises the following sub-components: orthographic processing, phonological processing, semantic and syntactic processing, lexical

access, morphological processing, automaticity and word recognition, and context effects (based upon Grabe, 2009). Orthographic processing involves visual recognizing of word forms from the text. This includes letters, letter groups, visual word shapes, and shapes that are letter parts (like the long vertical line in *l* or *b*). Orthographic processing is also very important for recognizing larger letter groups, as well as one or more morphological affixes (Grabe, 2009). Phonological processing, which is perhaps most important for listening, involves matching phonological clues with orthographic symbols and words, and using phonological information, to recognize words (Grabe, 2009). Semantic and syntactic processing becomes available following word recognition and is used for word-integration and comprehension processes. Words that are recognized can spread some activation to their semantic neighbours, meaning that when a related word is being accessed, it can be activated by the association of a previously activated word (Grabe, 2009). Lexical access is often said to be the same process as word recognition seeing as they amount to much the same phenomenon (Grabe, 2009). It happens when visually processed word forms are matched with the words in the reader's mental lexicon. The information a word carries orthographically and phonologically, activates all the words in the lexicon that have many of the same visual and sound features (e.g. lake and take) (Grabe, 2009). Morphological processing involves the recognition of morphological markers that helps to cue syntactic information associated with the word and isolates the base form (Grabe, 2009). Automaticity and word recognition are essential in all the above-mentioned sub-components; word-recognition skills must be automatized for fluent reading to occur. Automatized here means when we cannot stop ourselves from recognizing the word, or explain how we accessed the word meanings (Grabe, 2009). Context effects can be described as gaining information from the context in order to recognize a word. This not a sub-component used by fluent readers, but one that comes into play when a reader slows down because of processing difficulties. Context can then provide an additional level of information helping the reader to recognize the word (Grabe, 2009). Syntactic parsing occurs simultaneously with word recognition. This process involves taking in and storing grammatical information about recognized words (Hellekjær, 2005). This information from words and sentence structure is essential to reading (Grabe, 2009). At the same time as word recognition and syntactic parsing takes place, semantic propositions are being formed. They can be described as building blocks of text comprehension, and functions as a network of small packets of information linked together in a meaning unit. "The packets of meaning and the network linkages are built, or activated, as the input from the words and

structures being read are combined” (Grabe, 2009, p. 31). With a fluent reader, the lower-level processes of word recognition, syntactic parsing and semantic proposition occur relatively automatically. If undisturbed, the process proceeds effortlessly and rapidly in the working memory (Grabe, 2009; Hellekjær, 2005). However, if disturbed by for instance an unfamiliar word, the reader might have to interrupt the reading process, and thus the reading fluency. This because information in the working memory is stored there for a short time only, from about 25 to 30 seconds (Hellekjær, 2005). Working memory thus have an important role in lower-level processing, seeing as it supports all the processes of word recognition (Grabe, 2009). However, the limitations of the working memory, in particular the 25 to 30 second time span, may slow down the reading process, resulting in what have just been read dropping out of the working memory and being forgotten altogether (Hellekjær, 2005).

Higher-level processing

According to Grabe (2009), there is a general consensus among reading researchers on the role of lower-level processing to support reading comprehension. This is however not the case with higher-level processing. It is beyond the scope of this thesis to go into this debate. I will however, give a brief account for two models there seem to be some agreement about amongst reading researchers, namely the text model and the situational model (Grabe, 2009).

The text model of reader comprehension:

The text model describes the information the reader gathers from the text. When reading a text, new elements of meaning are continuously added to a network of ideas from the text. Some elements reappear often, while other are not considered as important and fades away from the reader’s immediate attention. Those elements that remain are integrated into a text model of comprehension. This model represents the reader’s linguistic comprehension of the text. (Grabe, 2009). When engaging with a text, however, the reader also brings a level of interpretation to the information processed, and as a result, builds a situation model of reader interpretation.

The situation model of reader interpretation:

The situational model is considered the most important for reading comprehension. It draws on the process that takes place when the reader interprets what he or she is reading by drawing upon their own background knowledge. In this process the reader is influenced by factors such as goals for reading, motivation, attitudes towards, and evaluation of the information given (Hellekjær, 2005). Reading for different purposes and reading different types of texts will influence the construction of the situational model (Grabe, 2009). The reader will adjust his or hers background information according to the purpose of the reading, e.g. whether it is reading critically for detail or skimming a text to get an overview. Seeing as the text model develops into the situational model, a proficient reader has to master the reading process at both model levels. There is, however, more to a proficient reader than the models described above, this will be elaborated on below.

3.3 What makes a proficient reader?

As we have seen, reading is complex mental process. It is important to know and understand how these mental processes work, and how they influence reading. It is equally important to be aware of other components that are required for being a proficient reader. In addition to being a rapid, efficient and interactive process, proficient reading is also a strategic process (Grabe & Stroller, 2002). The good readers are those who are actively participate in their reading, and use strategies to enhance their comprehension of a text (Bråten, 2007). A good reader also vary in his ways of reading a text, have a wide vocabulary and is motivated to read.

3.3.1 What is a reading strategy?

There are many definitions on reading strategies, what they all have in common, however, is that they are strategies employed with an element of consciousness. For this thesis, reading strategy use is described as conscious and systematic reading adjusted to the text and the goal of the reading. A strategic reader actively and consciously uses a strategy to gain knowledge from a text, and organizing his or her reading. (Bråten, 2007; Koda, 2004; Stangeland & Forsth, 2001).

There are many categorizations of reading strategies, and the most common are strategies used for memorizing, organizing, elaborating and monitoring. Additionally there are metacognitive strategies (Bråten, 2007; Grabe, 2009). A number of specific strategies can be used under either of these categories. I will not, however, go further into all of these, but add that a proficient and strategic reader has knowledge of various strategies, and “knows when, how and why to use strategies effectively and recognize appropriate contexts for using effective strategies” (Grabe, 2009, p. 227). The following section will look further into how students can become strategic readers.

3.3.2 Becoming a strategic reader

According to Grabe (2009) strategic readers “also engage actively in reading, read far more extensively, and have the motivation to read for longer periods of time” (Grabe, 2009, p. 227). Grabe also adds that strategic readers engage in difficult and challenging texts, using strategies that will help them manage the text (2009). In order for students to develop their reading strategy use, they have to explicitly learn about strategy use, as well as be given the opportunity to implement strategies in their reading (Anmarkrud & Refsahl, 2010). Anmarkrud and Refsahl (2010) claims that developing students into strategic readers requires reading strategy teaching to happen at four levels. First, the student observes and copies, then he uses strategies together with someone (a teacher or a fellow student), then the student use strategies independently but with guidance from a teacher, before he in the end is able to use several reading strategies independently. In other words, for students to develop their reading strategy use, teachers have to focus explicitly on teaching strategies.

3.3.3 Ways of reading

A proficient reader also varies in ways of reading a text. Skimming, scanning and careful reading for detail are expressions often used to describe such ways. Reading literature about reading proficiency and reading strategies one will discover that there are several ways of describing this field, as well as for categorizing reading strategies. When it comes to these three ways of reading one can discuss whether or not they are reading strategies or in a category of their own. I will not go further into this definition, and only handling them as ways of reading that a proficient reader varies between when reading.

Skimming

Skimming is to quickly read through a text in order to get an overview over its content, and find out if it contains the information one is looking for. Ways of skimming can be to look at headers, picture and diagrams, or read the first and the last passage. Skimming can be useful when students are given tasks showing whether they understand the main content in a text or finding out what the text is about (Stangeland & Forsth, 2001)

Scanning

Scanning is to look for certain information in a text. The point is not to read every word, but rather jumping from word to word to find the information one is looking for (Stangeland & Forsth, 2001)

Careful reading

Careful reading is used when a reader needs all the information a text can give: both the content, details and what can be read between the lines. This is more time consuming reading (Stangeland & Forsth, 2001)

3.3.4 Other components influencing reading proficiency

Vocabulary

As mentioned in Section 3.2.2, having a wide vocabulary has a great impact on reading proficiency. If a text is full of unfamiliar vocabulary, the reader will not be able to understand the text. Stopping at every unfamiliar word, a reader will as mentioned also interrupt and possibly break the reading process. Having a large vocabulary is thus important for developing proficient and fluent reading (Bråten, 2007; Grabe, 2009). However, reading is also a good way to gain a larger vocabulary.

Motivation

A proficient reader is also a motivated reader. For a student to be motivated it is important that he or she has positive experiences with reading, experiencing to master a text. Being motivated for reading, a student would prefer to read challenging texts in order to gain

knowledge (Bråten, 2007). A motivated reader will improve his reading proficiency while a demotivated reader will stagnate (Alderson, 2000).

Summing up, a proficient reader is also a strategic reader, who varies between different strategies and ways of reading a text. In addition to this, a proficient reader also have a wide vocabulary and is motivated to read challenging texts.

3.4 Reading in a foreign language

So far, the theory presented has looked at reading in a first language (L1). Seeing as this thesis looks at reading in Norwegian EFL classrooms, it is necessary to include a section on reading in a foreign language as well. According to Simensen (2007) L2 comprehension encompasses, among other skills, reading. What then is reading in a foreign language? How does it differ from reading in a first language? When it comes to reading and the reading process, it is difficult to distinguish between the two (Alderson, 1984). Alderson & Urquhart put it as follows: “we do not, and indeed find it difficult to, draw a clear distinction between first and foreign language reading- in fact, it is not clear to what extent reading in a foreign language is different from reading in a first language” (Alderson & Urquhart as cited in Hellekjær, 2005, p. 61). Still several reading researchers (Alderson, 1984; Bernhardt, 2011; Bernhardt, 1991; Grabe, 2009; Koda, 2004) have several outlined factors influencing the reading process when reading in a foreign language. Below I will present some of the key factors influencing foreign language reading.

3.4.1 Transfer

In the previous sections the theory presented has shown that reading is a complex process requiring various skills and strategies. However, if a reader is proficient in his L1 reading, can we also assume that he is a proficient L2 reader? Transfer between the L1 and the L2 is one of the older areas of reading research. It is a factor that can enable or constrain the students L2 reading comprehension, depending on the student’s ability to transfer his or her L1 skills to the L2. Koda (2007) implies three important criteria for L2 transfer to rely on L1 knowledge:

- for L1 effects to be active in L2 reading, the L1 resources must be well-learned and automatic (through extensive practice); otherwise these effects will not intrude without intentional effort on L2 reading

- transfer does not end at any specific point of improved L2 reading process; rather L1 resources will always be activated to some extent when these resources are closely associated with L2 reading processes
- the L1 transferred abilities will continue to develop in relation to L2 reading development; useful L1 support resources will integrate with L2 reading abilities (Koda, 2007 as cited in Grabe, 2009, p. 122).

The influence of transfer is, however, often seen in relation to two conflicting hypothesis, regarding the question of whether foreign language reading is a reading problem or a language problem (Alderson, 2005).

The Linguistic Threshold and the Linguistic Interdependence Hypotheses

The Linguistic Threshold Hypothesis (hereafter LTH) states that “in order to read in a second language, a level of second language linguistic ability must first be achieved” (Bernhardt & Kamil, 1995, p. 17). A lack of knowledge in the foreign language can constrain the ability to enhance one’s reading comprehension. Additionally, a lack of foreign language linguistics knowledge hinders the first language reading knowledge to transfer (Bernhardt & Kamil, 1995). In other words, the LTH emphasizes language as the key factor in reading activities.

The Linguistic Interdependence Hypothesis (hereafter LIH) on the other hand, states that “reading performance in a second language is largely shared with reading ability in a first language” (Bernhardt & Kamil, 1995, p. 17). It posits that skills such as reading are transferable from one language to another. Reacquiring reading skills is therefore not necessary when reading in a foreign language, but rather available upon need (Bernhardt & Kamil, 1995).

Several studies have been conducted on these two hypotheses, with different results. The trend however, seems to be that there is support for both theories (Bernhardt & Kamil, 1995). For this thesis, it is sufficient to know about the two different thesis, and that they both can affect L2 reading proficiency.

3.4.2 Other factors influencing foreign language reading

As already mentioned, having a wide vocabulary is essential in order to read effectively (Bernhardt, 2011; Grabe, 2009). When it comes to vocabulary knowledge there is, understandably, a wide gap between one's L1 and L2 knowledge. Lacking vocabulary knowledge, and dealing with unfamiliar words, is thus a factor that can constrain one's L2 reading comprehension (Grabe, 2009). As shown above (3.2.2), recognizing words in the lower-level processing helps enable fluent reading. Stopping up at unfamiliar words, and failing to recognize them, can lead to the reader interrupting the reading process, and thus hinder fluent reading. Learning strategies to deal with unfamiliar vocabulary is therefore of great importance for students to develop their L2 reading.

Both older and current research on foreign or second language reading, also emphasize the reader's background knowledge as a factor influencing the reader's L2 reading proficiency. The first-language cultural and linguistic knowledge base is a major contributing factor of the reconstruction of a second-language text (Bernhardt, 2011). Thus, what readers know on a topic can determine how much they extract from a text. But as Koda (2004) points out, we must keep in mind that it is difficult to determine whether those who know more read better, or whether those who read better know more. Nevertheless, when working with foreign language reading students can have great value of knowing strategies that enable them to use their background knowledge when reading.

Being a strategic reader, as mentioned in Section 3.2.2 above, is thus as important when dealing with texts in a foreign language (if not more) as when dealing with texts in one's first language. How students are taught to handle texts in their foreign language is essential for further developing their L2 proficiency. Trying to handle difficult texts with unfamiliar vocabulary without having knowledge of how to use reading strategies, might hinder the students' reading development in the foreign language (Grabe, 2009).

3.5 Pressure to learn

Pressure to learn is a term that has established itself as an important term in Norwegian educational rhetoric over the past years (Turmo, 2011). According to Turmo (2011) it can be explained as the extrinsic demands and expectations a teacher has of his or her students. If students experience these demands and expectations about their learning process, it can lead

to students gaining a better repertoire of learning strategies (Turmo, 2011). In addition to this, pressure to learn can increase students overall learning outcome. Seeing as pressure to learn is a relatively new term, I had trouble finding studies about this in English. Keeping Turmo's (2011) definition in mind, pressure to learn can be interpreted widely from work intensive class management to, in a reading perspective, picking out challenging texts at the input +1 level. The latter is the interpretation I will focus on in this thesis. Below, pressure to learn will be further explained through extrinsic motivation, and the input+1 model.

3.5.1 Pressure to learn through extrinsic motivation

When talking about motivation in educational situations, it is normal to separate motivation into intrinsic and extrinsic forms of motivation (Ushioda, 2012). Intrinsic motivation refers to an activity or action motivated by the learner himself. The motivation here lies in the activity itself, this can be because it is perceived as fun, challenging or interesting by the learner. Extrinsic motivation, on the other hand, is driven by an external outcome, such as gaining a qualification, getting a job, pleasing the teacher or avoiding punishment (Ushioda, 2012). Ryan and Deci (2000) separates between different forms of extrinsic motivation depending on whether it is rooted in the student himself, or if it controlled by an external factor or self-determined. Externally regulated motivation is the least independent form of extrinsic motivation. Here the students are driven by demands from their teacher or by an extrinsic reward (Turmo, 2011). Another form is introjected regulation, a relatively controlled form of regulation where one acts in order to avoid guilt, or to achieve self-pride or other such feelings (Ryan & Deci, 2000; Turmo, 2011). A third form of extrinsic motivation, regulation through identification, is when the teacher's control and regulations is perceived as important by the student. The last form is called integrated regulation and is when the teacher's actions and regulations are integrated in the student's actions, and identification of him or herself. This happens when the teacher's regulations has become part of the student's values and needs. Integrated extrinsic actions are similar to intrinsically motivated actions, but they are still driven by an external factor and not by the action itself, an example of such can be working hard in a subject to get a good grade (Turmo, 2011). In an educational situation, students will have to do several activities they are not intrinsically motivated to do. Whether the student then proceeds with these activities will be dependent on extrinsic motivation in forms of external regulation by the teacher or by introjected regulation. In this situation pressure to learn becomes highly relevant. Students experience pressure to learn when they

are externally motivated by their teacher and their learning environment. Learning takes place when students are intrinsically motivated, or when they experience extrinsic motivation (Turmo, 2011). Lack of either one, or both, can result in a very low learning outcome for the student. Often, however, research evidence indicates that it is better for the student to be self-motivated than externally motivated, at least when in the long run (Ushioda, 2012). If, however, the external regulation by the teacher is internalized in the student, it can lead to intrinsic motivation. An example of this would be if a student is given a task to read a text and answer questions related to it, this is thus an external regulation by the teacher. But if the student, when reading texts and answering questions, becomes interested in the tasks and wants to work more with similar tasks later on, the student has become intrinsically motivated. In other words, the teacher's external regulation can be positive for the student and the learning outcome, if it leads to intrinsic motivation. But for this to happen, the teacher must be able to give the student tasks he is able to master. The teacher's regulation or shall we say expectations, to the various tasks and activities he gives his students must be at a level matching the student's abilities. This leads us to the second part of learning pressure; Krashen's input +1 hypothesis.

3.5.2 Pressure to learn through Input+1

In the field of Second Language Acquisition (hereafter SLA) Stephen Krashen's input hypothesis is considered an important contribution to how a second language is acquired. It builds on the monitor hypothesis and the natural order hypothesis (Krashen, 1995). The monitor hypothesis posits that acquisition "initiates" our utterances in a second language and is responsible for our fluency, while learning only comes into play to make changes in the form our utterance, after it has been "produced" by the acquired system. The natural order hypothesis posits that the acquisition of grammatical structures proceeds in a predictable order (Krashen, 1995). The input hypothesis, thus building on the correctness of the two mentioned hypotheses, relates to acquisition, not learning, and claims that we acquire second language by understanding language that contains structure a bit beyond our current level of competence. According to Krashen (1995) this is done with the help of context or extra-linguistic information. The hypothesis is often described as input +1, or $i+1$, where i represents the current competence of the learner, and +1 the next level. According to Krashen (1995), L2 acquisition depends on comprehensible input. The input hypothesis claims that listening comprehension and reading comprehension are of primary importance in the

language program, while speaking and writing fluently in a second language will come on its own with time (Krashen & Terrell, 1988). In a classroom situation, it is the teacher's job to provide the students with material that contains comprehensible input. The teacher needs to make sure that the students understand what is being said or what they are reading. If the input is understood, and there is enough input, $i+1$ will usually be covered automatically (Krashen & Terrell, 1988).

Summing up, these two models can describe the expression *pressure to learn*, and illustrates the role the teacher has in order to raise the learning pressure in a classroom situation. In order for teacher's regulation and expectations to become motivating for the student, the regulation needs to be in a manner that the student is able to manage. The teacher needs to practice pressure to learn, by using reading material that is comprehensible for the student, but that also pressures students in their learning.

3.6 Reading proficiency and learning pressure

Having presented what is behind my working definition of pressure to learn, it is natural to look at how it can be usefully combined with reading in a foreign language. According to Simensen (2007), if students' experiences success when reading it will hopefully lead to them wanting to read more, and will eventually have a positive effect on their reading comprehension skills. But in order for the reading to be successful, students need to have a positive experience while reading, as well as learning something from what they read. Teachers can play an important role in this, by giving students texts and reading tasks that challenges the students, and pressures them to learn. According to Simensen (2007), for students to develop all sub skills involved in reading, they need to read texts at their level of linguistic difficulty, as well as texts in different text types and genres. Finding texts matching the students' input $+1$ level of difficulty can be difficult for a teacher, seeing how a class often is a very homogeneous group. However, for reading proficiency to develop it is essential that students face challenging texts. However, for the students to be motivated enough to read it, extensive reading programs must be initiated, with a number of genres and topics that are interesting and relevant for the students (Krashen, 1995; Krashen & Terrell, 1988). If this is not provided (by the teacher) it can lead to the student feeling overwhelmed and demotivated. But finding texts and tasks that matches the students' level of difficulty can hopefully lead to

a successful experience, which again can lead to interest in further reading and working with texts.

3.7 Why CLIL?

So far, this theoretical framework has dealt with reading, reading strategies and pressure to learn. Seeing as this thesis also seeks to compare regular EFL classes with CLIL classes, a brief overview of CLIL as an approach is natural to include. Content and Language Integrated Learning is an educational approach in which an additional language is used for the learning and teaching of both content and language (Coyle, Hood, & Marsh, 2010). CLIL has been used as a method in Norway since the middle of the 1990s, and often at upper secondary level (Svenhard, 2010). In CLIL, the content in a non-lingual subject is taught in a foreign language. In Norway, German, French and English have been used as the language of teaching. CLI research has shown that using CLIL as a method leads to positive effects on both reading, writing, listening and speaking in the foreign language used (Hellekjær & Hopfenbeck, 2012; Moe, 2010; Svenhard & Cherubini, 2010).

3.7.1 Reading in CLIL

CLIL as a method has gained more attention in Norwegian schools over the past years. A renewed focus on strengthening both the learning of a foreign language as well as on the teaching of reading can be reasons for this (Svenhard, 2010). Research shows that in addition to positive effects on the language and content taught, CLIL can also help strengthen students reading comprehension (Dalton-Puffer, 2008; Svenhard, 2010) Reading is in fact considered the most important basic skill in CLIL (Hellekjær, 2005, 2008; Svenhard, 2010) According to Hellekjær (1996) CLIL teaching forces students to train their reading skills. This because the students will get stuck when trying to read textbooks in their CLIL subjects if they read it the same way they read their textbook in their English subject. For teachers this opens up for teaching students reading-and word-handling strategies. Another advantage of reading in CLIL is that it can provide students with other text types than they are used to in their regular EFL class. Seeing as there in Norway are no textbooks designed for CLIL subject specifically, the teacher must use other sources to find texts appropriate for the subject and level. Theorists and practitioners have suggested that written or oral texts created for a purpose other than language teaching can increase learning the foreign language used (Brinton, Snow, &

Wesche, 1989). By reading for example authentic texts, students are required not only to understand information, but to interpret and evaluate it as well (Brinton et al., 1989). Reading in a CLIL subject thus forces students to read in a different way than they are used to, and using reading strategies is important to ensure that students are able to cope with the reading material presented in their CLIL subjects. Finding texts in CLIL can be challenging for the teacher, seeing as both competence aims and content in the subject, language level, and the text's degree of difficulty and word density have to match the students' level. But finding literature that matches all these aspects is important in order for students to benefit from having a CLIL subject, and acquiring both language and content.

3.7.2 CLIL and pressure to learn

The aspects mentioned above, can also be examples worth mentioning when it comes to CLIL and pressure to learn. Being challenged in reading in a foreign language, and handling different text material can be examples of pressure to learn, and are included in Brinton et.al's rationales for content-based language teaching (1989). The use of informational content which is perceived as relevant by the student is assumed by many researchers to increase motivation in the language course, and thus to promote more effective learning (Brinton et al., 1989). In addition:

language should be taught through a focus on contextualized use rather than on fragmented examples of correct sentence-level usage, the former a critical feature of a content-based approach. In this way, the learner will become aware of the larger discourse level features and the social interaction patterns which are essential to effective language use, as well as of the correct grammatical conventions (Brinton et al., 1989, p. 3).

Brinton et al. also stress the importance of the input +1 formula to increase successful language learning (1989). The input will serve for language learning if it also contains new elements to be acquired. A CLIL subject, containing both new language and new content, will contribute to maintaining this i+1 level, thus increasing the students pressure to learn. There is strong evidence that comprehensible input is a necessary condition, sufficient for the acquisition of a high level of proficiency in listening and reading (Brinton et al., 1989). Classroom experience and second language acquisition theory both show that rich second language input in relevant context is the key, where the attention of the learner is focused more on the meaning rather than the language (Brinton et al., 1989). Having a CLIL subject,

as discussed above, requires the students to read texts in a different way than they are used to. Through using a variety of texts, the teacher can thus increase the pressure to effectively learn a foreign or second language. To sum up, these rationales for integrating the teaching of language and content, shows that by having a CLIL subject students are challenged in their reading, regarding both their need for reading strategies and though a pressure to learn.

3.8 Chapter summary

Reading comprehension depends on a number of factors. As shown above, reading in a first language is similar to reading in a second language, but they differ when it comes to unfamiliar vocabulary and language awareness, as well as lower reading rates and less automaticity in processing the text. When it comes to describing the reading process three models have been presented: the bottom-up and the top-down models as two models much used in older research on reading, as well as the interactive model used in newer research, and drawing on aspects of the other two. When it comes to reading strategies focus has been put on consciously using strategies adjusted to the goal of the reading. Knowledge about reading strategies alone is not sufficient to becoming a proficient reader, and students thus need to learn how to use reading strategies consciously and systematically. In order for students to enhance their reading proficiency, they also need to vary in ways of reading, have a wide vocabulary, and be motivated to read. Focusing on pressure to learn and finding texts with rich comprehensible input, is also important to further develop students' reading proficiency. CLIL as a method has been said to provide this for the language learner, as it opens up for more use of authentic texts as well as forcing students to read these texts in a different manner than they are used to read EFL texts.

4 Method

In this chapter, I will present the research process behind the present study. I have structured the first half of the chapter according to five of what Ary, Jacobs and Sorensen (2010) refers to as the seven typical stages in the research process. These are

1. Selecting a problem
2. Reviewing the literature
3. Designing the research
4. Collecting the data
5. Analysing the data

The last two are stages are interpreting the findings and stating conclusions, and reporting results. Seeing as this is a master's thesis these will not be included here. Instead, I include sections on the study's validity, transferability and reliability. The main points from the chapter will be summarized in a final section.

4.1 Selecting a problem

A research question should be a problem consequential enough to warrant investigation (Ary et al., 2010). This means that it should be of relevance for the field of study (Ary et al., 2010). The process of choosing the research question for this study is accounted for in Chapter 1. As mentioned, I had conducted a pilot study on the topic of reading in CLIL in 2012 (Skogen, 2012), and in this study there were some interesting aspects I wanted to look further into.

4.2 Reviewing the literature

After deciding on a research question, the next step is to review relevant literature on the topic in question. Reviewing literature is important in order to ask relevant research questions, and to define one's area of study (Ary et al., 2010). Knowledge about relevant literature can help to avoid replication of previous studies. Additionally, studying related research can help the investigator find the method best suited with regard to how to answer the research question.

Finally, knowledge about relevant literature can give the researcher an important tool to interpret their own results (Ary et al., 2010). Based on this knowledge, I therefore conducted searches for relevant books, articles, master's theses, doctoral theses, as well as examining the Norwegian national curriculum. This is presented in Chapters 2 and 3.

4.3 Designing the research

Designing the research involves how to conduct the research in order to answer the research question (Ary et al., 2010). The design gives an overview of what data will be gathered, what method(s) will be used, and where, how and from whom the data will be gathered (Ary et al., 2010).

4.3.1 What methods would best answer the research questions?

For the purpose of the present study, I decided to collect my data through a combination of quantitative and qualitative data, thus using a mixed-methods approach. With regard to mixed methods design there are a number of designs possible. According to Teddlie and Tashakkori (2006) there are several questions that determines which is the most appropriate:

1. The number and type of data collection approaches that will be used
2. The number of phases or strands in the study
3. The type of implementation process to be used
4. The level or stage of integration of the approaches
5. The priority of the methodological approaches (Teddlie & Tashakkori as cited in Ary et al., 2010, p. 563)

Ary et al. (2010) describes six mixed methods approach, based on these questions. For the current study the design of concurrent triangulation is used (Ary et al., 2010). In a concurrent triangulation design, qualitative and quantitative data are collected at approximately the same time, "with the findings converging the conclusions in order to answer an overarching research question" (Ary et al., 2010, p. 563). My reason for choosing mixed methods was that it allows one method to complement the other. Words can add meaning to numbers, and

numbers can help explain the qualitative data (Ary et al., 2010) Additionally “by mixing methods in ways that minimize weaknesses or ensure that the weaknesses of one approach do not overlap significantly with the weaknesses of another”, the validity of the study can be strengthened (Ary et al., 2010 p.567).

An IELTS reading test, a quantitative survey and qualitative interviews were the three methods I chose to use. They will be further elaborated on in Sections 4.3.3 – 4.3.5 below. First a section on the data I wanted to gather for the study is presented.

4.3.2 What data would best answer the research questions?

As mentioned in the research question, in the present study I am to investigate how CLIL students and EFL students differ in reading, with regards to reading proficiency and their reading strategy use. I therefore decided to collect data from CLIL students, EFL students and teachers. This was mainly because I wanted to investigate the difference in reading proficiency and reading strategy use between the two groups, CLIL and EFL. With regards to reading proficiency I wanted to gather data from a reading test. Having both groups of students taking the same test would enable a comparison between the two groups. I also wanted to gather data about how the students experienced taking the test with regards to motivation and effort, the text’s level of difficulty and if they used reading strategies on the test. In addition to this I also wanted to gather data about students reading of English texts, such as how quickly they read English texts, how often they find texts challenging, if they quit reading a difficult text, and whether they are challenged in reading by their teacher. Additionally I also wanted to find out if, and how often, the students use reading strategies in their CLIL and EFL subjects. As this would give me data from the students’ perspective only, I wanted to gather data about the ways in which teachers work with reading and reading strategies as well. How much and what they read in their classrooms, problems occurring when reading, the knowledge and teaching of reading strategies, if they challenge their students in reading, and if reading is an overall focus in their teaching. Furthermore, I decided to collect some information about the respondents’ background such as their mother tongue, background with English and their grades.

4.3.3 The IELTS test

Reading proficiency is a fairly complex process involving a number of different reading skills, which I decided to use an IELTS test to measure. IELTS, or the International English Language Testing System, conducts 1.7 million tests globally. According to the IELTS website (<http://www.ielts.org>), IELTS is jointly owned by British Council, IDP: IELTS Australia and the Cambridge English Language Assessment. There are also more than 800 test centres and locations in over 130 countries. An IELTS test comprise four modules; listening, speaking, reading and writing. All candidates take the same learning and speaking modules, but can choose between Academic or General Training reading and writing modules. The Academic formats are for candidates planning to study at universities or higher forms of education. The General Training formats are for candidates taking secondary education, work training or for immigration purposes. This study uses only one reading module from a General Training test (Cambridge ESOL, 2007). The reading module consisted of a text with eleven short paragraphs, and thirteen questions based on information from the text (see Appendix B). For the first seven questions, the respondents were to match paragraphs from the text with the correct letter containing information from the text. Questions eight to eleven contained four statements and a list of people from the text, and the respondents were to match each statement with the correct person. Questions twelve and thirteen contained two sentences that the respondents were to complete with a maximum of three words or numbers from the text. The answers were to filled in on a separate sheet (see Appendix B). Normally candidates taking the IELTS test are graded on each part of the test using scores from 1-9. These scores reflect what is called the IELTS band scale, with each band corresponding a level of English competence. Band 1 is termed *Non-user* and band 9 is an *Excellent user*. Seeing as only part of text from an IELTS reading module was used in this study, the results were not calculated to a band score, but as numerical scores. Results were tallied either as correct or incorrect. The score from the reading test were to serve as the dependent variable of reading proficiency.

4.3.4 Constructing a survey

To investigate reading in CLIL and in EFL classes I constructed a questionnaire to further examine the respondents reading in English. The questionnaire had items about the respondents reading of English texts, and their use of reading strategies. The questionnaire

was to complement the reading test by including questions covering respondents' motivation and experience with taking the test. Having a questionnaire also made it possible to gain information about the respondents' background, such as their mother tongue and grades in English. Additionally, a questionnaire can be given to many respondents, thus gathering a larger data sample than when using interviews only. There are several types of surveys, and they are classified according to their focus, scope and the time of data collection (Ary et al., 2010). In this study only a small sample of the reference population has been used, and the data for this study was collected at one point in time, it is thus a cross-sectional survey (Ary et al., 2010). The questionnaire comprised of 33 questions (see Appendix C). Of them, only two questions were open-ended, meaning that the respondents' were to fill in the answer themselves. These questions asked the respondents' age, and the percentage of their CLIL teaching being in English. The rest were multiple-choice questions, with relevant responses given for the respondents to tick off (see for example questions 1 to 23 in Appendix C). The reason for choosing mostly multiple-choice questions was they are easier to compute and tabulate. Additionally, multiple-choice questions are less time-consuming for the respondents.

When using respondents from lower secondary this is beneficial in two ways: having a short and quick questionnaire prevents the respondents from becoming unfocused, and not answering the whole questionnaire properly. It also ensures that all the respondents have the same frame of reference in responding (Ary et al., 2010), thus making comparison between respondents and classes easier. With regard to the structure of the questions, they varied between scaled items (never, sometimes, often, almost always and always) and Likert-type items (strongly disagree, disagree, agree and strongly agree). In addition to this there were some questions that had checklists, presenting a number of possible answers were the respondents checked those that applied to them (see for example questions 24 to 33 in the questionnaire enclosed in Appendix C).

When formulating the survey questions there are number of ways to ask them, and the way a question is phrased can influence or prescribe the answer (Ary et al., 2010). The key is to keep questions short, simple and direct so that they are understood by every respondent. It is also important not to predetermine the respondent's answer, or imply a desired response (Ary et al., 2010). The questionnaire is made with this in mind. Another important aspect is that the respondents have the information necessary to answer the questions (Ary et al., 2010).

Therefore two different versions of the questionnaire were used, one for the EFL classes and

one for the CLIL classes. They both contained the same number of questions, and contained the same questions. The difference between the two were the way they were phrased; for the EFL class the questions concerned their reading and use of reading strategies in their English subject. For the CLIL class the same questions were asked concerning their CLIL subject. An example is question 1 in the questionnaire: “How quickly do you read English texts in your English subject?” and “How quickly do you read English texts in your CLIL subject?” Asking the two groups the same questions ensured that comparisons could be based on the results from the questionnaire. The reading test and questionnaire were given to the respondents as one pamphlet. The first page of the pamphlet consisted of a cover letter with information to the respondents. The cover letter can be found in Appendix A, and contained information about the purpose of the study, an explanation of the term CLIL, a request for cooperation as well as a request for asking for help if they needed clarification. The letter also assured the respondents’ of confidentiality, and included a reminder of their possibility to withdraw from the survey without any consequences. Additionally the cover letter had a section on how to complete the test and questionnaire. The reading test and questionnaire were handed out to all the respondents in the sample. In addition to this 13 respondents from the sample were interviewed, along with four teachers.

4.3.5 Interviews

To gain a deeper understanding of reading and reading strategies, I chose to combine the survey with interviews. This in order to provide information that might not have been obtained by the survey, or gaining information that could further verify the surveys and test. I decided on a semi-structured interview. In a semi-structured interview, the area of interest is set before the interview and the questions are formulated by the interviewer (Ary et al., 2010). However, the interviewer may modify the questions and direction of the interview during the interview. I wanted to interview both students and teachers. Before conducting the interviews I made two interview guides, one for the interviewing teachers and one for the students. They were structured alike in five sections, one on the respondents’ background, how much and what they read, problems occurring when reading, reading strategies and challenges regarding reading. The questions were open-ended, which required a more detailed answer than a yes or no response. The interview guide is enclosed in Appendix D.

4.3.6 Sampling for informants

For both the reading test and the interviews, I wanted to use, and compare, two groups of students: students with CLIL teaching and students with regular EFL teaching. For the comparison to be optimal, the groups should come from the same school and be at the same level. Based on my previous experience with the pilot study, I knew it might be difficult to get hold of informants with CLIL classes seeing as there is no official record kept over schools offering CLIL teaching. However, my former teacher at the University informed me of two schools having recently started with CLIL teaching. These schools were part of a Comenius Core-project. I was allowed to use these groups of students, in exchange the schools were to use my results from this study in a report on their project. In addition to me, a fellow master's student writing about CLIL and vocabulary were also to use the same students for his thesis. We therefore conducted the questionnaire, and also the interviews with the students together.

4.4 Collecting the data

In this section I will present how the data for this study were collected. First, I will account for the way the reading test and survey were collected. Next, the conduction of the interviews will be described. Finally, I will present the informants used in the interviews.

4.4.1 The IELTS test and the questionnaires

As mentioned, the questionnaire and interviews for this study were carried out with a fellow student. He were to test the students on a vocabulary test. At both schools the respondents completed the reading test and survey separate from this vocabulary test. The IETLS test and survey were given to the students together as one pamphlet. In each class either I, or my fellow student directly administered the test and questionnaire, and were thus available for any questions the respondents might have. Each student had 60 minutes to complete the reading test and questionnaire.

4.4.2 Interviews with the students

When handing out the surveys to the respondents, my fellow student and I asked for volunteers to be interviewed. Thirteen students from the four classes (three students from

three of the classes, four from the last one) volunteered to be interviewed. My fellow student and I decided to conduct the interviews with the students together due to the short available time period we had with the respondents.

We conducted the interviews in the same manner, starting with a short briefing session where we introduced ourselves and told the respondents about the purpose of the interview. The respondents were then informed about their anonymity and their right to withdraw from the interview at any point. Next, we told them about the structure of the interview questions, and asked their permission to record the interview. We assured them that the recordings would only be handled by us, and that they were to be transcribed and then deleted. They were given the opportunity to refuse recording, or withdrawing from the interview. All of the respondents approved of using a recorder. The interviews were conducted in Norwegian. The interview itself was based on the interview guide as described in 4.3.5 (see Appendix D). Throughout the interview I also used a combination of probes and pauses. The probe is a comment used by the interviewer to obtain more information from the respondent, for instance asking the respondent to further explain, or clarify, a previous utterance (Ary et al., 2010). The pause should be at least 5 seconds, and is used to give the respondent room to keep talking, or thinking about the question posed (Ary et al., 2010). When the interview was over, we had what Kvale and Brinkmann (2009) calls a debriefing session, in which we asked the respondents if they had any questions or comments they wanted to add. After the interviews were conducted I spent some time taking down notes about my immediate thoughts about the interview.

4.4.3 Interviews with the teachers

The interviews with the teachers followed much the same structure as described above. However, I conducted my interviews alone, interviewing each teacher separately for about 20 to 30 minutes. The interviews were all done in Norwegian and recorded.

4.4.4 The informants

Of the 13 students, six were male and seven were female. Of the teachers three were female and one was male. To assure their anonymity the teachers are referred to as CLIL teacher 1, CLIL teacher 2, EFL teacher 1 and EFL teacher 2. The students will only be referred to as students or respondents.

4.5 Analysing the data

After collecting the data from the reading test, questionnaire and interviews, the data needs to be analysed. Teddlie and Onwuegbuzie (2003) present a seven-staged conceptualization of how to analyse mixed methods. The seven stages include 1) data reduction 2) data display 3) data transformation 4) data correlation 5) data consolidation 6) data comparison and 7) data integration (2003). When analysing data for this study, I based the process on five of these stages including reduction, display, transformation, comparison and the integration of data.

4.5.1 Reducing and displaying data from tests and questionnaires

First the data from the reading tests and surveys were reduced, meaning they were analysed in form of descriptive statistics. Descriptive statistics describes and summarizes the findings in forms of measures of central tendency, standard deviation and correlation (Ary et al., 2010). I used the statistical package *IBM SPSS 20* (Statistical Package for the Social Sciences version 20) to process the data. Thus, the scores from the reading test and from the questionnaire were entered into SPSS. This enabled me to create tables to describe frequencies in form of percentages, with means and standard deviations.

4.5.2 Reducing and displaying data from interviews

Shortly after having conducted the interviews, I transcribed them. Kvale and Brinkman (2009) argue that the researcher needs to establish procedures for the process of transcribing data. Before transcribing the interviews I therefore decided that since the interviews had been conducted in Norwegian, I would transcribed them in Norwegian, and translate only the parts that were to be used in the study.

I wanted the transcriptions to reflect the interviewee as much as possible, thus placing commas, full stops and pauses where they occurred in the interview. Additionally, I decided to omit all information related to the informants' identity, as well as other responses of personal character either involving the interviewee, students or colleagues, not relevant for the study. This was to ensure the informants' anonymity. Besides this everything was transcribed, and the transcriptions can be made available upon request. Having established these guidelines, I transcribed the interviews by computer using a transcription program called Express Scribe. When the interviews were transcribed, I defined codes to reduce the material.

Coding is the core of qualitative analysis, and includes the identification of categories and themes (Ary et al., 2010). Seeing as the interview guides were divided into categories, I chose to use the same categories for when coding the answers:

1. informants' background
2. reading: how much and what
3. reading: problems and problem solving
4. reading strategies
5. challenges in reading
6. open category

Having established the codes, I read through each of the interviews separately, identifying each unit (word, sentence, paragraph, etc.) with the appropriate code. The units were classified and analysed based on my theoretical knowledge, as well as on using analytic strategies such as asking questions about the data, making comparisons and consider the meanings and implied meanings of words and phrases (Ary et al., 2010) . If a unit contained elements of more than one code, it was classified as a mixture of the codes in question. After all the data were coded, I placed the results into two documents: one for each informant, and one for units having the same coding, thus connecting the informants' answers by codes.

4.5.3 Comparison and integration of data

Having reduced the quantitative data to descriptive statistic displayed in tables, and the qualitative into transcribed and categorically coded documents, the data were to be compared and integrated. During the process of comparison, some of the quantitative data were transformed into words, while some of the qualitative data were transformed into numbers. Parts of the analysis consist of quantitative or qualitative data presented and analysed in separate sets. But for most of this study, the qualitative data is used to back up or further describe and explain aspects in the tables displaying quantitative data.

4.6 Validity

4.6.1 The validity of the interviews

Validity in qualitative methods deals with the accuracy and the truthfulness of the findings, what the findings mean, and how are to be interpreted. (Ary et al., 2010). With regard to the validity of the interviews used in this study, there are three aspects worth mentioning: the construction of the interview guide, researcher bias and triangulation. The interview guide can be a source of error as a result of what is called construct underrepresentation (Ary et al., 2010). This means that the interview guide used might have been too narrow, underrepresenting important dimensions that should have been included to best answer the research question. This could be either lack of representative questions or underrepresentation of certain aspects, narrowing down the dimension of the interviews. This is always a possibility when interviewing, and might weaken the study's validity. I did however, put effort and consideration in making the interview guide, structuring it after the theory on the themes in question trying to include all important dimensions.

Researcher bias can also be a source of invalidity in qualitative studies (Ary et al., 2010). When interviewing it can be a result of hearing only what one wants to hear. When transcribing interviews one can unknowingly distort the meaning expressed by the informants. And, when analysing the data one can allow personal attitudes to affect the interpretation. To avoid this, I have tried to control my own biases through reflexivity. Reflexivity is the use of self-reflection to recognize and seek out one's own biases (Ary et al., 2010). By recording interviews and following consequent rules when transcribing, I have tried to ensure objectivity and being true to my informants by accurately portraying their meanings. When analysing the interviews I have tried not to expect any findings and thus staying objective throughout the analysing process. Additionally, I have tried to be critical towards my own findings, going through them several times. Finally, triangulation can help strengthen the validity. In this regard I have triangulated the groups of informants, by interviewing both students and teachers. This helps strengthen the validity of the findings, presenting information from two different groups.

4.6.2 The validity of the IELTS test and questionnaire

Validity in quantitative research, deals with whether the test, test scores and questionnaire used actually measure what is supposed to measure. As for the IELTS test used, it is internationally recognized as a test used for reading proficiency, and provides documentation with regard to test design and validity. One aspect worth consideration however, is if the design of the IELTS test were unfamiliar to the respondents. Seeing as this is not a test used in Norwegian lower secondary schools, it is possible that the scores can be influenced by test unfamiliarity, and not only degree of reading proficiency. The students did however, get more time than what is usual when taking this test. Before taking the test I also had a thorough go through with the respondents, explaining the test format and opening up for any questions they might have, this to prevent the scores to be influenced by test unfamiliarity. Taking into consideration the extra time, the instruction and the test scores, I would argue that the validity of the IELTS scores reflect reading proficiency to a greater extent than they do test unfamiliarity.

With regard to the questionnaire and construct validity, there are two aspects to consider. One is the construction of the self-assessment items, if they are worded in a way that is understood by the respondent. Another aspect is of course if they test what they are set out to. As described in Section 4.6.1 the aspect of construct underrepresentation is an error that can affect the validity of the questionnaire. However, when making the self-assessment items some of the items had been used in earlier research by Hellekjær in his doctoral thesis (Hellekjær, 2005). The rest of the items were made keeping the theoretical framework as well as the research question in mind. A way to strengthen this would however be to have piloted the survey to a group of students, before using it on the sample. Due to the time and scope of this study, this was unfortunately not possible. I would still argue for the validity of the self-assessment items based on their construction, as well as the fact that the informants were able to ask for clarifications when filling out the questionnaire.

For the questionnaires, respondents' responses are also factors that might influence the validity. Examples can be that they give untrue answers that they think are more socially acceptable, or answer what they think the researcher wants them to or that they give "safe" answers because they fear their level of anonymity (Ary et al., 2010). These threats to validity can be hard to detect and avoid. The cover letter as described in Section 4.3.4, was handed out to ensure the respondents about their anonymity, as well as to explain the importance of

answering what they felt was right, rather than what they thought I wanted them to answer. Before taking the test and answering the questionnaire, I went through the cover letter with the students, to further strengthen their feeling of anonymity.

With regards to statistical conclusion validity, the findings in this study were as mentioned processed using the statistical processing program SPSS version 20. When entering scores into SPSS, I double checked each score in order to avoid errors. Seeing as SPSS is a well-recognized program used for statistics, no further elaboration will be given on statistical validity.

4.7 Reliability

4.7.1 The reliability of the interviews

Reliability has to do with the consistency of the instrument, whether it measures what it is to measure. When talking about reliability we often talk about sources of random error (Ary et al., 2010). Here, the informants and the interview guide and transcription, might be sources of error affecting the study's reliability. When interviewing, there is always a possibility that the respondents provides inaccurate information by answering differently from how they feel in order to please the interviewer, or to put themselves in a better light (Ary et al., 2010).

Information given by the students could also have been influenced by the informants' mood, motivation, memory and interaction with the interviewer and several other factors (Ary et al., 2010; Kvale & Brinkmann, 2009). Additionally, when using group interviews there is a possibility that the students adjusts their answer according to their fellow students, and that they would have answered differently had they been interviewed alone. All these are factors that can contribute to the interviewee giving different answers in another setting, and can therefore weaken the reliability. Group interviews can, however, also strengthen the reliability. Seeing as the students are able to discuss and complement each other's answers, the researcher is able to gain a deeper understanding of the questions concerned. Being in a group can also make some respondents feel safer and more comfortable with the interview situation. This is also important with regards to the ethical perspective of qualitative research.

Concerning the interview guide, its wording can be another cause of error. If questions are leading, they can influence the informants' answer, and thus weaken reliability. I have

however, focused on open-ended questions leaving the answer up to the respondent. During the interview I also made an effort not to influence respondents' answers. With the transcription process I have, as mentioned in Section 4.6.1 tried to avoid subjectivity to influence this process, as well as listened to the recordings several times when unsure about the content. To further strengthen the reliability, I could have had a third part transcribe the interviews in addition to me. Another alternative would have been to test and retest. Due to limited time, however, this was not possible for this study. I will however argue for the reliability of the findings, as I have worked to strengthen the reliability while gathering and analysing the data.

4.7.2 The reliability of the IELTS test and the questionnaire

With regards to the reliability of the quantitative data collected, it also is a question of the reliability of the measuring instrument used: if it measures whatever it is measuring (Ary et al., 2010). In this study the informants being measured, and the test and questionnaire as measuring instruments, can be sources of error affecting the reliability. As with the reliability of the interviews, the informants' mood, motivation, interest and so on, can have affected test results. This is also the case with leading questions, as mentioned in Section 4.7.1.

Ambiguous instructions can also affect the reliability of the test, this was however dealt with in Section 4.6.2. Additionally, a small sample may give unstable scores. Having taken these aspects into consideration, I would still argue for the reliability of the test, with the IELTS test being a globally acknowledged test for reading proficiency. As for the items on the questionnaires they were constructed trying to avoid leading questions. As for the size of the sample, this will be further discussed in Section 4.8 below.

4.8 Transferability or external validity

“External validity refers to the extent to which the findings of a study can be generalized to other subjects, settings, and treatments” (Ary et al., 2010). Transferability is the term used in qualitative research for the same definition. For this study, this can be interpreted as the extent to which the findings from test scores, questionnaire and interviews are generalizable to the reference population. This would be 10th graders at the Norwegian lower secondary schools, having CLIL teaching on the one hand and regular EFL teaching on the other. As mentioned, the sample in this study was a convenience sample, being from two non-randomly

selected schools only. Additionally, the sample was rather small, comprising 75 respondents on the IELTS test and questionnaire, and 17 respondents in the interviews. This means that the findings in this study cannot be generalized to the entire population as a whole. To make any firm generalizations in this regard would have required surveys of larger, representative samples comprising randomly selected respondents. In addition it would have required interviewees that also were randomly selected, in opposition to volunteers as is used in this study. The selection of the sample was a result of limited time conducting the study, as well as a limited range of respondents seeing as there are no official overview of schools having CLIL classes. Ideally, randomly selected respondents should have been used, and would have increased the study's validity, reliability, as well as its transferability. However, the triangulation of the data by using test, questionnaires and interviews, can help strengthen the validity and reliability of the findings.

4.9 Chapter summary

The present study is based on data collected by using mixed methods. It combined an IELTS reading test, a questionnaire and interviews. 75 students from four classes functioned as respondents on the test and questionnaire. 13 students volunteered to participate in the interviews, as well as the four teachers teaching the classes taking the test and questionnaire. The scores from the test and questionnaire were entered into SPSS, while the interviews were transcribed and coded. Additionally I have commented on the study's validity, reliability and transferability. Throughout the collection and analysing of the data, steps have been taken to strengthen the study's validity and reliability. An important aspect in this matter is the methods triangulation ensured by mixing qualitative and quantitative methods. Seeing as the sample is a small one, the findings presented in Chapter 5 below, cannot be generalized to the population as a whole.

5 Results and Analysis

This chapter presents the data from the IELTS test which is used to measure reading proficiency, the survey data and the interview data. It opens with a more detailed presentation of the sample by examining the variation between the two schools and the four classes in the sample. This is followed by a section presenting data on reading proficiency, more specifically the findings from the IELTS test, the questionnaire and interviews. After that, there is a section focusing on the results regarding reading strategy use. Responses from the questionnaire and interviews are provided in this section. Finally there is a section comparing the results from the CLIL groups and EFL groups, before the chapter summary.

Please note that the results from the questionnaire are presented grouped by topic in this chapter, rather than in the order they were given to the students. The questionnaire can as notated be found in Appendix C.

5.1 More about the sample

As described in more detail in Chapter 4, 75 respondents from two different schools participated in the present study. They were from four classes, with a CLIL class and a regular EFL class from each of the two different schools. Of these, 37 students had a CLIL subject, while the remaining 38 functioned as the control group with regular EFL lessons only. Additional information about the sample regarding gender and background information is provided in the sections below.

5.1.1 Gender distribution

Table 5.1 below shows the gender distribution in the sample, presented according to the schools.

Table 5.1: A table showing gender distribution among the respondents from school 1 and school 2. N=75

Class	School 1		School 2	
	Male	Female	Male	Female
CLIL class	10	14	6	7
EFL class	9	15	6	8
Total	19	29	12	15

From Table 5.1 we can read that from school 1 there was a total of 48 respondents, of which 19 respondents were male and 29 were female. The CLIL class in school 1 comprised 10 male and 14 female respondents while the EFL class included 9 male and 15 female respondents. From school 2, there was a total of 27 respondents, 12 male and 15 female. While the CLIL class consisted of 6 male and 7 female respondents, there were 6 male respondents and 8 female respondents in the EFL class. What is evident from this, is that there is a majority of girls in each of the four classes in the sample, and that there are a higher number of respondents from school 1. Overall the valid sample comprises of 31 male respondents and 44 female respondents, respectively 41% male and 59% female respondents.

5.1.2 Other factors of interest

On the questionnaire I had also included some variables covering the respondents’ backgrounds. The respondents were asked to state their first language (mother tongue). The table 5.2 below illustrates the distribution of respondents’ first language in frequency and percent.

Table 5.2: A table showing the frequency and percentages of respondents' first language. N=75

What is your first language (mother tongue)?	Frequency	Percentage
Norwegian	68	91
English	3	4
Other	2	3
Missing information	2	2
Total	75	100

From Table 5.2 we can read that 91 percent of the respondents have Norwegian as their L1, 4% have English as their L1, while 2% have a language other than Norwegian or English as their L1. Evidently, the high percentage of respondents with Norwegian as an L1 make the sample fairly homogenous in this regard. The respondents were also asked if they had lived in an English-speaking country. From this question it was evident that 4 % had lived in an English-speaking country less than 12 months, while 1% had lived 12 months or more. The remaining 93% had never lived in an English-speaking country. The remaining percentages meant that some students had not answered the question. When asking if any of the respondents had gone to school abroad, 95% answered no, while 3% had studied in a non-English-speaking country, but none in an English-speaking country. From the questionnaire it was also evident that of the 75 respondents, only six respondents have one or both parents coming from English-speaking countries. Thus as far as educational and language background goes, the respondents are a fairly homogenous group with over 90 % having Norwegian as their first language, and that the great majority had lived and attended schools in Norway only.

5.2 Grades from the CLIL groups and the EFL groups

The remaining sections in this chapter will focus on the two central questions examined by the present study: *How do the CLIL and EFL students differ with regard to 1) reading proficiency and 2) reading strategy use.* The data will hereafter be presented according to CLIL groups and EFL groups. CLIL group 1 and EFL group 1, are from school 1, and CLIL group 2 and EFL group 2 are from school 2.

Table 5.3 below shows the means and standard deviations for the grades in written English for all four groups.

Table 5.3: A table showing the means and standard deviations of the grades in written English from the two CLIL groups and the two EFL groups. N=75

Class	Mean	Standard deviation	Total respondents
CLIL group 1	3.96	0.91	24
CLIL group 2	3.38	0.87	13
EFL group 1	4.50	0.91	22
EFL group 2	3.93	1.21	14

From Table 5.3, it is evident that the highest average grades in written English are to be found in EFL group 1, with an average of 4.50. EFL group 2 and CLIL group 1 have fairly similar averages of 3.93 and 3.96 respectively. The lowest of the four is CLIL group 2 with an average of 3.38. The means and standard deviations for the oral grades are presented in table 5.4 below.

Table 5.4: A table showing the means and standard deviations of the grades in oral English from the two CLIL groups and the two EFL groups. N=75

Class	Mean	Standard deviation	Total respondents
CLIL group 1	3.96	1.11	23
CLIL group 2	3.85	0.90	13
EFL group 1	4.73	1.16	22
EFL group 2	4.31	0.75	13

From Table 5.4 we can see that EFL group 1 again has the highest average grade of 4.73. EFL group 2 has an average of 4.31, while the two CLIL groups have the lowest average grades of 3.96 for group 1, and 3.85 for group 2.

5.2.1 Analysis of the presented tables

From the distribution of grades presented in Tables 5.3 and 5.4, it is evident that EFL group 1 has the highest average grades in both written and oral English. CLIL group 2 has the lowest average in both written and oral English grades. EFL group 2 and CLIL group 1 have as

noted, a fairly similar average in written grades. However, they differ in the oral grades, with the EFL group enjoying a considerably higher average. CLIL group 2 and both of the EFL groups have better grades in oral than in written English, while CLIL group 1 has the same average. In written English, the remaining three groups are fairly equal, but CLIL group 2 has the lowest average grades. For oral grades the EFL groups have considerably higher average grades ranging over 4, while the CLIL groups have means lower than grade 4. In other words, the EFL groups overall have better grades than do the CLIL groups. Summing up, the distribution of grades shows that the EFL group 1 has the highest average grades in both written and oral English. While CLIL group 2 has the lowest average grades in both written and oral English.

5.3 Results regarding reading proficiency

When using the IELTS test to test reading proficiency, I was able to measure and compare the samples' reading scores. The results from this test thus provide me with a measureable score indicating students' level of reading proficiency. However, it was also interesting to cover additional aspects of the students' reading proficiency, and I therefore included items about the taking of the IELTS test, as well as items about the respondents' reading of English texts, in the questionnaire. The results are presented in the following sections, in addition to the responses from the interviews conducted.

5.3.1 Results from the IELTS reading test

As described more thoroughly in Chapter 4, a part of an IELTS test was used in this study to measure reading proficiency. The test consisted of a text with eleven short paragraphs, and thirteen questions based on information from the text (see Appendix B). When creating variables from the test scores, the right answer was given the value 1, while a wrong or blank answer was given the value 0. Seeing as the test contained 13 questions, 13 was the maximum score possible. The results are presented for the four groups with means and standard deviations in Table 5.5 below.

Table 5.5: A table showing the results from the IELTS reading test. N= 75

Group	Mean	Standard deviation	Respondents
CLIL group 1	5.5	3.75	24
CLIL group 2	7.5	2.70	13
EFL group 1	6.1	4.13	24
EFL group 2	6.4	4.47	14

As can be seen from Table 5.5, CLIL group 2 has the highest average score from the test with a score of 7.5. In addition it has the lowest standard deviation, meaning that the scores in this group vary less from the mean than for the remaining three groups. The two EFL groups have nearly the same average scores, with scores of 6.1 and 6.4, while CLIL group 1 has the lowest average score with a score of 5.5.

Having looked at the grades for the four groups, it was evident that the EFL classes had the best average grades with EFL group 1 having the highest grades in both disciplines. In comparison, CLIL group 2 had the lowest grades in both disciplines. After looking at the results from the IELTS test it is thus interesting to see that CLIL group 2 scored highest, and that the standard deviation was lower here than for the three other groups.

In addition, it was also evident that none of the groups had very high reading scores. This can be due to the fact that the test itself was above the level expected from students in the 10th grade, and not necessarily to the fact that these groups have poor reading proficiency. The interesting aspect for this thesis however, is to see how the groups score according to each other.

5.3.2 Results from the questionnaire: items about the students' motivation taking the IELTS test

The questionnaire contained six items about answering the reading test which the respondents were to fill in after having completed the IELTS test. They were to rate their level of agreement for five items comprising their own effort and motivation when taking the test. Please note that in Table 5.6 the mean is calculated from the understanding that *1= strongly disagree*, *2= disagree*, *3= agree*, and *4= strongly agree*. To give an example: In the first row

of Table 5.6, the mean for CLIL group 1 is listed as 2.96. This indicates that for that particular item, the response is to be found on the intersect between *disagree* and *agree*.

Table 5.6: A table showing the five items about respondents' motivation when the IELTS reading test. SD= standard deviation. N=75.

Items about the IELTS reading test	CLIL group 1		CLIL group 2		EFL group 1		EFL group 2	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
18. I was motivated to do my best on the test	2.96	0.62	3	1.00	2.87	0.76	2.64	0.75
19. It was important for me to do well on the test	2.71	0.75	3.15	0.80	2.61	0.78	2.29	0.83
20. I found the text in the test more challenging than texts I read in the CLIL/EFL class	2.63	0.82	2.85	0.80	2.87	0.97	3.36	0.84
21. I worked with understanding the text, even though it was difficult	3.04	0.83	3.46	0.78	2.87	0.87	3.07	0.92
23. I did my best on the test	3.00	0.72	3.46	0.52	3.09	0.85	2.64	0.63

Starting with the answers from item 18, this shows that CLIL group 2 has the highest mean of 3, this is equivalent to *agree*. This means that CLIL group 2 had the highest average of respondents motivated for doing their best on the test. But, the rest of the groups had mean scores fairly close to 3 as well.

For item 19, CLIL group 2 again had the highest mean indicating that a higher average of respondents from this group thought it important to do well on the test, than did respondents from remaining groups.

On item 20, the responses were reversed with the EFL group 1 having the highest mean. From this it is evident that the respondents from EFL group 1 *agreed* or *strongly agreed* to experience the text on the test to be more challenging than the texts they are used to in class.

Next, for item 21, CLIL group 2 again had the highest mean. It was evident that a higher average of students in CLIL group 2 *agreed* or *strongly agreed* with that they “worked with understanding the text, even though it was difficult”. EFL group 1 on the other hand, had the lowest average thus *disagreeing* or *agreeing* to working with understanding the text.

Finally, for item 23, CLIL group 2 again had the highest mean of 3.46. In other words, this group had the highest number of students feeling that they did their best on the test.

Summing up, the responses presented in Table 5.6 shows that the groups are fairly similar. However, there was a pattern in that CLIL group 2 had the highest means for all of the items except item 20 – meaning that they found the IELTS text the least challenging. On the rest of the items, this group had means over 3, which is equivalent to *agree*. This indicates that CLIL group 2 seemed to be most motivated for doing their best on the test. What was also evident was that on item 20 regarding if the respondents found the text in the reading text more challenging than in their CLIL/EFL courses, the two CLIL groups had the lowest means of 2.63 and 2.87. EFL group 1 had a similar mean of 2.87, but EFL group 2 differed from the other with a mean of 3.36. This means that EFL group 2 experienced the text more difficult than the texts they used in class.

5.3.3 Results from the questionnaire: items about the respondents' reading of English texts

Next, the results from items regarding respondents' reading of English texts are presented. Please note that in Table 5.7 the mean in item 1 is calculated from the understanding that *1=very slowly, 2=slowly, 3=average 4=above average 5=quick and easy*. For item 3 the mean is calculated from the understanding that *1=yes and 2=no*. For items 2, 4, 5, 6 and 7, the mean is calculated from the understanding that *1=never, 2=sometimes, 3=often, 4=almost always and 5=always*.

Table 5.7: A table showing the seven statements about the respondents' reading of English texts in their respective courses. SD=standard deviation. N=75.

Items about reading of English texts	CLIL group 1		CLIL group 2		EFL group 1		EFL group 2	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
1. How quickly do you read English texts in your CLIL or EFL class?	3.5	0.66	3.0	1.29	3.7	0.91	3.6	0.93
2. How often do you experience an English text to be too difficult?	2.2	0.83	2.9	1.14	2.0	0.77	1.9	0.73
3. If you experience an English text as challenging, do you continue reading it?	1.0	0.21	1.1	0.28	1.1	0.34	1.2	0.43
4. If yes, how often do you understand it?	3.3	1.15	2.9	1.28	3.4	1.19	3.3	0.99

5. How often do you quit reading altogether because a text is too difficult?	1.7	0.77	2.3	1.18	1.7	0.76	1.8	0.58
6. How often do you experience that your teacher encourages you do work with challenging texts?	2.35	0.98	3.3	1.18	2.0	0.9	2.2	1.31
7. How often do you experience that your teacher helps you to master a difficult text?	3.1	1.38	3.2	1.28	2.9	1.08	2.4	1.16

From the distribution in Table 5.7, is evident that the groups again are fairly similar in their responses.

On item 1, all groups have means at the intersect between *average* and *above average*, meaning that they all read English texts fairly quickly. It is however noteworthy that CLIL group 2 has the lowest mean, indicating that they are on average the slowest readers of the four groups.

On item 2, the greatest differences is between CLIL group 2 and EFL group 2. From this we can read that a high number of the respondents from CLIL group 2 experience their course texts as challenging, while the EFL group on the same school *never* or *sometimes* experience texts as challenging.

On item 3, the groups have almost identical means, barely over 1. Seeing as 1 is expressed as *yes*, this indicate that a high number of respondents from all four groups give up reading if they find a text in their respective course too challenging. In other words, respondents from all four groups often quit reading if they find a text challenging.

On item 4, we can read that when continue reading a challenging text, students from CLIL group 2 understand the text *sometimes* or *often*. While the respondents in remaining three groups understand the texts somewhere between *often* and *almost always*.

In statement 5, CLIL group 2 differed from the remaining groups, responding that it *sometimes* or *often* quit reading altogether because the text is too difficult, while an average of students from the three other groups do this *never* or *sometimes*.

For item 6, CLIL group 2 is the only group with an average of responses found in the intersection between *sometimes* and *almost always*. This means that a higher number of

respondents in CLIL group 2 experience that their teacher encourages them to work with difficult texts. For the rest of the groups, their answers lie between *sometimes* and *often* in this regard.

Finally, in statement 7, as far as the respondents feel that their teachers help them master a difficult text, an average of students in the CLIL groups experience this *often* and *almost always*. While an average of students in the EFL groups experience this *sometimes* and *often*.

Summing up, the responses in Table 5.7 show that all four groups read English texts fairly quickly, but that of the groups CLIL group 2 has the slowest readers. CLIL group 2 also had the highest average of respondents feeling that texts in their CLIL course was too difficult, while EFL group 2 had the lowest average in this regard. Responses from CLIL group 2 also indicated that when continuing reading difficult texts, they were the group who had the greatest struggle understanding the texts. Moreover, they had the highest average of respondents saying that they sometimes or often quit reading if a text was too difficult. CLIL group 2 also had the highest average of respondents saying that they were encouraged by their teacher to work with challenging texts, as well as the teacher helping them master a difficult text. Working with difficult texts thus seems to be a priority in CLIL group 2. In EFL group 2, however, the students seemed to face few challenges when reading.

5.3.4 Results from the interviews

In the interviews with both teachers and students I focused on how much, and what was being read as factors contributing to developing reading proficiency. I also wanted to know whether the teachers focus on finding texts that challenge the students when reading, and likewise if the students experienced the texts as challenging.

In their CLIL class, group 1 used a textbook in Norwegian. According to the students they did not use any English texts to supplement this textbook. The teacher, however, explained that they used English texts when possible, usually from websites and other sources, but expressed having difficulties finding relevant texts in English at level the students needed. When using texts in Norwegian, the teacher had often supplemented them with lists of English words in addition to talking about the texts in English. When English texts had been found, they had been made available for the students along with a Norwegian alternative of the text or theme in question. The students could then choose whether they wanted to read the Norwegian or the

English alternative. According to the teacher, most of the students chose to read the Norwegian text, but answered in English. Those who chose the English text were often the motivated students. When asked about problems occurring while reading, the students explained that unfamiliar words, understanding the text and boring texts were what they struggled with. All three students agreed on the fact that had the texts been more interesting, they would have tried harder to understand them. Their teacher mentioned unfamiliar words as the students' greatest struggle. But, seeing how a Norwegian version of the texts had always been given an alternative, not that many problems had occurred when working with reading. When reading English, she mentioned that some of the students refused to read because they thought they would not understand, or they refused to understand. If they chose to read the text, however, it was evident that they were able to understand after all. The teacher added that finding texts that challenged the students, and working with reading, were areas of focus in her teaching. But, seeing how she had experienced difficulties with finding material in English, reading had not been the greatest priority this term, but rather on conveying the content in English to the students.

CLIL group 2 also used the Norwegian textbook for the subject they have CLIL in. Additionally the students mentioned that they received texts and hand outs in English. The teacher explained that she used texts from the web, articles and other sources in addition to the textbook. With regards to problems when reading, students mentioned unfamiliar words, pronunciation and the difference in word order in Norwegian and English as their common problems. They found it harder to read English, but as one of the respondents expressed it: "reading in English is more difficult than in Norwegian, seeing as Norwegian is our first language, but it is not incomprehensible either". The teacher mentioned unfamiliar words and not grasping the context as problems the students faced when reading. Seeing as this group had CLIL in religion, which is an oral subject in the 10th grade, the teacher said that reading had not been a great area of focus. Focus has rather been that students should gain a vocabulary that enabled them to talk about the topics in question. When finding English texts, she had also met challenges finding material matching the students' level of proficiency. But she had focused on finding texts comprehensible for all her students, for them to get used to reading English literature about RLE-topics. She added that the group had had CLIL for a short period of time, and that reading would become a focus later in the term.

For the EFL groups the situation with reading material was different, seeing as they had a textbook in English designed for the subject. In EFL group 1 the students responded that they used the textbook nearly every class, or as explained by one of the students “if we, on a rare occasion, do not use the textbook, she (the teacher) hands out texts, or we borrow a book in English. Always books.” This statement was also confirmed by the other students. The teacher said she usually supplemented the textbook with texts from other textbooks, or from different online sources. With regards to problems occurring when reading, students mentioned understanding and pronouncing unfamiliar words, along with reading out loud. While some experienced greater difficulties reading English than others, they added that the teacher gave them different texts adjusted to their level of proficiency. The teacher perceived long texts and unfamiliar words as the problem areas. She said that some of the students become overwhelmed when seeing long texts, and that they therefore always work with texts together in class. She focused on giving students challenging texts that give them something to work with. While reading was an area of focus in her classes, she felt there was too little time to read at the expense of other criteria to be covered.

Students from EFL group 2 responded that they used the textbook for the subject, and that they did not get other types of texts. The teacher said that he normally supplemented the textbooks with texts from other textbooks and texts found online, but that this has not been done in this class yet. Additionally they read fiction borrowed from the school’s library. When reading, the students experienced difficulties with unfamiliar words and boring texts. They all missed more challenging texts to work with when reading. The teacher emphasised pronunciation, diction, unfamiliar vocabulary and a *Norwenglish* pronunciation of words as areas the students struggled with. As for solving these problems, the teacher preferred to read the text out loud for the students, and model in that way. The students viewed reading as a good activity for learning English, and that they read too little in class. The teacher focused on reading when it was required for the topic they worked with. He did not put much focus on finding texts that challenged the students, but added that the weakest readers did not read the longest and most difficult texts in the textbook.

Summing up, both CLIL groups used a Norwegian textbook in their CLIL course, and English texts as a supplement. Students in CLIL group 1 did, however, have the opportunity to choose whether they wanted to read the Norwegian or the English texts. With regards to problems when reading, all groups seemed to have somewhat the same problems with dealing with

unfamiliar vocabulary. In EFL group 1 the teacher mentioned long texts as a problem for some of the students. In EFL group 2 the students also mentioned that they missed texts that were more challenging and that they read too little in class.

5.4 Results regarding reading strategy use

As mentioned, one of the research questions was to examine whether CLIL and EFL students differ with regards to reading strategy use. In the questionnaire, there were ten items concerning the respondents' knowledge and use of reading strategies.

5.4.1 Responses from the questionnaire: students' use of reading strategies when reading a text

The responses from these items are presented in Table 5.8 below. Please note that in Table 5.8 the mean is calculated from the understanding that *1=never*, *2=sometimes*, *3=often*, *4=almost always* and *5=always*.

Table 5.8: A table showing the ten statements from the questionnaire concerning reading strategy use. SD=standard deviation. N=75

When reading a text...	CLIL group 1		CLIL group 2		EFL group 1		EFL group 2	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
8. ...I read through it one time only	2.71	1.33	1.85	0.80	3.26	0.96	3.07	1.07
9. ...I first read through it quickly, then careful a second time	2.13	1.04	2.92	1.44	2.04	0.88	2.43	1.09
10. ...for the first time, I stop at unfamiliar words	2.75	1.11	2.85	1.14	2.35	0.94	2.64	1.08
11. ...I read carefully to pay attention to every detail	3	1.14	3.54	1.27	3.09	1.44	2.93	1.07
12. ...I underline words or take down keywords	1.38	0.58	2.46	1.05	1.52	0.67	1.79	0.98
13. ...I write a summary of the text	1.21	0.51	1.69	0.86	1.22	0.42	1.93	1.00
14. ...I try to organize the text by creating a mind map or such	1.21	0.42	1.69	0.63	1.13	0.34	1.64	0.75
15. ...I try to understand the material by linking it to my background knowledge	2.17	0.87	1.85	0.69	2.04	1.07	2.57	1.16
16. ...I often take breaks to think about what I have read	2.58	0.93	1.92	0.76	2.04	0.64	2	0.78

17. ...I control my own understanding of the text after having read it	2.75	1.07	2.15	0.90	2.22	0.80	2.29	0.83
--	------	------	------	------	------	------	------	------

From Table 5.8 it is evident that there are small differences between the responses from the four groups. However it is possible to spot some trends.

Starting with item 8, an average of the EFL respondents answered that they *often* or *almost always* read through the texts one time only. CLIL group 2, however, was the group where most of the students read through the texts more than one time.

For item 9 the groups all have means in the intersection between *sometimes* and *often*. CLIL group 2 had a slightly higher average of students often read through the texts quickly a first time, then carefully a second time.

On item 10 it was evident that all four group *sometimes* or *often* stop at unfamiliar words when reading a text for the first time.

Responses to item 11 showed that all four groups often read carefully to pay attention to every detail. CLIL group 2 were the group with highest average of students *often* or *almost always* reading carefully.

Item 12 showed that an average of respondents from this CLIL group 2 “underline words or take down keywords” *sometimes* or *often*, while an average of respondents in the three other groups *never* or *sometimes* do this.

Item 13 and 14 both had means between the intersections *never* and *sometimes* from all four groups. This was the lowest distribution of means out of all the statements. Consequently, “write a summary of the text” and “try to organise the text by creating mind map or such” were the two strategies an average of the respondents used least of the ten strategies presented to them in the questionnaire.

From the responses to item 15 it was evident that more respondents from EFL group 2 used the strategy “I try to understand the material by linking it to my background knowledge”. While CLIL group 2 answer *never* or *often* to this strategy.

In item 16, the greatest difference in the mean scores was between the two CLIL groups. The strategy “*I often take breaks to think about what I have read*”, can thus be said to be used more often by students in CLIL group 1, than the remaining respondents.

Last, in item 17 all four groups answered that they *sometimes* and *often* control their own understanding of a text after having read it.

From this, it is evident that the EFL groups had a higher average of students saying that they often or almost always read through a text only one time. CLIL group 2 had an average of students saying this happens *never* or *sometimes*. Consequently, CLIL group 2 also had the highest average of students saying that they read through the text quickly one time, and carefully one other time. All groups *sometimes* or *often* stop at unfamiliar words. CLIL group 2 had the highest average of students reading the text carefully to pay attention to details as well as underlining or taking down keywords when reading. This was also evident from their test sheets, were almost all of the students had used a marker to underline words and sentences. Writing a summary or creating a mind map were the strategies least used by all the four groups. EFL group 2 more often than the others linked the reading material to their background knowledge. CLIL group 1 had the highest average of respondents taking breaks to think about what they had read, and control their own understanding of the text after having read it.

To sum up, none of the groups stand out with particularly low or high means, instead this varies between all four groups. The means range from 1.13 at the lowest to 3.54 at the highest, meaning the intersection between *never* and *almost always*. With 35% of the means found in the intersection between *never* and *sometimes* this indicates that a large average of the students rarely use reading strategies. 52.5% of the means were found in the intersection between *sometimes* and *often*. While this indicates that the respondents use strategies, there seem to be no structure or consistency regarding their use. Additionally there seems to be some strategies that are more used than others. From the distribution of answers presented in Table 5.8 it was evident that “*I first read through it quickly, then careful a second time*”, “*when reading a text for the first time I stop at unfamiliar words*”, “*I read carefully to pay attention to every detail*” and “*I control my own understanding of the text after having read it*” were the four strategies most used by an average of the respondents. While “*writing a summary of the text*” was least used.

5.4.2 Results from the questionnaire: students' use of reading strategies on the IELTS test

Next, the respondents were asked whether they had used reading strategies on the reading test provided with the questionnaire. The results are presented in Table 5.9 below.

Table 5.9: A table showing the respondents' use of reading strategies on the IELTS reading test. SD=standard deviation. N=75

Item 22. I used reading strategies to understand the reading test							
Group	Strongly disagree	Disagree	Agree	Strongly agree	Missing	Mean	SD
CLIL group 1	21%	54%	17%	-	8%	1.95	0.65
CLIL group 2	8%	39%	36%	15%	-	2.62	0.87
EFL group 1	42%	38%	13%	-	7%	1.68	0.72
EFL group 2	29%	43%	21%	-	7%	1.92	0.76

From the distribution of answers presented in Table 5.9, it is evident that respondents from CLIL group 2 had the highest number of students *agreeing* to having used reading strategies on the test, in addition to being the only group where students *strongly agreed* to having used strategies. CLIL group 1 had 17% agreeing to have used strategies, but 75% *strongly disagreeing* or *disagreeing*. EFL group 1 had 80% of the respondents *strongly disagreeing* or *disagreeing*, and only 13% agreeing. 72% from EFL group 2 *strongly disagreed* or *disagreed* to having used strategies, while 21% agreed to having used strategies. Thus EFL group 2 followed CLIL group 2 in the percentages of students using strategies, while CLIL group 1 and EFL group 1 ranked third and fourth. This shows that a very high percentage of the students did not use strategies on the test, but that CLIL group 2 had 51% of its students *agreeing* or *strongly agreeing* to having used strategies on the test.

5.4.3 Responses from the interviews

During the interviews I asked questions about students' and teachers' use of reading strategies. Their results will be presented group wise, starting with CLIL group 1.

In CLIL group 1, both students and their teacher were familiar with the term reading strategies. The students had learned about them in their English course and Norwegian course, but not in their CLIL course. When asked to list strategies they knew of and used, one of the

respondents mentioned skimming. When asked if they knew any other strategies, such as word wall, reading headlines only, or gather keywords in a word cloud, these were not familiar to the students. They did not use reading strategies when reading, or working with a difficult text. The teacher mentioned having used mind maps, *BISON-blikk* (strategies to get an overview of a text) and looking at the headlines or the pictures before reading the text. The teacher mentioned that learning and reading strategies are areas of focus at the school, and that it is worked with periodically. In other periods however, it is up to the students to use the strategies themselves. She said that the students have been taught about reading strategies, but sometimes when she told them to use a reading strategy they do not know what it was. But if she explained a strategy to them, they understood. “They have worked with it, but it is rather me who has not been good at saying this is a reading strategy. But they know of different approaches at least”.

In CLIL group 2, students were familiar with the term reading strategies and one student said that “there was a lot of talk about reading strategies in class”. They mentioned underlining word with a pen or a ruler as strategies they used. They had learned about word walls, and the teacher mentioned that they used them in class. They also used reading strategies in class, but did not use them when reading on their own. “If we are asked to do it (use reading strategies), we do so for a little while”. When dealing with unfamiliar words, the students responded that they either wrote down the words, asked someone for a translation, or used the context to figure out the meaning. The teacher for this group said she always had focus on learning and reading strategies when teaching. She also mentioned underlining words as a strategy that was used in this group, where the keywords underlined were put in a mind map or used to create sentences. Additionally the group had worked with taking down words on a post-it and stick them on a word wall. This had been an individual project where the teacher first had modelled how to use the word wall, before students were to add words on their own.

In EFL group 1 the students mentioned skimming, reading carefully for details and word wall as reading strategies they were familiar with. When dealing with unfamiliar vocabulary when reading, students said they were either given a list with words from text, or asked the teacher who then explains them on the blackboard. The teacher explained that she worked with developing students’ vocabulary. “So what I do when working with texts, is that I often pick out words and expressions from the text, and present them to the students before handing out the text. Then we work with the text, finding out what the words and expressions mean, we

work together this way”. She added that they also used word walls where they gather words, expressions, idioms and such from the topics in question. “The next time they write a text, I expect them to use these expressions in the text to learn how to use them in a context. If not, there is no point in learning them”. She also said that while she teaches the students about reading strategy use in the 8th grade, in 9th and 10th is up to the students to use this knowledge and chose how they work with a text.

Finally, students from EFL group 2 mentioned taking down notes when reading, read through a text several times and skimming as reading strategies they were familiar with. They had not, however, learned about this in their English-course, and rarely use it here. As for the teacher, he said that he sometimes told the students to underline unfamiliar words that they afterwards worked with in class together. He did not teach the students about reading strategies in his English course, but in his Norwegian courses. He said that the students had knowledge of reading strategies from other courses.

5.5 Comparing the CLIL and EFL groups

The aim of this section is to examine whether and to what extent CLIL and EFL students differ with regard to reading proficiency and use of reading strategies. According to the responses presented there was differences between the two groups with regard to test results on the IELTS test used. CLIL group 1 had as mentioned a score of 5.5, while CLIL group 2 had a score of 7.5. With the EFL groups, group 1 had a score of 6.1 and a score of 6.4 in group 2. Seeing as the CLIL group 2 had the lowest average grades in both oral and written English, it is interesting that it scored highest on the reading proficiency test. As with CLIL group 1, it had the lowest IELTS score, but did not differ that much from the EFL groups.

As for the statements on taking the IELTS test, the groups were very similar. There was, however, a pattern in that CLIL group 2 were more motivated for doing well on the test. This is interesting seeing as they were the group with the highest IELTS score.

EFL group 2 had a mean indicating that the texts used in the reading test were more challenging than the texts in their English subjects. From their interviews it was also evident that the students felt that they faced too few challenges when reading in class, and that they found the texts there boring. Furthermore, they had only worked with the textbook, and not any other types of texts.

From the distribution of answers regarding respondents reading of English texts, the responses were fairly similar. However, it was evident that CLIL group 2 more often than the other groups found reading to be challenging, and more often quit reading because a text was too difficult. However, what should be mentioned was that CLIL group 2 differed from the EFL groups with regards to being encouraged by their teacher to work with challenging texts. From the interviews it was evident that the teacher in this group worked a lot with reading and finding texts for the students, as well as focusing on teaching vocabulary and reading strategy use.

In the matter of using reading strategies when reading a text, there were again very small differences between the groups. When it came to using reading strategies on the reading test, however, CLIL group 2 again had the highest percentage of students using these on the IELTS test. EFL group 1 had the lowest number of students using reading strategies on the IELTS test. From the interviews it was evident that all groups had learned about different reading strategies, but that they did not always know that these techniques actually were reading strategies. In CLIL group 2 the teacher had worked with using a pen to underline words when reading, this became evident from these respondents IELTS test where more than 50% of the students used this strategy. In the remaining groups students did not have a habit of using reading strategies, and the teachers did not teach reading strategies.

5.6 Chapter summary

This chapter has presented the results of the IELTS reading test, the questionnaire and the interviews conducted. The IELTS test showed that one group from the sample, CLIL group 2, had a considerably higher score than the other groups. This group also scored higher on motivation for completing and doing well on the test. Overall, the data collected from the questionnaires indicated that there was a high level of agreement between the respondents regarding reading of English texts and reading strategy use. They respondents did, however, vary in their interviews. It was also, evident that CLIL group 2 had a high average of respondents using reading strategies on the IELTS test. A more detailed summary of the findings will be presented in the next chapter, Chapter 6 Discussion.

6 Discussion

In this chapter I start by outlining a summary of the most important findings regarding reading proficiency and reading strategy use from Chapter 5, Results and analysis. Next, I go on to discuss these findings in light of relevant theory and research. I also discuss whether the findings are a result of having CLIL teaching. Some final remarks on the study's validity are also presented, before ending the chapter with a brief summary.

6.1 How do CLIL and EFL students differ with regard to reading proficiency and reading strategy use?

The aim of this thesis is to learn more about whether students in EFL and CLIL classrooms differ with regard to reading proficiency and their reading strategy use. In order to address this issue I decided to employ mixed-methods approach, collecting data through an IELTS reading test, a questionnaire and interviews with students and teachers. What I found was that they differed in these regards:

- 1) Based on results from the IELTS reading test, CLIL group 2 had a considerably higher average reading score than did the three other groups.

Table 6.1: A table showing the results from the IELTS reading test. N= 75 (Table 5.5 reproduced for convenience)

Group	Mean	Standard deviation	Respondents
CLIL group 1	5.5	3.75	24
CLIL group 2	7.5	2.70	13
EFL group 1	6.1	4.13	24
EFL group 2	6.4	4.47	14

- 2) On the items about completing the IELTS test, it was evident that CLIL group 2 showed the highest motivation for taking the test (item 18), doing well on the test (item 19), and working with the test (item 21), and that they felt they had done their best on the test (item 23).

- 3) From the item asking if the students used reading strategies on the IELTS reading test (item 22), it was a clear that CLIL group 2 had the highest average of students using reading strategies on the test. On this item, this group differed markedly from the other three.
- 4) From the distribution of grades it was evident that CLIL group 2 were the group with lowest grades. This is interesting seeing as the points above show that they did best on the IELTS test, were the most motivated group and also the group where most students used strategies on the reading test.
- 5) EFL group 2 experienced the text on the IELTS -test as most challenging compared to the texts they read in class (item 20). In addition to this, EFL group 2 responded they were the group finding English texts they read in class the least challenging (item 2).
- 6) Responses from CLIL group 2 showed that they more often than the other groups experienced a text to be too difficult (item 2), and that they quit reading because the texts are too difficult (item 5). However, responses from CLIL group 2 also showed that they were the group that most often were encouraged by their teacher to work with challenging texts (item 6). In this regard, there was a visible difference between the CLIL group 2 and the remaining groups. The CLIL groups experienced that their teachers that often helped them master a difficult text (item 7).
- 7) Responses from the interviews with CLIL group 1 showed that they had mostly worked with Norwegian texts, and had been able to choose whether they wanted to read Norwegian or English texts. Items showed that these students never or sometimes quit reading because a text was too difficult (item 5)
- 8) From the interviews it was evident that there were differences between the groups regarding:
 - how they worked with texts and vocabulary
 - whether the teachers focused on reading and finding texts
 - students' motivation for reading
 - teachers' focus on teaching reading strategies

- students' knowledge and use of reading strategies

These findings will be further elaborated on and discussed in the following sections.

6.2 How and why do they differ in reading proficiency?

The findings from the IELTS test (Table 6.1) clearly show that CLIL group 2 had the highest score. As accounted for in the methods chapter, Chapter 4, the reading module used in this study measures reading proficiency. Therefore we can state that based on the test results, CLIL group 2 had the highest level of reading proficiency of the four groups tested. However, the test score cannot tell us why this group scored higher. As noted, this group also had the lowest average grades in oral and written English. In other words, the distribution of scores on the IELTS test cannot be explained by the fact that CLIL group 2 had the highest grades, and thus the best students. However, the responses in the interviews and questionnaire showed that there were other differences between the groups, related to their reading proficiency.

6.2.1 Different approaches to working with vocabulary

First of all, it was evident that all four teachers interviewed considered reading important in their teaching, but they varied greatly with regard to how they actually worked with this in practice, and in how they helped students solve their reading problems. All the teachers and students interviewed, mentioned unfamiliar vocabulary as a common problem when reading. There was however, a difference in how the teachers and students solved these problems.

In CLIL group 1, the teacher gave the students lists of words from the text, and asked them to use this when facing unfamiliar vocabulary.

In CLIL group 2 the students and teacher worked together to build a word wall. The teacher added some words to the word wall, but after that, it was up to the students to find and add unfamiliar words to the word wall before they worked on finding translations together. When interviewed the students from this group answered that they often used context to understand the meaning of an unfamiliar word.

In EFL group 1, they also built up a word wall, but according to the students, most of the time they asked their teacher for the translation of the unfamiliar words. When working with a new text, the teacher also gave students a list with vocabulary and expressions from the text.

In EFL group 2 the teacher modelled by reading the text aloud to the students. Here, the students also responded that they use the context to understand the unfamiliar words.

In accordance with Bråten (2007), having a wide vocabulary is important for developing reading proficiency, and it is especially important for developing ones L2 reading (Bernhardt 2011, Grabe 2009). Teachers can arrange for enhancing students vocabulary knowledge by presenting new vocabulary to their students. From the interviews, we can see that all the teachers have done this. Handing out word lists, giving students the translation or reading aloud to the students, can help improve their vocabulary. However, this does not teach students how to independently find out the meaning of new and unfamiliar vocabulary when reading a text on their own. In CLIL class 2, it was evident that after modelling to the students how to use a word wall, the students had to find vocabulary themselves. In this manner, the teacher enabled the students to seek new and unfamiliar vocabulary when reading. Students interviewed from this group also said that they used the context to understand the meaning of unfamiliar vocabulary. This was also the case for students in EFL group 2. Using the context to understand a word is quite efficient, seeing as it does not break the reading process (Grabe, 2009; Hellekjær, 2005). As discussed in Chapter 3, stopping at each new word, either to ask for a translation or to look up the word in a word list or dictionary can interrupt the students' reading process, and thus the development of reading fluency and proficiency (Grabe, 2009, Hellekjær 2005).

6.2.2 Working with texts

In CLIL group 1, the students were given both a Norwegian and an English version of the texts. This resulted in the most motivated, and often the best, students' choosing the English version. Most of the students, however, went for the Norwegian alternative of the texts. In CLIL group 2, however, the teacher had focused on finding texts that were comprehensible for all of her students. This was in order for the students to get used to reading English literature about RLE-topics. To compare with the EFL groups, the teachers mostly worked with the textbooks for their English courses, and used other texts as a supplement. In fact, EFL group 2 had only used the textbook.

From the interviews, the students from CLIL group 1 and EFL group 2, answered that they experienced boring texts as a problem when reading. The students in EFL group 2 felt that they worked too little with reading, and they wanted more challenges challenging texts and more reading. This was also evident from this group's response to item two on the questionnaire, where the students answered they *never* or *sometimes* experienced an English text to be too difficult. They also replied that they experienced the text on the IELTS test as more challenging than the texts used in their English course (item 20). Bråten (2007) mentioned that texts level of difficulty is a factor influencing reading proficiency. In addition, the literature on pressure to learn (Krashen, 1995; Simensen; 2007, Turmo, 2011) show that a certain pressure is important for students to develop their acquisition. Giving students challenging texts can help them develop their reading proficiency and becoming independent readers. Seeing as CLIL group 1 scored lowest on the IELTS test, the fact that most of them read Norwegian texts can be a factor influencing their reading proficiency. For them to develop as readers, they need to read texts in English that challenges them and gives them something to work with, in other words texts at their input i+1 level. This can also be the case with EFL group 2. On the IELTS score, they ranked as number 2, but still had a score fairly lower than the CLIL group. Seeing as they experienced the IELTS text as more difficult than the texts they are used to, it would seem that this group are not challenged in reading, and that they therefore have not progressed in their level of reading proficiency. In addition to this, Bråten (2007) and Grabe (2009) emphasizes the importance of being exposed to various text genres to enhance ones reading proficiency. Reading textbook texts only can be another factor constraining the students from developing reading proficiency.

In the questionnaire it also became evident that CLIL group 2 more often than the other groups quit reading altogether because a text was too difficult in their course (item 5). From this, we can read two things: that this CLIL group *sometimes* or *often* experienced their texts as too challenging, while the remaining groups *never* or *sometimes* experienced the texts as challenging. In accordance with Bråten (2007) and Krashen (1995), students need to be challenged in reading to develop their reading proficiency. It is however important that the texts are within the students "reach" for them to develop. Too small a challenge can lead to students stagnating at one level, while too great a challenge can lead to the students giving up reading. For the IELTS test results, however, it can appear as though the CLIL students in group 2 benefited more from being challenged than do the three other groups not facing challenges. Challenging texts demands more from the students and with the right guidance

from the teacher it can motivate students to work with reading and further developing their reading proficiency (Simensen, 2007; Turmo, 2011). On the questionnaire, it was evident that CLIL group 2 had the highest amount of students responding that they felt their teacher encouraged them to work with challenging texts (item 6), as well as saying that their teacher helped them master a difficult text (item 7). In other words, these students as a group experienced that texts can be too challenging, this means that one the on hand they are exposed to such texts, and on the other hand they are encouraged and supported by their teacher to work with texts. This can be a reason for this group's high score on the IELTS test.

6.2.3 Students motivation: items and interviews

From the items on students' motivation for taking and working with the IELTS test, it was evident that CLIL group 2 also scored highest on their motivation to do their best on the test (item 18) and in their work with the test (item 21). They also deemed it important to do well on the test (item 19), and responded that they felt they had done their best on the test (item 23). In accordance with the theory presented (Alderson, 2000; Bråten, 2007; Ryan & Deci, 2000; Ushioda, 2012) motivation for reading and a wish to master a text are important factors for reading proficiency. Since CLIL group 2 were the most motivated of the groups this can have affected their IELTS score, as well as their overall motivation for reading.

From the questionnaire, it was also evident that EFL group 2 showed the least motivation for doing their best on the test (item 18), that it was less important for the students in this group to do well on the test (item 19), and that they felt they had done their best on the test (item 23). This lack of motivation can have influenced their IELTS score. Also in accordance with theory presented, students who have had positive experiences with reading are often more motivated to read more (Bråten, 2007; Simensen, 2007; Turmo, 2011). Seeing as the students in EFL group 2 often found reading boring in their class, this could have led to reading becoming boring altogether for them. This could in turn have affected their effort and motivation for taking the IELTS test negatively.

From the interviews with the teacher from CLIL group 1, she said that some of her students refused reading texts, either because they believed they could not understand the text, or simply because they would not understand. However, if they read the text, they usually understood it. The students from this group said that if they had texts that were more interesting they would have tried harder to understand them.

From this it is evident that many of the students had low motivation for reading, either because of their experience of not coping with texts, or because of their experience with boring texts. As discussed in Chapter 3, low motivation for reading can restrict the developing of reading proficiency. Keeping in mind that this group scored lowest on the reading test, low motivation can be a factor influencing this score and the students overall reading proficiency.

In EFL group 1, the teacher said that her students became unmotivated by seeing long texts. On the questionnaire, they also were the group with the lowest motivation for working with understanding the text in the IELTS test, even though it was difficult (item 21). Again, in accordance with Bråten (2007) and Simensen (2007) these students can have developed a negative motivational pattern for reading, restricting their further development of reading proficiency, again affecting their IELTS score.

6.3 How and why do they differ in reading strategy use?

The second part of the research statement for the present thesis was how the groups differed with regard to reading strategy use.

6.3.1 The link between reading proficiency and reading strategy use: respondents' use of reading strategies on the IELTS test

From the questionnaire, it was evident that CLIL group 2 had the highest average with regard to the use of reading strategies on the IELTS test (item 22), and that they in this differed greatly from the other groups. In accordance with the theory presented on reading strategies, proficient readers use reading strategies when working with a text. This was also evident from the results on the IELTS test: the group who scored highest on the reading test were also the group with a higher number of students using reading strategies. Since CLIL group 2 differed so greatly from the others in this regard, one can be tempted to think that they were the only ones with knowledge about reading strategies. From the interviews, however, it was evident that both CLIL group 1 and EFL group 1 had teachers saying that they used reading strategies in their teaching. Why then, did more students from this group use reading strategies on the test, than from the other three?

6.3.2 Use of reading strategies when reading English texts

According to the literature presented (Anmarkrud & Refsahl, 2010; Grabe 2009), a strategic reader consciously and actively uses reading strategies. This implies that the reader must have developed a habit of using reading strategies. To be able to do this, it takes more than knowing about various strategies – the students must learn how to use strategies independently. Anmarkrud and Refsahl (2010) claims that developing students into strategic readers requires reading strategy teaching to happen at four levels. First, the student observes and copies, then he uses strategies together with someone (a teacher or a fellow student), then the students use strategies independently but with guidance from a teacher, before he in the end is able to use several reading strategies independently.

As was evident from the interviews with teachers from CLIL group 1, they worked with reading strategies in class, and she mentioned various strategies they used. She also said that the school had focus on reading and learning strategies, but that this was a focus in some periods, and that in other periods it was up to the students to use strategies themselves. She also said that the students had knowledge of types of reading strategies. However, when she told them to use a reading strategy they did not understand what she meant. When she gave them an example of a strategy, they remembered how to use it. The students also said that they had not learned about reading strategies in their CLIL course and that they did not use it if the teacher did not remind to do so. In other words, these students had not learned to use reading strategies independently. They knew about strategies, and were able to use them, but when reading on their own they did not use them.

In CLIL group 2, the teacher said she always focused on reading and learning strategies in her teaching. In class the students used a marker to underline words and key words. The students also confirmed that they had learned a lot about strategies and that they used them when their teacher told them to use them. While they did not use strategies' when reading at home, it was also evident from the IELTS test that they used them on the test. In other words, the teacher's focus on explicitly teaching strategies and implementing them in her teaching, had, in accordance with Anmarkrud and Refsahl (2010), led to the students independently using reading strategies on the IELTS test.

In EFL 1, the situation was somewhat the same. The teacher focused on reading and appeared to work with different texts, vocabulary and reading strategies. However, it was up to students

to use them after the 8th grade. The students mentioned that they used different ways of reading a text. This group also had the highest number of students strongly disagreeing to have used strategies on the IELTS test, and the lowest number of students agreed to having used strategies (item 22). From this we can see that students did not get any explicit teaching in reading strategies in their EFL course, which according to Anmarkrud and Refsahl (2010) is essential for developing independent strategic users.

For EFL group 2, the teacher said the students sometimes underlined words. He had not taught his students about reading strategies. The students however, said they never used reading strategies at home, and rarely in class. Sometimes they wrote a summary of the text or skimmed through a text. But they had not learned about reading strategies in their English course. This group also had a low number of students using strategies on the test (item 22).

From the questionnaire, it was evident that all four groups were somewhat similar in their responses about using reading strategies. Meaning that none of the groups used strategies consistently, or varied between different strategies and ways of reading. From the interviews, we could see that the teacher in CLIL group 2 focused on explicitly teaching the students to use reading strategies, as opposed to the three other teachers who only periodically worked with reading strategies. Evidently, and in accordance with the theory presented, in order for students to develop into independently using strategies, they need to have enough teaching and training in strategy use.

It is also noteworthy that the teachers in CLIL 1 and the two EFL groups said they did not focus on strategies throughout their teaching. From the interviews we could also see that teachers “left it up to” other subjects to teach strategies, or did not focus on reading strategies in English or RLE. The LK06, however, stresses that reading strategies should be worked on in every subject, and at every level.

To sum up so far, from the sections above it is evident that the four classes differed in several aspects concerning reading proficiency and use of reading strategies. From the IELTS test, it was clear that CLIL group 2 had the highest score and CLIL group 1 the lowest. The two EFL groups had almost similar scores. The groups also differed in factors concerning working with unfamiliar vocabulary, working with texts, being pressured in reading and motivation for reading. As is evident from Chapter 3, these factors affects each other and it is hard to say which of them has the greatest impact on the students’ reading proficiency. They can

however, help students either develop their reading proficiency further, or restrict its development. When it comes to reading strategies, the results showed that while teachers worked with reading strategies, this was done somewhat sporadically in CLIL group 1, and both of the EFL groups. The teacher in CLIL group 2, however, had a clear focus on reading strategies, which also rubbed off on her students, who also used strategies on the IELTS test more extensively than any of the other three groups.

6.4 The findings: results of having CLIL teaching?

The present thesis sets out to find differences in reading proficiency and reading strategies between two CLIL groups and two EFL groups. In the previous sections, it was evident that there were differences between the groups. However, one aspect requires discussion: are these findings a result of students having CLIL teaching? From the discussion above it became clear that the teachers' focus on texts, vocabulary and reading strategies affected the students' level of reading proficiency and their use of reading strategies. While previous studies (for example Dalton-Puffer 2008; Hellekjær and Hopfenbeck, 2012; Svenhard 2010) find that CLIL can help improve students reading proficiency, this was only the case for one of the two CLIL groups in this study. In this CLIL group, group 2, the teacher worked to expose the students to new, subject specific vocabulary and texts, as well as with reading strategies. In other words, this group was exposed to using English in a different manner than they were used to in their regular EFL classes. Having a CLIL course enabled them to read subject-specific material, in this case texts for the subject RLE and thus strengthening their reading of English. In accordance with Brinton, Snow and Wesche (1989), reading texts created for a purpose other than language teaching can increase the students' level of reading proficiency in English. Such texts can be more challenging to the students, but as is evident from the theory on pressure to learn, a certain pressure is required for students to develop. Seeing as they had the lowest average grades in English, but still scored highest on reading proficiency, their CLIL teaching can have had an influence on their development.

CLIL group 1 however, scored lowest on the reading test. However, as was evident from the interviews with the teacher in this group, they had not used that many texts in English. In addition to this, it had been up to the students to choose if they wanted to read in Norwegian or English. When faced with this choice, most of the students chose to read Norwegian texts. The theory shows that for students to develop their reading proficiency in a foreign language,

they need to be exposed to texts and vocabulary in that language (Grabe, 2009). In addition to be pressured in their learning (Krashen, 1995; Simensen, 2007).

As for their use of reading strategies, CLIL group 2 that scored highest on using strategies on the test, was also the group where the teacher focused most on using strategies. This is of course a factor influencing their use of reading strategies. This group was also the group responding that they were most exposed to challenging texts. Previous research on CLIL (Hellekjær, 1996) show that CLIL teaching forces students to develop their reading skills. If they read a text the same way they read a text in their English-subject they will get stuck. In other words, CLIL opens up for teaching students reading and word-handling strategies, and for the students using such strategies to be able to cope with a text. From the results above it is evident that this was the case in CLIL group 2.

Summing up, for CLIL teaching to be beneficial for developing reading proficiency, it is important with a certain amount of rich input in the foreign language. In addition to a certain learning pressure when working with texts and reading. Seeing as this was the case for CLIL group 2, I would argue for the fact that their CLIL teaching affected their results on reading proficiency and use of reading strategies. It is important to keep in mind that these two groups only had had CLIL teaching for two months when they were interviewed and tested. This short time span, in combination with the fact that CLIL group 1 had not focused on reading English texts, can therefore have influenced this groups' low score on the IELTS test.

6.5 Some final remarks on validity

So far, I have summed up the results of the IELTS test, questionnaire and interviews conducted for the present thesis, and discussed these findings in light of theory presented in Chapter 3. Before moving on to a conclusion, it is however necessary to address the validity of the results.

In Chapter 4, Method, I discussed the potential weaknesses of the external validity of the present survey. Seeing, as the sample is a small one, comprising only four schools that were not randomly selected, I cannot say that the findings are transferable to the population as a whole. I will, however, argue for that the results found in the present study are interesting enough to merit future research.

It is also necessary to comment on the study's construct validity, whether the test scores and questionnaire used actually measure what they are supposed to measure. As argued for in Chapter 4, the IELTS test is internationally recognized for testing reading proficiency. As for the items used in the questionnaire, Hellekjær (2005) has, as mentioned used some of them previously in a doctoral thesis. For the other items created for this study I will argue for their validity seeing as many of them were confirmed by the answers from the interviews, as well as the score on the IELTS test, and on the items on the questionnaire. Thus, the triangulation of methods used in this study, helps strengthen its validity. As far as the interviews go, I have tried to portray them objectively while being aware of researcher bias. Worth mentioning is of course the fact that only a sample of the students were interviewed, their responses cannot reflect their whole group. However, the answers from the informants often were in agreement with the responses from the questionnaire thus strengthening their validity. Furthermore, the results of the present study are in agreement with previous studies on reading proficiency and reading strategies. While these studies are not of the exact same field, the fact that they are in agreement with the present study, can also be regarded as an indication of validity.

6.6 Chapter summary

In this chapter, I have discussed the finding of the present study in light of some of the theory presented in Chapter 3. Theory on vocabulary, working with texts and motivation for reading appeared suitable to explain the groups' differences regarding the IELTS test. The teachers focus and implementation of reading strategies seemed to provide grounds for the differences in use of reading strategies on the test, and on the overall reading of English. In the chapter, I have also commented on the validity of the study.

7 Conclusion

In this final chapter, I discuss some implications of the study's findings, in addition to making some suggestions for further research. Finally, I make a few concluding remarks.

7.1 Implications of the findings

In the present study, I have examined whether CLIL and EFL students differ in reading, with focusing on reading proficiency and their reading strategy use. According to my findings, they differ in a number of respects. As was evident in Chapter 6, how teachers focus on vocabulary and working with texts can influence the students' motivation for reading as well as their overall reading proficiency.

As explained in Chapter 6, how teachers and students work with vocabulary is essential for students developing their reading of English texts. I therefore argue that in all classrooms, CLIL and EFL alike, teachers need to focus more on working with vocabulary. Students also need to learn how to effectively deal with unfamiliar vocabulary in order to maintain a fluent reading process. When working with vocabulary it is important that students take an active part, and not only receive word lists from their teacher. While this can be time consuming, it will ease students' further reading of English.

Furthermore, the teachers need to be aware of how students experience the texts they work with in class. While it can be difficult to find texts adjusted to all students' level of proficiency, it is important that the teachers at least are aware of the students experiencing texts as either too boring or too easy. I therefore argue the need for teachers communicating with their students about how they experience the reading, and also about the choice of reading material. As was evident from my interviews, the students had thoughts about their reading, and some were even asking for more challenges when reading texts. It is important that teachers also gain this knowledge from their students, as I believe this can make their teaching, and students learning, more efficient. And as was evident in Chapter 6, it can also lead to more motivated students

Moreover, it was evident that both CLIL students and EFL students need to be put under greater pressure in their reading. For EFL classrooms, I argue for the importance of more challenging texts, as well as reading texts in different genres. While I am sure that textbooks

designed for these courses function as good tools for teachers, students also need to meet texts from other genres, and above all, longer texts. This can be beneficial both for developing their vocabulary knowledge, their motivation for reading and improving their overall level of reading proficiency. For CLIL classrooms, I argue for the importance of using English texts whenever possible. Chapter 5 and 6 showed that for CLIL teaching to be beneficial, a certain amount of pressure to learn is needed; the students need to be challenged in order for them to develop. For reading, this can be done through using English texts of various genres and difficulty. Indeed, basing CLIL instruction on Norwegian texts and textbooks removes much of the learning potential from CLIL instruction.

Furthermore, my study, as do Hellekjær and Hopfenbeck (2012), makes it quite clear that the CLIL teaching must be of a certain volume and quality. This involves ensuring rich input through reading material in English, and how the teachers properly adapt students to CLIL teaching through adjusting their teaching methods.

As for reading strategy use, teachers need to understand the importance of students using reading strategies to develop their reading proficiency. I argue for teachers' need to implement reading strategies as a natural part of in their teaching of reading or in situations where students are reading to learn. This will require teachers to expand their own knowledge of strategies and how they can be taught, and to focus more on strategies in their teaching. While this may not have been a focus in earlier curricula, it is an important focus in the LK06, and thus a part of what are required from teachers. It cannot be emphasized strongly enough that students being able to use reading strategies effectively requires the explicit and integrated explicit teaching of these, in English as well as in other subjects.

7.2 Suggestions for further research

As noted in Chapter 4, I stated that the extent to which the findings of this study can be generalized is somewhat limited. An important reason for this is the small size of the sample. It comprises four classes from two schools only, and it would thus be interesting to conduct the study on a larger sample. It might also be interesting to conduct a study on the two classrooms at other levels, for instance at upper secondary.

It would also be interesting to conduct a study where the CLIL teaching has been going on for a longer time span than was the case in this study. In addition it would be interesting with a

scheme that allows the researchers to pre- and post-testing the sample and the control groups to better look for changes happening over time. Given that the required time and resources are available, one might also conduct a study where samples are tested using a complete IELTS test and not only one part of it, as is used in this study.

7.3 Concluding remarks

After working with this thesis I have gained a deeper knowledge of reading proficiency, reading strategy use, and the differences between CLIL and EFL classrooms. I have learned that CLIL can be a good alternative for developing students reading proficiency, but that CLIL teaching must be of a certain volume and quality and include what I have called pressure to learn. Just doing CLIL is not enough in itself. I have also learned that the EFL classrooms need challenges in reading as well. With regard to reading strategies, I have seen the importance of explicitly teaching this to the students, as well as the importance of the teacher helping them develop into becoming strategic readers. I will try to bring this with me into my future career as a teacher.

References

- Alderson, J. C. (1984). Reading in a foreign language: a reading problem or a language problem? In J. C. Alderson & A. H. Urquhart (Eds.), *Reading in a Foreign Language* (pp. 1-27). London: Longman.
- Alderson, J. C. (2000). *Assessing Reading*. Cambridge: Cambridge University Press.
- Anmarkrud, Ø., & Refsahl, V. (2010). *Gode lesestrategier - på mellomtrinnet*. Oslo: Cappelen Akademisk Forlag.
- Ary, D., Jacobs, L. C., & Sorensen, C. (2010). *Introduction to research in education*. Belmont, Calif.: Wadsworth Cengage Learning.
- Bakke, M. H. (2010). *What are teachers' attitudes towards reading in EFL-instruction and how is it taught in class?* (Master's thesis). University of Oslo. Retrieved December 2012, from DUO
<https://www.duo.uio.no/bitstream/handle/10852/32416/MasteroppgavexixEngelskdida ktikkxxMargrethexHxBakke.pdf?sequence=2>
- Barnett, M. A. (1989). *More than meets the eye: Foreign language reading: Theory and Practice*. Englewood Cliffs, NJ: Prentice Hall.
- Bernhardt, E. B. (1991). *Reading development in a second language: Theoretical, research and classroom perspectives*. Norwood, NJ: Ablex.
- Bernhardt, E. B. (2011). *Understanding Advanced Second-Language Reading*. New York and London: Routledge.
- Bernhardt, E. B., & Kamil, M. L. (1995). Interpreting Relationships between L1 and L2 Reading: Consolidating the Linguistic Threshold and the Linguistic Interdependence Hypotheses. *Applied Linguistics*, 16 (1), 15-34.
- Brevik, L. M., & Moe, E. (2012). Effects of CLIL teaching on language outcomes. In Tsagari, D., & Csépes, I. *Collaboration in Language Testing and Assessment* (pp. 213-227). Frankfurt am Main: Peter Lang Publishing Group.
- Brinton, D. M., Snow, M. A., & Wesche, M. B. (1989). *Content-Based Second Language Instruction*. New York: Newbury House.
- Bråten, I. (2007). *Leseforståelse. Lesing i kunnskapssamfunnet - teori og praksis*. Oslo: Cappelen Akademisk Forlag.
- Cambridge ESOL. (2007). *Cambridge IETLS 6. Examination papers from University of Cambridge ESOL Examinations*. Cambridge: Cambridge University Press.
- Coyle, D., Hood, P., & Marsh, D. (2010). *CLIL. Content and Language Integrated Learning*. Cambridge, UK: Cambridge University Press.
- Dalton-Puffer, C. (2008). Outcomes and processes in Content and Language Integrated Learning (CLIL): Current Research from Europe. In W. Delanoy & L.-. Volkmann (Eds.), *Future perspectives for English language teaching* (pp. 139-158). Heidelberg: Carl Winter.
- Faye-Schjøll, L. H. (2009). *Reading in upper secondary; What do they read, how is it taught, and what are the teachers' attitudes towards the teaching of reading?* (Master's thesis). University of Oslo. Retrieved December 2012, from DUO
<https://www.duo.uio.no/bitstream/handle/10852/32429/OppgavenxixDUOxmed.pdf?s equence=1>
- Frønes, T., & Narvhus, E. K. (2010). Lesing: rammeverk, tekster og oppgaver. In M. Kjærnsli & A. Roe (Eds.), *På rett spor: norske elevers kompetanse i lesing, matematikk og naturfag i PISA 2009* (pp. 31-58). Oslo: Universitetsforlaget.
- Grabe, W. (1999). Developments in reading research and their implications for computer-adaptive reading assessment. In M. Chalhoub-Deville & M. Milanovic (Eds.), *Studies*

- in *Language Testing 10. Issues in computer-adaptive testing of reading proficiency* (pp. 11-38). Cambridge: Cambridge University Press.
- Grabe, W. (2009). *Reading in a Second Language. Moving from Theory to Practice*. Cambridge: Cambridge University Press.
- Grabe, W., & Stoller, F. L. (2002). *Teaching and Researching Reading*. Harlow, England: Pearson Education.
- Hellekjær, G. O. (1996). Easy does it: Introducing Pupils to Bilingual Instruction. *Språk og språkundervisning* (3), pp.9-14.
- Hellekjær, G. O. (2005). *The Acid Test: Does Upper Secondary EFL Instruction Effectively Prepare Norwegian Students for the Reading of English Textbooks at Colleges and Universities?* (Doctoral dissertation). University of Oslo, Oslo.
- Hellekjær, G. O. (2008). A Case of Improved Reading Instruction for Academic English Reading Proficiency. *Acta Didactica Norge* (2), pp.1-17.
- Hellekjær, G. O. (2012). Engelsk programfag – to års engelskundervisning uten å bli bedre lesere. *Bedre skole* (3), pp. 23-29.
- Hellekjær, G. O., & Hopfenbeck, T. (2012). Rapportene fra FoU-prosjektene. 1 Lesing. CLIL og lesing. *Fokus på språk* (28), pp.84-124.
- Hudson, T. (1998). Theoretical Perspectives on Reading. *Annual Review of Applied Linguistics*(18), 43-60.
- Koda, K. (2004). *Insights into Second Language Reading. A Cross-Linguistic Approach*. Cambridge: Cambridge University Press.
- Koda, K. (2007). Reading and language learning: Crosslinguistic constraints on second language reading development. *Language Learning*, 57 (Issue supplement), pp. 1-44.
- Krashen, S. D. (1995). *Principles and practice in second language acquisition*. Hertfordshire, U.K: Prentice Hall Europe.
- Krashen, S. D., & Terrell, T. D. (1988). *The Natural Approach. Language Acquisition in the Classroom*. Hertfordshire, U.K: Prentice Hall International.
- Kvale, S., & Brinkmann, S. (2009). *Det kvalitative forskningsintervju*. Oslo: Gyldendal akademisk.
- McNamara, D. (2007). *Reading Comprehension Strategies. Theories, Interventions and Technologies*. New York: Lawrence Erlbaum Associates.
- McNamara, D., Ozuru, Y., Best, R., & O'Reilly, T. (2007). The 4-Pronged Comprehension Strategy Framework. In D. McNamara (Ed.), *Reading Comprehension Strategies. Theories, Interventions and Technologies* (pp. 347-374). New York: Lawrence Erlbaum Associates.
- Moe, E. (2010). CLIL og språkutvikling. *Fokus på språk* (24), pp.38-61.
- Ryan, R., & Deci, E. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist* (55), pp.68-78.
- Simensen, A. M. (2007). *Teaching a Foreign Language. principles and procedures* (2nd Edition). Bergen: Fagbokforlaget.
- Skogen, M. (2012). Reading in CLIL in Social Science at the VG1-level; How is reading focused on in CLIL? (Paper). Unpublished manuscript.
- Stangland, T. K., & Forsth, L.-R. (2001). *Huriglesing superlesing fotolesing*. Oslo: Aquarius Forlag as.
- Svenhard, B. W. (2010). Innledning. *Fokus på språk* (24), pp.5-6.
- Svenhard, B. W., & Cherubini, N. (2010). Developing receptive and productive skills through the use of learning centres. *Fokus på språk* (24), pp.20-37.

- Teddlie, C., & Onwuegbuzie, A. (2003). A framework for analyzing data in mixed methods research. In A. Tashakkori & C. Teddlie (Eds.), *Handbook of mixed methods in social & behavioral research* (pp. 351-383). Thousand Oaks, California: SAGE.
- Teddlie, C., & Tashakkori, A. (2006). A general typology of research designs featuring mixed methods. *Research in the schools*, 13 (1), 12-28.
- Turmo, A. (2011). Læringstrykk i grunnsopplæringen - et uutnyttet potensial? In N. P. Sandbu, G. Nygård, T. A. Galloway, L. A. Støren & A. Turmo (Eds.), *Utdanning 2011: veien til arbeidslivet*: Statistisk sentralbyrå.
- Ushioda, E. (2012). Motivation. In A. Burns & J. C. Richards (Eds.), *The Cambridge Guide to Pedagogy and Practice in Second Language Teaching*: Cambridge University Press.

Curricula and guidance material:

- Kunnskapsdepartementet. (1999). The Curriculum for the 10-year compulsory school in Norway. Oslo: The Royal Ministry of Education, Research and Church Affairs. Retrieved April 2013, from <http://www.nb.no/nbsok/nb/eeb606a971da3830a51ada32c54d2f96?index=0#0>
- Kunnskapsdepartementet. (2007). *Språk åpner dører. Strategi for styrking av fremmedspråk i grunnsopplæringen 2005-2009*. Retrieved April, 2013 from http://www.regjeringen.no/upload/KD/Vedlegg/Grunnskole/Strategiplaner/UDIR_SprakApnerDorer_07nett.pdf
- Utdanningsdirektoratet. *Curriculum in English*. Retrieved March 2013, from http://www.udir.no/Stottemeny/English/Curriculum-in-English/_english/Curricula-in-English/.
- Utdanningsdirektoratet. *Framework for basic skills*. Retrieved April, 2013 from http://www.udir.no/PageFiles/66463/Framework_FOR_BASIC_SKILLS.pdf?epslanguage=no
- Utdanningsdirektoratet. *The Quality Framework*. Retrieved October 2012, from http://www.udir.no/Upload/larerplaner/Fastsatte_lareplaner_for_Kunnskapsloftet/5/p_rinsipper_lk06_Eng.pdf?epslanguage=no

Appendices

Appendix A: Cover Letter

ENGELSK LESETEST OG SPØRRESKJEMAET

Kjære elev!

Denne lesetesten og spørreskjemaet er en del av et forskningsprosjekt som ser på lesing i CLIL-klasser og i vanlige engelskklasser.

CLIL står for content and language integrated learning, og er en undervisningsform der et ikke-språkfag (for eksempel religion eller samfunnsfag) undervises på engelsk, eller på et annet fremmedspråk.

Dine svar vil være av stor verdi for oss. Svar derfor så korrekt du kan – og spør oss gjerne om du lurer på noe.

Husk at du er anonym, og at dine svar ikke kan føres tilbake til deg. Husk også at du når som helst kan trekke deg fra testen, uten at dette vil få noen konsekvenser for deg.

HVORDAN DU SKAL GJENNOMFØRE TESTEN

I dette heftet du har fått utlevert skal du først fylle ut en engelsk lesetest. Skriv svarene dine på svararket på side 11.

Deretter skal du svare på et spørreskjema. Det er viktig at du følger instruksene i spørreskjemaet og svarer på alle spørsmålene slik at vi får best mulig innblikk i hvordan du og dine medstudenter leser og tenker om lesing.

Når du er ferdig med spørreskjemaet lever det til oss.

TAKK FOR HJELPEN! ☺

Appendix B: IELTS Reading Test

General Training: Reading and Writing

SECTION 3 Questions 28–40

Read the text on pages 122 and 123 and answer Questions 28–40.

PTEROSAURS

Remains of the pterosaur, a cousin of the dinosaur, are found on every continent.

Richard Monastersky reports

- A** Pterosaurs stand out as one of nature's great success stories. They first appeared during the Triassic period, 215 million years ago, and thrived for 150 million years before becoming extinct at the end of the Cretaceous period. Uncontested in the air, pterosaurs colonised all continents and evolved into a vast array of shapes and sizes.
- B** Until recently, most scientists would not have put pterosaurs in the same class as birds in terms of flying ability. Because pterosaurs were reptiles, generations of researchers imagined that these creatures must have been cold-blooded, like modern snakes and lizards. This would have made flying awkward, as they would have lacked the endurance to power their muscles for long periods of time.
- C** In the past three decades, however, a number of fossil* discoveries have prompted researchers to re-examine their views. The new picture of pterosaurs reveals that they were unlike any modern reptile. From a fossil discovered in Kazakhstan, scientists suspect that pterosaurs had a covering resembling fur. If so, this detail provides evidence of a warm-blooded body that could maintain the kind of effort needed to stay in the air. Indeed, scientists now believe that many pterosaurs were gifted airborne predators, built to feed while in flight. And, in fact, such controversy has

* *fossil*: the remains or impression of a plant or animal which has been preserved in rock for a long time



The Pterosaur: a flying reptile that lived during the time of the dinosaur

- surrounded pterosaurs since the first discovery of one in the early 1700s.
- D** Cosimo Alessandro Collini, the first natural historian to study the fossil and describe it, was unable to classify it. It was not until 1791 that the great French anatomist Georges Cuvier deduced that the animal was in fact a flying reptile, whose fourth finger supported a wing. He named the fossil *Pterodactylus*, combining the Greek words for wing and finger. A few decades later, the name pterosaur, or winged reptile, was adopted to describe the growing list of similar fossils.
- E** In 1873, a remarkable pterosaur specimen came to light that confirmed Cuvier's deduction. Unlike earlier fossils, this new find near the Bavarian town of Solnhofen contained delicate wing impressions, establishing definitely that the extinct reptile was capable of flight. Even though over a thousand pterosaur specimens are known today, such wing impressions remain rare. Normally only bones survive the fossilisation process.
- F** But how pterosaurs learnt to fly remains a matter for disagreement. Most researchers conclude that pterosaurs are

descended from a small tree-dwelling reptile that spent its life jumping between branches. This creature would have spread its limbs, and used flaps of skin attached to its limbs and body to help it to land gently on the ground. Over many generations the fourth finger on each of its front 'arms' would have grown longer, making the skin surface larger and enabling the animal to glide farther. Meanwhile, the competing argument holds that pterosaurs developed from two-legged reptiles that ran along the ground, perhaps spreading their arms for balance. Through gradual growth, the front arms would then have evolved into wings. This difficult issue will only be resolved with the discovery of earlier forms of pterosaurs.

G 'It's very difficult to say how pterosaurs changed over time because the earliest fossils we have are of pterosaurs whose fourth finger has already transformed into a wing,' says Fabio dalla Vecchia, an Italian researcher. In fact, the earliest known pterosaurs came from the mountains of northern Italy, where he has spent years searching for flying reptiles. These species have shorter wings than later forms, but there is evidence that they were skilful fliers, capable of catching fish over open water. Proof of this has been found in the fossil of a *Eudimorphodon*, a 215-million-year-old pterosaur found near Bergamo, Italy. Under a microscope, several fish scales can be seen in the abdomen of the specimen – the remains of the pterosaur's last meal.

H A different but equally impressive sight is the life-size model of *Quetzalcoatlus northropi*, which stares down at visitors in the Museum of Flying in Santa Monica, California. It has a beak the size of a man and wings wider than those of many of the planes exhibited nearby. This pterosaur had wings over 11 metres wide, making it the largest flying animal ever known.

I *Quetzalcoatlus* represents the height of pterosaur evolution. 'Unlike smaller pterosaurs, it could use natural currents to stay in the air without having to move its wings continuously,' said Paul MacCready, an aeronautical engineer. 'As pterosaurs got larger, they discovered the benefits of gliding on air currents, making use of a free energy source. With their hollow bones, these pterosaurs had a very light construction, ideal for such activity.'

J As we walked beneath the *Quetzalcoatlus* model in Santa Monica, MacCready pointed out its similarity to sailplanes, the most efficient kind of aeroplanes. Both have long slender wings designed to fly with minimum power. During flight, sailplane pilots routinely search for places where heat rises from sun-baked earth, creating hot air currents called thermals. Undoubtedly, *Quetzalcoatlus* would have used thermals as well, lazily circling over the river deltas that once covered parts of Texas.

K The triumphant reign of pterosaurs ended with this giant flier. At the end of the Cretaceous period 65 million years ago, a meteorite or comet slammed into the Earth. That calamity – and other events – wiped out roughly three quarters of all species, including all pterosaurs and dinosaurs. But before their disappearance, pterosaurs enjoyed unequalled success. They flew into sunny skies before any other vertebrate. For 150 million years they sailed the winds on the strength of a fragile finger. What a glorious ride they had.

General Training: Reading and Writing

Questions 28–34

The text has eleven paragraphs, A–K.

Which paragraph contains the following information?

Write the correct letter, A–K, in boxes 28–34 on your answer sheet.

- 28 similarities between pterosaurs and mechanical flight
- 29 the identification of the type of creature a pterosaur actually was
- 30 conflicting theories about how pterosaurs came to fly
- 31 the cause of widespread destruction of animal life on our planet
- 32 the fact that pterosaurs once existed all over the world
- 33 the first clear proof that pterosaurs could fly
- 34 concrete evidence that pterosaurs hunted their food from the air

Questions 35–38

Look at the following statements (Questions 35–38) and the list of people below.

Match each statement with the correct person, A, B, C or D.

Write the correct letter, A, B, C or D, in boxes 35–38 on your answer sheet.

- 35 He refers to the difficulty of determining how pterosaurs evolved without further evidence.
- 36 He failed to interpret the evidence before him.
- 37 He gave an appropriate name to the first pterosaur that was discovered. **A**
- 38 He mentions the ability of pterosaurs to take advantage of their environment.

List of People

- A** Cosimo Alessandro Collini
- B** Georges Cuvier
- C** Fabio dalla Vecchia
- D** Paul MacCready

Questions 39 and 40

Complete the sentences below.

Choose **NO MORE THAN THREE WORDS AND/OR A NUMBER** from the text for each answer.

Write your answers in boxes 39 and 40 on your answer sheet.

39 So far, evidence of a total of pterosaurs has been discovered.

40 The wings of *Quetzalcoatlus* measured more than across.

SVARARK FOR LESETESTEN

28		28
29		29
30		30
31		31
32		32
33		33
34		34
35		35
36		36
37		37
38		38
39		39
40		40

Appendix C: Questionnaire

There were two different versions of the questionnaire were used, one for the EFL classes and one for the CLIL classes. They both contained the same number of questions, and contained the same questions. The difference between the two were the way they were phrased; for the EFL class the questions concerned their reading and use of reading strategies in their English subject. The following questionnaire was given to the CLIL students. The EFL students received the same questionnaire, with *EFL* used where *CLIL* is used below.

Spørreskjema til CLIL-klassen på 10.trinn

Spørsmål om din lesing av engelske tekster i CLIL-faget

Under følger noen spørsmål om hvordan du opplever lesing av tekster i CLIL-faget. Gi kun ett svar per spørsmål.

1. Hvor raskt leser du engelske tekster i CLIL-faget?

Veldig sakte

Middels

Raskt og enkelt

1

2

3

4

5

2. Hvor ofte opplever du en CLIL-tekst som utfordrende?

Aldri

Noen ganger

Ofte

Nesten Alltid

Alltid

3. Hvis du opplever at en CLIL-tekst er utfordrende, fortsetter du å lese den?

Ja

Nei

4. Hvis ja, hvor ofte opplever du at du forstår teksten etter hvert?

Aldri

Noen ganger

Ofte

Nesten Alltid

Alltid

5. Hvor ofte gir du opp å lese fordi teksten er for vanskelig?

Aldri Noen ganger Ofte Nesten Alltid Alltid

6. Hvor ofte opplever du at læreren din oppfordrer deg til å arbeide med utfordrende tekster?

Aldri Noen ganger Ofte Nesten Alltid Alltid

7. Hvor ofte opplever du at læreren din hjelper deg med å mestre utfordrende tekster?

Aldri Noen ganger Ofte Nesten Alltid Alltid

Spørsmål om din bruk av lesestrategier i CLIL-faget

Det er flere måter å arbeide på for å forstå tekster. Nedenfor følger noen spørsmål om hvordan du leser for å få med deg innholdet i tekstene. Gi kun ett svar per spørsmål.

8. Når jeg leser en tekst, leser jeg gjennom den kun en gang

Aldri Noen ganger Ofte Nesten Alltid Alltid

9. Når jeg leser en tekst leser jeg raskt gjennom den en gang, for deretter å lese nøye gjennom den etterpå

Aldri Noen ganger Ofte Nesten Alltid Alltid

10. Når jeg leser en tekst første gang stopper jeg opp ved ukjente ord

Aldri Noen ganger Ofte Nesten Alltid Alltid

11. Jeg leser tekster nøye for å få med meg alle detaljer

Aldri Noen ganger Ofte Nesten Alltid Alltid

12. Når jeg leser en tekst understreker jeg ord eller skriver ned viktige stikkord

Aldri Noen ganger Ofte Nesten Alltid Alltid

13. Når jeg leser skriver jeg sammendrag av teksten

Aldri Noen ganger Ofte Nesten Alltid Alltid

14. Når jeg leser forsøker jeg å organisere teksten ved å for eksempel lage et tankekart eller lignende

Aldri Noen ganger Ofte Nesten Alltid Alltid

15. Når jeg leser forsøker jeg å forstå stoffet bedre ved å knytte det til noe jeg kan fra før

Aldri Noen ganger Ofte Nesten Alltid Alltid

16. Jeg tar ofte pauser mens jeg leser for å tenke over hva jeg har lest

Aldri Noen ganger Ofte Nesten Alltid Alltid

17. Når jeg har lest ferdig kontrollerer jeg hvor mye jeg har forstått av teksten

Aldri Noen ganger Ofte Nesten Alltid Alltid

Spørsmål om lesetesten du nettopp hadde

Under følger noen spørsmål om leseprøven du nå har hatt. Svar på hvor enig eller uenig du er i følgende utsagn. Kun ett svar per spørsmål.

18. Jeg var motivert for å gjøre mitt beste på leseprøven

Svært uenig Uenig Enig Svært Enig

19. Det var viktig for meg å gjøre det bra på leseprøven

Svært uenig Uenig Enig Svært Enig

20. Jeg opplevde teksten i leseprøven som mer utfordrende enn tekster jeg leser i CLIL-faget?

Svært uenig Uenig Enig Svært Enig

21. Jeg arbeidet med å forstå teksten uten å gi opp, selv om den var vanskelig

Svært uenig Uenig Enig Svært Enig

22. Jeg brukte lesestrategier for å forstå teksten i leseprøven

Svært uenig Uenig Enig Svært Enig

23. Jeg gjorde mitt beste på leseprøven

Svært uenig Uenig Enig Svært Enig

Litt om din egen bakgrunn

24. Gutt Jente

25. Hvilke språk er ditt førstespråk (morsmål)?

Norsk Engelsk Annet

26. Hvis du IKKE er født i Norge, hvor gammel var du da du kom til Norge?

Alder: _____

Hvis du var yngre enn 12 måneder, skriver du null (0)

Hvis du er født i Norge, hopper du over dette spørsmålet.

27.1 Er en eller begge av foreldrene dine fra Norge?

Ja

Nei

27.2 Hvis nei på 27.1, er en eller begge av foreldrene dine fra engelskspråklige land?

Ja

Nei

28. Hvor ofte snakker du engelsk hjemme?

Aldri

Sjelden

Månedlig

Ukentlig

Daglig

29. Har du bodd i et engelsktalende land?

Nei

Ja, i mindre enn 12 måneder

Ja, 12 måneder eller mer

30. Har du gått på skole utenfor Norge?

Nei

Ja, i et engelsktalende land

Ja, i et ikke-engelsk talende land

Litt om din skolebakgrunn

31.1 Har du undervisning i engelsk i et *ikke*-språkfag, som for eksempel historie, samfunnsfag eller reiligon?

Ja Nei

31.2 Hvis ja kan du anslå i prosent hvor mye av undervisningen som er på engelsk?

_____ %

32. Hvilken karakter fikk du i standpunkt i engelsk skriftlig på 9.trinn?

1 2 3 4 5 6

33. Hvilken karakter fikk du i standpunkt i engelsk muntlig på 9.trinn?

1 2 3 4 5 6

Appendix D: Semi-structured Interview Guide

Lærere:

Bakgrunn:

- Hva slags utdanning har du?
- Hvor mange år har du undervist?
- Er dette første gangen du underviser en CLIL-klasse/EFL-klasse? Hvis ikke, hvor mye erfaring har du med denne typen undervisning?
- (Hvor lenge har du hatt CLIL-undervisning i denne klassen?)
- Hvordan opplever du å undervise en CLIL-klasse/EFL-klasse?

Lesing: hvor mye og hva?

- Bruker du en lærebok? Hvordan og hvor mye?
- Hvor mye leser dere utenom denne læreboken? Hva slags tekster?

Lesing: hvilke problemer pleier dukker opp?

- Hvilke problemer pleier å oppstå når elevene leser?
- Hvordan løser du/dere disse problemene?

Lesestrategier:

- Hva betyr begrepet lesestrategier for deg?
- Underviser du elevene i lesestrategier? Hvordan og hvorfor/hvorfor ikke?

Læringstrykk:

- Legger du vekt på å finne tekster som utfordrer elevene?
- Hvordan hjelper du elevene å mestre vanskelige tekster?
- Er lesing og det å finne tekster et område du fokuserer på i din undervisning?

Er det noe du vil legge til?

Elever:

Bakgrunn:

Hvilke klassetrinn går du på?

Har du engelsk som valgfag i tillegg til CLIL-faget?

Lesing: hvor mye og hva?

- Bruker dere en lærebok? Hvor mye?
- Hva slags tekster leser dere i tillegg?
- Er lesing et fokus i undervisningen?

Lesing: hvilke problemer dukker opp?

- Hva slags problemer oppstår vanligvis når du leser?
- Hvordan løser du disse problemene?

Lesestrategier:

- Beskriv hvordan du leser engelske tekster.
- Hva betyr uttrykket lesestrategier for deg?
- Har du lært om lesestrategier i undervisningen?
- Bruker du det når du leser?

Læringstrykk:

- Opplever du at tekstene du leser er utfordrende?
- Er tekstene du leser overkommelige?
- Gir du ofte opp å lese tekster fordi de er for vanskelige?

Er det noe du vil legge til?