

“YESTERDAY I MET THE BIGGEST ICE CREAM AND  
DRINKED THE BIGGEST COKE OF MY LIFE”:

Are there differences in the competence of English  
grammar between CLIL students and non-CLIL students?

Pro Gradu Thesis

by

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Tiivistelmä – Abstract  <p>CLIL (Content and Language Integrated Learning) opetusmenetelmässä oppilaiden vieraan kielen kehityksen on huomattu olevan nopeampaa kuin ei-CLIL oppilaiden. Vieraan kielen käyttö opetuksessa tarkoittaa, että vieras kieli ei ole oppimisen kohde vaan oppimisen väline. Oppilaat oppivat kieltä käyttämällä tätä kouluaineen opiskelussa. CLIL menetelmän positiivisia puolia ovat, että oppilaan vieraan kielen kommunikatiiviset taidot kehittyvät ja sanavarasto kasvaa. Kieliopin kehityksestä CLIL opetuksessa ei ole vielä laajoja tutkimuksia. Kieliopin kehittymistä CLIL opetuksessa on kritisoitu, koska opetuksen pääpaino ei ole kielen oppimisessa.</p> <p>Tutkielman tarkoituksena on selvittää eroavatko kuudesluokkalaisten CLIL oppilaiden englannin kielioppitaidot normaalissa englanninopetuksessa olevien oppilaiden kielioppitaidoista. Tutkimus toteutettiin kielioppitestin avulla, jonka teki yhteensä 122 oppilasta. Tutkimuksen tarkastelun kohteena on englannin apuverbien <i>do</i>, <i>does</i> käyttö, kolmannen persoonan s-päätteen käyttö, epämääräisen ja määräisen artikkelin käyttö, imperfektin tunnistus ja sen käyttö, futuurin ja konditionaalin tunnistus ja persoonapronomien käyttö. Tutkimuksessa tarkastellaan onko CLIL ja ei-CLIL oppilaiden välillä eroja englannin kielen kielioppitaidoissa ja jos eroja ilmenee, minkälaisia eroja tutkimuksen mukaan oppilaiden välillä on ja missä kieliopin eri alueilla.</p> <p>Tämän tutkimuksen mukaan CLIL oppilaiden englannin kielioppitaidot ovat ei-CLIL oppilaisiin verrattuna paremmat. Tutkimuksen mukaan CLIL oppilaat päihittävät ei-CLIL oppilaat kielioppitestin kaikilla osa-alueilla, joten voidaan sanoa, että CLIL opetusmenetelmä vaikuttaa positiivisesti kieliopin kehittymiseen. CLIL menetelmän käyttöä tulisi tutkia lisää. Tarvittaisiin lisätietoa vieraan kielen kehityksestä sekä tämän vaikutuksista äidinkielen kehittymiseen.</p>	
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I hope this Pro Gradu Thesis will offer basic information about CLIL, in general, but also about the effect of CLIL on learning English grammar. My wish is to be able to be a CLIL teacher in the future and hopefully inspire other language teachers or content teachers to the world of CLIL.

*“Tell me,  
and I will forget.  
Show me,  
and I may remember.  
Involve me,  
and I will understand.”*

Konfutse 450 eKr.

Sincerely,

Mirva Mäkinen

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## 1 INTRODUCTION

Bilingual education is not a new phenomenon. According to Räsänen (1994: 16), it dates far back in history when bilingual education was used to help immigrants to adapt to a new language. Because of the long traditions of bilingual education and its many versions, there are different ways to use bilingual education. Content and Language Integrated Learning, also known as CLIL, is becoming more and more popular in Finland as well as elsewhere in Europe. In Content and Language Integrated Learning the weight is on learning the content, not on learning the language. One of CLIL's many positive aspects is that students learn that language is not just a target of learning but also a way to study different subjects (Nikula and Marsh 1997: 70). The main goal of CLIL teaching is to develop students' language skills. In addition, according to Marsh and Hartiala (2001: 21), one of CLIL's aims is to develop intercultural knowledge and understanding while teaching communicative skills. As a result, CLIL teaching is not just a way of learning languages but it is connected to intercultural knowledge as well. In other words, it can be said that CLIL is a dual-focused approach; a foreign language is used for learning and teaching of content and language (Mehisto, Marsh and Frigols 2008: 9). In Finland, CLIL is already quite known among teachers but, on the other hand, there are many interesting and valuable areas that should be studied.

It is widely acknowledged that CLIL students have better language skills than non-CLIL students because of the amount of exposure CLIL students have to the target language at school. However, the development of grammar skills is under debate. For example, Nikula and Marsh (1997: 8) point out that there should be more focus on form in CLIL classes because there seems not to be a great influence on students learning grammar. Järvinen (1999: 18), in addition, says that that productive skills do not develop like other language skills. In addition, Järvinen (1999: 22) points out that there has been found excellent results in receptive skills but not in productive skills. Rasinen (2007: 103) also points out that using a foreign language as a medium of teaching offers more situations and opportunities to practise and use the foreign language. This results in better development of the language skills. Rasinen adds that the positive sides of CLIL are that students have authentic situations, various topics, versatile written materials and communication with different teachers, which all

together enhance foreign language learning. Moreover, Mehisto et al. (2008: 169) point out that content teachers should consider how to increase focus on form to increase the accuracy of students language use. In addition, Mehisto et al. (2008: 169) say that by long run focus on form will be seen in more accurate expressions and content. On the other hand, they say that language teachers should use the materials from content subject to motivate the students. As can be seen, there are many positive effects of using a foreign language as a medium of teaching, however, the learning of grammar in CLIL classes is a controversial issue that should be studied more.

The purpose of the present study is to examine if there are differences in competence in English grammar between CLIL and non-CLIL students in grade six of Finnish basic education and if it can be pointed out, in what areas of English grammar the differences are. In addition, it is discussed if there are similarities in the mistakes made by CLIL students and non-CLIL students. In general, it is hoped to find out some useful information about the grammar development of a foreign language in CLIL teaching; do the grammar skills differ between CLIL and non-CLIL students and if there is a difference in the competence, in what areas of grammar the differences are? The study was carried out in three different schools by a grammar test which the students filled in. The grammar tests were studied quantitatively and the results of the CLIL students and the non-CLIL students were compared. In addition, the errors were taken into account and the error types were studied qualitatively to find out if there were differences or similarities between the students.

In the first part of the study bilingualism and its many different definitions are discussed. In addition, it is seen how the different definitions of bilingualism affect bilingual education. In chapter three, Content and Language Integrated Learning is discussed. It is seen what kind of positive effects CLIL has on foreign language learning or learning in general. Moreover, it is discussed what the Finnish national curriculum says about bilingual education. Criticism on CLIL is also taken into account. The framework of this study is introduced in chapter four. Different views of learning a foreign language in bilingual education are taken into account, such as Krashen's Monitor Hypothesis, Vygotsky's zone of proximal development and the Output Hypothesis by Swain. The present study is presented in chapter five. In

chapter six the results of the study are discussed by taking a look at the average results of the exercises and examining each exercise in turn.



## **2 BILINGUALISM**

According to Beardsmore (1986: 1), bilingualism as a concept has an open-ended semantics. Beardsmore compares bilingualism as a concept to a word as a concept; everyone knows what a word is but its definition is inadequate and it is difficult to explain what is meant by it. In other words, bilingualism can mean different things for different people and there is no one definition of bilingualism but many. In general, it can be said that bilingualism refers to people who are able to speak two languages (Myers-Scotton 2006: 2). Next the various perspectives to bilingualism are going to be discussed because all these have an effect on bilingual education and its aims. The perspectives examined vary from old to new; it has to be acknowledged that most of the recent theories of bilingualism have their background in the older theories. This results in presenting the old theories as well. It is also taken into account that languages have an effect on each other and that is why the term interference is discussed from the point of view of bilingual education as well. The different cognitive theories of bilingualism are also discussed on the viewpoint they have on bilingual education.

### **2.1 The definitions of bilingualism**

Next different definitions of bilingualism are discussed. First, the classic definition of bilingualism by Bloomfield is presented in addition to three definitions by Pohl. Third, ambilingualism is discussed. Forth, bilingualism can be achieved via different routes, which are taken into account next. Fifth, the term non-fluent bilingual is discussed. Sixth, bilingualism seen from functional or a receptive point of view differentiates the use of different languages. Next, the issues of passive and active bilingualisms are presented which are related to functional and receptive bilingualism as well. Seventh, a dormant form of bilingualism is presented. Eight, the productive bilingualism is taken into account, which today is usually the goal of modern bilingual education programs. Ninth, additive and subtractive bilingualisms are discussed. Bilingualism can also be defined on the basis of how the different

languages are presented in the brain. This perspective will be taken into account as well. Last the term semilingualism and multilingualism are discussed.

Bloomfield's (1984: 55-56; see also Butler and Hakuta 2006: 114; Baker 2006: 8; Ng and Wigglesworth 2007: 5) *classic definition* of bilingualism characterizes bilingual to have a native-like control of two or more languages. However, some contemporary researchers see this definition as too extreme and strict (Butler and Hakuta 2006: 114; Baker 2006: 8). According to Baker (2006: 8), the other extreme end in defining bilingualism is Diebold's (1964) definition of *incipient bilingualism*. Diebold defines people to be bilingual with minimal competence of second language. Bloomfield's and Diebold's definitions seem too extreme because bilinguals' proficiency may vary greatly between languages and contexts. Native-like control of a second language seems too difficult to attain and, on the other hand, one may argue if a person can be said to be a bilingual when only knowing some phrases in a second language. Haugen's (1953; see also Butler and Hakuta 2006: 114) view seem more reasonable: a person is a bilingual when he/she is fluent in one language but can, in addition, produce complete meaningful utterances in a second language. Already these three definitions prove that bilingualism can be seen in very different ways.

Pohl (1965, as quoted by Beardsmore 1986: 5) introduces three different kinds of bilingualisms. First, the *horizontal bilingualism* means a situation where a person has two different languages. The languages have an equivalent status in the official, cultural and family life. Second, according to Pohl, in *vertical bilingualism*, a person has a standard language together with a distinct but related dialect. Vertical bilingualism is also known as *diglossia*. Third, a situation where a person uses two dialects or non-standard language together with a genetically unrelated standard language is called *diagonal bilingualism*. Pohl's three different definitions for bilingualism and to its different forms offer various angles to bilingual teaching.

Halliday (1970: 141-142) talks about *ambilingualism*. Ambilingual is described to be a person who is capable of functioning equally well in either of his/hers languages. In addition, either of the language is used in all domains of activity and there cannot be seen any traces of the other language. In other words the languages are balanced. Halliday's definition of bilingualism connects to the one that is generally accepted as

the aim of programs of bilingual education. However, today it is acknowledged that a bilingual may have different functions with different languages. In other words, the languages are differentiated according to various tasks and contexts. This has to be taken into account in bilingual education because students may be able to function with a foreign language in one context but not in another.

To add to previous ones, Edwards (2006: 11) defines *primary bilingualism* and *secondary bilingualism*. In primary bilingualism, the situation could be, for example, when a child has parents who speak two different languages. As a consequence, the child learns naturally two different languages. Secondary bilingualism, according to Edwards (2006: 11), is a situation where second languages have been added via instruction. Secondary bilingualism refers closely to traditional foreign language teaching.

Segalowitz and Gatbonton (1977: 77) differentiate a *non-fluent bilingual* when there are clear differences between the languages; the speaker has sufficient skills to communicate but does not possess native like control of the language. Non-fluent bilinguals should be taken into account in bilingual education. Especially with minority language speakers one has to be careful to enhance language development. If a person has two poorly developed languages, it may have an effect on competence at school or, in general, everyday life. Teachers in bilingual education should avoid situations where neither of the languages develops adequately.

Beardmore (1986: 15-16) introduces *functional bilingualism* and *receptive bilingualism*. Functional bilingualism can be divided into minimalist and maximalist interpretation. The minimalist interpretation refers to a person who is able to cope with the second language. There are, however, small differences in grammatical rules and less limited lexis appropriate to the task at hand, that is, there is language for special purposes. Minimalist functional bilingualism is easy to acquire and requires no intensive investment in time or tuition. However, this form of bilingualism is not always accepted as a form of bilingualism. Maximalist interpretation of functional bilingualism refers to a person who is able to conduct all his/hers activities in a given dual linguistic environment satisfactorily. Receptive bilingualism is also a form of functional bilingualism. A receptive bilingual is a person who can understand the

written or spoken form of the second language but cannot necessarily, however, speak or write it. This form of bilingualism is also known as *passive bilingualism*. Passive bilingualism is quite easy to acquire, especially for older learners. Beardsmore also adds that passive bilingualism's long-term effects may be greater because the ability to understand a foreign language stays longer than the ability to speak or write it. However, from a functional and bilingual education's point of view passive bilingualism seems useless. Beardsmore's definitions for bilingualism are quite comprehensive and he takes into account different perspectives.

According to Grosjean (1999, as quoted by Butler and Hakuta 2006: 115), *dormant bilingual* has knowledge of different languages but is no longer able to use the language in everyday life. In other words, Grosjean (1982: 237-239) points out that dormant bilingualism is a form of bilingual who, for example, when moving to a foreign country loses the productive skills of the native language but is still able to understand the language. When returning to the native country one may be able to require the productive skills back. According to Ng and Wigglesworth (2007: 7), dormant bilingualism can be seen to be related to passive bilingualism. Edwards (2006: 10) also talks about receptive or passive bilingualism. The opposite of passive bilingualism is, according to Edwards (2006: 10), *productive or active bilingualism*. The difference between these definitions is in whether one can understand spoken or written language and can or cannot produce it.

Beardsmore (1986: 18-19) sees productive bilingualism as the opposite of passive bilingualism, as well. A *productive bilingual* is able to understand, speak and possibly write in two or more languages. However, there is not always the same proficiency in all the languages in all areas of language use. According to Beardsmore, most of the foreign language teaching programs aim to productive bilingualism. In addition, the goal of modern bilingual education programs in general, is productive bilingualism and the teaching and learning is closely connected to learning by doing which aims to the development of productive skills. The traditional foreign language learning is also concentrating more and more on productive skills of the language. It is seen vital that pupils learn to use the foreign language and are able communicate with foreign language speakers.

Another kind of perspective to bilingualism is the one by Lambert (1977: 18-19; 1974, as quoted by Beardsmore 1986: 22-23). Lambert talks about *additive and subtractive bilingualism*. In additive bilingualism the second language's cognitive and social abilities have no negative effect on the first language. However, in subtractive bilingualism the second language is acquired at the expense of the first language. It can be said that there is competition between the languages. In addition, Edwards (2006: 10) points out that the difference between additive and subtractive bilingualism is in the different outcomes. Meriläinen (2008: 120) talks about similar definitions for bilingualism. According to Meriläinen, when bilingualism has a negative effect on learning, one can talk about *restricted bilingualism* (rajoittunut kaksikielisyys). *Unbalanced bilingualism* (epätasapainoinen kaksikielisyys) means a situation when bilingualism has neither a positive nor negative effect on learning. When bilingualism affects learning in a positive manner, one can talk about *dominant bilingualism* (hallitseva kaksikielisyys). The aim of bilingual education should be additive bilingualism; however, in some cases the result is subtractive. This is the case usually with minority languages.

Bilingualism can be defined to be *balanced* or *dominant* as well. According to Butler and Hakuta (2006: 115), a balanced bilingual has similar degrees of proficiency in both languages, whereas dominant bilingual, or unbalanced bilingual, has a higher competence in the other language. However, Ng and Wigglesworth (2007: 7) add that the dominance of one language may not apply to all domains and therefore a similar competence in both languages has been under debate. As can be seen the terms balanced and dominant bilinguals are not agreed on.

In the 1960s, according to Myers-Scotton (2006: 293-294), bilingualism was defined on the basis of how the languages had been acquired and how the languages were represented in the brain. Weinreich (1968: 9-11) distinguishes three types of bilingualism: *compound*, *coordinate* and *subordinate*. According to Weinreich, in coordinate bilingualism the words of the two languages are kept separate, whereas in compound bilingualism the words have a common representation in the brain. Subordinate, on the other hand, refers to a type of bilingualism where words are interpreted through the stronger language. Myers-Scotton (2006: 294) adds that in compound bilingualism the two languages are acquired in the same context, in

coordinate bilingualism the languages are acquired in different environments. However, as Myers-Scotton points out, this view on bilingualism did not hold up because there were no consistent results in research to point out that bilinguals performed as the definitions indicated.

Bilingualism has negative definitions related to it as well. Cummins (1979: 7-8; see also Romaine 1995: 261) talks about *semilingualism*, a form of bilingualism when a person has less than a native-like competence in both languages. Edwards (2006: 10) points out that semilinguals' competence in both languages is inadequate. According to Cummins, semilinguals may have detrimental cognitive and academic consequences because of the poor competence in both languages. In addition, Ng and Wigglesworth (2007: 8-9) point out that semilinguals, or limited bilinguals, have limited proficiency in the first and second languages. However, according to Ng and Wigglesworth, the term semilingualism is no longer in fashion because of the negative label of it. Baker (2006: 10-11) points out that, in addition to the negative connotation semilingualism has, the reasons for underdevelopment of the languages may not be in bilingualism, but in economic, social and political conditions. One has to acknowledge that languages are used for different purposes and educational tests may be insensitive to the qualitative aspects of languages (Baker 2006: 11). In addition, Baker claims that comparing bilinguals to monolinguals is not reasonable. As a result, the language development in bilingual education should be carefully studied as of its own unity.

In addition to the definition of bilingualism, it is important to consider the term *multilingualism*, as well. Multilingualism, according to Oksaar (1980, as quoted by Oksaar 2007: 21), can be defined to be the ability to produce and understand two or more languages as a means of communication. Myers-Scotton (2006: 2) points out that multilingualism means speaking more than two languages and the term bilingualism covers multilingualism. In addition, Oksaar (2007: 21) says that a multilingual is able to switch from one language to another. Oksaar continues that the relationship between languages may differ, for example, in quantity, quality and function. The person's age, sociobiography and social and cultural criteria affect the relationship the languages have. As an important fact, Oksaar points out that it has to be remembered that language is part of a culture which makes multilingualism

connected to multiculturalism. Oksaar's definition of multilingualism seems comprehensible and modern. The definition can easily be seen in today's bilingual education where switching between languages is acceptable and the importance of culture is recognized.

To sum up, all the definitions of bilingualism have something in common but vary on the terms being used and on the perspective they take towards bilingualism. According to some definitions of bilingualism, bilinguals have balanced competence in both languages. On the other hand, some define languages to have different purposes and they are used in different contexts. In addition, bilingualism can be defined how languages are learnt: via instruction or naturally, for example from parents who speak different languages. Bilingualism can be defined also from the perspective how the languages are presented in the brain: do the different languages have common or separate representation or are words of one language understood through the stronger language. As can be seen, it is difficult to say which definition would be the best one because the definitions have common issues but more importantly, they differ in the perspective bilingualism is seen from.

Butler and Hakuta (2006: 120) point out that bilinguals profile may change over time, hence, bilingualism is seen as dynamic not static and that has effects on education as well. Today the emphasis in second language learning, whether the foreign language is used as a medium or in traditional foreign language classroom, is on learning how to use the language. The students should have to learn how to communicate with the foreign language. Therefore, the approach to bilingualism needs to take this viewpoint into account as well. In addition, one has to take into account that languages are not learnt separately from other languages or cultures.

## 2.2 Dimensions of bilingualism

As was seen, there are multiple definitions of bilingualism. However, bilingualism can be defined in a different kind of way as well. According to Baker (2006: 3-4), bilingualism can be explained through different dimensions. These dimensions vary from ability to the use of language and from the effect of age to the importance of context. Next these dimensions of bilingualism are presented.

Baker (2006: 3-4) talks about dimensions of bilingualism which explain bilingualism in a modern kind of way. First, according to Baker (2006: 3), one can view bilingualism from the point of view of ability. A bilingual may have a productive competence, which means that one is able to speak and write in both languages. A receptive ability, on the other hand, means a more passive form of bilingualism when one is able to understand a language or read it. Second, bilinguals vary in the use of languages. It can be studied where languages are acquired and used. Third, according to Baker (2006: 3-4), the balance of different languages is not usually equal which means that often one language is dominant. Fourth, age has an effect on bilingualism (Baker 2006: 4). According to Baker (2006: 4) *simultaneous bilingualism* is a situation where two languages are acquired at the same time from birth. In *consecutive or sequential bilingualism*, on the other hand, the other language is learnt after the age of three.

Baker (2006: 4) also talks about the dimension of development in bilingualism. According to him, when one has a well developed language and the other is in the early stages of development, it is called *incipient bilingualism*. *Ascendant bilingualism* refers to a situation when a second language is developing and *recessive bilingualism* when one language is decreasing. The point of culture is taken into account as well. A bilingual may be bicultural, multicultural or monocultural. Seventh, the importance of context has to be acknowledged. There can be bilingual and multicultural contexts, monolingual and monocultural contexts. In addition, Baker (2006: 4) talks about subtractive context, in which the home language is usually replaced by the majority language. In an additive context, a second language is acquired at no cost to the first language. He differentiates elective bilingualism as



well: a situation when one chooses to learn a second language. In this case, one may talk about *circumstantial bilingualism*, for example, a situation where an immigrant wants to learn another language to be able to function effectively in society. Ng and Wigglesworth (2006: 20) also talk about *stable bilingualism* which includes the terms of elective and circumstantial bilingualism.

Baker's dimensions of bilingualism take into account various perspectives that affect bilingualism and, hence, bilingual education. In addition, Baker's definitions offer a new kind of perspective to view bilingualism which is more diverse than the previously described.

### **2.3 Languages in contact**

There are many terms that are closely connected to bilingualism and one cannot discuss bilingualism and its education without getting to know these terms. An important fact to acknowledge is to realize that languages have an effect on each other. Therefore, interference has an important role in bilingualism and in CLIL because it affects the ways of teaching. Interference shows that languages do not operate independently. When learning a new language one already has the skills of another language. The well-known view to learning, in general, today is that one can and should use already learnt things when learning something new; the learner is seen as an active constructor of knowledge. The same applies to learning languages. Interference is related to CLIL because they appear in everyday communication. As a result they should be taken into account in the teaching, too. Next the issue of interference is discussed.

When the elements of one language are used in the context of another there is interference (Beardsmore 1986: 45). There can be negative interference or positive interference but, in general, the term interference in itself has a negative connotation and that is why the term transfer can be used as well (Beardsmore 1986: 46-47). Krashen (1981: 64-66) points out that first language interference can be seen in the second language as errors. When speaking in the second language, one may adapt, for example, forms from the first language that appear in the second language as

incorrect language structures. According to Krashen, the first language influence is strongest in complex word order, word-for-word and in translation of phrases. In addition, strong first language influence can be seen in acquisition-poor environments. However, the influence is weaker in bound morphemes, for example, in omission of plural on nouns or lack of subject-verb agreement. Broughton et al. (1980: 135-138) claim, on the other hand, that errors are a natural and important part of the language learning process. However, all errors do not come from mother tongue interference. Errors can be seen as generalizing rules when the restrictions of the rule have not been learnt yet. Broughton et al. (1980: 135-138) add that a native speaker may tolerate lexical errors far more than grammatical errors. In other words, interference is the influence of another language and it can be seen as negative or as positive. For example, in second language learning interference is positive when a learner is able to transfer structures learnt in one language to another language. In fact, this is something that CLIL and foreign language teachers should teach and emphasize to their students to make the learning and using of foreign language as effective as possible.

#### **2.4 Cognitive theories of bilingualism**

There are different cognitive theories of bilingualism which have an effect on bilingual education. The cognitive theories explain how languages are presented in the brain and what kind of effect the languages have on each other. Baker (1993: 131-146; Baker 2006: 167-180) introduces these four different theories; the balance theory, also known as balloon theory, the iceberg analogy, the threshold theory and the developmental interdependence hypothesis.

According to Baker (1993: 132-134; Baker 2006: 167-169), the balance theory, the separate underlying proficiency theory, sees language as a balloon in one's head. Monolinguals have only one balloon, one language, which means they have more room for one language. On the other hand, bilinguals have two languages, which means that they have two balloons in their heads; when one balloon (language) gets bigger, it takes room from the other. According to this theory, languages operate separately and there is no transfer between the languages (Cummins and Swain 1986:

81). One might oppose the teaching through a foreign language because of the balance theory. If languages operate separately, using a foreign language as a medium should have a negative effect on one's native language (Baker 1993: 132-134). It could be said that learning a new language diminishes the skills in the other. However, Nikula and Marsh (1997: 96-98) point out that there is no evidence of the negative effect on the native language, although there needs to be more research on that area. In addition, Cummins and Swain (1986: 82) say that there is little evidence to support the separate underlying proficiency.

The second theory, the iceberg theory (Baker 1993: 134-135; Baker 2006: 169-170; Shuy 1978, 1981, as quoted by Cummins 1984: 137), which is also known as the common underlying proficiency model, assumes that different languages have the same integrated source of thought. It can be said that languages have the same basic foundation but, on the surface, they are seen separately. The visible part of language, the tip of the iceberg, is the formal aspect of language which contains, for example, pronunciation, vocabulary and grammar (Shuy 1978, 1981, as quoted by Cummins 1984: 137). On the other hand, the less visible part is more difficult to measure and includes semantics and the functional meaning of language. According to this theory, languages have to be sufficiently developed to be able to process the cognitive challenges. According to Cummins and Swain (1986: 82), an experience in one language can promote development in both languages. Cummins and Swain present evidence for the common underlying proficiency model. According to them, results from bilingual education support the idea that languages have the same basic foundation. In addition, the studies relating age on arrival and immigrant students' second language acquisition support the theory. Common underlying proficiency model support teaching through a foreign language because it recognises the interference languages have and which can be used as students benefit when learning a foreign language.

The third theory, the threshold theory (Baker 1993: 135-137; Baker 2006: 170-173) or house theory sees languages as different floors. If a bilingual is on the first floor, his/her bilingualism is limited, which means that one has limited competence in both languages. In this case there might be negative cognitive effects. On the second floor one is a less balanced bilingual. The less balanced bilingual has age-appropriate

competence in one language and there are no negative or positive cognitive effects. On the third floor balanced bilingualism is achieved. The balanced bilingual has age-appropriate competence in two or more languages and there are cognitive advantages. In Finland, when students enter a foreign language program, they have usually firm competence in their native language. As a result, teaching through a foreign language does not have negative effects when considering the threshold theory. The aim of the bilingual program may be a balanced bilingual who can operate in two languages, but this can be achieved only in an extensive and continuous bilingual program.

The fourth theory, the developmental interdependence hypothesis (Baker 1993: 138-142; Baker 2006: 173) sees that the first language has to be developed before the second language can develop. As a result, it is easier for the second language to develop, the more the first language has already developed. If one sees bilingualism according to the developmental interdependence theory, it results in late bilingual teaching.

As can be seen, there are many different cognitive theories of bilingualism. The view the theory has, has its effect on bilingual education and how it is seen. For example, if bilingualism is seen from the point of view of the balance theory, it might be said that it is not useful to learn another language because the new language takes room from the first language. On the other hand, the iceberg theory emphasises the common source of thought which should be used as a benefit of learning new languages. From the perspective of the threshold theory the goal of bilingual education should be balanced bilingualism because this way more positive cognitive advantages would be gained. As a result, the bilingual programs should stress the development of both languages. If bilingual education programs are considered from the point of view of the developmental interdependence hypothesis, foreign language teaching should not be started early on because the first language has not developed sufficiently. As can be seen, some of the cognitive theories take a negative attitude towards bilingual education, but there are also those that see the value of bilingual education.

### **3 CONTENT AND LANGUAGE INTEGRATED LEARNING**

In different countries bilingual education has various forms. Next I will take a brief look at the history of bilingual education and its various forms. In addition to CLIL, the ideas of immersion are discussed because immersion has had a lot of influence on CLIL. The positive effects of CLIL are presented and it is considered why CLIL can be seen as an effective way of learning and teaching foreign languages. In addition, the characteristics of CLIL classroom are discussed. Next the Finnish national curriculum is discussed in point of view what it says about foreign language teaching and using a foreign language as a medium of teaching. Last, the criticism on CLIL is discussed.

#### **3.1 Bilingual education**

According to Baker (2006: 213), bilingual education is an umbrella term and it refers to many different versions of using a foreign language as a medium of teaching. He also states that bilingual education as a term has its problems because it is associated with bilingualism. Not all forms of bilingual education's aims are in bilingualism; the aim may just be to introduce students with different languages and get them to think of foreign languages. In addition, Wolf (1997: 53) points out that bilingual education can mean two different things; either upbringing of children at home by using two different languages, or teaching through a foreign language. As a result, one cannot use the term bilingual education without explaining what is meant by it.

There has been bilingual education since the Roman Empire when Greek was used for language of education (Takala 1992: 138). Haataja (2007: 7) points out that 200-800 BC the Greek language was widely used and afterwards Latin became the language for work, education and universities. Mehisto et al. (2008: 9) go even farther saying that the first known bilingual type of programme dates as far back to history as 5000 years ago when the Summerians wanted to know the local language. According to Genesee (1987: 1-11), it could be said that bilingual education has existed since the beginning of formal education because in ancient times for example Latin was used as the language of education. In addition, according to Räsänen

(1994: 16), bilingual education has been used in the past to help immigrants to adapt to a new language. As can be seen, bilingual education is not a new phenomenon although it might seem that way. In recent years using language as a medium of teaching has gained more popularity in schools and, as a result, researchers have had to pay more attention to it. In the 1990s one reason for the growing interest on CLIL was because of globalization (Mehisto et al. 2008: 10). According to Mehisto et al. (2008: 10) the desire in Europe is to develop the European cohesion and competitiveness by improving the language learning opportunities.

However, from a research point of view, bilingual education is quite a new area (Nikula and Marsh 1996: 9). Researchers have been interested in bilingual education since the 1960s. There have been about one thousand studies but the main focus of them has been on Canada and on the USA; there is little research on the bilingual education in the European context. Because of the increasing popularity of teaching through a foreign language, there is a need for research in the European context, as well. In addition, according to Järvinen (1999: 20), research on CLIL is scarce. However, she points out that there should be more research on CLIL to be able to form a foundation for a model of bilingual education, and deal with fears concerning CLIL. Nowadays bilingual education is considered a good way to teach students languages and contents. Bilingual teaching can be used as early as in kindergarten. Wolff (1998: 26) points out that children get acquainted with the language and the language is learnt naturally in a group. Children acquire a good starting point for learning languages in bilingual education.

There are different forms of bilingual education. Mehisto et al. (2008: 12) say that CLIL is an umbrella term which covers different educational approaches such as immersion, multilingual education, language showers (Finnish term *kielikylpy*) and enriched language programmes. First of all, submersion, also called sink or swim approach, can be said to present the negative side of using foreign languages as a medium (Cohen and Swain 1976: 46). In submersion there are no adjustments to take the minority language cultural and linguistic differences into account. This often results in frustration of difficulties of communication. According to Cohen and Swain (1976: 46), teachers do not understand the child's first language or different culturally determined expectations of appropriate behaviour. As can be seen,

submersion is not additive or taking the second language into account. The aim of submersion could be said to be to assimilate the minority language speakers to the mainstream culture and language. However, the aims of functional bilingual education should not be as in submersion.

Immersion is one form of bilingual education and it was developed in Canada. Immersion means teaching content through another language than the native language. Cummins and Swain (1986: 8) define immersion as a situation in which children from the same linguistic and cultural background are put together in a classroom where a foreign language is used as a medium of teaching. According to Genesee (1987: 1), in immersion students who speak the majority language of the society receive part of their education through a foreign language.

In immersion the foreign language is used to teach regular school subjects and usually the amount of foreign language is fifty per cent of the teaching. Immersion can be divided into different forms according to the starting point or the amount of foreign language that is used; early immersion, late immersion, partial immersion, total immersion and early total immersion (Baker 1995; Swain and Lapkin 1982: 5-15; see also Nikula 1997: 6; Snow 1990: 110-112 as quoted by Järvinen 1996: 3). Cummins (1984: 156-158) divides immersion for minority languages into four different types; submersion, monolingual immersion, majority language bilingual immersion and minority language bilingual immersion. As can be seen, immersion can be defined in various ways.

The characteristic features that Canadian immersion has shows how it differs from submersion. According to Cummins (1984: 155), in immersion there are bilingual teachers who are proficient in both languages. This assures functional communication between the teacher and students. In addition, in immersion teachers use extensively paralinguistic means, such as intonation and gestures. Context, linguistics redundancy and repetition play a large part of immersion teaching as well. The aim of immersion is to ensure additive bilingualism and biliteracy. However, not all of the different forms of immersion take all these features into account. In monolingual immersion second language input is modified, teachers are not always bilingual and first language literacy is promoted. Cummins (1984: 156-158) says that

monolingual immersion might be effective in developing English fluency. On the other hand, majority language bilingual immersion has bilingual teachers, instruction is modified and first language literacy is promoted. The aim is to immerse students in the societal majority language. Minority language bilingual education promotes strongly the students' first language.

A popular form of bilingual education in Finland is also language shower. Järvinen (1996: 3) uses the terms immersion and language shower in the Finnish context as synonyms. However, I would differentiate them because immersion is the Canadian form of foreign language teaching and the term language shower refers to a form of immersion created to apply to bilingual education in Finland. According to Rasinen (2006: 36) language showers have the most established position of bilingual education. Language shower programs have usually their own curriculum and the aims of the programs are established. The aim for language shower programs is, for example, oral and written competence in the target language. In addition, the purpose is to contain and promote the development of the first language, guarantee the same level of knowledge in the subjects taught as in normal classes and to teach students to understand and value the target language speakers and their culture. Laurén (1991, 1992, 1994, as quoted by Nikula and Marsh 1996: 8) points out that in language shower programs the target language should be used at least fifty per cent of the time during the whole school career. In addition, she states that teachers have their own language roles, which means one language for one person. She also adds that communicative and student-centred teaching methods that provide students with diverse and interesting learning opportunities are distinctive to language shower programs. According to Mehisto et al. (2008: 13-14) language showers are usually targeted to students aged four to ten years old. In addition, they say that the goals of language showers are to make students aware of different languages and prepare students for foreign language learning. The foreign language is used in routines, for example, to manage breaks or singing songs.

As can be seen, bilingual education has many names, but the recommended term in Europe is Content and Language Integrated Learning, CLIL (Järvinen 1999: 15). CLIL is becoming more and more popular elsewhere in Finland as well as in Europe. The reasons for the increased interest in CLIL can be found in European integration



and globalisation, which place demands on foreign language teaching (Seikkula-Leino 2007: 91; Mehisto et al. 2008: 10). In CLIL the weight is on learning the content, not on learning the language (Rasinen 2006: 37). One of CLIL's many positive aspects is students learning that language is not just a target of learning but also a way to study different subjects (Nikula and Marsh 1997: 70). According to Mehisto et al. (2008: 11), CLIL is a tool for teaching and learning of content and language, but also the essence of CLIL is integration which has a dual focus. The dual focus means that the foreign language learning is impeded in content classes and the contents from subjects are used in foreign language-learning classes (Mehisto et al. 2008: 11). Mehisto et al. (2008: 10) add that there is also a third element in CLIL; "The development of learning skills supports the achievement of content language goals."

According to Sajavaara (1995: 25), Finland has been a latecomer in bilingual education. Seikkula-Leino (2007: 92) points out that CLIL came to Finnish schools in the 1990s. This was made possible by the changed Finnish school laws in the 1980s and 1990s. The late change is surprising because Finland has long been a bilingual country. Bilingualism in Finland has its background far back in the history when Swedish was used as the language of church, administration and law (Hakulinen et al. 2009: 15-17). One might assume that in Finland there has been a lot of bilingual teaching for a long time but, as Sajavaara (1995: 25) points out, that is not the case.

In Finland, the most common language in CLIL teaching is English but languages such German, Swedish and French are used in teaching, as well (Nikula and Marsh 1996: 35). In my study, I will concentrate on the English language because of my own background. However, Nikula and Marsh (1997: 116) point out that there should be more foreign languages to choose from. CLIL aims, on the one hand, to promote students language skills but, on the other, also to preserve smaller foreign languages.

### **3.2 The positive effects of CLIL**

There is some evidence that using a language as a medium of teaching has positive effects on students' language skills. First of all, it can be said that CLIL offers a naturalistic language learning environment (Dalton-Puffer and Smith 2007: 8). In addition, they say that the increase in amount of the target language increases efficiency in learning. According to Nikula and Marsh (1997: 86-91), in Finland in grades 7-9 of basic education, students in CLIL classes are likely to have a wider vocabulary than non-CLIL students. In addition, CLIL students have better listening and reading comprehension skills due to the use of a foreign language. The development of oral skills depends on the teaching methods; CLIL students are more confident in using a foreign language and their confidence increases if the teaching methods enhance oral skills. When comparing CLIL students' formal language skills to those of non-CLIL students, the differences are not great. I (Mäkinen 2006) found out similar kinds of results when students had to evaluate their own language skills. These differences may be because in CLIL classes the attempt is not only to learn a language and the teacher does not always pay attention to the students' language mistakes. In addition, Järvinen (1999: 22) says that there has been found excellent results in receptive skills but not in productive skills.

Rasinen (2007: 103) argues that CLIL offers more situations and opportunities to practise and use the foreign language, which results in better language skills. In CLIL classes pupils have authentic situations, various topics, versatile written materials and communication with different teachers, which enhance foreign language learning. This is why, according to Rasinen (2007: 103), CLIL can make teaching and learning more efficient. She brings out the important fact, as well, that in CLIL classes the concentration is not on the content or on the language but on both at the same time. Nevertheless, it could be said that CLIL is an effective way of teaching a foreign language.

Cummins and Swain (1986: 89) point out that older learners in bilingual education make rapid progress. However, Cummins and Swain (1986: 88) argue that there is no advantage for older students in pronunciation. According to Cummins and Swain

(1986: 49) learners are able to attain native like receptive skills in bilingual education, but the productive skills stay non-native. On the other hand, they point out that despite the grammatical weaknesses learners are able to communicate. As can be seen, according to Cummins and Swain, older learners benefit from bilingual education as well. However, their productive skills lack behind.

Järvinen (1999: 80-81) talks about the neurobiological implications for practical implementations of CLIL. According to her, native-like proficiency may be acquired by early onset of a foreign language. In addition, the acquisition of content words is more likely to be enhanced by rich stimulus environment. She adds that the phonology component may be influenced, as well. In addition, according to her, the acquisition of implicit syntax may have a positive influence from early onset to language resulting in implicit learning. However, it is unlike that there is benefit from explicit instruction of grammar in early onset programs. Järvinen found out similar results as Cummins and Swain.

In addition, Järvinen (1999: 109-137) studied the acquisition of second language in CLIL programs. In general, she found out that the CLIL groups' development of second language is faster and more versatile. As a proof of this, it was found out that the CLIL students produce longer sentences and more complex ones. In addition, the CLIL groups' imitations of relative clauses were more accurate. Järvinen's study is a good example of the positive effects of CLIL.

The motivation of CLIL students has also been studied, in addition to self-concept, grammar learning and classroom anxiety. Pihko (2007) found out in her study that CLIL students have higher motivation than non-CLIL students. In addition, CLIL students put greater effort in their English study and have clearly high willingness to use English as a means of communication outside school as well. However, she points out that those motivational and attitudinal variables are quite expected and obvious. In addition to motivational variables, Pihko studied the students' self-concept for English language. She found out that both of the groups had positive self-concepts. The CLIL students were more satisfied with their English proficiency, however. CLIL students seemed to have greater confidence in their ability to learn English or other foreign languages at school. An important fact, considering the

present study, is that Pihko (2007: 121) found out that CLIL students grammar skills rated better than non-CLIL students'. Classroom anxiety was studied as well. According to Pihko (2007: 122), CLIL students use the second language naturally in the classroom and enjoy more English-medium classroom communication than students in traditional second language learning. Pihko's study gives clear evidence that CLIL has many positive effects on second language learning, although some of them are obvious because of the amount of English the students are exposed to.

In addition, Seikkula-Leino (2002) studied the motivation, self-esteem and mother tongue and mathematic skills of students in bilingual education. Seikkula-Leino (2002: 111-112) found out that the self-esteem of the CLIL students is similar to the non-CLIL students. However, the self-image of the non-CLIL students was significantly stronger than the CLIL students. The CLIL students estimated their reading and writing skills as well as oral and comprehension skills more negatively than the non-CLIL students. However, when comparing the motivation to study and the use of a foreign language, the CLIL students were more positive (Seikkula-Leino 2002: 122). Pihko (2007) also found out similar results in motivation. In addition, Seikkula-Leino (2002: 126) found out that there was no difference in the skills of the students' mother tongue between the groups. According to the study of Seikkula-Leino (2002: 140), there is no great difference in learning between the CLIL and the non-CLIL students. According to Seikkula-Leino (2002: 140), foreign language does not have a negative effect on learning in general. However, in bilingual education students may not always be able to perform as well as possible in learning a content. On the other hand, Seikkula-Leino (2002: 143) points out that using a foreign language as a medium of teaching is a justified teaching method, which has no negative effect on learning when used as appropriately.

Laitinen (2001) studied the English language skills of CLIL students in the 5<sup>th</sup> grade of Finnish basic education compared to the non-CLIL 9<sup>th</sup> graders' performance in a National Board of Education English test. The aim of the study was also to discuss the immersion programme in Hollihaka school in Kokkola. According to Laitinen's (2001) study, the CLIL students in the 5<sup>th</sup> grade achieved very much higher results in writing and oral skills than the sample of the 9<sup>th</sup> grade non-CLIL students in the National Board of Education English language assessment test. The 5<sup>th</sup> graders had

little lower results in reading comprehension and little higher results in listening skills than the students in the 9<sup>th</sup> grade group. According to Laitinen (2001: 98), it can be said that the CLIL students in the 5<sup>th</sup> grade have higher level of knowledge than the non-CLIL 9<sup>th</sup> graders of English language by the end of their school year. In addition, Laitinen studied the vocabulary size of the students and she found out that the 5<sup>th</sup> graders of immersion programme had a large vocabulary already by the end of the sixth grade. According to Laitinen (2001: 100), bilingual teaching in the school of Hollihaka gives good results in learning English language, in addition, it suits to all kinds of students. She also points out that using a foreign language as a medium of teaching is effective in teaching the productive use of language. In general, it can be said that according to Laitinen's study the CLIL students learn a foreign language in a effective way.

Jäppinen (2002, 2003, 2005) studied the effect of CLIL on students cognitive skills and learning a content. She found out that using a foreign language as a medium of teaching supports the cognitive development of the students. Jäppinen (2005: 62-64) points out that CLIL is more demanding for younger students and for learning abstract contents, such as space. However, Jäppinen (2002: 136) points out that there are other factors that have an influence on the cognitive development as well; for example, students' background and the qualifications' for acceptance to CLIL classroom. According to Jäppinen (2003: 42-43), the learning difficulties of individual students are usually a result of something else than learning through a foreign language. In addition, she says that with efficient support CLIL is not harmful to learning processes or to cognitive development. Moreover, learning in the CLIL environment enhances and helps the cognitive development of the students, which can be seen clearly among students of the age between 10 and 12 years old. As can be seen in Jäppinen's and others study, CLIL has scarce negative effect on learning. On the other hand, is seems that using a foreign language as a medium of teaching enhances learning.

### 3.3 Characteristics of CLIL-classrooms

CLIL has its own core features which have an effect on teaching and learning, as well. According to Mehisto et al. (2008: 29-30), the basic core features of CLIL are the multiple focus, safe and enriching learning environment, authenticity, active learning, scaffolding and co-operation. Next these characteristics of CLIL methodology are discussed. In addition, I will take a look at the qualification of CLIL teachers and the teacher talk.

First, multiple focuses in CLIL means that foreign language learning is supported in content class and content learning is supported in language class. In addition, the integrations of different subjects are important, which means in practise cross-curricular themes and projects. The supporting of students' reflections on the learning process is also vital. (Mehisto et al. 2008: 29.) This means that students are not just focusing learning a foreign language or content but focus on both of them by studying a theme which can include several different school subjects. Nikula and Marsh (1996: 7) add that the importance of CLIL is to integrate traditional foreign language teaching and content teaching. The foreign language needs to be seen as medium of learning and teaching and not just as a target of it (Nikula and Marsh 1996: 7).

Second, the safe and enriching learning environment is a crucial part of CLIL methodology. In CLIL a foreign language is used in routine activities and discourse. Students' confidence to use the foreign language is enhanced. The safe and enriching learning environment includes also using classroom learning centres, guiding access to authentic learning material and environments and increasing students' language awareness. (Mehisto et al. 2008: 29.) By creating a safe and enriching learning environment students are more encouraged to use a foreign language and they feel safe to do it. Hence, learning is enhanced.

The third characteristic of the CLIL methodology is authenticity. Students are free to ask help for the language, the interest of students is maximized and connections are made between content and students' lives. In addition, materials from the media and other sources are used and connections with speakers of the CLIL language.

(Mehisto et al. 2008: 29.) In addition, Brinton, Snow and Weche (2003: 3) talk about the enhancing of foreign language learning, the eventual uses of the students' use of the target language have to be taken into account. In addition, contents to be studied need to be relevant, interesting and informational to be able to increase the students' motivation. Brinton et al. (2003: 3) point out that all teaching should base on previous experience as well. An important part of CLIL is that language is taught through a focus on contextualised use.

Fourth, the active learning of students is important in CLIL. In CLIL students are communicating more than teachers and students help to set content, language and learning skills outcomes. Students also have an opportunity to evaluate their progress in achieving the learning outcomes. In addition, active learning means co-operation and negotiating the meaning of language and contents with peers. The role of the teacher is to act as a facilitator. (Mehisto et al. 2008: 29.) In other words students have a bigger role in learning and this makes the learning of content more interesting to the students.

One of the core features of CLIL, authenticity already included the connections between learning and students' own lives. The fifth core element, scaffolding also takes this into account. Scaffolding means that learning is build on the existing knowledge, skills, interest and experience of students. In addition, the information is repacked in a user-friendly way and the different learning styles are taken into account. Creative and critical thinking are supported while challenging the students to enter a way from their comfort zone. (Mehisto et al. 2008: 29.) As it can be seen, students' learning is based on previous knowledge and students are encouraged to think beyond.

Sixth, co-operation is vital for CLIL. CLIL teachers and non-CLIL teachers need to plan their lessons, courses or themes in co-operation to enhance learning. Parents also have to be taken into account and make sure they know about the core features of CLIL and how they can support the learning of students. In addition, there should be co-operation with local community, authorities and employers to enhance the authenticity of learning. (Mehisto et al. 2008: 30.) By co-operating with, for

example, local authorities, students see that the foreign language can be used outside school as well, and they get real life connections.

There has been some debate about the qualifications for teachers who are teaching in the foreign language classroom. According to Nikula and Marsh (1997: 43), in the lower elementary school, grades 1-6 of basic education, in Finland CLIL teachers are usually foreign language teachers or elementary school teachers who have specialised in a foreign language. However, in grades 7-9 of basic education the teaching is done mostly by subject teachers. Nikula and Marsh (1997: 43) point out that in grades 1-6 of basic education the teachers' foreign language skills are very important because the lessons are based on oral communication and the teachers are the foreign language speaker models for the students. In Finland, there are no specific qualifications that teachers should have when using a foreign language as a medium of teaching. Marsh, Oksman, Rinkinen and Takala (1996: 78-122) argue that a good certificate for CLIL teachers could be YKI (Yleiset kielitutkinnot) language tests' level six. In addition, they say schools could use language tests like TOEFL or the language test by the University of Cambridge. As can be seen, there are no general guidelines for the CLIL teachers' qualifications but, on the other hand, there seems to be a need for clear guidelines for teachers. As can be seen, it is difficult to say what the specific qualifications for CLIL teacher are. As Rasinen (2006: 128) puts it; the qualification for a CLIL teacher is a sum of many different things.

However, foreign language skills are not the only requirement for CLIL teachers. In addition, the teachers have to be, for example, able to adjust their teaching. Nikula and Marsh (1997: 45-47) add that a native speaker of the foreign language is not always the best teacher in CLIL teaching. The teacher has to be familiar with the subject contents and one has to recognise the cultural context that teaching always has. The CLIL teacher's language skills do not have to be perfect. Nikula and Marsh (1997: 48) argue that CLIL teaching offers a good context for learning together; a teacher can show his/her difficulties in a foreign language and by this one can create a positive atmosphere for learning. When students see that their teacher does not know everything, they can be braver to use the foreign language in the classroom. As a result, it is seen that teachers offer a foreign language speaker model for the students but it does not have to be perfect because the teacher can show students the



importance of using the language even though one might have difficulties in it, the importance lies in the foreign language development.

An important part of CLIL teaching is the manner of using the foreign language. Wong-Fillmore (1985: 33-42) points out some important characteristics of teacher talk as combined to bilingual education. First of all, there has to be clear separation of languages. The languages are used in different times or by different teachers. The emphasis needs to be on communication and comprehension. In addition, Wong-Fillmore (1985: 38) says that in the classroom there should be no “foreigner-talk”; the language should be grammatical and appropriate. On the other hand, one may not agree with this because of the various English language models students get from everywhere. However, Wong-Fillmore (1985: 39) points out that it is important that the teacher has routines in his or her language to make the language more comprehensible and rich. In addition, according to Mehisto et al. (2008: 31-32), CLIL teachers have to adjust their foreign language use. CLIL teachers need to talk slowly and use repetition and visual aids. Later on the foreign language can be in more natural pace.

Lyster and Mori (2006 as quoted by Mehisto et al. 2008: 169-170) also talk about the importance of the recasts of teacher. According to them the teacher encourages students to accurate language use by using recasts, corrections and prompts. In recasts teacher repeats the student’s sentence by using accurate language. However, recast can lead to insufficient language growth when it is overused and used ineffectively. Prompts, on the other hand, mean asking students questions to lead them to the right directions or giving students clues. The goal of using prompts is to support the self correction of the student.

Code-switching is an important part of bilingualism and therefore part of content and language integrated learning. According to Beardsmore (1986: 49), code-switching is rule-governed and depends on the topic and on the code being used. Situation and participants also affect code-switching. For code-switching to exist there must be at least two interlocutors who share the same pair of languages. When a person uses different languages to different tasks or in different situations there can exist code-switching. For example, in a CLIL classroom situation the teacher may switch

his/her language if it seems necessary. In addition, students may also switch between languages when doing exercises. As can be seen, code-switching is a natural and quite usual situation, for example, in a CLIL classroom. Therefore, it is important for the CLIL or foreign language teacher to think about these situations beforehand and, in addition, how one reacts to one's own code-switching or to the students. It can be said that teachers have to think of his/her foreign language use carefully.

As a conclusion, it can be said that CLIL supports the holistic view of learning (Mehisto et al. 2008: 30). According to them the goal of CLIL is to guide students to be capable, motivated and independent bilinguals or multilinguals. The core features of CLIL take this view into account and it has its effect on learning and teaching in CLIL classes.

### **3.4 The Finnish national curriculum and foreign languages**

The Finnish national curriculum sets the frames for foreign language teaching and using a foreign language as a medium of teaching. Therefore it is important to take a look at the Finnish national curriculum when considering CLIL. Next the Finnish national curriculum is discussed from the point of view of teaching foreign languages. In addition, the view the national curriculum takes on using a foreign language as a medium in the Finnish basic education in grades 1-6 is discussed.

#### **3.4.1 Foreign language teaching**

The Finnish national curriculum (Perusopetuksen opetussuunnitelman perusteet 2004, POPS 2004) sets aims for foreign language teaching. In the Finnish national curriculum foreign languages are divided into A, B1 and B2 languages. One starts to study the A language usually in grade three of the Finnish basic education and, in general, it is English. The B1 language is normally Swedish and students start to study it in the 7<sup>th</sup> grade of the Finnish basic education. In addition, students have usually an opportunity to take another voluntary foreign language in the upper elementary school. Considering the present study it is important to take a look at the

aims the national curriculum sets for the A language students in the Finnish basic education because the non-CLIL students of this study belong to this group.

The aims of foreign language teaching and learning are multiple but not specifically stated. This results in different outcomes in foreign language teaching. According to POPS (2004), foreign language students should acquire means to operate in different kinds of foreign language situations. In addition, the aims are to teach students to use their foreign language and understand and appreciate other cultures. The foreign language is seen as a skill and as a medium for communication, not just a target of learning. As a result, foreign language learning requires variable practice in different kinds of communication situations and it is seen that the learning of a foreign language is long-term. As can be seen, POPS (2004) emphasizes the meaning of communication and the use of the foreign language in everyday contexts that are close to the students' own world. In teaching this should result in using exercises that activate students and are interesting to them.

The first foreign language is usually chosen in grade three of the Finnish basic education, although some schools offer the option of starting to study a foreign language already in grade one. If one starts studying a foreign language in grade one the teaching focuses on listening skills and the practice of oral skills (POPS 2004). In addition, the exercises should be functional, playful and connected to the students' experiences. As a matter of fact, it seems that foreign language teaching in grades one or two are similar to CLIL; the focus is not on form but on communication.

The norm in the Finnish basic education is to start studying a foreign language from grade three onwards. The aims for teaching, according to POPS (2004), at that stage are to teach students to communicate in a foreign language in concrete situations that are familiar to the students. The emphasis is on oral communication; however, written communication is added gradually. Students are, in addition, taught to acknowledge the differences between cultures and languages. Moreover, it is vital that the students learn in lower elementary school positive language learning strategies that give the basis for learning foreign languages in the future. From the point of view of grammar, it is said in POPS (2004) that students should learn structures that are important in communication. As can be seen, the focus of POPS is

again on communication and on students' own lives. Grammar or the written form of a language are not emphasized, as it is not in CLIL. When examining POPS, it seems clear that all foreign language teaching should concentrate on communication. However, it seems not to be the case today. Although the general approach to teaching seems to be moving gradually to the functional approach. The growing popularity of CLIL is a good example of that.

### **3.4.2 CLIL and the Finnish national curriculum**

The Finnish national curriculum gives schools the opportunity to use other than pupils' native language in teaching school subjects' contents (POPS 2004). Language becomes then a medium of teaching and not the object of it. The schools can decide the term for the teaching used but usually the term language shower or foreign language teaching is used.

It is pointed out in the curriculum (POPS 2004) that the aim of teaching is to provide students better foreign language skills than in traditional foreign language teaching. However, it is pointed out in the curriculum that Finnish/Swedish and literature must be taught in the students' native language. As can be seen, the importance of one's native language is acknowledged and it should not be worried that CLIL has negative effects on students' mother tongue or literature skills. However, it is acknowledged that when using a foreign language as a medium of teaching, it should have some positive effect on students' foreign language skills.

Furthermore, the curriculum gives the same aims for learning different school subjects as the one not using a foreign language as a medium has. Hence, students have to obtain the level of foreign language skill that enables them to acquire school subjects' aims similar to non-CLIL classes. The amount of foreign language used in teaching has no effect on this. Because of the same aims, teachers' have to be extra conscious of the students' learning and use various teaching methods to ensure comprehension. As a result, teaching is more diverse and activates students well.

It is pointed out in the Finnish national curriculum that schools have to do their own curriculum concerning teaching in a foreign language and define what subjects are taught in a foreign language and how much foreign language is used in teaching. The national curriculum does not define the way CLIL should be executed; instead, it gives the schools freedom to execute CLIL in a way the schools see it to be the best. As a result, there are variable ways of using foreign languages as a medium of teaching. It may not be entirely dependent on the school, but on the teacher as well. Inside one school there can be teachers who have their own approach to CLIL. One teacher can use a foreign language in teaching in most of the subjects but another one uses it to cover certain areas and topics. According to the national curriculum, the school itself has the freedom to come up with the central contents for the foreign language teaching. The school can, for example, choose in which language the students are first taught to read or write. There are multiple approaches to CLIL and it is hard to say which one is the best. It could be said that each teacher finds his/her own approach by experience.

Even though POPS (2004) does not define specific goals for learning when using a foreign language as a medium, schools themselves have to do this. Schools should, at least, define what are the aims for listening and reading comprehension, oral communication, writing and cultural knowledge. In addition, the national curriculum states that if a student's native language is the same as the language used as a medium of teaching, s/he should have stricter aims in the target language. The aims of using a foreign language as a medium have no effect on the aims of Finnish/Swedish native language teaching, however. When using a foreign language as a medium of teaching, it is important that the teacher and the students know what the goals are. If the foreign language is used in teaching without acknowledging its purpose and its aims, there seems to be no use of using the foreign language at all. Setting goals in any learning and teaching is vital to be able to gain results.

The national curriculum takes into account transference between different subjects, especially the importance of Finnish/Swedish native language. According to the national curriculum, the amount of transference is different between contents. On the other hand, the national curriculum states some contents in Finnish/Swedish native language that have minor transference; for example, interaction skills such as telling

one's own opinion or receiving or giving feedback. In addition, contents in reading comprehension such as noticing the values and attitudes that are hidden in texts. One also has to take into account the relationship of language, literature and culture. Some contents that are also thought to have minor transference are the skills for searching information, oral presentation skills and the form of language. As can be seen, there are many contents that are seen to have minor transference with a foreign language, and as a result, a teacher has to take these into account in his or her teaching.

The evaluation of CLIL classes, according to the national curriculum, has to give teachers, students and parents enough information of the progress of student's language skills. One has to pay special attention to the progress of comprehension. In Finnish/Swedish native language evaluation, it has to be taken into account that the progress may delay in the beginning if a student is taught to read first in the foreign language. In separate school subjects the evaluation is the same as when teaching the subjects in one's native language. As can be seen, the national curriculum emphasises the development of foreign language and acknowledges the fact that students and parents should be given information about this development. To avoid frustration among students it is important to show them how they have developed. In addition, it is evident that students' parents want to know how their children's foreign language skills are developing. To be able to follow one's development, it is important that the aims of teaching and learning are clear and visible.

In conclusion, foreign language teaching and using a foreign language as a medium of teaching in the lower grades of Finnish basic education seem to have similar kinds of aims. In general, the meaning of communication is emphasised and, in addition, the importance of the activities to be related to students own experiences and culture are acknowledged. POPS (2004) does not define certain grammar structures that should be taught in a foreign language, although it is said that structures that are vital from the point of view of communication are important. This gives the teachers free hands when planning teaching and materials. When using a foreign language as a medium of teaching, language learning has to be seen as a coherent unity between all the school subjects. Therefore, teachers have to co-operate with each other to be able to sustain students' rational entities of different contents. In addition, the co-

operation between the class teacher and the traditional foreign language teacher is important to enhance foreign language learning.

### **3.5 Criticism on CLIL**

There has been some debate about the effect of CLIL on the mother tongue. Nikula and Marsh (1997: 96-98) point out that the effect of a foreign language on the mother tongue has not yet been comprehensively studied. In addition, they claim that the amount of using a foreign language in teaching is connected to mother tongue development. However, there is no proof that using a foreign language as a medium in teaching would have a negative effect on the mother tongue because teachers provide also the important terms of the content in the mother tongue and students use support materials, which can be in their mother tongue. On the other hand, Nikula and Marsh (1997: 96-98) point out that in grades 7-9 of basic education not enough attention has been paid to the effect of CLIL teaching on the mother tongue. Nikula and Marsh (1997: 98) argue that the general idea in upper grades of basic education is that the pupils' mother tongue is already developed. However, when using CLIL extensively, students may use, for example, foreign language sentence structures in their mother tongue. Seikkula-Leino (2007: 96) points out that if a student has problems with the development of the first language or problems in concentration it is not rational to study in a CLIL class. According to Seikkula-Leino (2007: 96), linguistic factors are crucial when transferring a pupil from a CLIL class. However, motivation and social skills should be considered as well. For this reason, the effect of CLIL on the mother tongue should be studied carefully and more attention should be paid to it.

Learning content in CLIL teaching has also been under debate. There have been some concerns that students in CLIL classes may concentrate too much on the language itself, while paying no attention to the content at hand. However, Nikula and Marsh (1997: 71) and Mehisto et al. (2008: 20) claim that some teachers have pointed out that actually students learn the content better in a CLIL class than in a non-CLIL class because of the multiple teaching methods and support materials. However, there are always students who have difficulties in learning the content in

CLIL teaching. The difficulties are usually due to the lack of motivation toward content rather than toward the language. In addition, the lack of motivation can depend on the wrong reasons for choosing CLIL, for example friends or parents' wishes. There have not been any valid research results showing that content learning in CLIL teaching would be weaker than in non-CLIL classes.

Behavioural problems in bilingual education are usually considered to be the result of using a foreign language as a medium of teaching. Cummins (1984: 211-212) points out behavioural problems that bilingual minority children may experience. According to him, children may have cultural identity problems when home and school cultures collide. In addition, the conflicting demands of parents and peers may result in behavioural problems. The maintenance of the first language may result as a problem or the lack of adequate knowledge of school language. Bilingual minority children may have to cope with an economically-depressed and stressful home situation or racial or ethnic intolerance. To sum up, bilingual children may have a variety of problems that affect the behaviour at school. As a conclusion, it is vital for the bilingual education's teacher to get familiar with the students cultural and home background. In Finland, as well, there may be students in CLIL classes who have trouble because of the second language, may it be at home or at school.

Rasinen (2006: 162) points out that bilingual education has in a way an elitist connotation. Because of this more attention should be paid on the measures of choosing students to CLIL classes. CLIL should not be considered to be an elitist form of education but as a form of education to all students depending on their backgrounds. This is why schools have to pay attention to how to choose students to bilingual classes and how to deal with the classes everyday school life. In addition, Mehisto et al. (2008: 20-21) point out that CLIL should not be just seen as a programme for the brightest. Learning content can be more motivating in a CLIL class than in a normal class: In addition, the hands-on method and the participatory nature of CLIL classes enhance learning.

To sum up, studies show that CLIL has many positive aspects in language and content learning. Cummins (1984: 265) points out that there is no implication that bilingual students with learning difficulties would be better off in monolingual



education; learning in a second language is no more confusing than learning in a first language. However, there have been some indications in last few years that the amount of CLIL classes would be decreasing (Hakulinen et al. 2009: 75). According to Hakulinen et al (2009: 75), the reasons for this have been in the lack of resources and teaching materials. In addition, there should be more training for teachers. However, Hakulinen et al. (2006: 75) point out that today it seems that the number of CLIL classes has been stabilized. There should be, however, more studies about CLIL and how it is used as a teaching method. There are always going to be students in schools who are weaker learners than others but that should not be a counter-argument against CLIL teaching.

## **4 THE THEORY BACKGROUND FOR CLIL**

In general, CLIL is lacking a solid background theory. Many second language acquisition theories apply to learning foreign languages as a medium but they are not all widely accepted when considering CLIL and teaching. However, it is vital that teaching and learning methods have a solid theoretical background, as Meriläinen (2008: 15) points out. Krashen's Monitor Hypothesis with its multiple independent hypotheses are seen as one functional theory that can apply to CLIL (see e. g. Meriläinen 2008). According to Meriläinen (2008: 27) using the method of a foreign language as medium teaching is based on the communicative approach and on Krashen's second language acquisition theory. The Krashen's Monitor Hypothesis takes many different variables into account. In addition, when considering CLIL it is vital to study Vygotsky's zone of proximal development because it offers an important setting for the learning in CLIL classes and in non-CLIL classes as well. Vygotsky's zone of proximal development recognizes the importance of pushing learners ahead while offering the students help. Swain's output hypothesis gives an interesting point of view to CLIL and teaching as well. Swain's ideas about the meaning of output are vital to CLIL as well. CLIL is a complex phenomenon and cannot be explained by using one theory. Because of the diversity of CLIL, it is important to take a look at different theories which offer different kind of perspectives to CLIL. Next these different theories are discussed.

### **4.1 CLIL and the Krashen's Monitor Hypothesis**

The Monitor Hypothesis by Stephen Krashen (1985: 1-4) offers a good background for the present study because many of the Krashen's hypotheses are taken into account in CLIL teaching. According to Krashen (1981), bilingual development depends primarily on acquisition. The Input Hypothesis consists of five different hypotheses: The Acquisition-Learning Hypothesis, The Natural Order Hypothesis, The Monitor Hypothesis, The Input Hypothesis and The Affective Filter Hypothesis. According to Meriläinen (2008: 27), using foreign languages as a medium of

teaching is based on communicative approaches to learning and teaching and on Krashen's second language learning theory.

Marsh and Nikula (1997: 14) point out that Krashen's theory cannot be applied as a whole to CLIL teaching; however, it has boosted the idea of automatic assimilation of language. Swain says (1985; 1996, as quoted by Nikula and Marsh 1997: 14) that foreign language input alone is not enough, but there is a need for comprehensible output as well. As can be seen, Krashen's theory can provide the background for CLIL teaching, but there is also need for some revision. Next these hypotheses are presented in view of the support they can give to CLIL teaching.

#### **4.1.1 Foreign language as a medium of study**

In CLIL classes a language is used as a medium of study, not as a target. Due to this, students are not consciously learning the language but acquiring it subconsciously while studying a particular content. Krashen's Acquisition-Learning Hypothesis offers an interesting point of view to language learning and, in addition, to CLIL teaching. The Acquisition-Learning Hypothesis supports the view of CLIL teaching on learning language subconsciously: "In other words, acquisition is a result of natural interaction with the language via meaningful communication..." (Mitchell and Myles 2004: 45).

The Acquisition-Learning Hypothesis distinguishes between learning and acquisition. Krashen (1985: 1) claims that acquisition is a subconscious process, whereas learning is a conscious process. According to Krashen (1981: 1), language acquisition is similar to children's first language acquisition. It requires meaningful interaction and natural communication. Krashen (1981: 101-102) argues that in second language learning as well, the most important point is acquisition. He says that the major function of the second language classroom is to provide intake for acquisition. Intake, according to Krashen is input which has been understood. In addition, the focus should not be on form. However, Krashen (1981: 101) acknowledges the fact that it is challenging to create materials and contexts to provide intake. On the other hand, learning concentrates on error correction and

explicit rules (Krashen and Seliger 1975: 173). The goal in learning should be acquisition; however, if learning is conscious and acquisition subconscious, all teaching should aim at subconscious acquisition.

#### **4.1.2 Route of learning**

CLIL cannot be used the same way with older learners who already have acquired some rules of the foreign language than with small children who are beginning to realize the existence of foreign languages. According to The Natural Order Hypothesis, there is a predictable order for acquiring the rules of language (Krashen 1985: 1). Therefore, language cannot be used in the same way as a medium of study in the lower grades of basic education as in the upper grades. In addition, Nikula and Marsh (1997: 8-81) point out that in classes 1-6 of basic education the subjects taught have to be practical and usually in lower grades of basic education the teaching is done in short periods. In lower grades of basic education bilingual teaching may be centred on getting to know the language. In grades 7-9 of basic education the subjects that are taught in a foreign language also have to be concrete. However, subjects that are international, such as the world wars, can be taught through a foreign language as well because it is easy to get hold of teaching materials in a foreign language. On the other hand, Nikula and Marsh argue that high school contents do not have to be so concrete anymore because students can work with abstract subjects in a foreign language.

#### **4.1.3 Various language learners**

In CLIL classes teachers do not pay attention to students' language mistakes in the same way they do in language classes. The purpose of this is to encourage students to use the foreign language even though they might make mistakes. Correcting mistakes is important but students in CLIL classes have to feel safe to use the foreign language. Nikula and Marsh (1996: 7) point out that the aim of CLIL usually is to encourage students to use the foreign language. However, Seppälä (1996: 23) argue that indirect error correction is vital to enhance learning. In addition, in CLIL teaching teachers have to take the learner's filters into account, such as, attitude

towards a certain school subject, since they may be an obstacle for learning. Teachers should provide a neutral learning atmosphere to enhance learning. In CLIL teaching language is used as a medium of studying and the weight is not on learning grammar. This provides students with opportunities to use language without having to pay so much attention to mistakes.

The Monitor Hypothesis (Mitchell and Myles 2004: 46) explains differences between individual learners. Krashen (1981: 12) states that learners have different ways of paying attention to language rules. Conditions for successful monitor use are various; there needs to be enough time, focus on form and the speaker must have representation of the rule to apply it correctly (Krashen 1981: 3). He points out, however, that situations where all the three different conditions apply are rare, most obviously the one being a grammar test.

There are two types of monitor users; “the over-users” and “the under-users” (Krashen 1981: 15-16). Over-users concentrate on grammar rules and do not want to make any mistakes at the same time making their speech non-fluent (Mitchell and Myles 2004: 46). However, according to Krashen (1981: 15) the over-users are quite accurate in their written English but are typically hesitant and over-careful when speaking. Under-users do not mind mistakes and speed and fluency are more important to them (Mitchell and Myles 2004: 46). It seems that under-users do not monitor at all or use conscious grammar (Krashen 1981: 16). Instead, they use a subconsciously acquired system but not conscious grammar. In classes there are always students who use the language in different ways.

The Affective Filter Hypothesis, on the other hand, pays attention to learners’ mental blocks, which can prevent the full internalisation of input (Krashen 1985: 3). In addition, attitudinal factors like integrative and instrumental motivation affect learning (Krashen 1981: 22). Integrative motivation means low affective filters because the aim to learn a language comes from being a valued member of the community that speaks the target language. In other words, interaction for its own sake is valued. Strong affective filters can be seen with instrumental motivation when a person desired to achieve proficiency in a language for utilitarian or practical

reasons. The aim of interaction, in this case, is to achieve certain ends. As can be seen, the motivational factors affect second language learning as well.

Furthermore, Krashen (1981: 37-38) describes a good language learner and a bad one. A good language learner according to Krashen is an acquirer. The acquirer is able to obtain sufficient amount of intake in the second language and has low affective filters to be able to utilize the input for second language acquisition. In addition, the good language learner uses the monitor in optimal ways. On the other hand, the bad language learner is not able to acquire or learn the target language. The reasons for this may be the attitudinal factors, for example, lack of interest in the second language, its speakers or high anxiety. In addition, the learner may have low aptitude or interest in grammar. A bad language learner may also be an under-user of the monitor. This kind of learner will progress as far as attitudes take him, according to Krashen (1981: 38). However, a monitor over-user may also be a bad language learner because the over-user is limited by his/hers conscious knowledge and will suffer from lack of spontaneity. These descriptions apply easily to CLIL classes where teachers are faced up with different kind of language learners. For the teacher to be able to optimize the learning conditions for everyone, it is useful to get to know the reasons behind good or bad language learning.

#### **4.1.4 The importance of input in acquiring language**

In a CLIL class, the teacher has to pay attention to whether students understand everything. The teacher has to do comprehension checks and use support materials to prevent students from misunderstanding the topic (Nikula and Marsh 1997: 55-57). Comprehension checks may be, for example, asking one student to translate the given instructions in the mother tongue or questions about the current topic. By making sure that students understand everything, comprehensible input is provided and students should be able to acquire the target language. Cummins and Swain (1986: 131) point out that comprehensible input is crucial to grammatical acquisition. They say that by being understood, there can be focus on form. According to The Input Hypothesis, speaking is a result of acquisition and grammar is learnt automatically as far as there is enough comprehensible input (Krashen 1985: 2).

According to Krashen (1985: 2), language is acquired by receiving comprehensible input. In his view, input is necessary for learning; it should be comprehensible and there should be an adequate amount of it. Krashen (1982: 63-73) defines four characteristics of optimal input for comprehension. First, optimal input has to be comprehensible; hence, the message is understood. Second, optimal input should be interesting and relevant. Third, optimal input is not grammatically sequenced and fourth, there is sufficient quantity of optimal input. All of the characteristics need a supportive affective environment as well. According to Long (1983, as quoted by Cummins 1984: 231), making comprehensible input needs here and now orientation. In addition, there has to be use of linguistic and extralinguistic information with general knowledge. The use of modification, repetition, confirmation, comprehension checks and clarification requests are important as well. In CLIL classes students receive input from a teacher as well as from peers.

According to Krashen (1981: 103-104), the input should go “little beyond” the student’s knowledge. With the help of extralinguistic context or our knowledge of the world, the student is able to understand the input. Krashen puts this in the form of  $i+1$ .  $i$  represents the stage where the student is with his/her knowledge at the moment. The student or acquirer can progress to stage  $i+1$  by understanding the input at hand. In other words, the teacher should provide students input that is challenging to them. Krashen (1981: 103-104) adds that optimal input includes structures that are a little bit beyond the acquirer’s current level of competence. In addition, he says that the optimal activities are natural, interesting and understood. The  $i+1$  formula will be naturally covered if the previous optimal input requirements are met and if there is a great deal of input. In addition, the formula seems understandable to maximize learning. The same kind idea of going beyond the learner’s stage of knowledge can be seen in Vygotsky’s (1982: 184-186) proximal zone of development (in section 4.2).

Even though in CLIL classes teachers do not pay attention to grammar, students acquire structural rules when hearing the foreign language. On the other hand, this puts pressure on the teachers to speak correctly and provide correct language models for students. However, CLIL students participate also in formal language lessons where the attention is on learning grammar rules and students get input from there.

In addition to input, Krashen (1981: 107-108) mentions the meaning of output. According to him, the meaning of output is not theoretically essential to language acquisition. Krashen (1981: 107-108) argues that second language competence may be acquired without ever producing it. In addition, Krashen (1981: 108) says that when active listening is provided but speaking delayed in a second language, it causes no delay in the proficiency in second language acquisition. He claims that comprehension normally precedes production and that production never occurs. However, from a bilingual point of view, output is meaningful because it enables communication.

The aim of CLIL is to learn a foreign language by using the language in studying normal school contents as has been explained previously. Nikula and Marsh (1997: 70) point out that one of CLIL's many positive aspects is that students learn that language is not just a target of learning but also a way to study different subjects. As can be seen, the meaning of output and using the foreign language is seen vital to learning.

The Output hypothesis by Swain (1985, 1995, as quoted by Mitchell and Myles 2004: 174) recognizes the meaning of output in second language learning. Swain (1985, as quoted by Meriläinen 2008: 29) agrees with Krashen's ideas of input but points out the meaning of output and paying attention to it as well. Swain (1995: 125-140) introduces three functions for output. First, there is a noticing-triggering function, which has a consciousness raising role in language learning. Second, there is a hypothesis testing function and, third, a metalinguistic function which has a reflective role. According to Swain, the activity to produce the target language, that is, output, makes the learner aware of the gaps and problems in the current second language stage. There has to be an opportunity to reflect on one's own language skills, to discuss and analyze it, to be able to experiment with new structures and functions of the second language.

In addition to the functions of output, Swain (2000: 99-100) points out that output has several roles in second language acquisition. First, output pushes the learner to process more deeply because output requires more mental effort than input. With



output, Swain (2000: 99) says the learner is in control of the situation and output also stimulates learners to move to more complex and complete grammatical processing which is needed for accurate production. Output can promote noticing-triggering functions, as well. Swain's Output hypothesis makes it evident that in second language learning it is important to offer the students opportunities to use the target language. CLIL and other bilingual programs aim at this and make the learning of a second language more effective.

When considering Krashen's Input Hypothesis, CLIL teaching seems an effective way of learning a foreign language. Students receive a great amount of target language input in CLIL classes and it is made comprehensible by teachers' comprehension checks. On the other hand, output is also emphasised in CLIL classes, although Krashen does not put great weight on output. Because of the great amount of input the students exposed to in CLIL classes, students should be able to acquire the target language in CLIL teaching.

To sum up, Krashen's Monitor Hypothesis provides support for CLIL. It takes into account many aspects that are important in learning foreign languages. First, The Acquisition-Learning Hypothesis brings up the important point of acquisition being subconscious. Second, The Natural Order Hypothesis shows that there is a predictable order for acquiring language rules. Third, The Monitor Hypothesis pays attention to different language users. Fourth, The Input Hypothesis acknowledges the importance of comprehensible input and its amount to acquiring a foreign language. Fifth, The Affective Filter Analysis presents the mental blocks that can prevent the full utilization of input.

## 4.2 Supporting learning

In CLIL teaching students are constantly exposed to, for example, new vocabulary. They are able to understand what is being taught with the help of supporting materials and peers' or teacher's assistant. One can easily see how Vygotsky's zone of proximal development works in a CLIL class when students are acquiring new information. However, it has to be acknowledged that the idea of zone of proximal development can be seen in non-CLIL classes as well.

Vygotsky (1982: 18) sees language as a means for communication. According to Vygotsky (1982: 18), language is a medium for social interaction and understanding. Vygotsky's ideas about language are easily connected to CLIL because of the connection to communication it has. Vygotsky (1982: 184-186) introduces the zone of proximal development which claims that a child is able to go beyond his or her skills with the help of another person. Vygotsky's zone of proximal development has the same features as Krashen's  $i+1$  formula.

According to Vygotsky (1982: 184-186), a child can perform in higher levels if he/she gets support. In other words, a learner is able to solve problems which he/she could not independently do. However, if there is someone to help him/her or there is supporting materials, the problem can be solved. However, the zone of proximal development is not limitless. A learner can easily solve problems that are close to his/her zone of proximal development but as one moves further away from the zone the tasks become more difficult and eventually impossible. The importance of zone of proximal development is that what a child is able to do today with some help; he/she will be able to do tomorrow independently. As a result, teaching should go little beyond students' abilities. In addition, Mehisto et al. (2008: 169) say that the zone of proximal development is the zone between student's current knowledge and the knowledge that can be pursued with assistance.

According to Mitchell and Myles (2004: 195-214), the zone of proximal development is a domain where learning can most effectively take place. The learner is not yet able to work on his/her own but with help one can achieve the aim. Mitchell and Myles (2004: 214) point out that originally the zone of proximal

development was concerned with the novice and expert issues. However, today it includes collaborative activities, for example, pair and group work with peers. Lantolf (2000: 17) reminds that the zone of proximal development is not a physical place situated in time or space. On the other hand, it can be said to be the difference between what one can independently achieve and what one can accomplish with support from someone else or with the support of materials. According to Thorne (2000: 226), Vygotsky's zone of proximal development emphasizes collaborative activity. It is seen that a person has an ability to co-construct through activity with other people and artifacts in the environment. This is a distinctive difference to Krashen's Monitor hypothesis where, according to Thorne (2000: 226-227), a learner is seen as a passive body listening and, in addition, the learning is seen as child-like. The zone of proximal development is closely seen in CLIL; the students are helped, for example, with different kind of visual material to cope with the task at hand.

## **5 THE PRESENT STUDY**

Next the present study is presented. First, I will take a look at the research problem and explain the research questions. Second, the data and methods will be discussed. In addition, the methods of analysis are presented. The aim is to present the present study as clearly as possible.

### **5.1 Research problem**

The aim of this study was to find out if students in Content and Language Integrated Learning (CLIL) teaching program and non-CLIL students have differences in their performance in English grammar. In Finland, CLIL is already quite known among teachers but, on the other hand, there are many interesting and valuable areas in CLIL that should be studied. There is little research on CLIL, in general; however, it is becoming more and more popular in Finland. Therefore, there is need for more research on how, for example, CLIL affects students' language skills. CLIL students are not taught more grammar than non-CLIL students. This creates an interesting topic for research: do CLIL-students and non-CLIL students have differences in English grammar skills even though the amount of time devoted to grammar is the same. However, the CLIL students hear the foreign language much more in the school context than non-CLIL students and this may result in better grammar skills. According to Nikula and Marsh (1997: 8), there should be more focus on form in CLIL classes. In addition, Järvinen (1999: 18) points out that productive skills, such as grammatical accuracy of speech, do not develop like other language skills. Järvinen (1999: 22) adds that there has been found excellent results in receptive skills but not in productive skills. As can be seen, the learning of grammar in CLIL classes is a controversial issue.

The aim of the study was to find out whether there can be found differences in English grammar skills between CLIL students and non-CLIL students.

- 1) Are there differences between CLIL students and non-CLIL students' grammar skills?

- 2) If there appear to be differences, in what areas of English grammar there are differences between the two groups?
- 3) If there appear to be differences, what kind of differences can be found?

## **5.2 Data and methods**

The information about the grammar skills of the students was gathered via a grammar test (see Appendix 1). The tests were mailed to three different schools and the teachers were informed what kind of instructions to give to the students (see Appendix 2). One has to take into account that it may show in results how the teachers have given the instructions to the students, for example, whether to leave tasks blank or try to fill in something. In addition, the schools have different orientations when using a foreign language as a medium of teaching, which have an effect on the development of the students' foreign language skills. In schools, that participated in the study, the use of English language increases gradually from the first grade to the sixth grade. However, the amount of using a foreign language in teaching may vary depending on the school. In addition, schools varied in what language students learn to read and write; others use the foreign language, others the mother tongue. It has to be acknowledged that using a foreign language as a medium of teaching has different variations, which affect the learning of a foreign language and may have effect on the results of the present study.

The grammar tests were mailed to schools in the spring 2009 and in the autumn 2009. Two schools had the opportunity to complete the grammar test in the spring 2009. In addition to this, in the autumn 2009 the test was done in one more school to enhance the reliability of the results. In each school two different groups of sixth graders of Finnish basic education took the test; one CLIL class and one non-CLIL class. The non-CLIL class acted as a control group.

The primary research material for the study was the results of the grammar test. The grammar test consisted of six different grammar exercises. Each exercise was a total of ten points; hence the maximum of the grammar test was 60 points. Five of the

exercises were taken from an English course books' test materials. One exercise was a combination of two different exercises. The exercises were chosen, in general, so that they would measure only the students' grammar skills not, for example, their vocabulary skills. As a result, in most of the exercises students were supposed to fill in gaps and the word was given to them in Finnish; hence, the exercises did not give opportunities for the students to be creative. In addition, the exercises did not measure students' communication skills. However, one has to acknowledge the fact that these kinds of exercises always include other skills than grammar as well. Students have to, for example, understand the instructions, which in these cases were in Finnish, but they, in addition, have to understand the sentences the exercise includes or the storyline in the exercise.

The first page of the grammar test consisted of background questions. The students were supposed to write down their last school grade in English and whether they were in bilingual education or not. In addition, the students were asked whether their home language is Finnish, and if not what their home language is. The students' home language may have some effects on the results and that is why it was asked. Because the grammar tests were handed in without names, there was a need for some background information about the students to ensure the study's reliability.

The grammar test consisted of six different exercises. The first exercise concerned the use of English *do*, *does* and *-s* (Fabritius 2005). The students had to fill in a short letter with the correct forms of *do*, *does* or *-s*. Finnish speaking students often have difficulties differentiating *do* and *does* and, in addition, when to use the third person *-s*. Therefore this kind of exercise was used in the grammar test. The exercise had ten gaps to fill in and each gap was worth one point. The maximum points for this task was ten.

The second exercise concerned the use of English articles *a*, *an* and *the* (Fabritius 2005). The students had to again fill in the gaps *a*, *an*, *the* or no article. Each article was worth one point, the whole exercise ten points. The Finnish language does not have articles and that can usually be seen in difficulties of learning the use of English articles. That is why it was useful to include an article exercise in the grammar test. It could be that the CLIL students know the use of English articles better than the non-

CLIL students because they have practiced more speaking as well as hearing. On the other hand, the CLIL students may not consciously know how to use the articles; the skills have become automatic.

In the third exercise students were given to words from which they had to choose the correct one to apply to the sentence (Fabritius 2005). All the sentences were in the past tense so the students had to know which verb form was the correct one. Simple past tense can be difficult to learn because of the irregular verb forms. The exercise had ten sections and each section was one point.

The fourth exercise was, also, about past tense forms (Fabritius 2005). In the fourth exercise students had to fill in gaps in a postcard. Students were given the Finnish word for the gap and, in addition, the verb in English in infinitive form. This was to make sure that the students would not do poorly in this exercise because of insufficient vocabulary. The exercise had ten gaps and each gap was worth one point.

The fifth exercise was made of two different exercises (Fabritius 2005). The exercise consisted of five sentences to where students had to fill in *will* or *would*. The verb of the sentence was translated into Finnish. Each sentence was worth two points. In grade six of the Finnish basic education the forms *will* and *would* are not usually taught but they appear in texts and in different exercises; the forms are used unconsciously. One can expect that CLIL students are more used to using these forms than non-CLIL students and this may result in better grammar skills.

The last exercise, exercise six, concerned pronouns (Kannisto, Sarlin, Siikaniemi-Holopainen & Törmä 2006). The exercise was a short story where students had to fill in the correct pronoun forms. The pronouns were given to the students in the text in Finnish. Each answer was worth one point.

### 5.3 The methods of analysis

In the present study, three different methods of analysis were used. First, statistical analysis was crucial to get an overall picture of the results. Second, the results were compared to each other. Third, hermeneutical perspective was also taken into account when analysing the mistakes students had made. Next, the methods will be discussed more carefully. In addition, it is taken into account what the positive aspect and negative aspects of the chosen methods are.

First, the primary method of the present study was a statistical analysis. There were 68 CLIL students and 54 non-CLIL students that participated in the study, altogether 122 students. In this case the students were from three different schools. In addition, the Pearson Chi-square test was done to resolve the statistical differences between the two groups in each part of every exercise. In statistical analysis it has to be taken into account that the data have been altered to numbers. In controversial cases this may cause difficulties; for example, if the answer is not clear correct or incorrect.

Second, a comparative method was used as well. The average results of students were compared to each other and it was considered whether there were differences between the results. In addition to comparing the average results, the percentage amount of mistakes of every part of each exercise were compared to each other. The purpose of this was to examine are there differences in the amount mistakes and if there are, in what kind of parts. To get information about the differences in grammar skills between CLIL and non-CLIL students comparative method is crucial. To be able to say something about the foreign language development in bilingual education one has to have a group were to compare the results.

Third, the hermeneutical perspective was also taken into account. Hermeneutics, in general, is about the interpretation of the results (Laine 2007: 28-31). According to Laine (2007: 28), in hermeneutics it is important to understand and interpret the results and the data. However, Ricoeur (2007: 140) talks about the hermeneutic problem; the problem of interpretation. According to Ricoeur (2007: 150), interpretation is, for example, finding out the hidden meanings. In addition, Laine (2007: 34) points out that it is very important that the researcher is critical and does



not take the spontaneous interpretation for granted. Laine (2007: 36) also talks about the hermeneutic spiral where the researcher is in dialogue with his/her data and results; after analysing it is important to take a look at the data again. In addition, Siljander (1988: 115-118) describes the hermeneutic spiral. According to Siljander (1988: 118), it is important to go back to the first impressions and think if they are valid after the analysis. As can be seen, hermeneutics is a multilayered perspective when analysing research results. In the present study, the mistakes students made were considered and, in addition, it was thought why a student had made a mistake he/she had. As a result, it was considered whether the bilingual education can have an effect on these mistakes. In general, hermeneutics is interpretation and that is why one should be careful with it. An interpretation of one task may vary extensively between individuals because everyone has their own backgrounds and ways of thinking. In the present study, the interpretations are explained carefully with examples to ensure the understanding behind the conclusion. However, the hermeneutic aspect to the study is vital to understand the results.

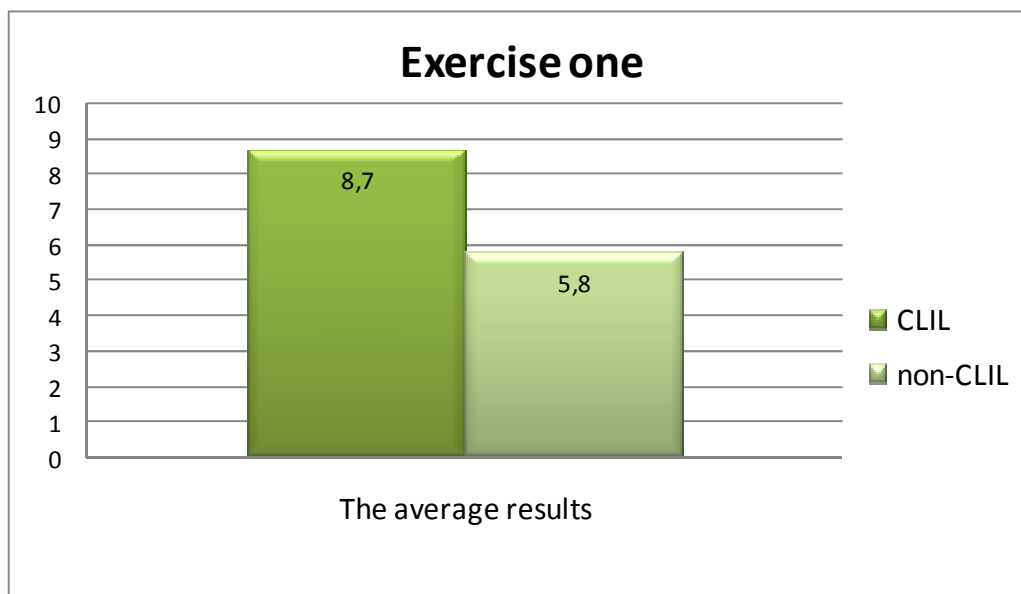
As a conclusion, three different methods of analysis were taken into account in the analysis of the data; a statistical approach, comparative approach and a hermeneutic perspective. All these different perspective offer something different to the analysis. The statistical approach gives general information about the competence of students in different areas of grammar. When comparing the results of the CLIL and non-CLIL students, it is seen how the foreign language skills between the groups differ. When analysing the results from the hermeneutic perspective, the reasons for the mistakes are considered and explained. To conclude, all the methods add something of their own to the analysis.

## 6 RESULTS

The results of the grammar test are discussed next. First, the analysis will start with a look at the average results of both groups of each exercise. In section 6.1 the average results of exercises are compared between the CLIL and the non-CLIL group. In addition, it is taken into account what kind of differences there are in the average results. Second, in sections 6.2-6.7 every exercise is examined more carefully and it is seen how many mistakes the CLIL and the non-CLIL students have made in percentages. The items of the exercises where the differences between groups have been very significant are taken into account and they are studied in more detail. Some examples of mistakes are also taken into account to support the analysis. In addition, it is considered why students have made the mistakes they have to deepen the analysis and to take every aspect into account. It is also considered whether the mistakes are similar between the CLIL and the non-CLIL students. In addition, there will be a look at the items of exercises where students from both groups have or have not made mistakes. Third, it will be discussed which exercises groups had the least and the most difficulties. As a result it is seen in what areas of English grammar students have difficulties and what areas seem easy according to the present study.

### 6.1 The average results of the grammar test

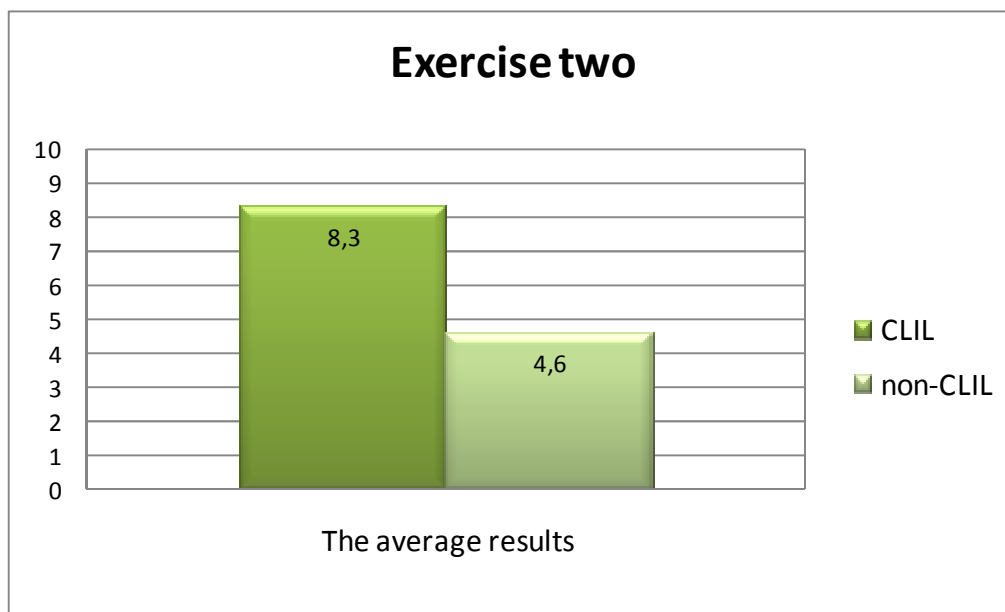
Exercise one concerned the use of *do*, *does* and the third person's *-s*. The aim of the exercise was to see whether the students know when to use the auxiliary verb *do/does* and third person's *-s* in a text that is in past tense. In addition, it was studied if the students recognise when there is a need for an auxiliary verb or *-s* in the context of the texts; not every item needed filling. In exercise one the CLIL students' average result was 8.7 and the non-CLIL students' 5.8 (Figure 1).



**Figure 1** The average results of exercise 1

The Std. Deviation in exercise one was among the CLIL students 1.5 and among the non-CLIL students 2.1. This shows that the variance in the answers of the non-CLIL students have been greater than among the CLIL students. In general, as can be seen from the results, the CLIL students seem to outperform the non-CLIL students when testing how the students use *do*, *does* and *-s* ( $p = .000$ ).

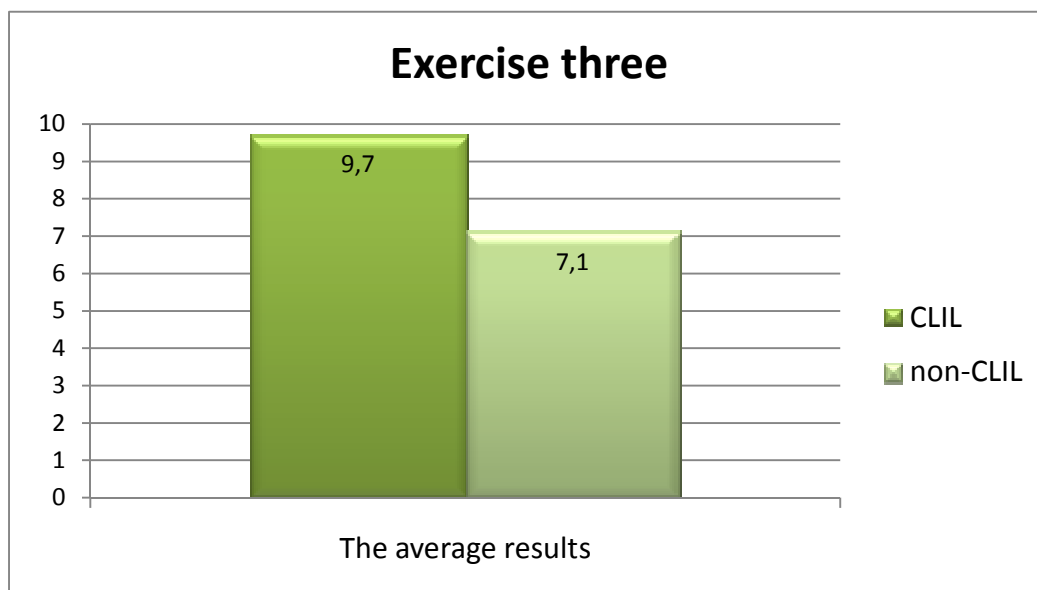
The purpose of exercise two was to measure the students use of English articles which is generally a difficult aspect of English grammar for Finnish students to learn. The CLIL students' average result was 8.3 and the non-CLIL students' 4.6 (Figure 2).



**Figure 2 The average results of exercise two**

The variance between answers in exercise two was not large (CLIL  $s = 1.8$  and non-CLIL  $s = 2.2$ ), however, as can be seen among non-CLIL students the answers vary more than among the CLIL students. As can be seen there is a big difference in the results between the two groups ( $p = .000$ ). It seems that the CLIL students are more familiar with using the articles than the non-CLIL students. Whether there are differences in article use, for example between definite and indefinite, will be presented later.

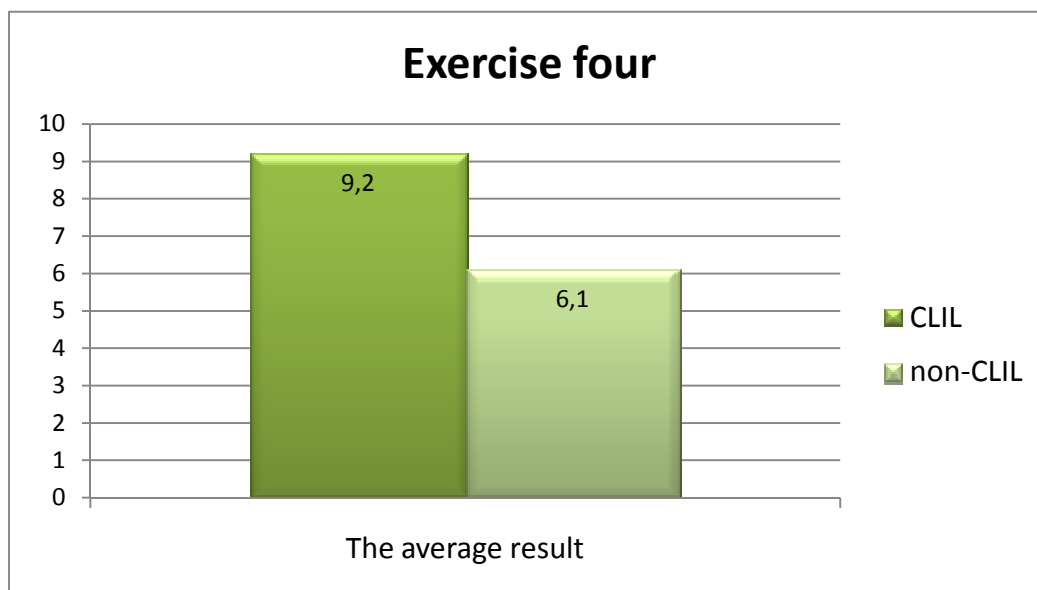
Exercises three and four both concerned the English past tense. In the third exercise students chose the correct alternative to suit a sentence and a text from two options; the students did not have to produce any past tense forms but they had to recognize when to use or not to use the form. Exercise three turned out to be quite easy for the CLIL students; their average result was 9.7. The non-CLIL students' average result was 7.1 (Figure 3). The difference here is significant, as can be seen ( $p = .000$ ).



**Figure 3 The average results of exercise three**

On the basis of the average results of exercise three, it can be said that the CLIL students are very competent in recognising and using the English past tense. In addition, the variance in the answers was not large (CLIL  $s = 0.6$  and non-CLIL  $s = 2.6$ ). However, the variance of the answers is a bit larger among the non-CLIL students than among the CLIL students. The average result of non-CLIL students is quite good also, but the variance may have an influence on that. In general, it seems that the CLIL students clearly outperform the non-CLIL students.

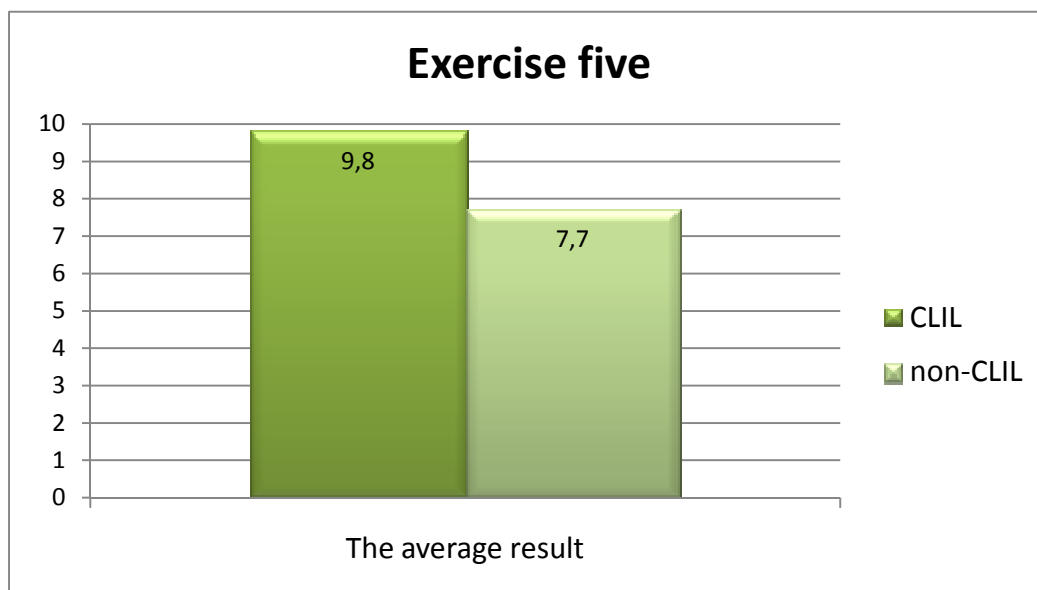
In exercise four, students were asked to fill in caps to a short story by using the past tense. The verbs were given to the students in Finnish and in English to ensure that their performance would not depend on the knowledge of vocabulary but on their grammar skills. The average result of the CLIL students was in exercise four 9.2 and the non-CLIL students' 6.1 (Figure 4).



**Figure 4 The average results of exercise four**

Again, here can be seen the difference between the groups ( $p = .000$ ). It can be said that the CLIL students recognise the past present form better than the non-CLIL students. In addition, the CLIL students are more familiar with the past tense conjugation. However, it has to be also taken into account how the answers vary inside the groups; Std. Deviation among the CLIL students was 1.3 and among the non-CLIL students 2.7. According to this there is some variance in the answers but not significant. What has to be taken into account is that the variance among the non-CLIL students is again greater than among the CLIL students.

Exercise five concerned the use of *will* as a future mark and conditional *would*. The purpose of the exercise was to see how the students recognize *will* and *would* and whether they are able to connect the forms to sentences where the verb has already been translated into Finnish to make the task easier. The average result of the CLIL students was 9.8 ( $s = 0.6$ ). On the other hand, the average result of the non-CLIL students was 7.7 ( $s = 2.4$ ), which is not a poor result either (Figure 5).



**Figure 5** The average results of exercise five

As can be seen from the average result the CLIL students did really well in exercise five. It can be said that the CLIL students at least recognize the forms *will* and *would* and know the difference between them based on exercise five. However, there can be seen a difference in the performance of recognising *will* and *would* between the CLIL and the non-CLIL students ( $p = .000$ ).

The last exercise of the grammar test, exercise six, tested the students' knowledge of personal pronouns. In general, it seems that the CLIL students clearly outperformed the non-CLIL students in this task ( $p = .000$ ). The average result of exercise six of CLIL students was 9.7 ( $s = 0.6$ ) and the non-CLIL students' 7.0 ( $s = 2.2$ ). As can be seen, there are differences in the use of personal pronouns between the groups (Figure 6).



**Figure 6 The average results of exercise six**

In general, it can be seen that the CLIL students are more competent in using English personal pronouns; however, the non-CLIL students' result was not bad either. Whether there are differences in the mistakes the students make, will be discussed later.

To conclude, the CLIL students outperformed the non-CLIL students in all of the exercises of the grammar test based on the average result. In addition, the statistical difference between the groups was very significant in each exercise. As a result it can be said that the CLIL students are better in English grammar than the non-CLIL students based on this study. The results of the average result seem to be the opposite to what Nikula and Marsh have pointed out. Nikula and Marsh (1997: 8) say that when using CLIL as a teaching method there should be more focus on form. According to them, using foreign languages as a teaching method does not have an effect on learning grammar. Järvinen (1999: 18) points out the same kinds of things saying that grammatical accuracy does not developed in CLIL classes like other language skills. However, it could be said that CLIL students are simply better in English because they are a special group. It seems that according to this study there is a significant difference between the foreign language grammar skills between the CLIL students and the non-CLIL students.



Nevertheless, there is a need to go a bit deeper in the analysis to see what kind of differences there are between the groups in the knowledge of English grammar. Next each exercise of the grammar test is presented in more detail. The aim is to find out whether there are differences in the mistakes the CLIL students and the non-CLIL students have made in the present study.

## 6.2 The use of *do/does*/third person's *-s* - "Does your parents enjoy travelling?"

Exercise one considered the use of *do*, *does* and *-s*. The students were asked to fill in when necessary the missing words to a short text. First, the items with statistically significant differences are discussed. Next, the item where there was no difference between the CLIL and non-CLIL students is presented and last, I will take a look at the items that were easy for students from both groups.

First, in exercise one there were many items where the statistical difference between the CLIL students and the non-CLIL students was very significant. In items two, three, four, five, six, seven and ten the statistical difference was significant (Figure 7). Next the items will be discussed in more detail and it is studied if there are similarities between the items where the CLIL students outperformed the non-CLIL students in a significant way.

My parents just 2. love \_\_\_\_\_ it.

It 3. sound \_\_\_\_\_ exciting, doesn't it?

My parents never 4. want \_\_\_\_\_ to do anything when we travel.

We just 5. see \_\_\_\_\_ lots of museums, art galleries, cathedrals and shopping centres.

I 6. swim \_\_\_\_\_ and 7. fish \_\_\_\_\_ there.

If you do, please, 10. \_\_\_\_\_ write to me.

**Figure 7 Exercise one: items with statistically significant differences ( $p < .001$ )**

In item two students were asked to fill in, *My parents just 2. love \_\_\_\_ it*. Seventeen CLIL students answered at this point *loves*. In general, 29.4 per cent of the CLIL students answered incorrectly and 85.2 per cent of the non-CLIL students. However, the most common mistake among the non-CLIL students was also using the third person's s-form, *loves*. On the other hand, there was a similarity in the mistakes which shows that there are students in both groups that have a difficulty in using the third person's -s. The reason for making a mistake in this item could be explained by the unit *parents*; the students may have considered the phrase *parents* to be a single unit that can be referred to in a third person's form *loves*.

In the third item, *It 3. sound \_\_\_\_ exciting, doesn't it?*, of exercise one only 1.5 per cent of the CLIL students answered incorrectly, whereas, 25.9 per cent of the non-CLIL students did. The non-CLIL students made variable mistakes in this item and there cannot be seen any similarity between the mistakes. Some non-CLIL students had left the space empty, some had answered *do* and some had used the s-form with an apostrophe. Using the form *sound's* indicates that the students knew the correct form but made a spelling mistake. In spoken language this would not have such a big difference but in written form it is a mistake. There was only one CLIL student who made a mistake in this item and the mistake was also using the apostrophe. As can be seen, it cannot be said that there were similarities in the mistakes made between the groups because only one CLIL student made a mistake in item three; however, that one mistake was the same as the most common mistake among the non-CLIL students.

In item four of exercise one, *My parents never 4. want \_\_\_\_ to do anything when we travel*, the number of incorrect answers among the CLIL students was 17.6 per cent of the whole group and the non-CLIL students' 77.8 per cent. The most common mistake among the CLIL students was using the third person's -s; as was among the non-CLIL students as well. A reason for making a mistake in this item may be again in seeing the word *parents* as a single unit where one can refer with the third person's -s as was in item two. Some students in both groups used again the apostrophe which indicates that the students do not know the correct use -s. In addition, this may mean that these students do not understand the difference of third person's -s and the genitive 's.

The CLIL students outperformed the non-CLIL students in item five, *We just 5. see \_\_\_ lots of museums, art galleries, cathedrals and shopping centres.*, as well. Only 2.9 per cent of the CLIL students had answered wrong in this item, whereas, 40.7 per cent of the non-CLIL students had. Eight of the non-CLIL students answered *do*, seven *does* and five used the third person's *-s*. It can be seen that the use of modal verbs is not clear with all the non-CLIL students or the use of third person's *-s*.

In item six, *I 6. swim\_\_\_ and...*, 4.4 percent of the CLIL students had incorrect answer and 35.2 per cent of the non-CLIL students. Three CLIL students made a mistake by using the *-ing* form which was the only mistake made by CLIL students. However, there was more variety in the mistakes made among the non-CLIL students. Ten non-CLIL students used the third person's *-s* and some used the *-ing* form or *do*. In addition, one non-CLIL student answered *swim's*. There was again no similarity between the mistakes and non-CLIL students made more variable mistakes than the CLIL students.

Only 5.9 percent of the CLIL students made a mistake in item seven, *.. and 7. fish \_\_\_ there*. However, 38.9 per cent of the non-CLIL students had the same item wrong. The non-CLIL students made several different mistakes, for example, using *do* or *does* or the third person's *-s*. In addition, two non-CLIL students used the *ing*-form. Only four CLIL students made a mistake in the seventh item, which was using the *ing*-form as well. It is difficult to say why the students had used the *ing*-form in this item; one reason may be that they had not either understood the sentence or they had read it hastily.

The last item of exercise one, item ten, *If you do, please, 10. \_\_\_ write to me.*, showed again differences between the two groups; 10.3 per cent of the CLIL students had an incorrect answer and 44.4. per cent of the non-CLIL students. The most common mistakes among the non-CLIL students was using the form *does*, which indicates that the use of *do* and *does* it not clear to these students. None of the CLIL students made the mistakes of using *does*, however, there were several students who answered *do*, six CLIL students and six non-CLIL students. Using *do* in this context would be acceptable if the writer really wants to encourage the other to write to him/her. What makes this interesting is that the same number of CLIL students and

non-CLIL students suggested the form *do*. It could be said that this kind of language is a bit more difficult but apparently some students from both groups were familiar with the phrase. One might suggest that the use of *do* comes from teacher talk; teachers may use the *do* to enhance their instructions.

As can be seen, in six items out of ten in exercise one the difference between the CLIL students and the non-CLIL students was very significant. However, there can be seen a similarity in some mistakes, for example in parts two and four were the most common mistakes among both groups was using the third person's *-s*. In addition, some students had problems in using the third person's *-s*, which was written down with an apostrophe. In general, it can be said that there were only few similarities in the mistakes made between the CLIL and the non-CLIL students.

In exercise one there was only one item where there was not a difference between the CLIL and the non-CLIL students; in the first item of the exercise ( $p = .465$ ). In item one both groups had difficulties (Figure 8).

1. ____ your parents enjoy travelling?
--

**Figure 8 Exercise one: no difference between the CLIL and non-CLIL students**

In exercise one in the first item, *1. \_\_\_\_ your parents enjoy travelling?*, 51.5 per cent of the CLIL students answered incorrectly, from the non-CLIL students 59.3 per cent answered incorrectly. The only mistake in item one was using *does*, 32 CLIL students and 35 non-CLIL students used the same form. It is difficult to say why the students made this mistake; the problem may lay in understanding where the *do/does* refers to in this sentence. The subject of the sentence here is *parents*, which needs the form *do* and it seems that students may have been confused with the phrase *your parents* and this may be the cause of the mistake. However, it is interesting why so many CLIL students made a mistake in this item but not in item two and four where the unit *parents* was used also. The number of mistakes in item two and four, however, was significantly lower.

There were also two items, item eight and nine, which were easy for both the CLIL students and the non-CLIL students (Figure 9). The common subject in these two items was that the both items concerned direct questions.

8. \_\_\_\_\_ you have this problem with your parents?
9. \_\_\_\_\_ you want to talk about it?

**Figure 9 Exercise one: easy items for the CLIL and to the non-CLIL students**

The eight item of the first exercise, 8. \_\_\_\_\_ *you have this problem with your parents?*, seemed to be easy for both groups; 4.4 per cent of the CLIL students made a mistake here and 11.1 per cent of the non-CLIL students. The non-CLIL students used the form *does* several times, whereas only one CLIL student did this.

In the ninth item of the exercise, 9. \_\_\_\_\_ *you want to talk about it?*, only 1.5 per cent of the CLIL students answered incorrectly which means only one student. The non-CLIL students also did well in this item, only 9.3 per cent of the non-CLIL students had a mistake at this item, which means five students. The one CLIL student who had answered incorrectly had left the item empty, which would be acceptable, for example, in spoken language when one can interpret the phrase as a question from the intonation. However, here it was not accepted. Two non-CLIL students had also left the ninth item empty and three had answered *does* which indicates that these three students had not known the right reference with the subject *you*.

The form of the question *Do you...* may be quite familiar to both groups from classroom interaction; students are used to hear questions by their teacher and are used to forming ones. This results in knowing how to form the direct question, which was seen in the results of the grammar test in items eight and nine.

To conclude, it can be said that the CLIL students outperformed the non-CLIL students in exercise one of the grammar test, in general; the CLIL students had a better average and when analysing the exercise more carefully it can be seen that the CLIL students did significantly better in most items of the exercise one than the non-CLIL students. In exercise one, there were some similarities in mistakes, for

example, in item two where the most common mistake among both groups was using form *loves* with the subject *parents*. In addition, in item ten students from both groups used a form of spoken language in sentence *If you do, please, 10. do write to me*. In item one, CLIL students and non-CLIL students also made a similar kind of mistake. However, it has to be taken into account that some of the students have not read the instructions carefully as was asked to, which was seen in a variety of given answers, such as *-ing* forms in points six and seven. This may have influenced the results.

### 6.3 Articles - “Look! What a expensive hat!”

Exercise two measured the use of English articles. The students were asked to fill in to a short text when necessary articles *a*, *an* or *the*. I will first present the items where student had a statistically significant difference. In addition, an item with no difference is discussed.

In exercise two there was a very significant statistical difference in seven items of the exercise (Figure 10). Next these items are discussed and it is seen what kind of differences or similarities there can be found in the answers of the students.

- I'm not sure. But I like (2) \_\_\_\_\_ leather jacket over there.

Look! What (3) \_\_\_\_\_ expensive hat!

I haven't got that much (5) \_\_\_\_\_ money.

... sandwich with (7) \_\_\_\_\_ ham and (8) \_\_\_\_\_ cheese

for me, please.

- For me, too. And (9) \_\_\_\_\_ cup of (10) \_\_\_\_\_ tea, please.

**Figure 10 Exercise two: items with statistically significant differences (p< .001)**

The second item of exercise two, *But I like (2) \_\_\_\_\_ leather jacket over there*, seemed out to be more difficult to the non-CLIL students than to the CLIL students.

In this item it was studied if students know how to use the definite article when referring to a certain object. 10.3 per cent of the CLIL students made a mistake in this item. For example, five CLIL students used the article *a*, one CLIL student left the space empty and one answered *that*. In general, using *that leather jacket* is a correct answer but does not apply to the instructions given where students were asked to use *a*, *an* or *the* when needed. This may imply that the student did not know the correct article but was able to go around this; which is an important skill in itself. Most of the non-CLIL students who had made a mistake in this item used an indefinite article which indicates that they did not understand the difference between a definite and an indefinite article. On the other hand, it can be that the non-CLIL students had not understood the text itself and that is the reason why they did not realize to use the definite article.

Item three concerned the use of an indefinite article, *What (3) \_\_\_\_\_ expensive hat!* 13.2 per cent of the CLIL students answered wrong and 44.4 per cent of the non-CLIL students. Nine CLIL students used the indefinite article *a* and seventeen non-CLIL students. Some non-CLIL students also used the definite article and some had left the space empty. Using the indefinite article *a* indicates that these students had not either noticed the letter beginning the word *expensive* or they did not know how this affects the choice of an indefinite article. In general, the CLIL students had fewer mistakes in this item the mistakes were, however similar.

In the fifth item, *I haven't got that much (5) \_\_\_\_\_ money.* Only 7.4 per cent, four students, of the CLIL students made a mistake in this part, whereas, 57.4 per cent of the non-CLIL students did. The five CLIL students who had an incorrect answer in this item had used *the*, *of* or *a*. The most common mistake by non-CLIL students was using the indefinite article *a*. In addition, many of the non-CLIL students used the definite article. Two non-CLIL students had also used *of* like one CLIL student. As can be seen, for non-CLIL students it appeared to be difficult to understand the meaning of money with the use of articles. Money is an abstract word which does not need any article with it. This seems to be difficult for Finnish students to learn but the CLIL students had clearly understood this item as only two CLIL students answered *the money*.

In item seven and eight ... *sandwich with (7) \_\_\_ ham and (8)\_\_\_ cheese for me please.*, students were supposed to recognise the zero article with food related words. In item seven, 23.5 per cent of the CLIL students made a mistake and 77.8 of the non-CLIL students. Most of the mistakes among CLIL students were the use of indefinite article *a*. Among the non-CLIL students, students' mistakes varied more than the CLIL students' mistakes. Thirty-four of non-CLIL students' mistakes were the use of an indefinite article *a* or *an*. Some students wrote down also the definite article or other words, for example *and*. In item eight, the most common mistake by CLIL students was again the use of indefinite article *a*. The same mistake was seen among non-CLIL students; 26 answered *a* and others, for example, *an* and *the*. In item eight, 17.6 per cent of the CLIL students had a mistake, whereas 74.1 per cent of the non-CLIL students made a mistake. As can be seen, even though the statistical difference between the CLIL students and non-CLIL students was very significant, the mistakes made were similar. It seems that both CLIL and non-CLIL students are uncertain about the use of zero article.

In item nine and ten, *And (9) \_\_\_ cup of (10) \_\_\_\_\_ tea, please.*, only 4.4 per cent of the CLIL students had a mistake, three students, whereas 25.9 per cent of the non-CLIL students made a mistake in this item. In item ten, again only six CLIL students made a mistake, 8.8 per cent of the whole group. However, 59.3 per cent of the non-CLIL students made a mistake in this item. The CLIL students answered in item nine, for example, *an cup of...* or *the cup of...* In item ten the CLIL students made mistakes by using *the*, *an* or *a*. However, there were not many mistakes. The non-CLIL students made more mistakes than the CLIL students and, in addition, there was variety in the mistakes. In item nine, six students used the definite article and some the indefinite articles. In item ten, the answers varied from *a* to *the*. It seems that the non-CLIL students were not familiar with the phrase *a cup of tea*. Many students tried to use articles with the word *tea* which indicates that the use of articles with food related words is not clear to the non-CLIL students as has been previously noted.

As can be seen, there was a significant statistical difference in many items of exercise two; the CLIL students outperformed the non-CLIL students. The mistakes varied a lot; however, there were some similar mistakes as well. For example, in item



three using an indefinite article *an* with the word *expensive* was a common mistake. In addition, items seven and eight, which concerned the use of zero article with food related words, appeared to be difficult.

In exercise two there was one item where there was no statistical difference between the CLIL students and the non-CLIL students ( $p = .162$ ). In item four students from both groups had similar difficulties (Figure 11).

- (4) \_\_\_\_\_ things aren't any cheaper here than at home.

**Figure 11 Exercise two: no difference between the CLIL and non-CLIL students**

The fourth item of the exercise, - (4) \_\_\_\_\_ *things aren't any cheaper here than at home.*, appeared to be difficult for both groups. 64.7 per cent of the CLIL students had a mistake at this point and 77.8 per cent of the non-CLIL students. The most common mistake among CLIL students was the use of a definite article, 41 CLIL students choice *the things* to be a correct answer. Similarly, 33 non-CLIL students used the form *the*. It can be said that the students thought that it was referred to certain things in the context although it was spoken on a general level when there is no need for a definite article. What was interesting in this item was that also many CLIL students made the same mistake in this item, although they did, in general, better than the non-CLIL students in the exercise.

In exercise two there were significant differences between the CLIL and non-CLIL students in many items of the exercise: most of these were in items that referred to food or to an abstract word and or the article was not used at all. It seems that, at least, to the non-CLIL students the use of articles with food words and abstract words seems difficult. The difference here may be of the daily use of a foreign language the CLIL students have; they are used to using these words and articles and, in addition, they hear the teacher using the foreign language daily.

#### 6.4 The past tense - “I buyed you a present.”

Exercise number three concerned the use of the past present form. In exercise three students were asked to choose from two options, *a* and *b*, the correct form to apply to the given sentence and the text. In exercise four students filled in a short text with correct verb tenses. Next, I will discuss the items of exercise three and four with statistically significant differences.

In six out ten items of exercise three the statistical difference was very significant and the CLIL students clearly did better than the non-CLIL students (Figure 12).

2. I have a CD full of digital photos. I	<i>a) take</i>	<i>b) took</i>	at least a hundred photos.
5. I didn't	<i>a) had</i>	<i>b) have</i>	that much money or time.
6. What	<i>a) -</i>	<i>b) did</i>	you do in New York?
7. Well, I	<i>a) walked</i>	<i>b) walking</i>	on Broadway.
8. I	<i>a) watch</i>	<i>b) watched</i>	American TV.
9. I	<i>a) went</i>	<i>b) go</i>	roller-blading in Central Park

**Figure 12 Exercise three: items with statistically significant differences (p< .001)**

In item two, *I have a CD full of digital photos. I a) take b) took at least a hundred photos.*, the percentage of mistakes among CLIL students was 2.9, when among the non-CLIL it was 36.5 per cent. As can be seen, the CLIL students recognised the irregular form for of verb *take* better than the non-CLIL students. The irregular conjugation of verb *take* may be difficult to students but at least according to this item of the exercise the CLIL students were familiar of the form *took*. In addition, in item nine, *I a) went b) go roller-blading in Central Park.*, the students had to know the correct conjugation. None of the CLIL students made a mistake in this item, however; 17.3 per cent of the non-CLIL students made. According to these items of the exercise the CLIL students are better in using and recognising irregular past tense.

Items seven and eight concerned the regular conjugation of past tense. The difference between the CLIL and the non-CLIL students was clear in item seven, *Well, I a) walked b) walking on Broadway*, where only one CLIL student chose the incorrect form. However, 30.8 per cent of the non-CLIL students made a mistake in item seven. In item seven students also had to know the difference between *-ing* form and the *-ed* form. In the instructions of the grammar test it was not said that choose the past tense but choose the correct form to suit the text. In this case the non-CLIL students' mistakes may indicate that they did not know that the right form in this sentence was the past tense or they did not recognise the text be in the past tense. However, the difference to the CLIL students is considerable. Only one CLIL student made a mistake in item eight, *I a) watch b) watched American TV.*, whereas 21.2 per cent of the non-CLIL students chose the incorrect form. It is interesting that there was a considerable difference also concerning the regular conjugation of verbs. However, the mistakes may be a result of not knowing the correct form or not understanding the context of the text.

Both items five and six concerned the use of *did*, although in different ways. In item five, *I didn't a) had b) have that much money or time.*, only two CLIL students made a mistake in this item, whereas fifty per cent of the non-CLIL students made. In item six of exercise three, *What a) – b) did you do in New York*, the CLIL students performed better than the non-CLIL students. The CLIL students did not make any mistakes; however, 30.8 per cent of the non-CLIL students chose the incorrect form. From these items of the exercise it can be seen that the non-CLIL students did not know how the verb acts with the modal verb *did*. In item five, where students should have noticed that the form *didn't* needs an infinitive form with it, about fifty per cent of the non-CLIL students chose the incorrect alternative. This result shows that the form *did + infinitive* was not clear for the non-CLIL students. Further, in item six many of the non-CLIL students did not succeed in forming a question. These kind of questions one might assume to be familiar to all students because of teacher talk; teacher asking students questions. The positive effect of teachers' questions was seen in items eight and nine of exercise one; both groups performed well in forming questions. However, those questions were in past tense. In general, it seems that forming questions in the past tense is difficult and it should be practiced more.

In addition to exercise three, exercise four concerned the past tense. In exercise four students were asked to fill in missing verbs in the past tense. The aim of exercise was to measure the students' ability to form past tense of the given verbs when the aim of the exercise three had been more of recognising the use of past tense. To make sure the students would not do poorly in the exercise because of not knowing the verb itself in English, all the verbs were given in the infinitive form in Finnish and English. When comparing the average results of the two groups one can see that the CLIL students did again well in the exercise

Next the items of the exercise four are studied where the statistical difference was very significant between the two groups (Figure 13). Some examples of mistakes are also taken into account and the difference between the mistakes of CLIL students and non-CLIL students' is studied.

1. (a) _____ you (b) _____ my postcard from New York? (Saitko? - get)
2. I _____ you a present. But it's a surprise. (ostin - buy)
3. Yesterday I _____ the biggest ice cream
7. After the film I _____ mum. (soitin - call)
8. We _____ for at least an hour. (puhuimme - talk)
9. What (a) _____ you (b) _____ this weekend? Send me an e-mail! (teit - do)

**Figure 13 Exercise four: items with statistically significant differences ( $p < .001$ )**

Sentences one and nine aimed to test the students' competence to form questions using the past tense. In item one (a) of exercise four, (a) \_\_\_\_\_ you (b) \_\_\_\_\_ my postcard from New York?, the CLIL students did not make any mistakes. In the second item, (b), seven CLIL students had an incorrect answer, 10.3 per cent of the whole group. On the other hand, 34 per cent of the non-CLIL students made a mistake in the first item and even 57.4 per cent in the second item. The most common mistake in the first item among non-CLIL students was using *do*; the non-CLIL students knew how to start the question but failed to use the past tense. The

mistakes in item one (b) were more variable; many non-CLIL students answered *got*, some *getted* or some *getting*. The mistake made among the CLIL students in one (b) was using the form *got*. As can be seen, even though the difference between the groups was very significant, the most common mistake among both groups was using the form *got* in item one (b). The students had not remembered to use the infinitive form which is required with *did*. This may be a result of hasty reading or lack of competence.

Sentence nine similarly measured the forming of questions. Item nine consisted of two items, *What (a) \_\_\_\_\_ you (b) \_\_\_\_\_ this weekend?*, and they were corrected individually, although they are connected to each other. In the first item, 7.4 per cent of the CLIL students made a mistake. The students answered either *have* or *do*; *have* in one case could have been correct but not in this context. *Do*, on the other hand, suggests that students have not understood how to refer to the past when using *do*. In addition, the non-CLIL students made mistakes in the first item; 35.6 per cent of the group. The most common mistake among the non-CLIL students was the use of *do*. Some non-CLIL students had also answered *does* or left an empty space. In the second item, only two CLIL students made a mistake. One had answered *done* and the other had left the space empty. Among non-CLIL students, 22.2 per cent of the group had answered incorrectly. The mistakes varied between *does* and *doing*. It might have been confusing to students to form a question by using two forms of *do*; first to refer to the past one should be able to use *did* and then remember what form to use with that. However, even though the CLIL student had some mistakes in item 1(b), which also concerned the use of infinitive with *did*, in item nine (b) only a few made the same mistake. On the other hand, the non-CLIL students made mistakes in both items which indicate, as in exercise three, that the non-CLIL students have problems in forming past tense questions.

In sentences two and three students should have known the right conjugation to irregular verbs. First, both groups made mistakes in the second item of the fourth exercise, *I \_\_\_\_\_ you a present*. In the CLIL group, 1.8 per cent had an incorrect answer and in the non-CLIL group 40.4 per cent of the group. Only two CLIL students had used *ed*-ending to refer to the past tense; the rest of the mistakes were spelling errors, for example *boughth* and *bogth*. It seems that the CLIL students were

aware of how to form a past tense from the verb *buy*. However, the non-CLIL students had various mistakes. Quite many had used the present form of the verb *buy* even though in the instruction it was asked to use the past tense. Some had used the *ed*-ending and some had formed their own conjugations, for example, *brig*.

Item three consisted of two items, *Yesterday I (a) \_\_\_\_\_ the biggest ice cream and (b) \_\_\_\_\_ the biggest coke of my life*. There was a difference between the groups in their answers and in the item (a). In the first item only five CLIL students made mistake, 7.4 per cent of the whole group. However, 34 per cent of the non-CLIL group made a mistake in this item. As in the previous exercise, some CLIL students had used the *ed*-form to conjugate the past tense. The non-CLIL students' mistakes were more varied and included some *ed*-forms as well. According to items two and three, the non-CLIL students have more difficulties in forming the past tense than the CLIL students. However, it has to be taken into account that, for example in item four, which also concerned the conjugation of an irregular verb, 4. *I \_\_\_\_\_ a horse, too. Yes, I really did. (ratsastin - ride)* the difference between the students was not very significant.

It seems that the non-CLIL students do not only have difficulties of conjugating irregular verbs but regular also. Item seven, *After the film I \_\_\_\_\_ mum.*, was easier to the CLIL students than to the non-CLIL students. Three CLIL students, 4.4 per cent of the whole group, made a mistake in this item. Two of the students had used the infinitive form of the verb and one had used a form *calld*. The form *calld* could be interpreted as a correct form; the student had probably only forgotten one letter. However, in this case it was taken as an incorrect answer as has been with the previous spelling mistakes. The non-CLIL students made more mistakes than the CLIL students in item seven; 48.9 per cent of the non-CLIL students had an incorrect answer. The non-CLIL students' mistakes were quite variable; however, the two most common mistakes were using the infinitive form or leaving the space empty.

In item eight, *We \_\_\_\_\_ for at least an hour.*, the non-CLIL students had again more mistakes than the CLIL students. 10.3 per cent of the CLIL students answered incorrectly, whereas 53.3 per cent of the non-CLIL group made a mistake here. The most common mistake among the CLIL students was using the infinitive form *talk*,

as was with the non-CLIL students as well. The non-CLIL students had, in addition, various conjugation suggestions, for example, *toak*, *tolk* and *talkt*. Some of the forms suggest again that students probably knew the right conjugation form but did not know how to spell it. Using the infinitive form in either item seven or eight may suggest that students had not understood the context of the text or they simply did not know the correct past tense for *talk*. It is interesting that the difference between the students was very significant in items seven and eight, which were the only items of the exercise that aimed to measure the conjugation of regular verbs. The conjugation of regular verb should be easier to students than the conjugation of irregular verbs. In addition, the verbs used in the exercise, *call* and *talk*, are quite common verbs that should be familiar to non-CLIL students as well. Nevertheless, the CLIL students outperformed the non-CLIL students.

As a conclusion, it can be said that the CLIL students knew better the use of past tense according to exercise three and four; however, there can be found common mistakes among the groups in the exercise four. For example, the use of infinitive form of the verb after *do/did* proved out to be difficult in both exercises. In addition, both of the groups had difficulties in conjugating some verbs, *drink*, *ride* and *eat*. In general, however, the CLIL students outperform the non-CLIL students in the use of past tense based on the present study.

### **6.5 The use of *will* / *would* - “Where would (matkustat) you travel next summer?”**

In exercise five students were asked to fill in *will* or *would* to five sentences. The verb of each sentence was translated into Finnish to make the exercise easier for the students. In grade six of Finnish basic education the teaching of *will* and *would* are usually left in the end of spring semester. Sometimes there is no time to teach these forms at all. As a result, in this exercise it was supposed to see differences in the use of *will* and *would* because they have not been directly taught to either of the groups but can be used in the classroom in normal interaction. The point of exercise five was to see if the recognition of *will* and *would* is different between the groups

In exercise five there were statistically a very significant difference in three sentences, one, two and four (see Figure 14).

1. \_\_\_\_\_ (haluaisitko) you like a chocolate cake?
2. Where \_\_\_\_\_ (matkustat) you travel next summer?
4. What \_\_\_\_\_ (haluaisit) you like for your birthday?

**Figure 14 Exercise five: items with statistically significant differences ( $p < .001$ )**

In item one, *Where \_\_\_\_\_ (matkustat) you travel next summer?*, none of the CLIL students made a mistake. On the other hand, ten non-CLIL students made, twenty per cent of the whole group. In item two, *I think I \_\_\_\_\_ (pysyttelen) stay in Finland.*, six CLIL students, 8.8 per cent, made a mistake, whereas 46 per cent of the non-CLIL students made a mistakes in the second item. In sentence number four, *What \_\_\_\_\_ (haluaisit) you like for your birthday*, CLIL students made no mistakes, whereas 16 per cent of the non-CLIL students answered incorrectly. As can be seen, in three out of five sentences there was a very significant difference between the CLIL students and the non-CLIL students' performance. This indicates that the CLIL students are more familiar with *will* as a future mark and the conditional *would*. This can be the result of daily use of English. The CLIL students may be more familiar with hearing these forms in classroom talk, whereas the non-CLIL students have not got so much practice of *will* and *would* because of the less use of the foreign language.

As can be seen, in three out of five sentences the statistical difference between the CLIL and the non-CLIL students was very significant, however, there cannot be pointed out any similarities in those sentences. In addition, in sentences three and five (Figure 15), the difference between the groups was obvious but not as significant as in the previous ones.

3. I think I \_\_\_\_\_ (pysyttelen) stay in Finland? ( $p = .028$ )
5. We \_\_\_\_\_ (menemme) go to our summer cottage. ( $p = .005$ )

**Figure 15 Exercise five: items with some differences**



Both groups made some mistakes in item three, *I think I \_\_\_\_\_ (pysytyttelen) stay in Finland*. Three CLIL students answered incorrectly, 4.4 per cent of the whole group, in sentence number three and 18 per cent of the non-CLIL students. In addition, in item five, *We \_\_\_\_\_ (menemme) go to our summer cottage*, all the CLIL students had a correct answer. In sentence number five, twelve per cent of the non-CLIL students made a mistake. It is difficult to say why the difference between the two groups was not very significant in these two sentences. The exercise itself was quite short and it was probably easy just to answer something. It would have been interesting to know how the students felt about the exercise; was it too difficult, which led them to guess or was it too easy, in which case they did not have motivation to do it.

There were very significant differences statistically between the groups in exercise five. In sentences number three and five the differences were not very significant, although there could be seen a difference between the groups. The differences do not show which one of the forms, *will* or *would*, is more difficult to the non-CLIL students. In general, the exercise shows that the CLIL students are more confident in using *will* or conditional *would*. It seems that CLIL students recognised the forms *will* and *would* better than the non-CLIL students. This can be a result of the daily use of English language in a classroom; the teacher of the CLIL students may use the forms even though they have not been taught to the students. As a result, the CLIL students learn to recognise the difference between *will* and *would*.

### **6.6 Personal pronouns - “Come on, Mummy can take them home!”**

The last exercise of the grammar test, exercise six, concerned the use of personal pronouns. Students were asked to fill in the correct form of a pronoun to a short text. The correct pronoun was given in Finnish. First, I will present the items of exercise six, which had statistically significant differences. In addition, the items with no differences between the CLIL and the non-CLIL students are discussed.

In six out of ten item the statistical difference between the students' answers was very significant (Figure 16). Next these items are discussed.

... walk (2) \_\_\_\_\_ dogs in the park and  
 let (3) \_\_\_\_\_ run around.  
 friend sometimes calls (5) \_\_\_\_\_ and  
 The dogs like (7) \_\_\_\_\_ a lot.  
 ... mother sees (9) \_\_\_\_\_ in the park she often shouts to the dogs:  
 “Come on, Mummy can take(10) \_\_\_\_\_ home!”.

**Figure 16 Exercise six: items with statistically significant differences (p < .001)**

First, in the first sentence, (1) \_\_\_\_\_ often walk (2) \_\_\_\_\_ dogs in the park and let (3) \_\_\_\_\_ run around, in item two, three CLIL students had an incorrect answer. The given answers were, for example *ours* and *ar*; *ar* can refer that the student had known the correct form but did not know how to spell it. In the third item, ... and let (3) \_\_\_\_\_ run around., there were four mistakes made, for example *they*, *their*, *theye* and one empty answer. It can be said that these students did not either know the correct form for *they* or students did not know where at this point the pronoun was referring to. In contrast, the non-CLIL students made more mistakes in both of the items. In item one the most common mistake was *we*, which may indicate that students understood the context but did not know the correct form for *we*. In addition, some CLIL students answered *as*, *us* and *ours*. The closest correct answer here would be *ours*, which shows that these students had been on the right track. In item three, the answers of non-CLIL students were a lot more varied than the CLIL students'. The most common mistake was using *they*. Some students had also left the space empty and other had answered, for example *these*, *thoses*, *those* and *their*. The non-CLIL students, as did the CLIL students, had tried to find the right answer but failed in the spelling.

In the next sentence, (4) \_\_\_\_\_ friend sometimes calls (5) \_\_\_\_\_ and says (6) \_\_\_\_\_ can come to the park too., the most difficult one seemed to be item five. None of the CLIL students made a mistake in this item, however, eight non-CLIL students made. The non-CLIL students answered, for example *my*, *to my* or left the space empty. The

form *my* may once again show that in spoken language the non-CLIL student may have had the correct form but in written was not able to differentiate *me* and *my*.

Some mistakes were also made in item seven, *The dogs like (7) \_\_\_\_\_ a lot*. In this item the correct answer could have been either *him* or *her* because it does not come clear from the text if the person is male or female. Five CLIL students did not know to correct inflection for the pronoun at this point and they used *s/he*. The mistakes of the CLIL students were all in singular subject form pronouns, however, the non-CLIL students' mistakes were more various. The non-CLIL students answered, for example *he's*, *hes*, *on he* and *his*. The most common mistake was leaving the space empty but some non-CLIL students had also used the singular subject form *he/she*. The non-CLIL students' mistakes were various and one cannot see from them if students had known the right form and only had trouble writing it.

In the next sentence, *When (8) \_\_\_\_\_ mother sees (9) \_\_\_\_\_ in the park she often shouts to the dogs: "Come on, Mummy can take (10) \_\_\_\_\_ home!"*, in item nine only four CLIL students had an incorrect answer. The CLIL students had answered, for example *ours* and *aur*. From these mistakes it can be seen that the CLIL students were trying to find the correct form based on the Finnish word *meidät*; the CLIL students were probably trying to write down *our* which is not the right object form to fit the sentence. The non-CLIL students, on the other hand, had various mistakes, for example *we*, *ours*, *our*, *me*, *they* and *as*. In the same way as some CLIL students had tried to put the English pronoun based on only on the Finnish translation, some non-CLIL students did as well. Either the context was not understood or the students did not know the right form. In the last item, item ten, *"Come on, Mummy can take (10) \_\_\_\_\_ home!"*, a few CLIL students made a mistake. The CLIL students answered either *your*, *os* or *them*. The answer *os* may be a result of studying Swedish and mixing languages unconsciously. Among the non-CLIL students there were many different mistakes; *they*, *your*, *your's*, *as*, *their* and *them*. It seems that by using the form *your* or *your's* the non-CLIL students were close in finding the correct answer. However, forms like *their* and *as* show that there needs to be work done in the use of personal pronouns.

As can be seen, in many items of exercise six the difference between the CLIL students and non-CLIL students was very significant. In addition, there were different kinds of mistakes which are difficult to explain where they come from. Some mistakes seemed obviously to be spelling mistakes but some were just incorrect. In exercise six there were also items where the statistical difference was not significant and in which students from both groups made only some mistakes. These items of the exercise are discussed next (Figure 17).

<p>(4)_____ friend</p> <p>says that (6) _____ can come to the park too.</p>
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**Figure 17 Exercise six no difference between the CLIL and non-CLIL students**

In the sentence, (4)\_\_\_\_\_ *friend sometimes calls* (5) \_\_\_\_\_ *and says* (6)\_\_\_\_\_ *can come to the park too.*, students made only a few mistakes. None of the CLIL students made a mistake in item four and only one non-CLIL student made. The mistake made was using word *mine*. In item six only one CLIL student and four non-CLIL students' had an incorrect answer. The mistake made by a CLIL student was *han*, which is difficult to say what was meant by it. The non-CLIL students made mistakes, for example *it*, *his* and an empty space, which are too difficult to analyse. Items four and six may have been quite easy for students because the form that was looked for was the singular subject form of personal pronouns. These forms are the basic forms that are in use from the beginning of starting to learn a foreign language.

To conclude, in exercise six, there were many items where the statistical difference between the CLIL students and the non-CLIL students was very significant: items two, three, five, seven, nine and ten. This means that there was a very significant difference in the answers in half of the items of the exercise. A significant difference was in items five and eight. In items one and four the difference was almost significant. In item six, there was no difference in the answers but students from both groups made only a few mistakes. As a conclusion, it can be said that the CLIL students and the non-CLIL students made mistakes at the same items in exercise six, however, the non-CLIL students made more mistakes than the CLIL students and there was, in addition, many items where the difference between groups was very

significant. The use of personal pronouns may be a difficult task for students because of their various forms.

### **6.7 How about it?**

Next there will be a brief look at the exercises which were most difficult to the CLIL students and to the non-CLIL students. In addition, it will be discussed in which exercise the students performed the best. This discussion will give information on what areas of English grammar seem difficult to students and which easy.

First, in exercise two both groups had the most difficulties based on the average result of the exercise. The average result of the CLIL students was 8.3 and the non-CLIL students 4.6. In general, the CLIL students did well in this exercise as well; however, the average result was the lowest in exercise two. Even though the average result in exercise two was the lowest for the both groups, there was a big difference between the CLIL and the non-CLIL students, which may indicate that the use of English articles is the most difficult part to both CLIL students and to non-CLIL students but non-CLIL students do worse than CLIL students. As a conclusion it can be said, that English articles are a complex issue for Finnish students to learn. A reason for this is probably because the Finnish language has not got articles like the English language. For this reason teachers should pay extra attention on the teaching and learning of articles. However, it has to be remembered that when communicating, small errors are not essential if the message is understood. Although correct language use should still be emphasised.

Second, the best average result of the groups was in the same exercise, exercise five. The result of the CLIL students was 9.8 and the non-CLIL students 7.7. As was discussed earlier, exercise five concerned the recognition of *will* as a future mark and conditional mark *would*. As can be seen from the result, both groups did well in this exercise, although the CLIL students outperformed the non-CLIL students. It is interesting that the best result can be found in exercise five because the issue is usually taught more profoundly in the upper grades of Finnish basic education. However, it has to be taken into account that the exercise had been modified to suit

the needs of this study and to make it easier for the students. This may have affected the results.

There have not been many studies about the effects of CLIL on foreign language learning. Most of the studies have found out that CLIL has a positive effect on, for example learning vocabulary. In addition, it is seen that when using CLIL, listening and reading comprehension and students oral skills develop. However, when comparing formal language skills, the differences have not been great. (Nikula and Marsh 1997: 86-91.) In addition to Nikula and Marsh's study, Järvinen (1999: 22) points out that there has been found excellent results in receptive skills but not in productive skills. As can be seen, the development of grammar in CLIL teaching is not a straightforward thing. Järvinen (1999: 109-137), however, has studied the acquisition of a second language in CLIL programs and she found out that the language CLIL students use is more versatile. In addition, according to Järvinen's study, CLIL students are able to produce longer and more complex sentences. Laitinen (2001) also found out in her study that students in CLIL programme learn English in a effective way. According to the present study there is, in addition, a difference in the grammar competence between CLIL students and non-CLIL students.

As a conclusion, it can be said that the CLIL students outperformed the non-CLIL students in the present study. First, the average results of each exercise of both groups were studied. It was found out that the CLIL students had better results than the non-CLIL students in each exercise. In addition, the statistical difference between the CLIL students and the non-CLIL students was very significant in each exercise. Second, each exercise of the grammar test was discussed and items of exercises were taken into a more profound analysis. Third, it was discussed which exercise was the most difficult one to each groups and the easiest one based on the average results. The results showed that exercise two, which concerned the use of articles, was difficult to both CLIL and non-CLIL students. On the other hand, the students had least mistakes in exercise five, which concerned the recognition of *will* and *would*. To conclude, it is seen that the CLIL students master the English grammar better than the non-CLIL students.

## 7 DISCUSSION AND CONCLUSION

As has been pointed out, using foreign languages as a medium of teaching is becoming popular anywhere in Europe. The reasons for the popularity of bilingual education are in the positive effects there has been gained in foreign language learning and learning, in general. However, bilingual education research is quite scarce and there is a need for more research on using foreign languages as a teaching method. It has been found out that using a foreign language as a medium of teaching has positive effects on the productive skills of the students. However, there is a need for more research on the effect on grammar skills.

The purpose of this study was to find out whether there are differences in English grammar skills between CLIL students and non-CLIL students. In addition, it was studied if there are similarities in the mistakes made between the two groups. In the present study it was found out that the CLIL students outperform the non-CLIL students in the sixth grade of Finnish basic education in English grammar. The CLIL students achieved better results in each exercise of the grammar test and in every item of each exercise. The difference of the two groups was statistically very significant in each exercise ( $p < .000$ ), which means that there was a great difference in the competence of grammar skills in each exercise in general. In addition, the Std. Deviation was smaller among the CLIL students than among the non-CLIL students in every exercise. In general, it could be said that in each exercise the variance of mistakes was larger among the non-CLIL students, whereas the mistakes made by the CLIL students were more similar to each other. There was seen a consistence in some mistakes done by the CLIL students, for example the use of some spoken language forms, such as using *do* to emphasize a verb.

In general, students made various mistakes and it was difficult to make general conclusions based on the results of the grammar test. However, there were some similarities in the mistakes made by the CLIL students and the non-CLIL students as well. For example, in exercise one, students from both groups had difficulties of using the correct auxiliary verb form with the unit *parents*. In addition, the use of third person's *-s* proved out to be difficult with the subject *parents*. Students also made similar mistake in exercise two in item four by using a definite article with the

word *things*. In exercise four, the CLIL students and the non-CLIL students both had the same mistake of using *got* instead of *get* in sentence with the auxiliary verb *did*. It is difficult to say what, are the reasons for the similar mistakes the students made. Nevertheless, it could be said that the similar mistakes point out the issues of grammar that are difficult to both CLIL and non-CLIL students.

The most difficult area of grammar according to the present study was the use of English articles; both groups had the lowest results in exercise two, which measured the use of articles. However, the CLIL students outperformed the non-CLIL students this exercise as well. Both groups of students got the best results in exercise five, which concerned the recognition of *will* as a future mark and conditional *would*. These give an indication of what are the most difficult parts and the easiest parts of English grammar for students.

There are, however, some limitations in the present study that one has to take into account when considering the results. First, in a quantitative study it is important that the amount of data is adequate. In the present study the data consisted of 68 CLIL students and 54 non-CLIL students, in overall 122 students participated in the study (n= 122). The results of the present study give some guideline on the differences in grammar between CLIL and non-CLIL students but cannot be generalized too much. Based on these results it would be interesting to do a wider research to see how reliable the results of this study were.

Second, the backgrounds of the students' were very diverse. In one non-CLIL group there were students whose home language was not Finnish but something else. In addition, some students' mother tongue was not Finnish, which may have an effect on the results. The grammar test was in Finnish, which means that the students whose mother tongue was not Finnish were not able to use their native language when answering the grammar test. In addition, it has to be taken into account that when a student has another mother tongue than Finnish, he/she is also studying English through a foreign language or a second language. As a result, studying English may be even harder or on the other hand, even easier if the mother tongue is close to English. As can be seen, the students' various backgrounds may have an effect on the results of the present study.



In addition, there might have been differences in the instructions given to the students when filling in the grammar test or in teachers' teaching methods. It has to be taken into account that the teacher gave the instructions to the grammar test. Teachers were provided with an instruction; however, there may have been differences in giving the instructions. This may have had some effect on the results and on the way the students answered. For example, in one group there were some tests that were not done completely. It is impossible to know whether these students did not have time to finish the grammar test, did not know how to do the exercises or did they not just feel like it. Fourth, it has to be taken into account that there are differences in teaching methods, in general, between schools, not to mention CLIL teaching which has various forms. As a result, different teachers may put weight more on grammar learning which, on the other hand, may be seen in the results.

It also has to be taken into account that there was only one person who corrected the grammar tests. In general, because of the type of the exercises, for example fill in, the answers were quite uncontroversial. However, there were also some items of exercises that were more difficult to interpret. For example, if the instructions of an exercise asked the students to fill in when needed, it was impossible to know whether a blank space meant a correct answer or had the students left answered because he/she did not know the answer. This problem could have been avoided by asking to mark a line when, for example an article was not needed. In addition, giving points was difficult in some items; some students had spelled for example a verb incorrectly but it was seen that the students' form was correct but it was written down as a spoken word. In these cases, the answer was considered incorrect because the purpose of the study was to examine the grammar in written form not in oral. These kinds of mistakes could have been avoided by doing a pilot test, which was not done in this case. However, Valli (2007: 203) points out that even though one finds some mistakes in data, it does not mean the data could not be used.

One crucial point has to be remembered: how the students are selected to the CLIL classes. Usually CLIL students are in a CLIL class voluntarily and have motivation to learn a foreign language. In a non-CLIL class everyone needs to participate in the foreign language teaching even though some might not want to. The difference in

motivation may be a key issue in learning the foreign language. The more a student has motivation to learn, the more he/she will learn; this applies also to CLIL classes.

The present study only gave a small view of the differences in grammar skills between CLIL and non-CLIL students. There were some limitations for the study; however, the results still give some indications about the differences of grammar between CLIL and non-CLIL students. In the future it would be interesting to study the phenomenon more profoundly to get results that would be more easily generalized. There should be more information on how the foreign language grammar skills develop when using a foreign language as a medium of teaching. It would be interesting to know how CLIL students' grammar skills develop over time compared to non-CLIL students'. In addition, what is the role of teacher talk and focus on form on learning grammar in CLIL classes would be an interesting topic to study. In addition to the differences in grammar skills between CLIL and non-CLIL students, other areas of foreign language learning should be studied. The present study gave a glimpse of the CLIL students' competence in English grammar skills compared to non-CLIL students. In general, according to the present study it seems that the CLIL students' formal language skills are not at least worse than non-CLIL students'. In the future, CLIL is going to be an interesting area of research that should be taken into account to be able to develop CLIL and get more information about its effect on foreign language development.

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## Appendix 1: The Grammar test

### Englannin kielioppitesti 6. lk

Kielioppitesti ei vaikuta englannin kielen numeroosi. Tee tehtävät kuitenkin huolella ja tarkasti. Älä hämäännä, jos osa asioista ei ole sinulle tuttuja, tärkeintä on yrittää vastata jokaiseen kohtaa.

Ennen tehtävien tekoa täytä alla pyydettävät tiedot.

Tyttö \_\_\_\_\_ Poika \_\_\_\_\_

Viimeisin todistuksessa ollut englannin kielen numero \_\_\_\_\_

Olen englanninkielisessä opetuksessa kyllä \_\_\_\_\_ ei \_\_\_\_\_

Äidinkieli, jos muu kuin suomi \_\_\_\_\_

Kotona puhutut kielet, jos muita kuin suomi

\_\_\_\_\_

Kiitos vastauksestasi!

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\*\*\*\*\*

**1 Lue artikkeli matkustamisesta. Lisää do, does tai s-päätte tarvittaessa. <sup>1</sup>**

1. \_\_\_\_\_ your parents enjoy travelling? But probably not as much as my parents. My parents just 2. love \_\_\_\_\_ it. We just got back from London. Next month we are going to New York. It 3. sound \_\_\_\_\_ exciting, doesn't it? But it isn't. My parents never 4. want \_\_\_\_\_ to do anything when we travel. We just 5. see \_\_\_\_\_ lots of museums, art galleries, cathedrals and shopping centres. I'd like to go our summer cottage. I 6. swim \_\_\_\_\_ and 7. fish there. And I play with our neighbours' children.

8. \_\_\_\_\_ you have this problem with your parents? 9. \_\_\_\_\_ you want to talk about it? If you do, please, 10. \_\_\_\_\_ write to me.

Dave Davenport

/ 10p.

**2 Lähdet ostoksille uuden ystäväsi kanssa.**

**Kirjoita artikkeli a, an tai the tarvittaessa. <sup>2</sup>**

Do you want to go shopping?

- Sure, why not? I need \_\_\_\_\_ new jacket.

OK. What size do you take?

- I'm not sure. But I like \_\_\_\_\_ leather jacket over there.

Look! What \_\_\_\_\_ expensive hat!

- \_\_\_\_\_ things aren't any cheaper here than at home.

You're right. I haven't got that much

\_\_\_\_\_ money.

- Let's go and have something to eat.

Yes, let's. \_\_\_\_\_ sandwich with

\_\_\_\_\_ ham and \_\_\_\_\_ cheese

for me, please.

- For me, too. And \_\_\_\_\_ cup of \_\_\_\_\_ tea, please. /10p.

<sup>1</sup> Fabritius, M. 2005. Surprise kokeet 4. Helsinki: Kustannusosakeyhtiö Otava.

<sup>2</sup> Fabritius, M. 2005. Surprise kokeet 4. Helsinki: Kustannusosakeyhtiö Otava.

### 3 Jimiä haastatellaan koulun lehteen hänen USA:n matkastaan.

Lue haastattelu. Ympyröi oikea vaihtoehto. <sup>3</sup>

1. Did you a) *bring* b) *brought* any photos with you?
2. I have a CD full of digital photos. I a) *take* b) *took* at least a hundred photos.
3. a) *Do* b) *Did* you buy any presents?
4. No, I a) *didn't* b) *doesn't* buy anything.
5. I didn't a) *had* b) *have* that much money or time.
6. What a) - b) *did* you do in New York?
7. Well, I a) *walked* b) *walking* on Broadway.
8. I a) *watch* b) *watched* American TV.
9. I a) *went* b) *go* roller-blading in Central Park.
10. Oh, yes. And I a) *see* b) *saw* King Kong. On TV!

/10p.

### 4 Lue Jimin postikortti New Yorkista.

Kirjoita puuttuvat verbit englanniksi imperfektissä.

Verbien perusmuodot ovat lauseen lopussa sulussa. <sup>4</sup>

Dear Steve,

1. \_\_\_\_\_ you \_\_\_\_\_ my postcard from New York? (Saitko? - get)
2. I \_\_\_\_\_ you a present. But it's a surprise. (ostin - buy)
3. Yesterday I \_\_\_\_\_ the biggest ice cream and \_\_\_\_\_ the biggest coke of my life. (söin - eat, join - drink)
4. I \_\_\_\_\_ a horse, too. Yes, I really did. (ratsastin - ride)
5. I \_\_\_\_\_ some policemen in Central Park. They had horses. (näin - see)
6. In the evening we \_\_\_\_\_ to the cinema to see an action film. (menimme - go)

<sup>3</sup> Fabritius, M. 2005. Surprise kokeet 4. Helsinki: Kustannusosakeyhtiö Otava.

<sup>4</sup> Fabritius, M. 2005. Surprise kokeet 4. Helsinki: Kustannusosakeyhtiö Otava.

7. After the film I \_\_\_\_\_ mum. (soitin - call)

8. We \_\_\_\_\_ for at least an hour. (puhuimme - talk)

9. What \_\_\_\_\_ you \_\_\_\_\_ this weekend? Send me an e-mail! (teit - do)

Jim

/ 10p.

### 5 Täydennä aukkoihin *will tai would*.<sup>5</sup>

1. \_\_\_\_\_ (haluaisitko) you like a chocolate cake?

2. Where \_\_\_\_\_ (matkustat) you travel next summer?

3. I think I \_\_\_\_\_ (pysyttelen) stay in Finland?

4. What \_\_\_\_\_ (haluaisit) you like for your birthday?

5. We \_\_\_\_\_ (menemme) go to our summer cottage.

/ 10p.

### 6 Täydennä pronominit vihjeiden mukaan.<sup>6</sup>

\_\_\_\_\_ often walk \_\_\_\_\_ dogs in the park and let \_\_\_\_\_  
 minä meidän niiden  
 run around.

\_\_\_\_\_ friend sometimes calls \_\_\_\_\_ and says that \_\_\_\_\_ can come  
 minun minulle hän  
 to the park too.

The dogs like \_\_\_\_\_ a lot.  
 hänestä

When \_\_\_\_\_ mother sees \_\_\_\_\_ in the park she often  
 minun meidät

shouts to the dogs: "Come on, Mummy can take \_\_\_\_\_ home!"  
 teidät

/ 10p.

Kiitos vastauksestasi!

<sup>5</sup> Tehtävä muokattu käyttäen Fabritius, M. 2005. Surprise kokeet 4. Helsinki: Kustannusosakeyhtiö Otava.

<sup>6</sup> Kannisto, L., H., Sarlin, M., Siikaniemi-Holopainen & J., Törmä. 2006. What's on? Test it. Helsinki: Tammi.

## Appendix 2: Instructions for the grammar test

### Ohjeet englannin kielioppitestin täyttöön

- Kielioppitestin tekevät yksi **alakoulun normaalissa englannin opetuksessa ollut seitsemäs luokka ja yksi seitsemäs luokka, joka on ollut alakoulussa CLIL luokalla.**
- Oppilaiden nimiä ei tule mihinkään kielioppitestin papereihin.
- Kielioppitesti ei vaikuta oppilaiden englannin kielen numeroon.
- Ennen testin aloittamista, pyydä oppilaita täyttämään huolellisesti testin ensimmäinen sivu.
- Pyydä oppilaita tekemään tehtävät huolellisesti ja rauhassa. Tehtävissä voi olla asioita, joita heille ei ole opetettu, mutta tärkeää on yrittää vastata tehtäviin.
- Testin tekeminen vie noin tunnin.
- Kielioppitestit (kaksi eri pinkkaa; CLIL-luokkalaisten ja ei-CLIL-luokkalaisten) kerätään samaan kirjekuoreen, joka on varustettu postimerkillä ja palautusosoitteella.
- Kielioppitestin tarkoituksena on tutkia onko kuudennen CLIL-luokkalaisten ja ei-CLIL luokkalaisten välillä eroja englannin kieliopin osaamisessa.
- Oppilaille annettavassa versiossa ei ole näkyvillä tehtävien lähteitä, mutta laitoin yhden version, jossa lähteet ovat merkitty.

Kiitos testin tekemisestä!

Terveisin,

Mirva Mäkinen