

Degree Thesis II

Master's Level

Academic English in CLIL-programs

Classroom practices that promote or hinder proficiency in academic English vocabulary

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Abstract

English CLIL-instruction in Sweden is supposed to be beneficial to students who want to improve their academic English vocabulary proficiency in preparation for studies or employment abroad. However, recent research shows that there is no difference in academic English proficiency between students in upper secondary school CLIL-programs and students in regular upper secondary schools in Sweden. Furthermore, educational researchers question if CLIL-programs in Sweden qualify to be defined as CLIL-instruction since Swedish translanguaging is extensively used which does not make the programs 100% English-medium instruction. Through teacher observations and questionnaires, this study investigates the classroom practices at a CLIL-program in Sweden in addition to ask the CLIL-teachers about their teaching strategies in regards to promoting students' acquisition, development, and use of academic English. The findings include that the classroom practices are in accordance with practices considered beneficial to students' proficiency in academic English by numerous previous studies. In addition, all the teachers questioned in this study purposely work to support and develop students' academic language proficiency in their respective subject areas and across the curriculum. The study also found four possible factors that perhaps can undermine the acquisition, development and use of academic English vocabulary and those include the following: First, the teachers believe that the students are already sufficiently fluent in academic English, and thus concentrate more on content than on language in their instruction. Secondly, extensive translanguaging in the classroom is common in addition to the students' habit of speaking Swedish to each other in student-to-student communication. Thirdly, the students do not receive the corresponding level of education in their native language of Swedish as they do in English, which can have detrimental effects on their abilities to develop their English past their Swedish language abilities. Finally, classroom practices that are not inclusive of all students can work to undermine the acquisition and use of academic English vocabulary.

Keywords: CLIL-program, Academic English, English Language Learners, Translanguaging, Teaching Practices, Cognitive theory, Scaffolding, Literacy engagement.

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1. Introduction

In a world where global mobility is on the increase both through technology and actual travel many people end up in international settings where English is the lingua franca, not only in a social capacity but also in professional and educational circumstances. For people who aspire to study or work in such settings where English is the official language fluency in tourist-English does not suffice. To be able to communicate in English about issues pertaining to economics, technology, chemistry or history for example, proficiency in academic English is crucial. However, while basic interpersonal communication skills (BICS) in English can be acquired fairly easily, a fluency in academic English requires a cognitive academic language proficiency (CALP) that involves the communicative skills of higher order thinking and thus has to be purposefully and methodically learnt (Cummins, 2000). Therefore many students in Sweden who wish to pursue academic studies or work abroad prepare by attending CLIL-schools with educational programs where English is the language of instruction (Doiz, Lasagabaster & Sierra, 2011).

Swedish students in general are often fluent in English and many students, especially those who play computer games, already use a nuanced and varied English language in middle school. In addition, Swedish middle school students are also in general able to adapt their English language skills according to the context, and many can both argue their position on societal issues and write newspaper articles in English fairly proficiently. However, middle-school, students' English skills differ greatly depending on whether they use English extensively in their spare time, for example by reading books, magazines, or playing computer games. Nevertheless, Swedish middle school students do not usually encounter academic English vocabulary outside school unless they watch or read scientific material in English (Olsson, 2016). According to a recent Swedish research study titled *On the impact of extramural English and CLIL on productive vocabulary* (Olsson, 2016) the difference in English proficiency between students who use English extensively in their spare time outside school and those who do not decrease when students reach upper secondary school and as the English language use in school becomes more demanding. Furthermore, according to the study Swedish upper secondary school students have a very high fluency in basic interpersonal communicating skills (BICS) which is the everyday language used in social contexts, but do not necessarily have the cognitive academic language proficiency (CALP) needed to communicate effectively about academic topics in English (Olsson, 2016).

Content and language integrated learning (CLIL) programs where the instruction is conducted in English have proven to have a very positive effect on students' academic language proficiency in many other countries. However, a longitudinal study of CLIL and non-CLIL students in Sweden from Gothenburg University (Olsson, 2015) shows that there is no difference between Swedish students in Sweden who attend English CLIL-programs and Swedish students in regular schools in their academic English vocabulary proficiency. In other words, subject specific learning in English does not have an increased effect on fluency in academic English among Swedish students. There are suggestions that the reason for this lack of difference between CLIL and non-CLIL students is due to the fact that Swedish upper secondary school students are already so fluent in English that CLIL-programs tend to have very little effect on their English. At the same time, there are educational researchers who believe that the reason can be found in the way CLIL-education is conducted in Sweden and who argue that subject teachers might concentrate too much on teaching the subject itself and thus neglect to include academic language developmental strategies in their instruction

(Olsson, 2015). Moreover, frequent code switching where students and teachers translanguage in order to clarify contexts and to translate difficult words can according to Yoxsimer Paulsrud (2014) be detrimental to the development and use of an academic English vocabulary register in CLIL-programs in Sweden.

As a teacher student with a strong belief that excellent communication skills in academic English is of utmost importance for all students who wish to excel academically or professionally in settings where English is the dominant language, I am extremely interested in the reasons behind the lack of difference in academic vocabulary use between CLIL and non-CLIL students in Sweden. Furthermore, my Bachelor's level thesis on the topic of teaching academic English to English learners investigated literature on classroom practices that have been proven beneficial to the acquisition of academic English among English language learners across curricula. Thus, the inspiration behind the topic of this thesis is that I want conduct empirical research to explore the teaching practices in a Swedish CLIL-program to investigate if there are anything that occurs in the classrooms that actually is detrimental to the acquisition of academic English vocabulary among the students. Another source of inspiration behind the topic of research is that I want to use the findings to enhance my own strategies as an educator, as I strive to engage in classroom practices that promote the use of an academic English vocabulary among all my students.

1.1 Aim and research question

The aim of this paper is to investigate possible causes for the lack of any significant difference in CLIL and non-CLIL students in the progress of English academic vocabulary use by exploring teaching practices at a CLIL-school in Sweden, and the research questions are thus:

- Do subject-teachers in CLIL-classrooms engage in any observable teaching practices that promote the use of an academic English vocabulary?
- If so, what teaching practices are used to promote the use of academic English vocabulary among CLIL-students?
- Is there anything in the classroom situation that could possibly undermine the use of academic English vocabulary among the students?

2. Background

This section will start by defining abbreviations and terms as specifically used in this empirical research study. Furthermore, it will provide a brief background on CLIL-instruction in Sweden. In addition, it will look at the guidelines by the Swedish National Agency for Education, *Skolverket*, in regards to teaching academic language to upper secondary school students.

2.1 Definition of terms

2.1.1 CALP and BICS

Cognitive Academic Language Proficiency (CLAP) pertains to students' levels of fluency in the formal language of schooling that is more prevalent in academic settings than in everyday contexts. According to Cummins (2000), the level of fluency in academic language is highly contingent upon the individual cognitive abilities of the students. *Basic Interpersonal Communication Skills* (BICS) on the other hand, refers to students' abilities to communicate

in informal settings using a more colloquial language in everyday situations like for example among friends or at home (Cummins, 2000).

2.1.2 CLIL

Content and Language Integrated Learning (CLIL) refers to educational programs where the overall purpose is for students to gain fluency in a second language (L2) and acquire content knowledge in different school subjects simultaneously. This is achieved by using the students' second language, in this case English, as the language of instruction across curricula and not only in language arts, as is customary in regular non-CLIL educational programs (Olsson, 2015).

2.1.3 Academic vocabulary

Academic Vocabulary is the language genre that occurs in academic contexts and as the language of formal instruction. The vocabulary consists of formal terms that are used to conceptualize and convey academic information, knowledge, and skills (Schleppegrell, 2004). Furthermore, academic vocabulary can be classified as general, and thus applicable across the academic curricula, or domain-specific in nature belonging to a particular field or subject (Baumann & Graves, 2010, p. 6). In this study the academic vocabulary is in English and thus also referred to in the text as academic English and abbreviated to AE.

2.1.4 ELL

English Language Learner (ELL) refers to a student that is a learner of the English language, here after in the text referred to as ELL. The term is applicable to students in Sweden who learn English in non-English or in English-speaking schools as a second or foreign language (Garcia, 2009).

2.1.5 Grammatical metaphor

A *grammatical metaphor* is a way of making an everyday expression into a more comprised and specialized expression by for example turning a verb into a noun phrase. The purpose of a grammatical metaphor is to allow for a large amount of information to be packed in the subject position of the phrase thus making it more linguistically effective and academic in nature. An everyday congruent verb expression, for example: *A vaccine against chickenpox was discovered*, can be adapted to *The discovery of a chickenpox vaccine*, by making the verb a noun phrase and thus more compact in nature (Schleppegrell, 2004, p. 72).

2.1.6 Affordances

Affordances are the availability of social, physical, or symbolic resources that preconditions learning. *Affordances* include but are not limited to the availability of teachers, translators, books, facilities, computers or the ability to code-switch in different languages to convey information with the purpose of increasing comprehension (Gibson, 2015).

2.1.7 Scaffolding

Scaffolding is a practice where a teacher first supports students' learning on a level that is in congruence with the students' current cognitive abilities. This level is often referred to as the zone of proximal development, the socio-cultural notion first developed by Lev Vygotsky. Then, the teacher moves the level of instruction onto a more advanced stage and onto a learning situation in which the students need the support of a teacher, scaffolding, in order to progress to a stage where they can handle the new knowledge and material on their own (Gibbons, 2009, p. 24).

2.1.8 Translanguaging

Translanguaging is a strategy where bilinguals alternate between their native first language and the language they are learning to make sense of the bilingual context and to gain deeper meaning. *Translanguaging* is also sometimes referred to as code switching (Garcia, 2009, p. 45).

2.2 CLIL-instruction in Sweden

One of the reasons behind the occurrence of English-medium CLIL-programs in Sweden is that the current globalization trend increasingly requires the Swedish population to be able to engage scholarly and professionally in international environments. Schools that offer CLIL-education have thus become popular among Swedish students who aspire an international future since there is a belief that the more exposed they are to English the more proficient they will become in the English language (Doiz, Lasagabaster & Sierra, 2011). International studies show that CLIL-instruction have a beneficial impact on the academic English language proficiency among students who attend CLIL-programs in European countries, however a recent Swedish study shows that Swedish students in CLIL-programs are no more fluent in academic English than students in regular Swedish schools (Olsson, 2015). According to a study titled *English-medium instruction in Sweden: Perspective and practices in two upper secondary schools* (2014), English-medium instruction can have an adverse effect on students' Swedish language skills if they do not simultaneously receive the corresponding level of education in Swedish as they receive in English (Yoxsimer Paulsrud, 2014). Furthermore, research show that different CLIL-programs in Sweden implement different language policies. While some schools are fairly strict in the enforcement of the "English only" rule other schools use extensive translanguaging as part of the everyday classroom practices and especially when student engage with more advanced material. According to Yoxsimer Paulsrud (2014) it is questionable if schools in Sweden that are not 100% English-medium can qualify as English CLIL-instruction.

2.3 Government agency guidelines about teaching academic language

The Swedish National Agency for Education, Skolverket, gives Swedish schools the mission to implement classroom practices that promote academic content language proficiency in all verbal and written communication across the curriculum (Skolverket, 2011). However, despite the existence of policies that instruct teachers to implement teaching strategies that are beneficial to the acquisition of an academic vocabulary among students many educators continue to use mainstream didactics as they lack the proper training to teach students subject content and content language simultaneously. Furthermore, the deficiency in training among teachers results in an unequal opportunity among students to acquire academic language skills (Curtin, 2005, p. 27).

3. Theoretical perspectives

This section describes the theoretical perspectives used in this paper to frame and interpret this empirical research study, including information on how English language learners acquire academic English along with a brief overview of previous research in teaching practices that have proven successful in teaching ELLs academic English vocabulary in different subjects.

3.1 The acquisition of academic English by English language learners

According to Schleppegrell (2004) students can develop academic English skills in school if they are given ample opportunity to interact with new tasks that in turn develop new ways of thinking about what they are experiencing and then require them to talk about the learning situation with their classmates and the teacher. Language is thus produced as a function of social interaction in the classroom and the need to express the new experiences through

language. Moreover, lexical and grammatical features mediate different meanings and contexts, which in turn create the language that is appropriate for a specific content in a specific situation (Schleppegrell, 2004, p. 18). The acquisition of an academic English vocabulary is thus contingent upon the way subject content and the activities pertaining to the new knowledge are embedded in a social context (Schleppegrell, 2004, p. 156). Furthermore, according to Schleppegrell (2004) it is important that teachers pay close attention regarding classroom practices that are inclusive since research shows that all students usually are not given the same opportunity to engage with new tasks and experiences and hence not given the same opportunity to develop an academic English vocabulary.

3.2 Teaching academic English to English language learners

Even though there is academic English vocabulary that is general in nature academic vocabulary is also highly domain-specific as it belongs to a certain subject with its own register of genre specific words and expressions (Baumann & Graves, 2010, p. 6). Research into teaching strategies that are beneficial to the acquisition of academic English in ELL have concluded that since each school subject is different in nature different methods are required to teach ELLs AE depending on the subject. Furthermore, research has shown that many subject teachers lack the knowledge and proper training in how to teach ELLs the academic English vocabulary that is specific of the subject they teach (Aguirre-Muñoz, Parks, Benner, Amabisca, & Boscardin, 2006). For example, a biology teacher knows how to teach biology but not how to teach biology in a way that promotes the acquisition and use of the academic English vocabulary that is specific for biology.

According to Cummins (2011), generous access to print and opportunities to intensive literacy engagement in all subject areas where ELLs are introduced to a rich variety of text genres is crucial to the successful acquisition of AE since academic language mainly exists in texts. Furthermore, a teaching method involving scaffolding, where teachers engage in literature discussions with the students and carefully guide them to step by step into more advanced levels of communication about literature is beneficial to the acquisition of a more advanced academic language surrounding texts (Gibbons, 2009). Moreover classroom discussions about the nature of different text genres and how they are constructed help students gain a deeper understanding about how to produce written texts in different genres. Moreover, teaching strategies where teachers model texts by showing examples and then engage in activities where the class writes texts of different genres together before students work on their own build literacy competence and academic English vocabulary skills (Schleppegrell, 2004). Students who are exposed to reading and trained in writing different genres of texts such as expository text, narratives, and reports are more linguistically prepared and thus more likely to engage actively and use proper content language in all school subjects than are students without opportunities to intensive literacy engagement (DiCerbo, Anstrom, Baker, & Rivera, 2014). According to empirical research with large scale data from a meta study, literacy engagement is a very effective way to teach academic English to ELLs as the result from the study reveals that academic success is far more contingent upon students' access to print and opportunities to extensive literacy engagement than their socioeconomic background (Cummins, 2011, p. 142).

According to Schleppegrell (2009), the main features of the communication that takes place in a typical science class involve explaining abstract processes in addition to communicating about the relationships between cause and effect. Moreover, an AE register is often acquired in a social context since tasks and experiences in the science classroom is organized by language that students need to develop to be able to describe knowledge and activities.

Furthermore, scaffolding where the teacher first teach in the students' proximal zone of development and then help students link tasks with the appropriate more advanced genre specific terms promote the acquisition of AE vocabulary skills (Gibbons, 2009). Moreover, in science class knowledge is often presented before students learn the subject language and thus an approach called "reading to learn" where the teacher unpacks abstract content specific language before students can produce it on their own promote the acquisition of both knowledge and language. To help students produce the genre specific language of science teachers model language and recast students' communication about topics pertaining to various science topics (Schleppegrell, 2009). According to Cummins (2000) since science information is highly abstract ELLs benefit from the extensive use of visual aid in the classroom like for example cause and effect charts and pictures that illustrate and label science processes. Furthermore, since the academic English vocabulary pertaining to science is highly abstract and decontextualized in nature students' cognitive abilities play a major role in the successful acquisition of a science language in English. Students with prior science knowledge can simply apply the new language on to science concepts that they already are familiar with (Cummins, 2000).

According to Ballantyne, Sanderman, and Levy (2008) the main obstacle for ELLs in math education is that many students, due to socioeconomic and ethnic backgrounds, are unfamiliar with the context in which the math problem is presented in traditional textbook scenarios and thus as a result have a hard time to realize the necessary steps they need to make to solve the problem. Furthermore, according to Piaget's cognitive learning theory students comprehend and learn new material faster if they can relate to it contextually and cognitively (Cummins, 2000). Therefore, experienced math teachers pay close attention to the context in which math problems are presented and often work to create environments, stage situations, and use hands-on material that students can relate to in the math classroom (Ballentyne et al., 2008, pp.51-52). In addition, math teachers that strive to help their students develop the AE language genre of math initially introduce the students to content specific vocabulary, sentences, and terms used in math communication. Furthermore, teachers also pay special attention to meaning as many words in math have one meaning in the actual math context and an entirely different meaning in colloquial English. Moreover, students with a thorough school background in their native language in math are more likely to actively partake in classroom discussions about math. Therefore continued math instruction in their native language benefit the acquisition and development of the genre specific English language used in math in ELLs (Cummins, 2000). Furthermore, students who have a hard time to comprehend the decontextualized language that comprises academic English vocabulary can benefit from translanguaging as it can be used as a linguistic strategy to negotiate the meaning of language in advanced academic genres (Garcia, 2009).

3.3 Cognitive theory

According to Piaget's cognitive learning theory students' cognitive levels are crucial in their abilities to acquire academic English, as academic language is highly abstract and decontextualized. Students with prior knowledge about the subject content in their native language thus only need to translate their existing knowledge into English, while students who do not receive instruction in their native language have to struggle to learn both content and content language on the same time. According to Cummins (2000) students without prior schooling can thus increase their abilities to develop an academic English greatly if they start to receive the corresponding level of instruction in their native language as they receive in English (Cummins, 2000).

3.4 The Sociocultural theory of the Zone of Proximal Development (ZPD)

The sociocultural learning theory is very broad and thus applicable to many aspects of education. However for this study Vygotsky's idea of the Zone of Proximal Development, which is a part of the sociocultural theory, is employed. The zone of proximal development is considered to be the learning-level that is in congruence with the students' current cognitive abilities and where the learning in any given subject is under development. Teachers' can enhance the students' cognitive abilities by using the ZPD as a start-out point for all learning and can then carefully guide and thus scaffold the students' learning process from their current ZPD into more advanced levels of knowledge and abilities (Gibbons, 2009, p. 24).

4. Methods and material

4.1 Design

In this study data is collected through a mixed method that includes classroom observations at a CLIL-program in an upper secondary school in Sweden in addition to a teacher questionnaire. The questions are open-ended in nature and they are answered in written form. In addition, field notes are used as observation protocol to document the nature of the individual teachers' classroom practices including their interactions with students and the content material (Cohen, Manion, & Morrison, 2011, p.468). Before the actual research took place the method was piloted with the help of two upper secondary school teachers who answered the teacher-questionnaire to investigate if the format and the questions were conducive to the purpose. In addition, the teachers gave the researcher access to their classrooms to pilot the choice of the observation protocol. The purpose of piloting a research method is to increase the reliability and validity in addition to the practicability of the questionnaire and the classroom observations by using both participants and settings similar to that of the actual data collection sample (Cohen et al. 2011). The results of the pilot showed the questionnaire to be suitable for its purpose, as the results answered the research questions. However, the results of the pilot also revealed that a structured observation schema did not suit the data collection method initially chosen during the classroom observations as such a structures schema was too restrictive in character to provide answers to the research questions. Instead, field notes, where the researcher simply takes running notes of what is occurring were used as each classroom observation had to be thoroughly described and explained in a context to be comprehended for the analysis purpose (Fejes & Thornberg, 2015).

4.2 Selection strategies

As the purpose of this empirical research study is to investigate if subject teachers in upper secondary school CLIL-programs include strategies in their teaching practices that promote or hinder the use of an academic English vocabulary classroom observations were conducted and questionnaires were administrated at a CLIL-program in Sweden where English is the language of instruction. Furthermore, as each subject has its own genre specific content language which according to previous research mentioned in the theoretical background section of this study requires different teaching practices (Schleppegrell, 2009); three different subject teachers were observed during two consecutive days. Each classroom observation lasted for 70 minutes (the entire length of each lesson) and each subject teacher was observed on two separate occasions for a total of six classroom observations. The same three subject teachers that were observed then they answered the teacher-questionnaire.

During the initial selection process English, geography, physics, psychology, and mathematics were chosen as suitable subjects for the classroom observations as those fields of

studies according to previous research each represent a different genre of academic English vocabulary. However, on the two days during which the classroom observations took place both the physics and psychology teachers were indisposed and on sick leave and thus unable to partake. As a result the classroom observations were conducted in only three out of the originally planned five subjects since the substitute teachers that replaced the regular teachers during the two days had not been given informed consent letters or any other information concerning the planned research and thus was eliminated due to ethical reasons.

4.3 The informants

The informants in this study are three upper secondary school teachers who teach at an English-medium CLIL-program at a major city in Sweden. All three teachers are middle-aged men, and while the English teacher and the geography teacher are British, the mathematics teacher is born in Sweden. The English teacher has lived in Sweden for twenty years and speaks fluent Swedish. He has obtained his teaching degree in Sweden and has worked at the school for six years. The geography teacher, who also speaks fluent Swedish but with a distinct British accent, has lived in Sweden for eleven years and received his teaching degree in Great Britain. Before coming to Sweden he taught at an upper secondary school in York and had to complete some additional coursework at a Swedish university to be able to receive a Swedish teaching credential. He has taught at the present school for five years and is also certified to teach history. The mathematics teacher has worked at this particular school for two years. He has received his teaching degree in mathematics and physical education at a Swedish university and has previously taught at two different regular Swedish-speaking upper secondary schools before joining the teaching staff at the CLIL-program. The mathematics teacher is not certified to teach English and has not received any additional training to teach mathematics in an English-speaking classroom.

The initial contact with the informants took place via the principal through e-mails and phone conversations. Upon the request from the researcher to collect data in subjects that use different genres of language, the principal contacted seven subject teachers in the program that were asked to participate in the study. Five teachers agreed to partake and were subsequently contacted by the researcher via e-mail to arrange with the practical details concerning suitable dates and times for each classroom observation to take place. Furthermore both the principal and the five teachers received letters of consent in addition to oral information about the study. However, at the time when the research took place only three of the five teachers were able to partake, and thus the classroom observations only took place in English, geography and math classes.

4.4 The school

The upper secondary school where the research was conducted is located in one of Sweden's major cities. The school, which also conducts regular Swedish-speaking upper secondary education, used to offer an International Baccalaureate (IB) program but this has now been discontinued and replaced by an international section. Within the international section the students choose between a social science and a natural science track where all classes then are conducted in English.

4.5 Analysis

A qualitative approach is used as the key method of analysis for the classroom observations and the teachers' answers in this empirical research study. The purpose of a qualitative analysis approach is to describe, comprehend, and interpret data in order to identify and summarize the findings of the observations and questionnaires (Cohen et al., 2011). During

the classroom observations the researcher used field notes to document the observable phenomena as the teachers' classroom practices needed to be described and explained in a context for the individual situations to be fully understood. The results from each classroom observation are presented together with the teachers' answers in the results section.

4.6 Ethical aspects

According to The Swedish Research Council (2002) researchers who conduct studies where data is derived from humans need to make ethical considerations in regard to information, consent, confidentiality, and requirement of usage (The Swedish Research Council, 2002). Other ethical aspects of this empirical study include research bias in addition to the comprehensiveness regarding reliability and validity.

Informed consent entails giving the participants full disclosure of what the research is about, what the researcher will do, and how the retrieved information will be handled and used. In addition, an informed consent informs the research participants of their individual rights during the process, including rights to absolute privacy. However the main purpose of informed consent is to make the participants fully aware of their rights to self-determination in regard to their participation in the research which include that they are free to withdraw consent at any time and discontinue their participation without consequences (Cohen et al., 2011, pp. 77-78).

Furthermore, in regards to confidentiality the researcher guarantees the participants the right to full privacy both during and after the research. In this empirical research study confidentiality is secured by not disclosing any names or other details that will enable anyone to identify or trace any of the individual participants or the institution where the research is taking place (Cohen et al., 2011, p. 92). Letters of information, shown in appendix 2 of this paper, pertaining to informed consent and confidentiality were sent to the principal and to the participating teachers at the school before the questionnaires were administrated and the classroom observations were conducted.

4.7 Validity and reliability

In this study research bias cannot be avoided, as it is the researcher that selected the school, the subjects, and classrooms in which the observations were conducted. Moreover, the analysis of the results is fully contingent upon the researchers own background knowledge, perception, evaluations, and conclusions (Cohen et al., 2011). Lastly, due to the limited nature of this empirical research study in regard to length, scope, timeframe, in addition to the small amount of samples used to collect data, this study cannot be considered as comprehensive research on the topic.

5. Results

In this section, the outcome of the data collection and analysis is presented. The section is divided into two subsections. The first section presents the data derived from the classroom observations and the second section presents the findings from the questionnaire.

5.1 The classroom observations

The data collected from the classroom observations are presented in tables according to subject. The first column describes the observed teacher behavior and the second column explains what phenomena or teaching strategy is perceived to be taking place.

Observed teacher behavior in English class:	Explanation and analysis of perceived phenomena / teaching strategy:
The teacher tasks the students to dramatize a philosophical dilemma from a famous novel, and introduces seven different literary works for the students to choose from. In addition, the students are instructed to read the chosen novel over the weekend.	The teacher introduces an element that will entail literacy engagement as students will be introduced to and will work extensively with famous pieces of literature. The students will read a novel, analyze the philosophical dilemma and then dramatize it. This process will most likely give the students a chance to explore and learn the genre language pertaining to all parts of the process, and thus the strategy qualify as work where students engage with texts using all their communicative skills. Literacy engagement is an optimal method in the acquisition of academic language as AE vocabulary often exists in texts.
To familiarize the students with the novels the teacher shows YouTube clips of some of the works that are available on film.	The teacher uses media as an affordance to increase comprehension and to familiarize the students with the content.
The teacher uses advanced academic words and expressions pertaining to the literature genre that the class is working with and instructs the students to discuss the pros and cons of each novel.	The teacher promotes academic English language use by modeling the language that he expects the students to use in their group-discussions.
During the whole-class discussion about the novels the teacher rephrases students' words and expressions and clarifies his own language mainly by unpacking grammatical metaphors	The teacher uses scaffolding as he unpacks grammatical metaphors in addition to encourages, models and supports the students use of words and expressions pertaining to the genre.
The teacher asks the students questions about their choices and asks them to explain the philosophical dilemma in their novel of choice. In this process the teacher encourages the students to use genre-appropriate language as they discuss the historical perspectives and political messages of the novels. When the students argue their choice of novel the teacher reinforces proper language use by modeling language that he makes individual students repeat.	The teacher scaffolds the students into using a more genre appropriate academic English language pertaining to literature. The teacher also seems to be working in the students' zones of proximal development as he meets them at their level in their current language use and develop the language to become more academic in nature by modeling language that students then repeat.
During the students' group discussions regarding the philosophical dilemma of the novel the teacher translates the students arguments in expressed in Swedish into English.	The teacher uses translanguaging to make sense of the bilingual context of the group-discussion that takes place in Swedish.

Table 1. Results from the classroom observations in the English class

Observed teacher behavior in geography class:	Explanation and analysis of perceived phenomena / teaching strategy:
During the lecture the teacher speaks British English using a highly content specific academic English vocabulary pertaining to the topic of geology that the students are currently working with in geography class.	The teacher models the appropriate academic English language genre used in geology.
During the geology lecture the teacher uses a very clear and explanatory Power Point as visual support with pictures and written concepts that correspond to the lecture content.	The teacher uses a Power Point as an affordance to increase the students' comprehension of the content and the content language. The teacher also provides the students with the context they need to be able to apply the appropriate genre specific vocabulary to the abstract processes of cause and effect and other phenomena in geology.
The teacher repeatedly only engages with three of the thirty-two students in the class during the lecture regarding clarification of content language.	This phenomena of only engaging with a few students might have a negative effect on students' abilities to acquire both content and academic content language as it can be perceived as if the teacher do not implement classroom practices that are inclusive of all students. Hence, not all students are given an equal opportunity to engage with content and content language during the lessons.
The teacher rephrases abstract concepts and explains concepts more clearly without the request from students.	The teacher unpacks grammatical metaphors to clarify abstract content language.
At the end of the lesson the teacher asks the students how many of them know what the words <i>lithosphere</i> and <i>orogenesis</i> are in Swedish, and concludes that none of the thirty-two students know the meaning of the words in Swedish.	The teacher checks for language and content comprehension and thus investigates if the students' cognitive abilities in English correspond with the level of their cognitive abilities in Swedish.

Table 2. Results from the classroom observations in geography class.

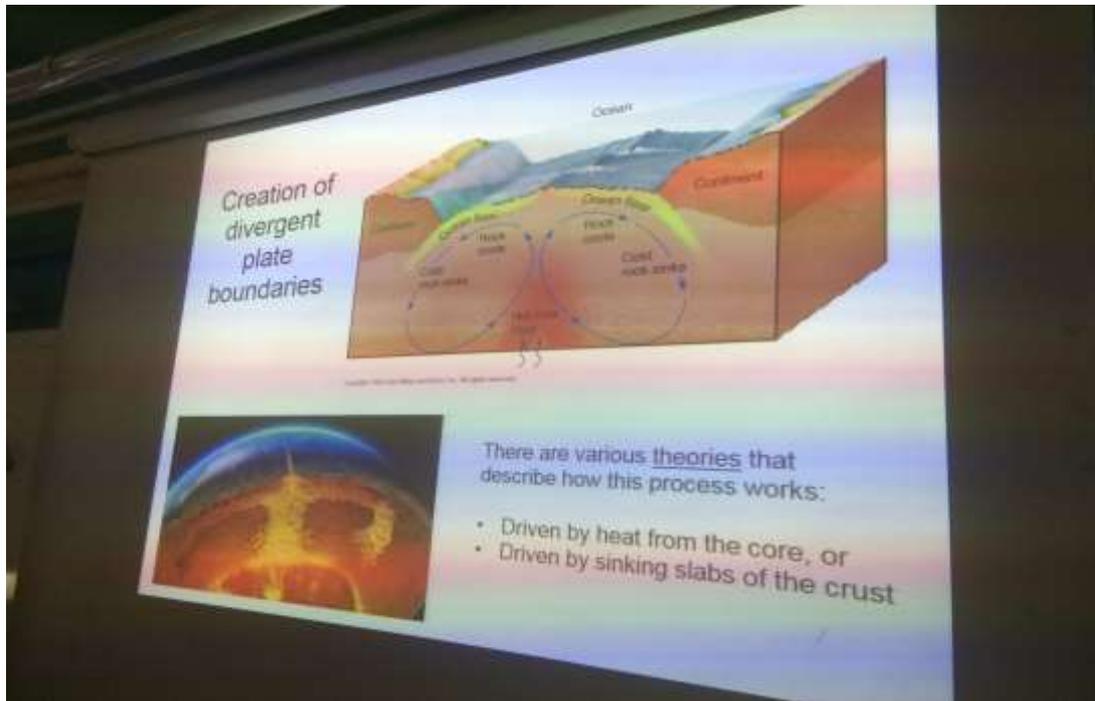


Table 3. Power Point slide from geography class.

Observed teacher behavior in math class:	Explanation and analysis of perceived phenomena/ teaching strategy:
<p>The teacher goes through the work from the previous lesson and introduces the students to the genre of math problems that will be a part of this week's lessons while using content appropriate math language.</p>	<p>The teacher works in the students' zone of proximal development as he uses the students' current knowledge as a start-out point and builds on the knowledge and language from there.</p>
<p>The teacher puts some of the abstract math problems into context on the request of some students.</p>	<p>The teacher provides the students with the context they need to be able to apply the appropriate genre specific vocabulary to the abstract and often decontextualized processes in math.</p>
<p>The teacher uses appropriate and genre specific mathematical terms in English when explaining and demonstrating the numerical solutions to the math problems.</p>	<p>The teacher models the genre specific academic English used in math.</p>
<p>Sometimes the teacher repeats in Swedish what he just said in English. In addition he speaks Swedish when working with individual students on the math problems and when he talks to the students about topics that do not relate to math.</p>	<p>The math teacher uses frequent translanguaging to clarify the bilingual context. In addition, it seems as if the teacher speaks Swedish to ensure the comprehension of math in general among the students. Moreover it actually appears that the teacher speaks Swedish to the individual students without any particular reason and perhaps because both the teacher himself and the students are Swedish. It is difficult to judge.</p>

Table 4. Results from the classroom observations in math class.

5.2 The teacher questionnaire.

5.2.1 Answers from teacher questionnaire

1. Do you do anything to prepare your students for the content specific academic English vocabulary that is used in the classroom instruction? If so what?

According to the English teacher he does not do anything in advance to prepare the students linguistically for each lesson. However he claims that since English is a language arts subject the current content builds on previous content and as such it works to develop the students' language skills since they advance through the different topic genres of the English language in accordance with the course requirements. Lastly, the English teacher is of the opinion that the Swedish students that choose to attend a CLIL-program are already highly fluent in academic English vocabulary and thus have no difficulties to follow the curriculum in English class without preparation.

Even though the English teacher claims that he does not do anything in particular to prepare the students linguistically in advance it is evident however from the English teacher's answer that he works in the students' zone of proximal development. In addition, both the classroom observations and the questionnaire show that the teacher builds the current content on the previous content and thus the students' existing knowledge and skills are used as a starting point to build new skills and knowledge on. Furthermore, the teacher's opinion that his students are already highly fluent in academic English vocabulary due to the fact that they choose to attend a CLIL-program could possibly have detrimental effects on the AE language development among the students, however the classroom observations show that the English teacher works diligently to further develop the students AE language skills.

According to the geography teacher he does not do anything in particular to prepare his students for the content-specific academic English vocabulary that they will encounter during the geography lessons. However, he encourages the students to prepare for each topic by reading the corresponding pages in the course textbook, and thus he hopes that it will prepare the students for what he will be talking about during the lessons, which are always in the form of a lecture. Moreover, the geography teacher believes that students in CLIL-programs in general already are very proficient in English otherwise they would not be attending a school with English as the instructional language.

The belief that the students already are very proficient in English can hinder the students' acquisition and development of Academic English vocabulary in geography since it is evident from the classroom observations that the lessons are in the form of lectures, and thus mainly a monologue by the geography teacher. In addition, even though the geography teacher uses very clear and explanatory visual aid to help students grasp the context surrounding the processes of cause and effect it appears as if the teacher focuses on the students' comprehension of content rather than on the acquisition of an appropriate content language.

According to the mathematics teacher he starts each school year by going through a list of math concepts to make sure that the students know what they entail and he also checks with the students that they know the meaning of the concept in Swedish. However, the math teacher claims that many math expressions in English are very similar in Swedish making it easy for Swedish students to comprehend math vocabulary in the English context.

2. Do you encourage your students to acquire, develop, and use the content specific English vocabulary characteristic of the subject you teach? If so, how?

The English teacher claims that he constantly encourages both the acquisition and the development of the content specific academic English vocabulary that is used throughout the different topics of the course content. In addition, he claims that he does not only encourage but also reinforces the use of appropriate academic language by explaining advanced expressions and words but also through demonstrating by example, both written and orally, how a more advanced level of English is used. Furthermore, the English teacher explains that he often rephrases students' sentences, not to correct them, but to make them more academic and specific in nature.

All of the aspects mentioned by the English teacher above were also visible to some extent during the classroom observations.

The geography teacher claims that he always encourages the students to use the appropriate English vocabulary characteristic of the subject, however he claims that the students often use a simpler and content inappropriate language, especially during tests. Instead of using words and expressions that are used in the actual lecture and in the textbook, the students often try to explain what they mean by engaging in a strategy where they rephrase what they mean by using many regular words. Furthermore, the teacher is of the opinion that unfortunately there is not enough classroom time to teach the students English during the geography lesson.

Hardly any of the factors that the geography teacher mentions above were visible during the classroom observation except that the teacher rephrased abstract concepts and explained some of the concepts more clearly during the lecture. The fact that the teacher believes that the students are already very fluent in English in general might also be the explanation to why the teacher does not concentrate more on the students' linguistic abilities in geography. Hence, this can be the reason behind why the students use a colloquial language during the geography lessons more suitable in everyday situations than in geography class.

The math teacher claims that he supports the students in their acquisition and use of the content specific mathematical vocabulary as he always discusses the math problems, math formulas, and possible solutions with the students in English. He also believes that as the math course advances so does the language used in math. Furthermore, the students learn language by discussing the different math problems as they progress in smaller groups or in class. The math teacher uses strategies such as word phrases to help the students remember in what steps to solve a math problem, and these phrases contain content words in math. An example of such a word phrase is “**P**lease **E**xcuse **M**y **D**ear **A**unt **S**ally” which helps a student remember the order used to tackle an algebra problem: **P**-parenthesis, **E**-exponent, **M**-multiplication, **D**-division, **A**-addition, **S**-subtraction.

During the classroom observation it became evident that the math teacher uses extensive translanguaging in Swedish including sometimes when he discussed math problems with the students, which is quite contrary to his answer in the teacher questionnaire. Moreover, the knowledge that the math teacher uses word riddles in English as a strategy for the students remember math steps, is an interesting practice that would not have been made evident if it had not been for the teacher questionnaire.

3. In your opinion, what could undermine your students' acquisition, development, and use of academic English vocabulary?

According to the English teacher the students often speak Swedish to each other both during the lessons and always between the lessons. In addition, despite research that engaging in translanguaging is beneficial to the development of a second language the English teacher believes that in the case with Swedish CLIL students excessive translanguaging might instead undermine the development and use of an academic English vocabulary. If the students cannot find the appropriate way to express themselves in English they simply say it in Swedish.

According to the geography teacher, his colleague, the Swedish teacher at the school, claims that as a result of the CLIL-practice where the students learn all content in English, the students' Swedish language skills suffer greatly. Furthermore, he believes that if the students do not master language of an academic nature in each subject in their native language, it can be difficult to acquire that genre in English or any other language. Lastly, the geography teacher believes that the students' habit of speaking Swedish to each other - he understands that this comes more naturally than speaking English to another Swede - might undermine the acquisition and fluency of academic English vocabulary.

The mathematics teacher believes that the lack of a level-corresponding acquisition of academic math content vocabulary in Swedish might undermine further development and use of such language in English. Furthermore, he is of the opinion that the students in his class often talk too much to each other informally about math and other private matters during class in Swedish a habit that, according to the teacher, also might undermine the development and use of a math content appropriate academic vocabulary in English.

All three teachers are of the opinion that an excessive use of Swedish among students, both during the lessons and during break, might hinder the students' acquisition and use of an academic English vocabulary. Furthermore, both the geography teacher and the math teacher believe that the fact that the students in the CLIL-program do not receive education in Swedish might be detrimental to their ability to develop an academic English vocabulary that is more advanced than their current Swedish language skills.

6. Discussion

This section will discuss the findings from the classroom observations and the teachers' questionnaires regarding academic English vocabulary use in English-medium CLIL-programs in Sweden. Furthermore, the results will be synchronized and discussed in relation to the background information presented in section 2 and the theoretical perspectives presented in section 3. This section will conclude with a discussion about the method used to conduct this empirical research study.

6.1 Teaching practices in English CLIL-instruction that promote AE proficiency

The Swedish National Agency for Education, *Skolverket*, has given educators the task to implement classroom practices that promote content learning and academic language proficiency simultaneously (Skolverket, 2011). Throughout this empirical study it has become evident that there are indeed numerous elements of the teaching practices observed with all three teachers that are in accordance with what existing research on the topic find beneficial to the acquisition of both content and academic English vocabulary among English language

learners (Bauman & Graves, 2010). Examples of such teaching practices observed are elements of literacy engagement, scaffolding, translanguaging, and the use of affordances, in addition to the insertion of abstract information into contexts that are familiar to the students. Moreover the classroom observations reveal that classroom practices vary greatly depending on the content and discourse of each subject. For example, the English teacher seems to focus on the use of the correct language pertaining to literature and according to research success in English language arts requires knowledge about the language itself including proficiency in academic English vocabulary in addition to the understanding of meaning and construction of grammatical metaphors (DiCerbo et al., 2014). Moreover, the geography teacher's aim seems to be on the comprehension of the content language that describe the process of cause and effect and other phenomena in geography while the math teacher on the other hand works to insert the math problems into contexts that the students can relate to. Thus both the geography teacher and the math teacher work in accordance with Piaget's cognitive theory by putting abstract information into a context (Cummins, 2000). Furthermore, teachers use different strategies to support the acquisition, development and use of academic vocabulary in class depending on the linguistic demands of each subject on the students. For example, during the English class the teacher uses scaffolding where language is corrected and modeled. Seemingly, the teacher works in the students' proximal zone of development, as students are guided and encouraged to use the more advanced genre specific academic language that is used to discuss literature (Gibbons, 2009).

According to Cummins (2011) intensive literacy engagement is highly beneficial to the acquisition of an academic vocabulary, as AE exists mainly in written materials. A small example of such interaction with written materials is possibly observed in English class where the students engage with literature as they work with interpreting a famous novel in regard to its historical background and political content as well as analyzing the philosophical dilemma that is present in the story. During the classroom observation, the students read and discuss the material and the teacher supports academic vocabulary learning by rephrasing difficult concepts and by unpacking genre specific words and expressions. Moreover, the teacher models ways to talk about literature in English and encourages the students to use the appropriate register in the classroom discussions. Furthermore, the teacher talks about the content of the novel and the language used to discuss literature a strategy that according to Schleppegrell (2004) can be used to help students gain a deeper understanding of the construction of texts in different genres. In addition, extensive scaffolding takes place as the teacher works in the students' proximal zone of development (Gibbons, 2009) and helps them adapt their more general language use into more linguistically effective expressions of academic nature.

According to Piaget's cognitive learning theory students acquire knowledge faster if they have previous understanding and contextual experience of the presented material (Cummins, 2000). During the observation in math class the teacher explains some of the mathematical problems by placing them in an everyday context familiar to the students to make it easier for them to relate to and thus perhaps comprehend. Schleppegrell (2004) states that it is important that students understand the context in which the content language is presented as the acquisition AE is contingent upon the way subject content and the activities pertaining to the new knowledge are embedded in a social context that students can relate to (Schleppegrell, 2004, p. 156). Moreover, according to the answers in the questionnaire, the teacher goes through mathematical concepts and vocabulary at the beginning of each semester to make sure that all students know the meaning and checks the comprehension by making the students translate the mathematical concepts and expressions into Swedish. According to

DiCerbo et al. (2014) students with knowledge about math in their native language are more likely to engage in classroom discussions about math problems than students without previous math-knowledge in their native language since the students with existing knowledge basically translate their knowledge into the second language. Moreover, the math teacher uses techniques such as word phrases to help students remember formulas used to solve math problems, and he uses translanguaging extensively when communicating with individual students. In addition, when speaking to the class the teacher sometimes repeats what he just said in English in Swedish. According to Gracia (2009), translanguaging is a linguistic strategy that can be beneficial to ELLs as it helps negotiate the meaning of words and expressions and thus promote the comprehension of a more advanced academic language genre.

According to Schleppegrell (2009) the features of the language used in a typical science class include highly abstract expressions used to explain abstract processes in addition to cause and effect. Furthermore, in science classrooms the language often link science theories with concrete practices and experiences, and thus learning and language development often occurs simultaneously for ELLs. In this study, during the observation in geography class Power Point is used to illustrate abstract information in context where explanatory pictures demonstrate processes of cause and effect in addition to connecting the material with short explanations in academic English that are highly genre-specific in nature. During the classroom observations the geography teacher uses visual aid as a complement to his lecture in addition to rephrasing content language that appear to mainly scaffold the students' academic English comprehension in geography. According to Gibbons (2009) the process of "reading to learn" is highly beneficial to ELLs in science subjects where the knowledge usually comes before the students become fluent in the academic language of science. Moreover, according to the questionnaire, the geography teacher prepares the students for each lesson in advance by tasking them to read about the upcoming topic in their textbooks, and as the student engage with the text pertaining to the new content they also familiarize themselves with the academic vocabulary used to talk and write about the topic. The geography teacher's strategy to prepare the students by instructing them to read ahead about the upcoming topic is exactly in accordance with Cummins (2011) findings that the practice of reading about academic subjects is crucial to the successful acquisition of AE vocabulary among ELLs.

6.2 Factors in English CLIL-programs that undermine AE proficiency

A recent study (Olsson, 2015) shows that there is no significant difference between students in English CLIL-programs and students in regular schools in their academic English proficiency, and thus there is a need to take a closer look at classroom practices in CLIL-programs in Sweden. As the data derived from both the classroom observations and the teachers' questionnaires is analyzed there are four factors that stand out as possible reasons for the lack of difference in English proficiency between the two student categories: First, the teachers in this particular study are of the opinion that students in English CLIL-programs already are highly fluent in academic English and thus see no special need to prepare the students linguistically before new content material is introduced in class. This belief might actually deprive some students from the extra support they would need to advance in their development and proficiency of an academic English vocabulary. Secondly, some teachers use translanguaging extensively and even speak to the students in Swedish during class. In addition, according to the teachers' answers on the questionnaire, all participating teachers believe that the students' habit of communicating with each other in Swedish both during and outside class might undermine their acquisition as well as their proficiency in academic English. Thirdly, in the questionnaire both the math teacher and the geography teacher

mentioned the fact that the students do not receive the corresponding level of education in Swedish as they do in English and this could possibly undermine their abilities to develop AE. The teachers' concerns are indeed in accordance with Piaget's cognitive theory (Cummins, 2000). If the students in the English-medium CLIL-program do not receive the same level of education in their native Swedish language as they receive in the English speaking instructional environment, their lack of Swedish education might have detrimental effects on their ability to learn and develop proficiency in academic English since they do not have the corresponding knowledge in Swedish. The impromptu question to the students made by the geography teacher at the end of the geography lesson showed that none of the thirty-two Swedish native-speaking students knew what the word *lithosphere* or the concept of *orogenesis* translate to in Swedish. According to Piaget's cognitive theory, this can possibly mean that since the students have not received geography instruction in Swedish they do not know the meaning of the words in Swedish. Therefore, they might not fully comprehend the definitions and thus not their appropriate use or the applicability of the terms in the English language context (Cummins, 2000). Lastly, it was very evident during the classroom observations in the geography class that out of the thirty-two students in the class it was almost exclusively the same three students that engaged in conversations about geography with the teacher. According to Schleppegrell (2004), students that are not given the opportunity to engage linguistically with new tasks and experiences in the classroom do not acquire AE vocabulary at the same extent as the students who actively partake in the classroom discussions do. Curtin (2005) claims that the reason behind some teaching practices that result in an unequal opportunity among students to acquire academic language skills can be due to the deficiency in teacher training regarding how to teach AE across curriculum (Curtin, 2005, p. 27). When the researcher gathered information about the participants in this study it became clear that the math teacher had not received any additional training in how to teach mathematics in English. The lack of training can turn be the reason why the math teacher translanguages extensively with the students, a fact that can possibly hinder the students from acquiring the genre specific AE used in math class (Curtin, 2005).

6.3 Method discussion

The aim of this empirical research study is to investigate if subject teachers in upper secondary school CLIL-programs include strategies in their teaching practices that promote or hinder the use of an academic English vocabulary. The mixed methods used in this study to explore the teaching strategies in different subjects include classroom observations at a CLIL-school in Sweden in addition to a teacher questionnaire. Furthermore, the piloting of the instruments proved the survey to be conducive of their purpose but revealed that a structured observation schema that is generally recommended to document data collected through observations was not suitable for this study. Instead, field notes were used as documentation as those are less restrictive in format and more descriptive in nature than a structured schema (Fejes & Thornberg, 2015). Moreover, the choice of a mixed method were proven beneficial to the results as certain aspects of the teachers' practices and opinions that could not have been gathered from merely observing was made evident in the teachers. For example, that fact that the math teacher prepares the students in the genre specific vocabulary used in mathematics in the beginning of each term was not something that was observed during the classroom observations but was made clear through the questionnaire. In addition, the knowledge about the teachers' attitudes pertaining to the level of their students AE proficiency, in addition to their beliefs that the students' excessive use of Swedish in school has detrimental effects on their English were also derived from the teachers questionnaires.

The aim of both methods is to give insight into possible teacher practices that can prove detrimental to the acquisition and use of academic English vocabulary among Swedish CLIL-students. However, while this empirical research study gives an actual insight into some current teaching practices regarding academic English vocabulary use at a CLIL-school in Sweden it is very limited in nature which is largely due to the time constraints for carrying out the study. Furthermore, the classroom observations took place in only three classes during two days and the answers to the written questions were collected from only three subject teachers. In addition, the analysis of the data, and in particular the data derived from the classroom observations, is highly contingent on the researcher's own perception of what actual elements of teaching practices took place and therefore this empirical study cannot be considered comprehensive on the topic and thus no generalizations can be made based on the conclusions of this research (Cohen et al., 2011).

Lastly, in an attempt to avoid participant bias, the researcher had to be somewhat elusive regarding exactly what feature of academic language use was being explored during the classroom observations. For this same reason, the classroom observations were conducted before the teacher questionnaires pertaining to classroom practices were administered to avoid that any of the participants would change their teaching strategies to be more in line with what was being researched. Research bias is fairly common and entails that study participants with prior knowledge of what phenomena the researcher is investigating adapt their responses or behavior accordingly to present what they believe to be optimal results in an attempt to please the researcher (Cohen et al., 2011).

7. Conclusion

In the first part of this section the conclusions of this study are presented. In the second part suggestions of further research are being made.

7.1 Concluding discussion

The research questions of this study were:

- Do subject-teachers in CLIL-classrooms engage in any observable teaching practices that promote the use of an academic English vocabulary?
- If so, what teaching practices are used to promote the use of academic English vocabulary among CLIL-students?
- Is there anything in the classroom situation that could possibly undermine the use of academic English vocabulary among the students?

The results from the classroom observations and from the teacher questionnaire show that the subject-teachers in the CLIL-classrooms where this particular study was conducted engage in numerous teaching practices that according to previous research promote the acquisition and use of an academic English vocabulary among English language learners. For example, the data from the classroom observations show teaching practices that include elements of literacy engagement where students read and discuss a novel and where the teacher talks about what language to use when discussing and analyzing literature. Furthermore, the teacher seems to work in the students' proximal zone of development as he models language, unpacks grammatical metaphors, and scaffolds students as they are encouraged to use the appropriate genre specific language pertaining to literature. The advantages of these practices can be tied to previous research by Cummins (2011), DiCerbo et al. (2014), Gibbons (2009), and Schleppegrell (2004) that are presented in the background and theoretical perspective section

of this study. Moreover, the geography teacher engages in teaching practices that enhance the students comprehension of content language by using visual aid that help explain the topic by labeling processes of cause and effect and by providing a descriptive text of the phenomena. This practice can for example be tied to Piaget's cognitive learning theory about the importance of giving students a contextual understanding of abstract process to apply their new language to (Cummins, 2000). Furthermore, the geography teacher tasks the students to read about the upcoming topic in the textbook in preparation for each lesson and the advantages of this practice can be tied to research by Gibbons (2009) that states that knowledge in science often comes before the student is fluent in the language genre pertaining to science. In addition, Cummins (2011) claims that the practice of reading about academic subjects are crucial to the acquisition of AE among ELLs. Hence both the English teacher and the geography teacher recognize the fact that AE can only become salient to ELLs if they engage with both tasks and academic literature connected to content, and thus elements of literature engagement were a part of the teachers' classroom practices. The math teacher includes strategies where math problems are put into context in addition to working with the students' comprehension of mathematical terms, concepts and vocabulary. The benefit of these mentioned practices can be tied to research by Cummins (2000), Schleppegrell (2004), and DiCerbo et al. (2014). Furthermore, the math teacher translanguage in Swedish when communicating with the students, a practice that according to Garcia (2009) can help students make sense of the bilingual context and thus gain a deeper meaning of abstract processes. Concludingly, all three teachers uses affordances in their classrooms: The English teacher uses YouTube clips, and the geography teacher uses a Power Point while the math teacher translanguage and uses word-riddles to support the students learning. According to Gibson (2015), the use of affordances is beneficial practice as it increases students' comprehension.

The factors detected during this research that can possibly work to undermine the students' academic vocabulary proficiency include that the teachers in the study believe that the students already are sufficiently fluent in English and thus the teachers might therefore concentrate more on developing students' knowledge of subject content instead of the content language (Olsson, 2016). In addition, extensive translanguageing and the fact that students speak Swedish to each other in school yield less time and opportunity to speak English. Furthermore, the students do not receive the same high level of instruction in Swedish as they do in English, as the CLIL-program, according to the teachers, is the only schooling the students attend. According to Piaget's cognitive theory the successful development of an academic English vocabulary is contingent upon the development of the same level of academic content language in the students' native language (Cummins, 2000). Lastly, classroom practices that are not inclusive of all students can work to undermine the acquisition and use of academic English vocabulary as all students are not given the same opportunity to engage with methods or material that promote the acquisition and use of AE vocabulary. According to Curtin (2005), unequal opportunities among students to acquire academic language skills is often due to the fact that some teachers continue to use mainstream didactics in the classroom because they lack the proper training to implement practices where students learn content and content language simultaneously.

This study makes it evident that teacher practices vary greatly. In addition, some perceptions held by the teachers regarding the acquisition of AE might actually hinder the development of AE among students. Therefore a potential practical application of this study might include to bring to attention the importance of the need to take a closer look at the quality of teacher training pertaining to teaching AE across curriculum. According to research presented as a background to this study, many teachers lack the proper training to successfully be able to use

teaching practices that promote the acquisition and use of AE vocabulary in the subject they teach (Curtin, 2005).

7.2 Further research

Some of the results in this study indicates that the student in English CLIL-programs in Sweden do not receive education in their native language at the same level as they do in English. In addition, according to Piaget's Cognitive Theory, students who obtain the same level of education in their native language as they receive in the second language are better equipped cognitively to develop skills in a second language pertaining to both content and language (Cummins, 2000). Therefore, future research needs to be conducted to investigate if the CLIL-students' proficiency in academic English vocabulary would increase if they also receive the same level of education in their native language as they do in the CLIL-program. Moreover, research shows that CLIL-students who attend English CLIL-programs in other European countries are significantly more proficient in academic English vocabulary than students in the same countries that attend regular schools (Olsson, 2016), therefore suggestions for further research also include investigating if there is a difference between the way Sweden and other European countries conduct CLIL-education.

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November 7, 2017.

Letter of information and consent

Dear Participant,

My name is Anneli Mattsson Kershaw and I am a teacher-student at Dalarna University (Högskolan Dalarna) in Falun, Sweden, where I am obtaining a Master of Arts in Upper Secondary Education in English and Swedish as a Second Language. I am currently working on an empirical research study where the aim is to investigate different subject teachers' classroom practices and opinions in regards to academic English language instruction and use at CLIL-schools in Sweden.

The method used to collect data for this study is through classroom observations in different subjects where English is the language of instruction. In addition, the teachers who participate in the study will be asked to answer a few written questions. All data obtained in this study are subject to the guidelines for ethical research by the Swedish Research Council and will be handled accordingly. Your participation in this research study is voluntary and you may choose to terminate your participation at any time and without explanation. To guarantee participant privacy, all information and all results derived from this study will be handled in a manner that will make it impossible to identify any classes, participants, or the institution that took part in the research. The results of this empirical research study will be presented in my master level English degree thesis.

For additional information contact any of the persons listed below:

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I have received sufficient oral and written information regarding my participation in this study. I feel fully informed and I hereby agree to participate.

Place/Date:

Name: