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Teachers' Beliefs About Learning and Language as Reflected in Their Views of Teaching Materials for Content and Language Integrated Learning (CLIL)

JYVÄSKYLÄN YLIOPISTO

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ABSTRACT

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The key concept of this study, Content and Language Integrated Learning (CLIL), is based on the notion that foreign languages are best learnt by focusing on the content which is transmitted through language. Despite the fact that CLIL has been an implemented practice in Finland since the early 1990s, teaching materials in CLIL have been ignored almost completely by educational authorities. Therefore, there are only a handful of ready-made textbooks for CLIL available in Finland, and consequently, CLIL teachers often design the material needed for lessons independently.

The study aims at investigating CLIL teachers' beliefs about the role of learning and language in CLIL and exploring the strategies in which teachers adapt teaching materials for CLIL. Beliefs about learning and language are approached through the teachers' accounts of teaching materials in CLIL. Further, the purpose is to find out how CLIL teacher experience and training received in CLIL are reflected in teachers' understandings of CLIL and beliefs about learning and language. The study focuses on thirteen Finnish primary school teachers who teach content subjects for grades 3 – 6 in English. The qualitative data consist of two thematic interviews, oral and written diaries, and teaching materials designed by the respondents. With all the three stages together, the purpose was to look into the teachers' beliefs in-depth.

The results show that learning in the CLIL classroom is still rather teacher-centred. Teachers' views of language are two-fold: for the majority, language appears to be a set of words or a system arranged by syntax while some others see language as a social practice or a tool for communication. Rather than work experience or CLIL teacher training, the influence of teacher personality is remarkable on teachers' design and use of materials. This study will provide up-to-date information on a topic not studied much and insights to help further develop CLIL as an educational approach. The results may also have potential implementation for teacher education.

Keywords: CLIL (Content and Language Integrated Learning), teaching materials, materials design, beliefs, language, learning, adaptation, expertise

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FOREWORD

It has been a long way from my first thought of starting to write a PhD to this day when it is finally ready. Many fantastic people contributed to my decision to start this journey and since then, even more have supported me in a variety of different ways. It is now time to give thanks.

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This study has been financially supported by several institutes which I am very grateful for. The generous grant by Olvi Foundation in 2009 allowed me the kick-off for the analysis phase of this study. The Faculty of Humanities at the University of Jyväskylä gave me a grant at the last stage, which allowed me to have the final study leave from my regular work and thus, greatly contributed to finalizing this study. The financial support by the Soroptimist International of Europe and the City of Kuopio also enabled me to focus on this research during my study leaves.

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And finally, my dearest ones at home. I hope I have set you an example of fulfilling your dreams no matter what and having the courage to do what you want, overcoming the obstacles on the way. You are the Best!

Sukeva 28.7.2014
Eveliina Bovellan

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1 INTRODUCTION

1.1 Orientation

The origins of this study can be traced back to an August day in 2007 when the headmaster of the school where I worked asked me to teach Religious Studies through English for the fourth grade of the English stream. From my educational background, I am a language teacher in a primary school in Eastern Finland. The school has mainstream and English-stream classes for grades 1 - 6 abreast. At that point, I had taught English and German for the mainstream classes in that school for three years and did not have the faintest notion of teaching content subjects through English. However, desperate as the headmaster was, I, with no previous experience of teaching through English and with no English-language teaching materials for Religious Studies, could not but to "pick up the gauntlet" and start learning what CLIL (Content and Language Integrated Learning) is through trial and error.

Struggling with the terms of the field of Religious Studies and searching for English materials from various sources, I could not help wondering if this was the reality for every CLIL teacher in Finland. The astonishment of the beginning gradually developed to an urge to find out more about teachers' materials design for CLIL and about their beliefs about learning and language that guided their choices of materials. After participating in an in-service training on CLIL in 2007 - 08, the idea of this study was finally formulated. Today, looking back at my thoughts and experiences during my first year in CLIL, it now seems obvious that I, being a teacher, recognized a problem in my work which I attempted to solve by researching (cf. Niikko 2010: 237). Finding out research background for matters that initially bothered me at my work also made me evaluate my own methods in CLIL and observe myself at work, and thus enabled me to reform and introduce new practices for work. As Niikko (2010: 245) puts it, research made me reflect myself critically and made me increase my responsibility towards my work.

As it has become evident to me during this research process, the researcher is a central tool, a research instrument of a qualitative study (Cresswell 2007: 38; Eskola & Suoranta 2005: 210). My background, knowledge and status inevitably guided my choices and the direction the study would take. As Mäkelä (1995: 56) puts it, a study can never be totally unbiased, because it is always influenced by the choices of the researcher, and no reality can be faced without preconceptions of that reality. In the first place, my preconceptions were guided by my personal experiences on the challenge of CLIL, particularly from the point of view of materials design, and second, by the urge of understanding teachers' beliefs about learning and language behind their choices concerning materials design and use for CLIL. Thus, in the same setting another researcher with different preconceptions might achieve different results. Nevertheless, it is equally important to observe the position of the researcher in relation to the informants of the study. In Riessman's (1993: 11) words:

> The story is being told to particular people; it might have taken a different form if someone else were the listener.

Consequently, the researcher has to be aware of the issues that may have an impact on her attitude towards the informants, the focus of analysis, etc. In the present study, the aim is to recognize and bring out such connections as thoroughly as possible in order to conduct all the stages of the study in a transparent and reliable way.

This study is positioned in the field of applied linguistics, thus having *language* in focus. The area of interest is *Content and Language Integrated Learning* (henceforth referred to with the acronym *CLIL*) which combines content and language in teaching and learning. With its roots in Canadian immersion programmes and content-based instruction in the United States, CLIL is primarily a European methodology which aims at additive bilingualism, i.e., the second language is added on to the mother tongue (Commins 2012; Dalton-Puffer 2011a). CLIL is a pedagogical approach which has a dual aim: learning of the subject matter (content) and learning of the foreign language used as the medium of instruction. The significance of CLIL becomes evident in the rapidly increasing research literature published in the field. In fact, CLIL has been named as one of the most important developments in the field of language teaching and learning in the last few decades (Ioannou Georgiou 2012: 495). The core idea of CLIL is summarized by Coyle, Hood and Marsh (2010: 1) as follows:

> Content and Language Integrated Learning (CLIL) is a dual-focused educational approach in which an additional language is used for the learning and teaching of both content and language.

It has been acknowledged that it is of great significance to investigate CLIL teachers' beliefs to find out more about CLIL implementation (Nikula & Dalton-Puffer 2014: 118). It is particularly important to explore how teachers understand learning and language in CLIL, because teachers greatly influence their learners' language development, and therefore teachers' knowledge about

language and how it is used and learned when studying content through a foreign language should be deliberately developed (Morton 2012: 49). This has also been recognized as an important aim elsewhere. Arkoudis (2005: 175) maintains that CLIL teachers' understandings of the role of language within content teaching are important, as are their views of teaching and learning, because the curriculum cannot be delivered in isolation of the pedagogical beliefs of teachers. Besides learning the content, CLIL is also very much about learning the foreign language and therefore, it is important to understand how teachers view the roles of learning and language in CLIL. Hence, the present study attempts to look into *CLIL teachers' beliefs about learning and language from the point of view of teaching materials*, an approach not much discovered in previous research.

According to Wan, Low and Li (2011: 403), teachers' beliefs can be described as "a complex set of variables based on attitudes, experiences, and expectations". They constitute a basis for teachers' action, reflect the nature of their instruction, and guide their decision-making (Basturkmen 2012: 2; Correa, Perry, Sims, Miller & Fang 2008: 141; Kagan 1992: 73; Polat 2009: 230; Thompson 1992: 138). Teachers' beliefs about language learning are shown to influence learners' beliefs and views of success and how they learn languages (Allen 1996). Teachers contribute to the success of their pupils (see Dufva, Lähteenmäki & Isoherranen 1996; Kalaja & Dufva 1997; Kalaja, Dufva & Nordman 1998; Sakui & Gaies 2003), and sometimes the teacher's influence in a pupil's competence in learning languages can be enormous – either in a positive or negative sense (Dufva 2003: 139). Hakkarainen, Lonka and Lipponen (2002: 46) argue that a teacher's view of a pupil's intelligence affects her way to interact with the pupil and how challenging tasks she gives for the pupil to solve. A teacher's belief about a pupil's high intelligence may be reflected as improved achievements. Similarly, a teacher's negative view of a pupil's intelligence may turn out to a self-fulfilling prophecy, contributed by the probability that the teacher gives the pupil simpler and more mechanic tasks than for others. Studying teacher beliefs is, therefore, of utmost importance, and in the present study, this question is approached through teachers' interviews and diaries.

Since this study approaches teachers' perceptions of learning and language through the way they observe *teaching materials* for CLIL in the primary school context, materials comprise another key concept here. It is important to investigate the materials design and use of primary school teachers. This is crucial because the age and the linguistic and cognitive level of the target group have to be taken into account more specifically than when dealing with older students. In Finland, textbooks for CLIL are seldom available, probably because publishers find them unprofitable and do not therefore produce them. It may also be that there is a lack of textbook writers for CLIL. Textbooks from the target language countries, on the other hand, do not correspond to the Finnish curriculum. For instance, Finnish children do not need to learn British flora and fauna but the ones typical in Finland. Hence,

CLIL teachers are obliged to design their teaching materials independently, using various resources, such as Finnish textbooks, the Internet, encyclopedias, colleagues, native speakers, etc. The design of teaching materials comprises a significant difference between the work of mainstream class teachers and CLIL teachers. For the teachers of mainstream classes in Finland, designing teaching materials is not a common practice since publishers offer high-quality textbooks and teacher's manuals. CLIL teachers, on the contrary, face the lack of suitable materials and do not usually have another option but to prepare materials themselves.

Since the question of teaching materials in CLIL from teachers' perspective has been much overlooked in previous research, it was considered necessary in the present study to focus on the area that concerns not only a great number of teachers putting CLIL into practice but also pupils, educational authorities, and publishers. Though not a target of substantial investments, teaching materials have a highly-valued status as a means of improving and developing the quality of CLIL. Setting criteria for good teaching materials is important because research shows (e.g., Niemi 2004: 190) that there is a significant connection between teaching materials and learning results. Further, Nikula (2008b: 279) deems teaching materials as a key for developing teaching through a foreign language. The urgent need for research on teaching materials in CLIL, and particularly the teachers' role in designing them, has been expressed by several researchers (e.g., Cammarata & Tedick 2012: 259; Coyle et al. 2010: 147; Wyatt 2011: 2). Cammarata and Tedick (2012: 259) consider the balance between content and language a difficult challenge for teachers specifically because of the absence of materials designed to integrate language and content and resources teachers can make use of. Moreover, Coyle et al. (2010: 147) call for wider research on CLIL materials, from both a design and a task perspective. As Coyle et al. argue, the nature of good CLIL input has to be open to inspection and development, given that the new technologies and the succeeding multimodal learning prospects will offer teaching various new dimensions.

Since CLIL encompasses the potential for the development of at least some degree of *bilingualism* (Mehisto & Marsh 2011: 39), it is worthwhile to briefly introduce how bilingualism is understood in research literature and in the present study. Bilingualism is also referred to as *pluri- or multilingualism* and the term 'bilingual' is often used as a shorthand form for cases of multi- or plurilingualism, but, in a strict sense, bilingual means an individual who has a language competence in two languages (Baetens Beardsmore 1986: 3). A multi- or plurilingual individual, on the other hand, can communicate in more than one language with at least limited skills, either actively through speaking or writing or passively through listening and reading (Bertrand & Christ 1990: 208; Wei 2008: 4).

Further, multi- or plurilingualism means situations where several languages exist in a society and can be utilized either separately or simultaneously. A multi- or plurilingual individual has an ability to use more

than one language for the purposes of communication and to take part in intercultural interaction in several languages (Coste, Moore & Zarate 2009: v-vi). In Europe, plurilingualism has generally been defined to refer to individuals whereas multilingualism is connected to societal multilingualism (Van de Craen 2001: 1). From a wider perspective, multilingualism is, in fact, the norm, as Ellis (1994: 4) and Coyle (2011) argue. Research on sociolinguistics is increasingly heading in this direction, as evidenced by Kytölä (2013: 86) in his recent study on multilingual language use in Internet football forums. He considers monolingualism an exception that may only occur in the most guarded real-life genres of language use. Undoubtedly, countries or communities with only one language are rare today. According to Richards and Rodgers (2001: 3), some 60 percent of today's world population is multilingual. Some researchers, however, take an even broader perspective to multilingualism. Luukka's (2013) view of language includes dialects, slang, and subject-specific languages. Hence, she argues that every person is, in fact, multilingual.

According to Liem and McInerney (2008: 46), "multilingual competence promotes cultural relevance in globalized, information-based technological societies", setting bi- or multilingual pupils in an advantageous position in global society. This argument is often appealed to when justifying CLIL programmes. Research has also shown a connection between plurilingualism and creativity: plurilinguals evidence a higher capacity for problem-solving, generating new processes, and developing alternative ways of perceiving the world (Pinho, Gonçalves, Andrade & Araújo e Sá 2011: 41). The context of the present study is bilingual education, referring to operating in *two* languages which are the learner's mother tongue and a foreign language. Therefore, the term *bilingualism* seems more natural than multi- or plurilingualism in the present context and will henceforth be used in this study.

Since English is the major CLIL language (Dalton-Puffer 2011a: 183; Morton 2013: 112; Nikula & Dalton-Puffer 2014: 119) with the percentage of approximately 95 of all cases (Nikula, Dalton-Puffer & Llinares 2013: 71) and is also the language of instruction in the context of this study, it is necessary to clarify the concept of *English as a lingua franca (ELF)*. The status of English as the *lingua franca* today is unquestionable. It is the global language of business, research, entertainment industry, etc. Again, more than one term has been applied when referring to this phenomenon. Pennycook (2010: 85) makes a distinction between English as a *lingua franca* and *Lingua Franca* English, arguing that the former tends towards an understanding of a pre-given language used by different speakers, while *Lingua Franca* English (LFE) emerges from its contexts of use. LFE is made up of common elements in the emergent varieties of English, with traditional native types considered the standard for comparison (Canagarajah 2007: 235). A satisfactory solution for the juxtaposition of English as the major *lingua franca* and the position of smaller European languages might be searched for bearing in mind Breidbach's (2003: 22) words on the role of English in the European context:

> Sustainable cultural and political inclusion, which can lead to opportunities of participation in multilingual Europe, requires a holistic language education policy inclusive of English and linguistic diversity.

Due to its high-standing status, learning English through the integration of content and language seems to be of utmost importance in today's world (Cendoya & Di Bin 2010: 12). The fact is that English is the language overwhelmingly used as a means of instruction in most European countries. A recent study by Salo, Kankaanranta, Vähähyyppä and Viik-Kajander (2011: 33-34) on the ways of supporting internationalisation in Finland suggests the increase of teaching through English as one major method. The respondents of the study consist of 320 Finnish experts from different fields, including head teachers, researchers, municipal authorities and business executives (Vähähyyppä 2013). Judging from the results, the respondents are most likely continually faced with the demand of English competence in their fields and are therefore extremely conscious of the need for an early start in English studies. It has been generally acknowledged that the spread of CLIL is very much fuelled from employers who highly value English as the international *lingua franca* as well as from grass-roots actions where parents believe that CLIL offers their children a vantage in the labour market (e.g., Dalton-Puffer 2011b: 9-10; Hüttner Dalton-Puffer & Smit 2013). Therefore, it is worthwhile to understand the significance of EFL in the context of the present study.

To clarify, this study aims at presenting new insights into the field that invariably comes up in discussions with CLIL teachers and researchers, but has nevertheless scarcely been in focus of research, that is, teachers' beliefs about learning and language detected through their views of the design and use of teaching materials for CLIL. The aims of this study will be discussed in more detail in the following subchapter.

1.2 Aims

It has been generally agreed in CLIL literature that there is relatively little research on what teachers think, know and do in CLIL (Morton 2012: 11). CLIL teachers' beliefs have been approached in a few recent studies (see e.g., Hüttner et al. 2013; Morton 2012; Pena Díaz & Porto Requejo 2008; Tan 2011 in the CBI context), but yet there is an abundance of interesting questions to be explored on the influence of teacher beliefs on implementing CLIL. The present study will contribute to this demand by highlighting an area confronted by a great number of CLIL teachers and pupils every day, namely, teachers' beliefs about learning and language as reflected in their design and use of teaching materials in primary CLIL. The topic will be investigated through teacher interviews and diaries, thus intending to hear the teachers' voices through different data. This approach is expected to allow an in-depth insight into CLIL teachers' beliefs.

During the 1990s and the beginning of 2000s, the emphasis of CLIL research was on uncovering the phenomenon by showing its various ways of implementation and by providing macro-level information about CLIL primarily in the form of surveys and reports (e.g., Järvinen 1999, 2000; Marsh & Lange 1999; Marsh, Maljers & Hartiala 2001; Marsh, Marsland & Maljers 1998; Marsh & Nikula 1999; Nikula & Marsh 1996, 1997). In this millennium, however, CLIL research has rapidly increased and awakened wide interest. Most of the recent research on CLIL has been in the area of attainment in the CLIL language focusing on language learning outcomes (e.g., Admiraal, Westhoff & de Bot 2006; Lasagabaster 2008; Zydatiß 2007). Research shows convincingly the beneficial effect of CLIL on learning results. Admiraal et al. (2006), for instance, found out that in the Netherlands, secondary school CLIL students showed higher scores for their English language proficiency in terms of oral proficiency and reading comprehension than the control group. Lasagabaster's (2008) study conducted in the bilingual Basque-Spanish context shows that the CLIL approach improves students' foreign language competence in bilingual contexts where English has little social presence. Furthermore, Zydatiß (2007, 2012) demonstrates in his comparative study on the learning results of German students in CLIL and mainstream classes that CLIL learners excel at cognitively complex tasks involving interpretation, drawing conclusions and text-bound writing.

Other areas of interest in CLIL research have recently been classroom interaction (see e.g., Dalton-Puffer 2007, 2009; Llinares & Whittaker 2006, 2010; Nikula 2008a, 2008c), CLIL students' vocabulary acquisition (e.g., Sylvén 2010), cultural diversity (e.g., Carrió-Pastor 2009), the effects of CLIL on mother tongue development (e.g., Meriläinen 2002; Merisuo-Storm 2002), and CLIL teacher expertise (e.g., Hartiala 2000), for instance. Overall, these studies suggest that CLIL tends to have a favourable effect on different areas of learning. With the increase in CLIL research, the complexity of factors involved in CLIL has drawn more attention. Yet, as Dalton-Puffer, Nikula and Smit (2010a: 9) put it, further research is needed to explore possibilities of CLIL and to provide insights to help further develop CLIL as an educational approach. The aim of this study, investigating teacher beliefs about learning and language in CLIL, is one of the obvious gaps in this field so far.

The studies on teaching materials in CLIL conducted have addressed materials used in certain subjects (e.g., Kozianka & Ewig's (2009) study on materials for secondary school CLIL biology in Germany), the nature of tasks in CLIL (Vollmer 2008), making texts accessible to learners at different levels (Montet & Morgan 2001), CLIL teachers' methodology with materials (Gierlinger 2007b), or adapting authentic materials for CLIL (Moore & Lorenzo 2007). What has been lacking is an attempt to cover teachers' beliefs influencing their process of designing materials for CLIL. Since the question of CLIL materials from the teachers' perspective has been almost completely overlooked in previous research, it is considered necessary in this study to focus on the area that concerns not only a great number of teachers putting CLIL into practice but also pupils, educational authorities, and publishers.

Thus, the aim of the present study is to find out how primary CLIL teachers' understandings of learning and language are reflected and guide their views of materials design and use for CLIL in Finland. Further, teachers' views of the need of adapting materials for CLIL reflecting their beliefs about learning and language as well as their strategies of adaptation will be in focus. All teaching is based on beliefs of e.g., what the learners are to be taught and why. CLIL teachers' beliefs about learning and language are expected to be reflected in the ways they speak about materials. Last, the influence of expertise on CLIL teachers' views of learning and language will be investigated. Thus, the research questions of this study are the following:

1) What do CLIL teachers' accounts of materials design and use reveal about their beliefs about learning and language?

2) What do CLIL teachers' accounts of the need to adapt materials and their strategies of adapting materials for CLIL reveal about their beliefs about learning and language?

3) How is CLIL teachers' expertise reflected in their views of learning and language?

This study takes the perspective of approching beliefs about learning and language through teachers' own accounts of materials design and use, both in the form of interviews, written or oral diaries and teaching materials attached to the diary. Involving teachers intensively into the data collection is expected to reveal their appreciations, choices and pedagogical implications in the most reliable way (see e.g., Huhta, Kalaja & Pitkänen-Huhta 2006).

1.3 Outline

The study has the following structure: chapter 2 will introduce Content and Language Integrated Learning (CLIL) both in European and Finnish contexts and look into the problematics of combining content and language from the teachers' point of view.

Chapter 3 will present some perspectives to learning and language in CLIL and discuss the importance of teachers' beliefs for learning in CLIL, as in all educational settings. Chapter 4 will deal with teaching materials used for CLIL, covering the particular challenges CLIL sets for materials, the need and strategies for adapting materials, and the pros and cons of authentic materials.

Chapter 5 will present the methodology of the study, and chapter 6 will introduce the results. The results will be summarized and discussed in chapter 7, also assessing the reliability of the study and providing suggestions for future research.

2 CLIL AS FRAMEWORK FOR STUDYING TEACHER BELIEFS

2.1 CLIL in the context of bilingual education

In this chapter, CLIL will first be positioned in the context of bilingual education. Immersion and Content-Based Instruction as variations of bilingual education will be introduced and their connections to CLIL investigated. Further, the connections of content and language in CLIL will be explored in the light of previous CLIL research. Dalton-Puffer's (2011a) six-point list of the characteristics common for most CLIL programmes, which aptly summarizes the framework where CLIL is implemented today, will be presented. Finally, problematics related to CLIL will be critically discussed.

Education in a language which is not the learner's first language is as old as education itself. As early as 3000 BC, students to be scribes in Sumer studied in a language foreign to them. In the Classical Period, Greek and Latin were used as the languages of teaching. Since the 16th century, Western imperial powers commanded that the medium of instruction in the schools of their colonies was the language of the mother country. In the postcolonial world, this practice has prevailed in many ex-colonies. Through the ages, also members of linguistic minorities have received their formal education through a second language. (Dalton-Puffer 2007: 2; Lyster 2007: 7; Rajander 2010: 131; Takala 1992.)

The immersion programmes launched in Canada in 1965 were the first to combine language and content subjected to intensive long-term research evaluation (Cummins 1998: 34). In Canadian immersion, French is used as the medium of instruction for children with English as a mother tongue from kindergarten to the early years of school. Research has repeatedly shown the success of French-Canadian immersion programmes (see e.g., Johnson & Swain 1997; Swain 1996; Swain & Lapkin 2005), and consequently, immersion can be considered to formulate a thoroughly tested model for the later experiments of combining content and language in teaching. Immersion has been the premise

for content-based instruction (CBI) in the United States since the 1970s. An alternative term used is content-based language teaching (CBLT). Lyster and Ballinger (2011: 279) maintain that CBI, or CBLT, is an approach where content such as history is taught through the medium of a language that pupils are simultaneously learning as an additional language, the emphasis being, however, on language learning.

In the last few decades, teaching content through a foreign language has also become more common in Europe, influenced by the principles of immersion and CBI. In Europe, the term in use is Content and Language Integrated Learning (CLIL). Based on the same principle, CBI and CLIL can generally be used interchangeably (Ruiz de Zarobe & Jimenez Catalan 2009: 82; Tedick & Cammarata 2012: S29). Besides the different geographical contexts, the major difference between CBI and CLIL seems to be that CBI emphasizes the role of language while in CLIL, content and language are given equal weight. Nevertheless, there are also major differences that distinguish CBI and CLIL. Tedick and Cammarata (2012: S29) point out that CLIL emerged much later than CBI, in the end of the 1980s, and besides being an approach to language and content teaching, CLIL also represents a significant educational reform that has influenced countries much wider in the world than CBI. Furthermore, CLIL has been strongly supported by government and society, which is not the case with CBI (Tedick & Cammarata 2012: S29). Due to its roots firmly in immersion and CBI, CLIL is not, in fact, such an innovative form of education as sometimes advocated (Cenoz, Genesee & Gorter 2013: 6).

There has been controversy of the relationship between immersion and CLIL since some scholars consider immersion a form of CLIL while others do not (Cenoz et al. 2013: 13; Tedick & Cammarata 2012: S34). The latest contribution to this debate (Dalton-Puffer, Llinares, Lorenzo & Nikula 2014: 217) suggests developing "a common non-hierarchical matrix" in cooperation with different research traditions of bilingual education. Undoubtedly, this would result in more far-reaching research than setting (sometimes artificial) boundaries between different traditions. It seems that in some countries, the desire to position immersion as an approach separate to CLIL is stronger than in others. In Finland, for example, immersion experts emphatically underline that only early immersion through Swedish, Finland's other official language besides Finnish, should be called immersion (Buss & Mård 1999). Even if conducted by exactly the same principles, immersion through any other language but Swedish should not be called immersion in Finland. Interestingly, however, in North America the CBI literature has regularly referred to immersion as a form of CBI (Tedick & Cammarata 2012: S34). Obviously, immersion differs in some respects from CLIL. According to Lasagabaster and Sierra (2010), immersion has explicit definitions about the amount of foreign language used in teaching and the age of learners starting in the programme. Immersion also typically has a native speaker teacher while CLIL is primarily carried out by teachers who speak the CLIL language as a foreign language.

Figure 1 presents the relationship of CLIL and CBI to immersion.
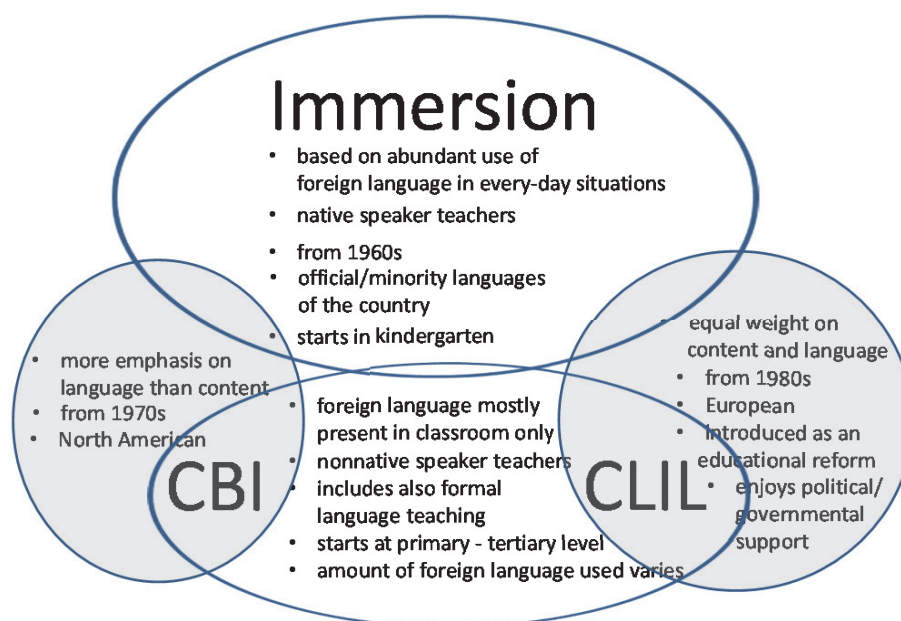
FIGURE 1   The relationship of CBI and CLIL to immersion

The figure shows that immersion lays the basis for CBI and CLIL which have both adopted a range of features from it. CBI and CLIL share a great number of similarities (oval at the bottom middle) but have also many features characteristic of only one of the approaches (grey ovals at the bottom left and right). Because of the controversial position of immersion in the field of CBI and CLIL, this study will consider immersion as an independent variation of bilingual education and will not position it under CBI or CLIL. Rather, immersion is considered as the premise for both approaches originated from the principles of immersion.

The modern European CLIL dates back to the beginning of the 1990s when several European countries launched programmes of Content and Language Integrated Learning in primary and secondary schools, and the term CLIL was widely adopted. The new term attempted to describe and design good practice in different types of school environments where teaching and learning take place in a foreign language (Marsh et al. 2001). Since the early stages of CLIL, teaching through a foreign language has been a form of education with the political support of the EU where the use of the term CLIL is explicitly recommended for all teaching through a foreign language (Marsh 2002). According to Tedick and Cammarata (2012: S29), "CLIL was born in the context of Europe's call for plurilingualism in light of globalization and the region's quest for social cohesion and economic competitiveness". Most European countries are adopting, if they have not already, some form of CLIL provision in primary and secondary education. In Llinares, Morton and Whittaker's

words (2012: 1), CLIL has often been a bottom-up movement, with many small-scale initiatives in different parts of the continent. The adoption of a specific term intended to define the nature of CLIL more clearly, aiming to bring forth that CLIL is a lifelong concept that embraces all sectors of education from primary to tertiary, from a few hours a week to intensive learning lasting for years (Coyle 2005).

One of the reasons for the popularity of CLIL is that educators, policy makers and parents consider CLIL a strong means to offer children a better preparation for their future life, in which good (English) language competence, international contacts and mobility will be increasingly more widespread (Breidbach 2003; Dale, van der Es & Tanner 2010: 11; Nikula 2008b: 278; Nikula et al. 2013: 71). More varied language resources are needed in society because globalization is putting pressure on the economy (Nikula, Saarinen, Pöyhönen & Kangasvieri 2012: 41). By choosing CLIL as their children's foreign language learning programme, parents seek to prepare their children to the future work life in the global world (Abendroth-Timmer 2007: 20; Ioannou Georgiou 2012: 496-497). Though the early start in CLIL is often highlighted, research has shown (Lorenzo, Casal & Moore 2010: 429) that a later start in CLIL can also result in competences equal to those obtained in an early introduction. As already mentioned, there is ample research evidence on the capacity of CLIL within different countries: a range of studies shows that CLIL learners achieve better learning results in both content and language than their peers in mainstream classes (e.g., Merisuo-Storm 2013; Van de Craen, Ceuleers, Lochtman, Allain & Mondt 2007, but for a comprehensive review on research results on pupils' achievements in CLIL, see Dalton-Puffer 2011a). How well CLIL actually meets all the above-mentioned goals would require ample further research, particularly from the socio-political perspective.

Traditional foreign language teaching has been criticized for the lack of connections to real life, and in many contexts, a major motive for generating CLIL has been to respond to relatively poor results from studying foreign languages simply as curriculum subjects (Morton 2012: 79-80). It has also been claimed (e.g., Sajavaara & Takala 2000: 169) that there is too little interaction in the traditional foreign language classroom, and hence it has not resulted in natural foreign language communication. Thus, it would appear that learning a language and its use in different contexts would require considerably more weight on language than classroom situations allow. In a CLIL setting, natural learning contexts are created by the use of foreign language for communication as well as by exposure to input provided by a teacher who teaches through a foreign language (Jimenez Catalan & Ruiz de Zarobe 2009: 81). The instruction may vary from focus on content to focus on language.

Until recently, the focus of teaching in CLIL has typically been on content with content-embedded language as part and parcel of content instruction (Coyle et al. 2010; Llinares et al. 2012: 187). According to Cammarata and Tedick (2012: 262), this focus underlies the assumption that when language is used as the vehicle to teach content, children learn the content and acquire language

without a particular focus on language itself. Thus, language is believed to surface naturally as an outcome of content instruction. From this perspective, learning content matter is the primary and learning language the secondary goal (Järvinen 2010: 146). The same is true for CBI, where a major premise up to the 1990s was that language learning was a by-product of content learning (Snow 1993: 52). Indeed, teaching has been seen as a process of transferring the content of the curriculum into the learners, language being "the gateway through which this transfer happens" (Barwell 2005: 144). In this thinking, language is seen as a portal through which content is accessed. In many CLIL programmes, content specialists, and not language teachers, are responsible for teaching, and this might contribute to the tendency to focus on content at the expense of language. As a result, language is learnt incidentally, not purposefully.

However, recent research on teaching through a foreign language (e.g., Lyster 2007: 6) agrees that there is an obvious need to also focus on language form because foreign language learning and academic achievement share an equal status as educational objectives. On the other hand, one could argue that also in scientific contexts, the linguistic form and content, or the way of speaking and the way of thinking, are intertwined, as pointed out by Ylönen (2001: 133). Undoubtedly, the importance of intentional foreign language learning in CLIL cannot be undermined. Also the shift in research has been towards an approach where content and language are seen as interwoven and closely integrated, even if the emphasis may vary from one to the other at a given time (Barwell 2005: 144; Coyle et al. 2010: 1, 3).

Because of the integrative nature that CLIL is seen to possess today, in this study the label 'language and content' is not seen as ideal as it was at the early stages of CLIL. This notion is shared by many researchers (see, e.g., Arkoudis 2005: 184; Barwell 2005: 144; Dalton-Puffer 2011a: 196; Dalton-Puffer et al. 2010b: 284). According to Barwell (2005: 144), the label refers to the conduit metaphor and seems to force a separation between language and content. In other words, the label "CLIL" has not been found to be as innocent as it may first seem. Dalton-Puffer et al. (2010b: 284) explored the meaning of each letter in "CLIL", finding assumptions behind the label that should not be accepted at face-value. They argue that the final "L" (Learning) points to a preference for learning over teaching, although both processes are involved; the "I" (Integrated) points to integrating content and language learning in a balanced way; the initial "C" (Content) suggests at seeing content as its own entity, separate from language; and the first "L" (Language) implies that CLIL is applicable to all linguistic codes created and used as foreign languages. However, that is not usually the case, because in practice, the "prestige" languages overrule in CLIL. Despite the shortcomings of the term, better suggestions to rename this educational approach have not yet surfaced.

CLIL is typically carried out in mainstream education at the primary, secondary, or tertiary level (Dalton-Puffer 2011a: 183). Because CLIL cannot be defined in a straightforward way, as pointed out above, a concise definition

containing the core idea of CLIL is needed. The present study borrows Dalton-Puffer's (2011a: 184) perceptive idea of *CLIL as "a foreign language enrichment measure packaged into content teaching"* which briefly articulates the two goals CLIL aims at, that is, simultaneously learning the subject content and the foreign language. The integration of content and language means developing a foreign language hand in hand with new curriculum knowledge (Gibbons 2002: 6). A figure adapted from Coyle (2005) represents the desired balance between content and language in CLIL:

FIGURE 2   CLIL ideal (adapted from Coyle 2005)

The balance between content and language signifies that curriculum topics in CLIL should have both subject-specific and language-specific aims, because in this way, the curriculum can provide learners with an authentic context for meaningful and purposeful language use.

Research has shown that there are certain common features characterizing CLIL approaches irrespective of the country. Dalton-Puffer (2011a: 183-184) provides a six-point list of the characteristics of CLIL programmes in Europe, South America, and many parts of Asia (for a concise summary of the list, see Dalton-Puffer & Smit 2013: 546). Because Dalton-Puffer's arguments largely support the picture of CLIL adopted in this study, they will be provided below, briefly supplemented by the views of other CLIL studies and taking a stand on each topic from the point of view of the present study.

1) CLIL is about using a foreign language or a lingua franca, not a second language.
CLIL draws, among other things, on second language acquisition research. At times, definitions of *second language* and *foreign language* are confused or used synonymously. Therefore, it is essential to clarify in what ways a second language (L2) and a foreign language are determined in the area of CLIL. The relevant question here is whether CLIL languages are defined as *second* or

foreign languages. This study will follow Dalton-Puffer's (2011a: 183) definition that CLIL is usually about using a *foreign language* or a *lingua franca*, not a second language. In Finland, like the majority of European countries, the prevailing CLIL language is English. English as the most common foreign language in CLIL settings is due to its role as an international language rather than a community language (Lyster & Ballinger 2011: 281; Nikula 2005). The role of English in CLIL will be introduced in more detail in the following.

2) The dominant CLIL language is English, since it is increasingly regarded as a key literacy feature.
The position of English as the *lingua franca* today is unquestionable, and a fluent competence of English is considered by many as a part of general knowledge (e.g., Huber 1998: 199). The significance of English can be even compared to that of reading and writing in the era of industrialization (Breidbach 2003: 19). The prevalent position of English in CLIL has been a reality from its early stages, but lately, English has risen far above the other languages in CLIL (Dalton-Puffer 2011a: 184; Dalton-Puffer & Smit 2013: 550). An obvious reason for this is the growing demand of fluent English competence in international business, industry, and travel, for instance. Simultaneously, English has become the language of global entertainment industry, e.g., music, films and the Internet. This tendency has not only been considered favourably. Strong opinions have been uttered about the development of English into the European *lingua franca*. Phillipson (2009: 91), for instance, uses a provocative term *European linguistic apartheid* to describe the supremacy of English in Europe. In academia, the tendency towards one common language has been in progress for quite some time. Publishing academic articles in English has steadily increased (Ylönen 2011: 2), and in Finland, demands have been made to allow English even the status of a primary language of academic teaching (cf. a critical discussion in Ylönen & Kivelä 2011: 316). In the CLIL context, the position of English as the most widely used language of teaching further contributes to the spread of English as the language for all purposes. Since the CLIL language for the respondents of this study is English, the study is situated in the middle of this hotly debated context.

3) CLIL teachers are normally non-native speakers of the target language.
In most cases, CLIL teachers are not foreign language experts, but content experts. However, many researchers (e.g., Hartiala 2000; Lasagabaster & Sierra 2010: 370; Lyster & Ballinger 2011: 285) call for the teachers' excellent competence in the language of teaching. Hartiala (2000) argues that CLIL teachers are foreign language models for their pupils, and therefore their target language competence has to be near-native level. Lyster and Ballinger (2011: 285) point out that to achieve its full potential, bilingual education should not only be rich in language but also in discourse. CLIL teachers' near-native command of the target language is a prerequisite to reach these aims. However, the aim for native-like mastery of the L2 has recently been criticized in the field

of L2 acquisition. According to Ortega (2011: 175), the prevalent tendency in SLA research seems to be to abandon the ideal of near-nativeness as an impoverished, limited notion of what is learned. Instead, the aim is towards highly divergent competence levels and language profiles in the individual languages a person acquires (Neuner 2005: 16). Moate (2013: 19) argues that teachers' methodological expertise is the key for successful CLIL, and not near-native language skills. In the modern world of many variations of English, in particular, but also of other languages, this study takes a stand that native-like mastery of the foreign language is not aimed at, neither by the teacher or the learners. A more thorough discussion on this CLIL principle will be continued in chapter 2.3.

4) CLIL lessons are usually content lessons, while at the same time the target language continues as a separate subject.
In Finland, the first foreign language (usually English) is taught for 2 – 3 lessons a week apart from content subjects. The focus is in formal language learning, often criticized by the ignorance of the contexts to real life. Järvinen (2000: 114) argues that in an ideal case, content teacher and language teacher could plan and carry out an integrated unit where content and language would support each other in a fruitful way. This study, however, does not look at the collaboration of content and language teachers in CLIL, but admittedly, teaching the CLIL language as a separate subject does not seem to implement the principles of CLIL, the core of which is integration. So far, there is little research on the role of formal language teaching for the development of the CLIL language, and therefore, it would be an interesting topic for future research.

5) Less than 50 % of the curriculum is taught in the target language.
Due to the vast spectrum of different CLIL variations, it is problematic to generalize the amount of teaching provided in a foreign language. It would require an extensive, European-wide research on different CLIL models until it were possible to state even general guidelines about the amount of foreign language teaching provided in CLIL within Europe. Morton (2012: 30) makes a difference between the 'weak' and 'strong' versions of CLIL, based on the amount of teaching through a foreign language in a particular programme. In Finland, generalizing the amount of teaching through a foreign language in CLIL seems to be as problematic as it is European-wide. In Finland, there are schools with a higher percentage of CLIL than 50, such as international schools, but more often, less than 50 % of the curriculum taught in the foreign language is true (Kangasvieri Miettinen, Palviainen, Saarinen & Ala-Vähälä 2011). This is also the case in the schools of the respondents of this study.

6) CLIL is usually implemented once learners have already acquired literacy skills in their first language.
The ultimate objective of CLIL, laid down by Dalton-Puffer (2011a), is that the learners become proficient in both the L1 and the L2, without any detriment to

the acquisition of academic knowledge (Lasagabaster & Sierra 2010: 370). This aim is not always valid in cases where children start CLIL in their first school year or earlier and are still practicising their L1 literacy skills. However, the aim should be to learn to read and write in the L1 before the L2, because acquiring L1 literacy skills first supports the acquisition of the L2. As Merisuo-Storm (2013: 172) argues, good literacy skills in the L1 are necessary for learning any subject, not only the L2, and therefore it is crucial to first learn to read and write in the L1. According to Dalton-Puffer (2011a: 193), CLIL classrooms are an environment for naturalistic language learning. Such a setting seems to call for a solid base in the L1, which also justifies the acquisition of reading and writing skills in the L1 prior to the L2. The respondents of the present study taught primarily in schools where CLIL began in the first grade (children aged seven years). In these contexts, it is presumable that many children learn to read and write in their mother tongue (that is, other than English) first.

As pointed out in Introduction, CLIL research in the 1990s and 2000s has primarily shown positive results about learning in CLIL, showing that it provides learners with strong L1 and L2 competence, large vocabulary, and fluent communicative skills. Besides that, CLIL has been shown to support learning in general, sometimes even providing CLIL learners with an advantage over their non-CLIL counterparts (Admiraal et al. 2006; van de Craen et al. 2007; Dalton-Puffer 2007, 2009; Lasagabaster 2008; Merisuo-Storm 2002; Sylvén 2006; Zydatiß 2007). In the recent CLIL literature, however, criticism towards CLIL has considerably increased. Two opposite poles seem to be raising their heads. At the first end of the pole, there are fervent defenders of CLIL who use superlatives and slogans in favour of their affair (Mehisto & Marsh 2011: 39; Meyer 2010: 11). At the other end, the suspicious opponents of CLIL doubt all the positive research results presented about CLIL and search evidence to prove them wrong (Bruton 2011b: 523-4; 2013). Though slightly exaggerated, the public CLIL debate now seems to be close to the latter description. Based on the research evidence of the favourable learning results in CLIL, this study withdraws from a purposeful CLIL criticism and leans on objective CLIL research.

Beliefs about CLIL in the public debate are also likely to have an influence on which learning and language aims are considered important in CLIL and why. In vivid discussions on CLIL in the press and social media, the influence of CLIL on content learning, in particular, has been cast doubt on (Harmer 2011; Smith 2005). Understanding content is claimed to be sternly hindered because of language problems, and the whole context where a teacher and pupils sharing the same mother tongue are made to communicate through a foreign language is claimed to be highly artificial (Smith 2005). The metaphors used in the CLIL context, such as 'two for the price of one' and the 'added value of CLIL', create emphatically positive expectations about CLIL and have therefore lately been an object to severe criticism. For example, Bonnet (2012: 66) argues that these slogans have become accepted truths in the CLIL discourse instead of

testing hypotheses through evidence-based research. As Rajander (2010: 131-132) maintains, it is, indeed, occasionally difficult to perceive how the CLIL rhetoric is to translate into practice. The use of the above-mentioned slogans seems to create an atmosphere of groundless optimism and almost limitless belief in the potential of CLIL without evidence. Striving for high reliability, this study aims at showing the pros and cons of CLIL objectively, based on research evidence and avoiding biased opinions.

What has been criticized about CLIL since its early stages is the 'élitist' label often attached to it. According to a range of researchers (e.g., Apsel 2012: 50; Banegas 2012a: 46; Bruton 2011b: 524, 2013: 587; Dalton-Puffer et al. 2010b: 282; Hélot & Young 2006: 75; Lasagabaster & Sierra 2010: 373; Latomaa & Nuolijärvi 2002: 186; Wolff 2013), CLIL learners tend to have gone through a selection process of some kind, be it because of parental choice, a language proficiency test, or simply by placing the best learners from mainstream classes in CLIL classes. Thus, very often CLIL learners are claimed to be a part of an élite group specifically selected to CLIL, and as a result, only high achievers can avail themselves of this type of education. In the Spanish context, Lasagabaster and Sierra (2010: 372) suggest that immigrant students tend to be completely excluded from CLIL programmes, thus endangering their success in the national English language proficiency exams. This is a highly undesirable tendency, which in some other European contexts, such as Belgium (Somers 2013) and Sweden (Otterup 2013), has been deliberately fought against. However, precise knowledge about this is difficult to obtain since there are rarely statistics of the number of immigrant students in CLIL available. In Finland, élitism is hardly involved in CLIL because the Finnish educational system is acknowledged to be one of the most equal in the world.

Although the results of CLIL research from the last 20 years support the general idea of CLIL as a beneficial programme which has a considerably positive effect on learning content and language simultaneously, it is undeniable that more research in all areas of CLIL is needed. This study attempts to answer this demand on the part of teacher beliefs. In the following, the characteristics of CLIL in Finland will be presented.

2.2 CLIL in Finnish educational context

This introduction will shed light on the reasons why CLIL has so rapidly been introduced in Finland and has been reacted to with primarily positive terms. It is also important to touch upon the methodological roots of CLIL and the legislation on teaching through a foreign language in Finland, as the following paragraphs will aim at.

Since its independence in 1917, Finland has officially been a bilingual country with Finnish and Swedish as its two official languages. Further, Finland gives recognition to a number of minority languages, such as three Sámi languages, Romani, and Finnish sign language (Basic Education Act 628/1998**;**

Sámi Language Act 1086/2003). For the vast majority, 92% of the population, Finnish is the first language, while for 5.5% of the population it is Swedish (Statistics Finland 2013). Multilingualism can be seen everywhere every day in Finland: at dinner in milk cartons with Finnish and Swedish texts on them, on TV with both Finnish- and Swedish-language channels and Sámi and Finnish sign language news, and in schools as an obligation to study both Finnish and Swedish. All education in Finland is provided separately in both Finnish and Swedish from pre-primary to university levels for both language groups. Thus, the bilingualism of the society shows, in fact, as the monolingualism of an individual.

In the decades following World War II, Finland has been open to foreign influences, particularly from North America and Western Europe. There is a persistent claim that Finland is the most Americanized country in Europe. This is probably based on the increased popularity of the use of English in Finland since the 1960s when Finland began to orient to Anglo-American politics, lifestyles and popular culture (Copp Jinkerson 2012: 14; Ekholm 2004). As Leppänen and Nikula (2007) maintain, by this new orientation Finland sought to turn away from the cultural dominance of its previous rulers, Russia and Sweden. English is very much present in the everyday life of Finnish people. Finnish companies are often named in English, radio channels play abundantly English-language music, and the majority of the TV programmes on Finnish TV channels come from English-speaking countries. However, the programmes (except those for children) are not dubbed, but subtitled in Finnish. As Morton (2012: 32) points out, Northern European countries such as Finland are countries with high English-language presence. In low presence contexts, mostly in Southern European countries, on the other hand, the only real contact with English for most learners is the language classroom. Further, as a member of the Uralic language family, Finnish is such an isolated language with only about five million speakers that the importance of learning foreign languages has always carried significant weight in the Finnish society. It has been understood that there is a true need for foreign languages, because Finnish is not understood very much outside the Finnish borders. Even to cope with the neighbouring countries, it is of utmost importance for Finns to study foreign languages.

One of the central principles guiding educational arrangements in Finland is social equality in society (NCCBE 2004: 14; Rajander 2010: 114). In general, Finnish schools do not select their pupils, but every school-aged child is guaranteed a school place in the neighbourhood where she lives (though this may not always be true for disabled children). Basic education is free of charge for everybody and local authorities are responsible for organizing education and reaching the objectives of education. On the other hand, teaching in basic education does not have to be completely identical between schools, but they can organize it rather freely and write their own curricula based on the National Core Curriculum for Basic Education (2004) and the municipal document, fulfilling the conditions and requirements set by Basic Education Act (628/1998)

(Finnish National Board of Education 2012; Halonen, Nikula, Saarinen & Tarnanen *in press*: 9; Komulainen 2012: 16).

The Finnish education system with equal opportunities for everybody has excelled in the PISA assessments (OECD 2007, 2010), conducted in approximately sixty countries. Finland has many times successively ranked one of the top performers, though markedly falling in the latest rank (OECD 2013). Despite equally high standards of every school in Finland, parents increasingly tend to favour specialized schools. There has recently been heated debate on this issue in Finnish media and futures research, showing concern with the differentiation of schools and demanding stronger policy measures to correct this trend (see, e.g., Hirvonen 2013; Kalalahti 2014: 70-71; Keränen 2013; Korkeakivi 2012: 13; Rubin & Linturi 2011: 71). Research shows, however, that concern about the increasing inequality of education in Finland is justified. Kauppinen (2004: 180-181), Seppänen (2006) and Rajander (2010: 22-23) argue that in Helsinki Metropolitan Area, parents with high education and good professional status more often choose a specialized school for their children. As a result, approximately one fifth of the children begin the first grade in some other school than the one within their neighbourhood (Keränen 2013). As Seppänen (2006) maintains, systems for choosing a preferred school are well established in today's Finland, particularly in urban areas. For example, schools consistently advertise their specialties for parents and have strictly private tests to select their pupils.

Research has indicated interesting factors contributing to school choice preferences. Rajander (2010: 116) and Seppänen (2006) maintain that the high educational level and socio-economic status of mothers, in particular, increases aspirations for choosing a specialized school for a child. This tendency is contrary to the principle of equality in the Finnish comprehensive school system where pupils are generally expected to attend their local school (Rajander 2010: 22). The fact that applying for schools outside one's school district has become more common in the 21st century is one reason why concern and research on social inequality particularly in Helsinki Metropolitan Area have recently considerably increased (Komulainen 2012: 18). Given the recent concern on the diversification of schools in Finland, it is possible that CLIL, with its entrance exams and high selectivity rates, may to some extent threaten the traditional Finnish education system based on equality. Rajander (2010: 114), for example, suspects that equality has been in part replaced by the concept of diversity and a corresponding emphasis on the need to respond to the specific learning needs of gifted pupils.

So far, concerns specifically about CLIL have not been raised, probably because CLIL is not conducted on a very large scale (primarily in big cities) and because it has not attracted very much public interest. However, in a recent publication on bilingual schools in Finland, Nuolijärvi (2013: 45) maintained that CLIL, for its part, modifies Finnish language politics from several directions: when a school decides about teaching certain subjects in a certain language, or when parents select a foreign language programme for their child,

they all influence national language politics. The quietude of Finnish debate on CLIL is also indicated by the fact that English as the dominant language of CLIL classes has never been a subject of wide debate in Finland (Rajander 2010: 137). Nevertheless, as early as the late 1980s, the Ministry of Education (1989) suggested that efforts should be made to introduce classes also in major global languages other than English, such as French, German and Russian. This suggestion is not out-of-date even a quarter of a century later, since English unambiguously exceeds other languages in CLIL. It has to be borne in mind, however, that Swedish immersion particularly in southern and western parts of Finland is very popular, covering approximately 4200 children aged 3 – 15 in 2010 (Kangasvieri et al. 2011: 23). In Finland, thus, the increase of social inequality through diversing schools has rather been addressed as a general phenomenon, not tied to any educational approach.

Despite the relatively long history of CLIL in Finland, the practices of CLIL at the local level are still varied (Saarinen, Kangasvieri & Miettinen 2012: 1). Differences between individual schools and grades are remarkable, and no established CLIL model exists (Nikula & Järvinen 2013: 144). This observation is also valid in most of the other European countries since it is generally acknowledged that CLIL is not a one single teaching method but has many different variations. In Finland, a reason for varied CLIL practices may be that a great amount of decision-making in education policy has been decentralized to the local level. The most notable regulations set by legislation for CLIL in Finland only concern the qualification of a CLIL teacher who teaches in a foreign language on a regular basis. In 2005, the Finnish National Board of Education specified the minimum competency level of CLIL teachers. A primary CLIL teacher is required to be a qualified class teacher with a university degree and completed university level studies in the CLIL language equivalent to 55 credit units. The language competency can be substituted by achieving the highest proficiency level (that is, 6 on a scale 1-6) in the National Certificates Examination (Act on General Language Examinations 668/1994, 669/1994) equivalent to the CEFR (Council of Europe 2003). Further, secondary school teachers are required a university degree as a subject teacher and similar requirements for foreign language competency as class teachers (Takala 2000: 51).

Statistics on teaching through a foreign language in Finland show that CLIL seems to be more common in primary schools than in lower secondary schools (Kangasvieri et al. 2011: 54). Therefore, it is important to investigate particularly primary CLIL teachers' beliefs, which is the goal of this study. One of the advantages of applying CLIL for primary school is that CLIL can be used effectively to link language learning with content subjects. While in primary school in Finland one teacher is responsible for teaching most of the subjects to her class, integrating subjects through the use of a foreign language is considerably easier than in secondary school with a subject teacher system. Primary school children are also at a favourable age concerning intercultural understanding which CLIL is supposed to promote (Nikula et al. 2012: 48).

With few pre-learned prejudices, they form an opportune target group for learning about other cultures and simultaneously accepting different ways of living and doing things.

The following chapter deals with CLIL teachers' role as content and foreign language experts. It aims at covering the various demands set for a CLIL teacher and the expected level of teachers' CLIL language competence.

2.3 Demands on CLIL teachers

This chapter deals with the various demands and challenges teachers are often faced with due to the dual focus of CLIL. Integrating content and language in every-day classroom situations requires constant awareness of the equal importance of the two. Particularly in materials design in a foreign language, teachers need to pay special attention to plan texts and activities that present the new content in a discipline-bound language which is understandable but simultaneously challenging enough for the learners. CLIL teachers' foreign language competence is one factor which is considered important to discuss critically in this context. The latter part of the chapter introduces different ways of improving CLIL teachers' professional coping, such as pre- and in-service teacher training, teacher cooperation and sharing materials.

It is generally acknowledged that teachers' workload in all types and levels of education is continuously growing heavier, and teachers are facing increasing demands from various directions. For example, teachers are expected to keep up with the rapid development of ICT while the increasing challenges with pupils' behavioural problems or learning disabilities may not allow them any extra time for independent or in-service training to support taking over new challenges. According to Griffiths (2012: 475), what seems to have been forgotten is that teachers are also individuals with their own desires, needs, beliefs, and characteristics. Training and supporting teachers in their demanding profession needs constant attention and, according to the latest research on teachers' well-being at work (e.g. Kumpulainen 2013: 204), should be taken more into account. In addition to the challenges common to all teachers, expectations for CLIL teachers' capabilities seem to be even higher. CLIL teachers are confronted with a double role with a demand of mastering both content and language and expected to meet high requirements in both. As Arnold and Rixon (2008: 43) explain, "the CLIL approach operates very much at the level of teacher skills in mediating language, curriculum content and the development of inquiry skills in children". Merisuo-Storm (2013: 169) argues that a CLIL teacher has to think of the learning process of content and language as a whole, and not as separate entities, requiring major changes to the accustomed teaching practices. Taking into account how teaching can best support the learning of both language and content is crucially important, including materials design (Nikula 2012: 134). Furthermore, frequently faced

with the lack of teaching materials, CLIL teachers have to know the curriculum very well in order to teach the necessary content to their pupils.

Besides the knowledge of the subject matter, the pedagogical competence of a CLIL teacher covers knowledge of second language acquisition and teaching a foreign language. As Järvinen (2011) aptly argues, a CLIL teacher also needs an ability to combine discipline-based thinking to the questions of language learning and teaching. It is particularly important to reflect upon how the concepts and discipline-bound language use can be taught so that they are comprehended in both L1 and L2. Since CLIL teachers are to a great extent responsible for the design of the materials they use for their group, they need to be very much aware of the relationships between the concepts and skills required in their subject as well as of the genres and registers of the texts they use. After all, CLIL teachers are also responsible for how the multilingual academic literacy of their pupils develop (Lorenzo 2013: 385). Therefore, it is not sufficient if teachers simply knows the foreign language, but they should also command the genres and discourses of the content subjects they teach, the linguistic dimensions typical of the genres, and the relationships between the concepts and skills relevant to those genres (Morton 2012: 79; Nikula & Järvinen 2013: 159). Text types and discourses are a central part of discipline-specific language. According to Aalto (2013), this may include, for instance, an argumentative way of speaking, subject-specific genres and constructions, and ways of reading and writing.

It is important to know how teachers' awareness of genres and discourses guides them in their decision-making in CLIL, and therefore this study raises CLIL materials into focus. Teachers' awareness of subject-specific languages is essential because the academic languages of science and history, for instance, differ from each other in subject-specific idiosyncrasies. According to Llinares et al. (2012: 109), in science, irrespective of language or culture, phenomena are perceived, processes defined, and properties examined, whereas in history narratives or arguments are built around finding and interpreting evidence about the past. On the surface level, the most obvious difference between disciplines is that of vocabulary which is often technical and abstract. However, knowing the special vocabulary of the field alone is not sufficient for teaching the content through the foreign language, but also the connection between language and thinking is required.

When confronted with the reality, the often-quoted description of a CLIL teacher, "two experts in one package", may turn out to be something completely different. Content teachers regard themselves as disciplinary experts and they may find it difficult to take on the responsibility for language issues (Lorenzo 2007: 505; Moate 2011a: 17; Schleppegrell & O'Hallaron 2011: 6-7). Marsh, Mehisto, Wolff and Frigols Martín (2011) note that teacher training in the integration of language and content is not widespread, although CLIL teachers need multiple types of expertise: among others in the content subject, language, best practice in teaching and learning, and in the integration of CLIL within an educational institution. Nikula and Järvinen (2013: 153) remark that

in the Finnish context, CLIL has generated a new teacher type: a teacher who is not a language teacher but who teaches in a foreign language and thus inevitably also teaches the foreign language. Due to the dual focus of CLIL, this observation has relevance also in other European countries.

According to Gibbons (2002: 120), "good content teaching is not necessarily good language teaching, and subject teaching must go beyond the concerns of the language specialist". Teaching content subjects in a foreign language is a demanding task because the integration of language, subject content, and thinking skills requires systematic planning and monitoring (Mohan 2001: 108). As Breidbach (2006: 14) points out, this requires awareness of the fact that language instruction is an inseparable part of every lesson and every subject specialist is also responsible for language teaching. On the other hand, a new professional challenge CLIL brings with it may free teachers to deviate from their old teaching routines, and CLIL lessons can have a highly innovative potential for schools. For example, according to Breidbach and Viebrock (2012: 12), CLIL can break the cycle of fossilised routines and lead to new perspectives and positions. Hall (2000: 295) suggests teacher research as a means to an active involvement and deeper understanding of what takes place in a classroom. From the perspective of CLIL, in particular, Hall's demand is very worthwhile regarding that as a relatively new approach, CLIL is to be researched on a larger scale to find out the various dimensions it demands from the teacher.

An interesting description of the developmental stages of an immersion teacher has been presented by Cammarata and Tedick (2012: 257). Due to the many similarities between teaching in immersion and CLIL, these stages are considered worthwhile also in the CLIL context. Cammarata and Tedick raise identity transformation as the first key constituent. Identity transformation signifies that a teacher begins to see herself as a content and language teacher, not as a teacher of only one of the elements. The second constituent is external challenges, including time constraints, lack of resources, and other factors that are outside of the teacher's control. The third stage is called "On my own", where a teacher experiences a growing sense of isolation. Generally, L1 classrooms overrule in schools, and CLIL teachers may be faced with prejudices by L1 teachers, feeling outsiders. Fourth, a teacher experiences "Awakening", developing an increased awareness of the interdependence of content and language. Descriptively, the last, fifth stage is called "A stab in the dark" where a teacher has difficulties identifying what language to focus on in the context of content instruction. The above-described presentation quite evidently shows the many stages a teacher goes through until she knows what teaching through a foreign language might be about.

One aspect worth discussing in more detail in this context is CLIL teachers' foreign language competence. In this respect, CLIL distinctly differs from immersion. As pointed out above, immersion teachers are, as a rule, native speakers of the target language, while CLIL teachers are usually native speakers of the language used in the surrounding society, and the target language is a

foreign language both for the teacher and pupils (Dalton-Puffer & Nikula 2006: 244; Moate 2011a: 17; Nikula 2005). Therefore, neither the teacher nor the community usually provides native-speaker support in CLIL. The views of the level of CLIL teachers' expected target language proficiency seem to have altered along with increasing CLIL research available. In the mid-2000s, Dalton-Puffer and Nikula (2006: 244) argued that a CLIL teacher needs to be near-native in the L2 to be able to perform successfully in classroom. In this decade, however, Moate (2011b: 341, 2013: 19) remarks that CLIL teachers do not need native or even near-native fluency in the target language although this requires adjustments in teaching. Attitudes towards the teachers' use of L1 in the CLIL classroom have also become more approving. Lasagabaster (2013: 17), for instance, concludes that the teacher's use of L1 in the CLIL classroom "can serve to scaffold language and content learning in CLIL contexts, as long as learning is maintained primarily through the L2". A shift to more permissive attitudes towards teachers' foreign language competence may result, for example, from the global reinforcement of English as a *lingua franca* and, along with this development, from the increased toleration of many kind of Englishes today. Nevertheless, it seems obvious that a CLIL teacher is required a certain level of CLIL language proficiency in order to be able to combine the language, cognitive skills and ways of thinking of a specific discipline when teaching the content. From the perspective of the present study, a CLIL teacher is required high-standard CLIL language proficiency also in order to design high-quality teaching materials in a foreign language.

Some critical voices have been heard about CLIL teachers' inadequate knowledge of the instructional language, e.g. in Finland (Moate 2011b: 341; Takala 2000: 52), and similar concerns have recently been expressed in the Netherlands, Spain, Germany and France (Admiraal et al. 2006: 92; Bruton 2013: 593; Llinares & Whittaker 2010: 126; Massler 2012: 42; Olivares Leyva & Pena Díaz 2013: 94; Tardieu & Dolitsky 2012: 5). As Doyé and Héloury (2007: 189) point out, it is difficult to motivate children to use the CLIL language if the teacher's CLIL language competence is distinctly inadequate. To improve teachers' linguistic coping in the CLIL classroom, Moate (2011a: 17) suggests CLIL teachers apply teaching and learning repertoires that go beyond commonly held assumptions of L1 classrooms. Thus, what may be lost in the teacher's target language proficiency, will be gained in the richness and variety of teaching methods in the CLIL classroom. Further, by understanding the linguistic challenges of the content areas, teachers can support language learning in CLIL and develop pupils' metalinguistic awareness about how language works in the disciplinary contexts. In this sense, in particular, teachers play a very specific role in a bilingual classroom. As Miramontes et al. (2011: 24) argue, it is a teacher's responsibility to help learners make sense of the instruction, e.g., through active involvement in the learning process and through expanding learners' conceptual base by providing examples and explanations. In this way, the teacher instructs learners to the next level of cognitive and linguistic development.

CLIL teachers themselves may also be well aware of their deficiencies in the foreign language competence, as two recent studies suggest. In Tardieu and Dolitsky (2012: 5), CLIL teachers in France admitted that their English was not exemplary. In Massler's (2012: 43) study on launching a CLIL programme in six German primary schools, CLIL teachers repeatedly addressed their lack of foreign language knowledge. Nikula and Järvinen (2013: 154) report that CLIL teachers in Finland mention the development of their foreign language competence as the greatest challenge. These findings imply that a native speaker teacher might be preferred to a teacher who has the target language as the L2. The superiority of a native speaker is not, however, self-evident. Hartiala's (2000) study suggests that a teacher who shares her pupils' mother tongue might better understand the problematics of the acquisition of the target language on top of the L1.

Mehisto, Asser, Käosaar, Soll and Võlli (2007: 73) suggest using native speakers (NSs) as resource people in finding the correct terms in the special fields of content subjects. By a closer investigation, the idea has many drawbacks. First, being a NS does not make a person an expert of content subjects and terms needed in teaching them. Thus, it may be just as difficult for a NS to find correct special field vocabulary as it is for a CLIL teacher, because a NS may not know the applicable genres or the ways of thinking of a particular field. After all, being a content expert does not simply mean knowing the vocabulary or concepts, but it is very much about commanding the way of thinking of the particular discipline. Second, obtaining NS assistance is in many cases difficult for practical reasons: there may not be any NSs of the CLIL language in the school or even in the same city. Teachers' contacts to the countries where the language is spoken may be scarce and due to the lack of NS acquaintances, even e-mail assistance may thus be out of question. Last, there is the financial argument, as NSs as resource people would be an extra cost for the school. Particularly at the early stage of launching CLIL, the school has to face many other costs, and with the general lack of external investments to CLIL programmes, there seems to be an attempt to cut down all costs that are not considered necessary. Therefore, as Dalton-Puffer, Nikula and Smit (2010b: 285) state, CLIL teachers are supported by native speaking assistant teachers in some contexts, but this is by no means the norm.

As in all teaching and learning, new knowledge provided in CLIL is constructed on children's previous knowledge structures. Järvinen (2011: 49) maintains that it is important that teachers deliberately guide young learners for thinking because intellectual operations modify the ways of perception, and through practice, the child will learn that knowing is not simply knowing *what* but it may also mean knowing *how*. Putting thinking into words is closely related to language learning, and in school, language develops in a dialogue with peers and between the child and the teacher (Järvinen 2011: 50). When designing materials for CLIL, links with education on a large scale should be sought for, focusing especially on the education of young learners (Morton 2013: 17). Alanen (2000: 107) points out that the teacher has to make sure that the

language she uses in the classroom is understandable for children, and on the other hand, to teach children the language typical of the educational context. This study attempts to show to what extent teachers' beliefs about language guide their materials design and use and thereby affect learning in the primary CLIL context in Finland.

Various means of improving the quality of teaching in CLIL have been suggested. The most important issue in aiming at higher quality seems to be investing in pre- and in-service teacher training (Breidbach & Viebrock 2012: 14; Dale et al. 2010: 11; Fernández & Hallbach 2009: 54; Massler 2012: 44; Morton 2012: 10-11; Pistorio 2009: 42). Undoubtedly, high-quality teacher training is the key for the overall development of education. In-service training in all levels and types of education has widely been recognized as a crucial factor supporting teachers' work (Syrjälä, Estola & Uitto 2006: 47). In the CLIL context, Morton (2012: 11) argues that the lack of adequate training and preparation of CLIL teachers with the appropriate language skills and methodology may seriously threaten the ambitious plans for the implementation of CLIL across Europe. Designing materials for CLIL, in particular, has been estimated to be a demanding task for teachers (Morton 2013: 115). Therefore, large-scale CLIL teacher training would develop the theoretical and methodological competences required for effective teaching in CLIL (Pistorio 2009: 42), which would probably also have positive consequences to CLIL teachers' materials design. As Breidbach (2006: 11) argues, CLIL teachers in the field may have extremely varied expectations of teaching and learning through a foreign language. In the Finnish context, at least, this is largely due to the dearth of CLIL teacher training available, and the same seems to hold true worldwide (cf. e.g., Pistorio's (2009) report on the lack of CLIL teacher training in Argentina).

Another issue CLIL researchers seem to agree on is that providing CLIL teachers extra working hours for collecting relevant materials and preparing CLIL lessons is crucial to ensure the quality of teaching and to prevent the teachers from being overburdened (Fernández & Halbach 2011; Massler 2012: 44). According to Llinares and Whittaker (2010: 141), CLIL teachers need training not only in subject matter and CLIL pedagogy, but also in language, including a variety of genres, written and spoken registers, and the overall linguistic features required for the representation of content in their subject. An important consideration to be added in Llinares and Whittaker's list is training in CLIL teachers' knowledge about language learning and language pedagogy. The results of this study are expected to contribute to giving recommendations on materials design and use and in that respect also help designing CLIL teacher training.

Lorenzo and Moore (2010: 30) argue that both content teachers and language teachers have their share in developing CLIL. Both need to reconstruct their pedagogical values. Content teachers need to become more aware of the language demands of their subjects, and language teachers need to develop a more textual appreciation of language. Adopting new ways of pedagogical and linguistic thinking does not happen overnight and therefore,

Fernández and Halbach (2009, 2011) suggest it is crucial to provide teachers with time to reflect on their practice and on what CLIL involves to be able to develop their teaching along with a clear vision of how to best implement CLIL. Teachers who switch from ordinary L1 classrooms to CLIL need the time to make the necessary adjustments in their own personal subjective theories about teaching.

CLIL teachers' professional expertise has been discussed by a range of reserchers (e.g., Coyle 2005; Coyle et al. 2010; Pihko 2010). One of the most informational models to be taken into account when teaching in CLIL is the 4Cs framework (Coyle 2005), which was developed to give guidelines for quality CLIL in terms of guidance for four fields: content, communication, cognition and culture. In the 4Cs framework, content includes the subject matter, project or theme in process. Effective CLIL takes place through progression in knowledge, skills and understanding of the content. Communication corresponds to interaction, language use to learn the language and content. The communicative context provides the learner with the prerequisites for developing appropriate language knowledge and skills. Cognition is engagement in associated cognitive processing, thinking and understanding. Culture includes citizenship as well as self and other awareness, acquisition of deepening intercultural awareness. The 4Cs framework integrates content learning and language learning within specific contexts establishing a symbiotic relationship between the four elements (Coyle & al. 2010: 41), though culture infiltrates them all. The figure below presents Coyle's (2005) 4Cs framework.
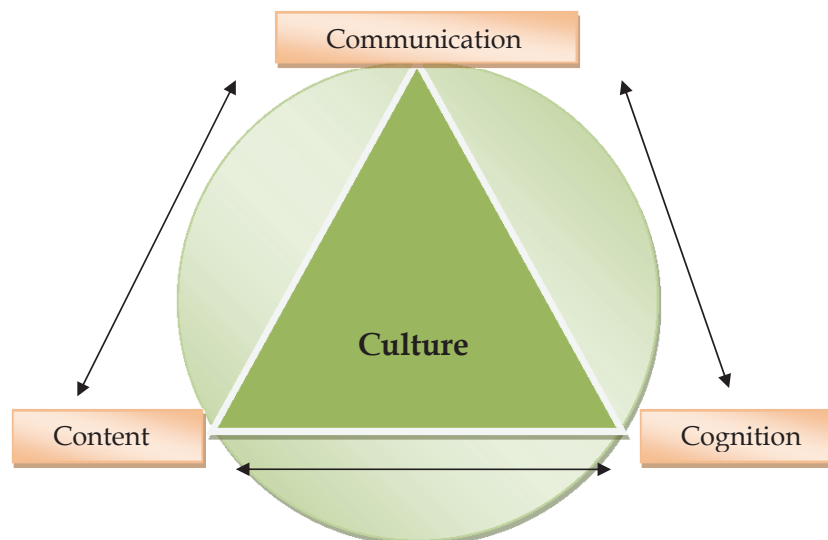
FIGURE 3.   The 4Cs framework by Coyle (2005).

Since one focus of this study is how CLIL teachers' expertise is reflected in their understandings of learning and language, Pihko's (2010: 17) formulation of

three core features of professional expertise of a CLIL teacher seems very useful. Her categorization is based on Kohonen's (2003, 2007) proposition of multidimensional expertise of a subject teacher. The first element is a CLIL teacher's cognitive expertise, which covers the command of the content subject and a sufficient language competence both in the learners' mother tongue and CLIL language. It also includes awareness of the dimensions of target language culture. This element is in line with previous research on CLIL teachers' expertise (e.g., Hartiala 2000).

Secondly, Pihko suggests pedagogical expertise, referring to the teacher's ability to classify and adapt content and language on the level of learners' skills, utilizing methods and materials applicable to CLIL. Adapting the language and/or content of L1 texts is often necessary in CLIL to provide learners with texts on an appropriate linguistic and content level (Lasagabaster & Sierra 2010: 372; Moore & Lorenzo 2007). The present study is primarily concerned with this element, the focus being on teachers' accounts of their ways of designing materials for CLIL and therein of their ways of adapting them. Adaptations will be investigated in detail in chapter 4.3. The third core feature by Pihko comprises work community skills, which entail a CLIL teacher's commitment to active collaboration inside and outside school, developing existing forms of collaboration and creating new ones. Indeed, teacher collaboration appears to emerge as one of the key elements in discussions on developing CLIL in research literature, as will be shown in the following discussion.

Teachers' professional development through peer coaching, CLIL teacher teams and networks, or school-based professional communities has been seen important all over Europe (Fernández & Halbach 2011; Massler 2012: 44; Pawan & Craig 2011: 309) and claimed to be the best way of utilizing and recycling good ideas, texts and exercises. Research has shown that teachers' expertise is developed during their participation in various communities of practice (Traianou 2007: 140). As Hargreaves (2004: 184) maintains, one of the most powerful resources people in any organization can have for learning and developing innovative ideas is each other. Cooperation is not only essential for sharing ideas and materials, but also pays off as better satisfaction with work and as high team spirit. Collegial meetings offer teachers regular opportunities to network and mentor each other in their own school setting.

Teacher collaboration is particularly interesting from the point of view of the present study which has teaching materials as the general framework for studying teachers' beliefs. Kozianka and Ewig (2009: 144), Mehisto et al. (2007: 73) and Pelli-Kouvo (2014: 125) suggest that sharing materials in teachers' common materials banks will diminish CLIL teachers' work load and provide new perspectives on issues to be taught. Recycling materials also has the advantage that the original may gradually be extended and refined. Recently, especially virtual environments for CLIL teachers to exchange ideas and materials have been called for (Infante, Benvenuto & Lastrucci 2009: 162). Regrettably, as Creese (2010: 101) argues, opportunities to collaborate between teachers are rare given current school structures. However, the vast resources

provided by modern digital media offer teachers almost unlimited possibilities for collecting databanks, sharing materials and networking if only they can find the time for that. At best, Coyle et al. (2010: 165) see the networked communities as powerful inclusive spaces where CLIL teachers can work together to form a collective "voice". Therefore, opening up various channels of teacher cooperation is of great importance to the development of the quality of CLIL materials (Morton 2013: 116). For example, a Facebook site called "Bilingual Education Platform" actively shares the latest research results on CLIL, tried-and-found websites with CLIL materials, and introductions of CLIL programmes worldwide, and with this large bank of information has also supported the progress of the present study.

At present, with no centrally-produced CLIL materials (with a few exceptions, such as Spain and the Netherlands), it is important that CLIL teachers are informed of the various possibilities of designing materials, focusing on the most effective ways proved by research. In CLIL in particular, as a relatively new educational approach, gaining professional information through networking contributes to collectively creating and articulating teachers' own theories of practice, based on their CLIL teaching experiences (Coyle 2011: 61). The present study contributes to this important task by clarifying CLIL teachers' views of materials design. As Wyatt (2011: 2) argues, there is little research into how teachers actually develop the practical knowledge and skills that help them design materials, and thus, the intention of the present study is to contribute to fulfilling this research gap, hopefully being beneficial also for teacher education. Research, though scarce, on language teachers' processes of designing teaching materials has been reported in Johnson (2003) and Tomlinson (2012). These reports reveal, for instance, that teachers who are good task designers simulate input and output to a great extent and study many possibilities before ending up to one for further editing (Johnson 2003: 129, 132) and that teachers retrieve very much from their repertoire and rely on inspiration (Tomlinson 2012: 152).

The above discussion shows that confronted by the demands of being both content and language expert, CLIL teachers are faced with many challenges. From the materials perspective, CLIL teachers as the main designers of materials are considered crucial in the successful implementation of CLIL. Undoubtedly, CLIL needs in-depth research also on practical considerations, e.g., on the ways of designing teaching materials, in order to gain momentum. Throughout this study, the demand of finding out different ways of coping with the combination of language and content from a teacher's perspective is the very reason why looking into teachers' accounts of the process of their materials design is important, expecting to highlight good practices worth sharing with other CLIL practitioners. The results will presumably have the potential to influence how CLIL is implemented on a practical level.

3 PERSPECTIVES TO LEARNING, LANGUAGE AND TEACHER BELIEFS

Introducing theories of learning and language from the point of view of CLIL is beneficial in this study because teachers' decisions concerning teaching materials are dependent on teachers' conceptualizations of learning and language. To be able to understand and assess them, it is crucially important to know about the development of theoretical frameworks of learning and language. This chapter will first present different learning theories and their applications to CLIL. Second, the different views of language will be discussed, and finally, the focus will be turned into how teacher beliefs are understood in recent literature.

3.1 Views of learning

This chapter presents a brief overview of the development of learning theories in the last few decades, clarifying the differences between the constructivist notion and the sociocognitive and sociocultural views of learning. Special attention will be paid to what makes learning efficient and what is an ideal setting for learning. Further, Cummins' (2000) quadrant, which has had a great impact on teaching EFL, will be introduced as a framework for the present study. Finally, learning theories which have shown prominent in CLIL research will be discussed.

Learning theories have undergone various changes in the last few decades. Traditionally, learning in the school context has been approached from the teacher's perspective, highlighting the teacher's role as the transmitter of knowledge. In the last few decades, there has been a shift towards more learner-centred views, which consider learning as cognitive and social activity where the learner actively construes knowledge (Tynjälä 2006: 112). Thus, the learner is now in the focus of learning, unlike earlier, and the teacher's role is to guide learners to the sources of information and to other experts (Luukkainen

2005: 130). It is not the memorized facts that are required from modern education but capabilities to solve tasks and problems in teams and capacities to utilize modern information and communication technology (Ylönen, Alanen, Huhta, Taalas & Tarnanen 2008: 187). The move away from teacher-centred models of instruction and towards more learner-centred and community-based models has been marked worldwide (Barab, Kling & Gray 2004b: 3).

However, not all researchers agree with the realization of the frequently-stated development towards more learner-centred classrooms. Ylönen et al. (2008: 187) argue that even today teachers tend to teach as they were taught in their school times. In a similar vein, Tapscott (2009: 122) questions the true change of teaching and learning practices by arguing that the model of education, which revolves around the teacher delivering a one-size-fits-all, one-way lecture while students are expected to absorb the content, still prevails. He (2009: 137) also suspects that 'do-it-on-your-own' attitude is present in many education systems though this attitude is completely foreign to most of the 'Net Geners', young people of the Internet generation, who in their online networks have grown up collaborating, sharing and creating together. Research has also shown that such a collaborative way of learning is more effective in increasing academic performance than individual learning (e.g., Slavin 1995).

Teacher training is largely considered the most critical stage to influence the mindsets of new teachers. Still, the old paradigms die hard. Ylönen et al. (2008: 188), for instance, argue that even today the tendency in teacher training is to plan teacher-led lessons instead of constructivist learning designs. As regards teaching materials, Krumm (2010: 1222) maintains in the German context that the use of a textbook should already be practiced in teacher training so that student teachers would familiarize themselves with learner-centred and collaborative ways of working. Undoubtedly, teaching materials are too often considered a given, which very few newly-qualified teachers dare question or criticize. In Finnish teacher education, however, textbooks are consciously given weight and student teachers work with various materials in many ways. Despite this, the role of textbooks in teaching has been vividly debated also in Finland (e.g., Aalto 2008: 79-80; Jalkanen & Vaarala 2012).

Several researchers have discussed what makes learning efficient and what an ideal setting for learning is (e.g., Bransford, Brown & Cocking 2000; Cummins 2001: 277; Kalantzis, Cope & Harvey 2003: 15; Sawyer 2006). A comparison of these discussions results in four key qualifications for efficient learning. First, a learner builds new knowledge on her previous understanding and utilizes the new information. Prior knowledge, skills and beliefs considerably influence how learners organize and interpret their environment. Second, information is combined with conceptual structures so that it does not remain superficial but guides to deep understanding. Knowledge is more than just an ability to remember, and thus in-depth understanding is required to transfer knowledge from one context to another. Third, a learner is made an active participant in guiding her own process of learning and supporting her in taking control of, and self-regulating, her own learning. An effective learner is

autonomous, self-directed, flexible and collaborative, to mention just a few requirements. The last qualification underscores the social context of learning. Learning is social, because it takes place in a community, which encourages individual learning, dialogue, apprenticeship and mentoring. Capabilities of working in a group are also highly valued.

Three terms describing the recent learning ideal frequently occur in the research literature, namely experiential learning, investigative learning, and group learning. According to Liem and McInerney (2008: 9-10), experiential learning is based on the idea that children learn and make meaning most effectively from doing and experiencing and not just from listening to the teacher. Hands-on and concrete tasks allow them activity and self-fulfillment in lessons. As a result of experiential learning pupils are more deeply engaged in a learning activity, have to think more deeply, and discover the detailed implications of ideas through direct immersion in an activity. The model of investigative learning can be attached to the situational cognition, because in both, the learner guides her learning by posing problems, constructing working theories and evaluating them critically as well as by searching for deeper knowledge independently (Hakkarainen et al. 2002: 202–205; Kröger 2003: 210). From the new information gained this way, the learner constructs a new working theory. The problems in hand are anchored to the learner's previous experience and knowledge or to a significant context, e.g. problematic cases solved by real experts.

As the term suggests, group learning can be defined as learning in a community, together with peers. According to Mansour (2009: 30), group learning happens when students discuss approaches to a given problem with little or no interference from the teacher. Kröger (2003: 210) maintains that all factors contributing to working out a task are shared between the members of a learning community. In this way, the different strengths of invidual learners are maximally utilized. According to Llinares et al. (2012: 100-101), group work activities allow for students' co-construction of knowledge and give students the opportunity of developing the language and participating more actively than in teacher-led classroom. Despite encouraging research results on group learning (e.g., Järvelä et al. 2011), teachers are not sufficiently aware of the principles of joint learning. Therefore, Järvelä et al. (2011: 52) suggest that teachers' understanding of the principles of group learning is to be promoted, and the use of ICT for purposes supporting common knowledge building and interaction is to be strengthened.

Definitions of good learning have also been adopted in the field of second language acquisition (SLA). Views of language learning are interesting from the point of view of the present study particularly because CLIL is inevitably about learning a foreign language, and hence understanding the various ways CLIL teachers see language learning is significant. Understanding how language is learnt has developed considerably in the last few decades (Andrews 2011: 10). As Atkinson (2011c: 1) puts it, the cognitive approach has dominated the study of second language acquisition, considering language, above all, a cognitive

product and its development a cognitive process. The cognitive approach draws on psychological explanations of L2 learning and construes learning as an individual accomplishment and abstract knowledge acquisition, that is, extracting perceptual cues from the environment and processing them into representations (Atkinson 2011c: 4; Ortega 2011: 168). Atkinson (2011c: 4-5) continues that cognitivism is also characterized by the centrality of language, and considering language as code, resulting in a cognitive "grammar" that consists of a set of symbols and a syntax for arranging them. Thus, language is simply coded information, a tool for encoding the world. According to Ortega (2011: 168), cognitivist SLA relies strongly on taxonomies and categories, such as "language", "learner", or "native speaker".

Second language learning has also been considered from a sociocognitive perspective. Atkinson (2011a: 143) describes second language acquisition from a sociocognitive standpoint as follows:

> […] mind, body, and world function integratively in second language acquisition.

In a similar vein, within the sociocognitive approach language is referred to as

> […] a tool for social action: selling fish, arguing, sharing stories, calming children. Language in use must be nimble and quick to effect social action – it must be dynamically adaptive vis-á-vis its environment. (Atkinson 2011a: 146)

Consequently, second language learning is regarded from a sociocognitive perspective as a social accomplishment and a natural product of situated activity systems (Atkinson 2011a: 150; Ortega 2011: 168). Block (2003: 109) argues that in this approach, learners are active agents and do not simply process information. As Ortega (2011: 168) mentions, in sociocognitive approach knowledge and learning are socially distributed, have social histories, and are only possible through sociality. Learners actively develop and engage in ways of mediating themselves and their relationships to others in communities of practice (Block 2003: 109). Thus, L2 learning takes place through intentional social interaction and co-construction of reflected-upon knowledge, and overall, the sociocognitive approach can be characterized by relations, practices, and dynamism (Ortega 2011: 168, 171).

Frequent attempts have been made in SLA research to define the most optimal environment for second language learning. The importance of the appropriate level of input for learners has first been expressed by Krashen (1984, 1985) in his well-known input hypothesis, and later by Cummins (2000), summarized in his quadrant of BICS (basic interpersonal communicative skills) and CALP (cognitive academic language proficiency). Krashen (1985) draws a difference between language acquisition and learning, and argues that language competence is achieved by acquisition through exposure to comprehensible input. In order to develop the foreign language competence, such comprehensible input has to be understandable but a little beyond the learners' current language level so that the learner can find meaning with contextual help. Acquisition occurs when the learner needs to exert effort to extrapolate

meaning which is facilitated by exposure to meaningful input. Acquisition, which can only take place in a naturalistic environment, results in implicit knowledge. Most formal rule-based language learning, which is typically what classroom language learning is, can only result in the learning of explicit knowledge. CLIL, in contrary, is generally considered to provide environments in which there is both exposure to the target language, and opportunities to allow the learner to use CLIL language in a meaningful way, thereby turning into implicit knowledge.

Krashen emphasizes in his affective filter hypothesis (1984: 32-33) that the learner should avoid frustration, that the level of input cannot be too high, and that the learner must feel confidence both in the learning process and in herself, and have enough time for the acquisition process of the target language. Besides input, Krashen also focuses on affective factors when acquiring a foreign language. The learner has to see the learning situation in a positive light whereby the so-called affective filter can contribute to acquiring a language. Krashen's input hypothesis has faced many counterarguments, e.g., by Baker (2001) who maintains that in language acquisition, a learner does not learn to produce a language, but only to understand messages sent by others. Similarly, Järvinen (1999) argues that learners' deficiencies in production skills form the central criticism against input hypothesis. Swain (1988), on the other hand, notes on the basis of her study that it is not the input but the implicit language elements that are the most crucial for the development of language skills, because that is how pupils are exposed to more complex language. Despite the criticism, Krashen's theory has been extremely influential in teaching EFL.

Like Krashen's, also Cummins' theories about language learning have had a great impact on teaching EFL. The present study benefits from Cummins' quadrant (Figure 4, Cummins 2000) with BICS and CALP as its theoretical foundation, which has borrowed from Krashen's input hypothesis. Cummins' quadrant with different levels of context and cognitive demand indicates how context reduces the language required and how it facilitates comprehension and production. According to Cummins, the skills needed for basic interpersonal communicative skills (BICS) are the first to be achieved when learning a foreign language. Dealing with demanding abstract contents is enabled by cognitive academic language proficiency (CALP). Developing CALP requires focusing on content, language and language use both in the source and target languages. Quadrant III with high context and high cognitive demand offers the most ideal setting for learning in CLIL. As regards materials design, the ideal levels of language and content for materials are expected to be achieved when both their context and cognitive demands are high. Thus, CLIL teachers need to have profound knowledge of the cognitive and linguistic levels of their pupils in order to design materials at an appropriate level.

Low Cognitive Demand

Quadrant I (easiest)
High context
Low cognitive demand

Quadrant II (harder)
Low context
Low cognitive demand

High Context

Low Context

Quadrant III (harder)
High context
High cognitive demand

Quadrant IV (hardest)
Low context
High cognitive demand

High Cognitive Demand
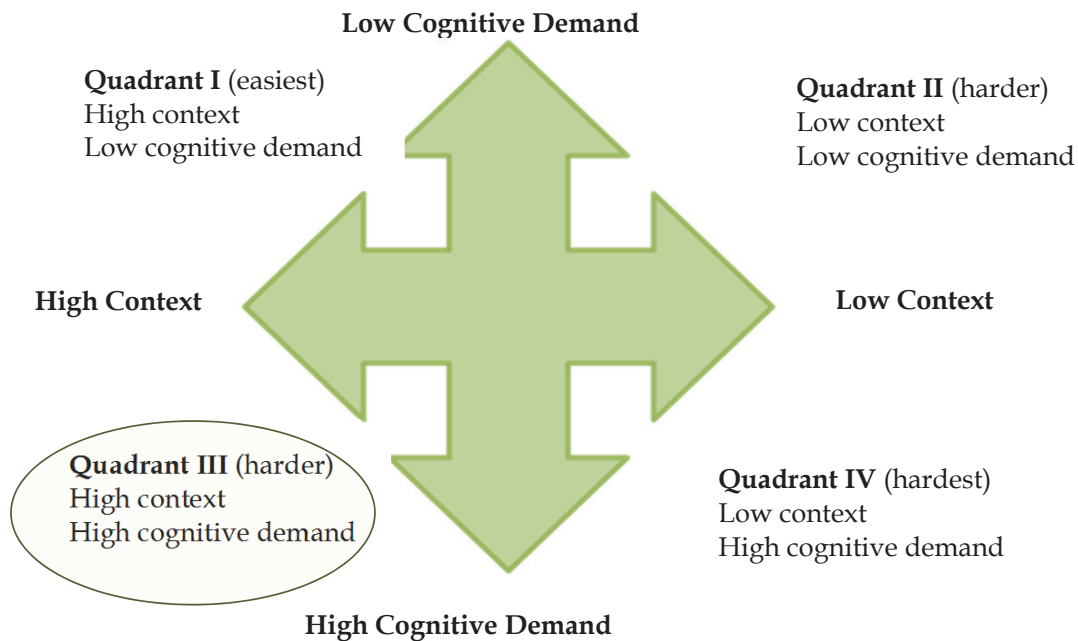
FIGURE 4.   Cummins' (2000) quadrant

In the goal orientation theory, Ames (1992) has described optimally challenging tasks along similar lines as Cummins. Tasks that can be mastered with optimal effort but are neither too easy to generate boredom nor too hard to produce anxiety, can facilitate learners' orientation towards the learning goal. Such tasks take into account the learners' prior knowledge and developmental stage. On the basis of research on teaching through a foreign language, it seems that rich input is the key for effective foreign language learning and proficiency. Ellis (2008: 855), for instance, suggests that acquisition probably proceeds most rapidly through a combination of form-focused instruction and exposure to the target language. Similarly, Benson (2011: 7) recommends a combination of instruction and exposure to language input, as well as opportunities to produce language output. In the CLIL context, the results of Ruiz de Zarobe's study (2010: 206) confirm that there is a positive relationship between the amount of exposure to English and the linguistic outcomes. This suggests that pupils with more exposure to English achieve higher levels of proficiency on written production tasks than pupils with less exposure to English, provided they receive sufficient exposure to the target language. The results of Navés' (2009, 2011) study support this: she confirms that one of the salient characteristics of a successful implementation of CLIL is that instruction takes place within a long-lasting, carefully designed programme which provides massive exposure to the target language.

During the relatively short history of CLIL research, learning in CLIL has been approached from many different perspectives. Dalton-Puffer (2009: 198) maintains that current CLIL research is based on the central tenet that all kinds of learning, including language learning, are socially situated and of a dialogic nature. Knowledge is developed in a dialogic process between experts and novices and between peers. Hüttner et al. (2013: 275) found out in the context of Austrian tertiary CLIL that the most resilient belief about language learning in CLIL detected from the views of CLIL teachers and learners was that it is 'doing'. Both teachers and learners characterised language learning in CLIL as repeated practice, referring to abundant foreign language use. Indeed, in the light of the most recent research, it seems that research now increasingly focuses on the social perspective on second language development while the interest on individual cognitive processes is diminishing (Llinares et al. 2012: 12). These social views consider second language learning as a process inextricably linked with the social activities learners are participating in. In this way, they share the constructivist notion of language, according to which language is not a separate unit but is always combined with content and social practices.

3.2 Views of language

As mentioned earlier, the various ways teachers view language in the light of teaching materials for CLIL have scarcely been touched upon in previous CLIL research. Therefore, this study will look into teachers' views of language on a more general level. Research has indicated that teachers' views of language do generate their individual teaching methodologies (Borg 2003; Thompson 1992). According to Miramontes et al. (2011: 12), the starting point for understanding the fundamental significance of language for the development of a human-being and her personality is recognizing the role which language plays in experiencing an individual's framework of reality.

Traditionally, a distinct difference has been made between the two major views of language: formal and functional views of language. In the formal, or structural, view, language is treated as an abstract code or a system of structurally related elements for the transmission of meaning. These elements include, for instance, grammatical units, such as phrases or clauses, and lexical items, such as words. The target of language learning is the mastery of these elements. For instance, Grammar Translation Method is a language teaching method based on this view of language. (Richards and Rodgers 2001.) Abstract objectivism, where learning is seen as a process of adding 'language objects' on top of the previous knowledge, has been the underlying ideology of most textbooks in language education until this century, the main point being in learning grammatical rules and lexical items, or words (Dufva, Suni, Aro & Salo 2011: 112).

In the functional, or communicative, view, language is seen as a vehicle for the expression of functional meaning, focusing on the semantic and communicative dimensions of language (Richards & Rodgers 2001: 160). This view is largely based on research by Hymes (1972), Halliday (1975) and Widdowson (1978). The communicative approach starts from a theory of language as communication, and the goal of language teaching is to develop communicative competence, to express communication functions and categories of meaning. The communicative view also shows in teaching materials which should involve real communication and in return promote learning. Learning activities attempt to engage the learner in meaningful and authentic language use. Activities range from conversation sessions to dialogues and role plays. (Richards & Rodgers 2001: 160-161, 166.)

According to Richards and Rodgers (2001), also a third view of language is generally distinguished, reflected in current approaches to language learning. The interactional view sees language primarily as a communicative tool, as the means for interpersonal relationships and social transactions between individuals. The target of language learning is to be able to initiate and maintain conversations with other people. Therefore, besides knowing the grammar and vocabulary it is as important to know the rules for using them in communicative contexts. This approach seems to resemble the functional view in many respects. Both have a focus on communication, the interactional view in particular, since in this view language is considered first and foremost a tool for communicating. Today, functional and interactional views appear to have intermingled and major differences between them are hard to detect. It is self-evident, however, that based on the ample use of foreign language in the CLIL classroom, the view of language as a communicative tool is a guiding principle towards CLIL learners' better foreign language competence. This is also the view the present study leans on.

Recent research in applied linguistics seems to have a strong socially situated perspective on learning and language, indicating that the socially-oriented view of language has been carried on up to this decade. According to Morton (2012: 64), language is now increasingly seen as a set of meaning-making resources when people engage in concrete activity, and learning appears in the socially-situated action of participating in talk-in-interaction. This view of language suggests that multiform and multilanguage resources are utilized in different ways in different situations. Block (2003: 39) prefigured this tendency by an image of linguistic competence as a mass with no clear divisions among the parts. He further argued that there is constant bleeding between and among languages as well as additions and losses in terms of repertoires. This conceptualization also seems applicable to CLIL where learners constantly deal with more than one language and may use different languages and genres for different purposes (e.g. language in the textbook, language in interaction with peers, or language addressing the teacher).

The modern view of language is crystallized in Pennycook's (2010: 1) suggestion of language as a local practice whereby language is a product of the

deeply social and cultural activities in which people engage. Pennycook (2010: 2) argues that the notion of language as a system has been challenged in favour of a view of language as doing. Language use is part of a multifaceted interplay between humans and the world, and language use in a particular place is a result of one's interpretation of that place. Pennycook regards language as a practice instead of a pre-given entity. He claims that language practices as social activity are a central part of daily social organization. This view of language as a practice considers language as an activity rather than a structure. Pennycook (2010: 33) further maintains that the stability of language practices is a product of repeated social activity, but still, they are also always being rewritten and under change.

Following Pennycook (2010), the present study takes a communicative stand on language, suggesting that also in CLIL contexts, language is used in social activities between individuals. Language is here seen as doing rather than a system because in CLIL, a foreign language is used as a vehicle for learning, thus having an active role in all classroom practices. This notion rises from the premise of CLIL as the combination of teaching and learning content and language. Due to the strong role language plays in CLIL it is significant to understand CLIL teachers' views of language guiding their practices, and in this study, this is approached from the point of view of teaching materials. Thus, in CLIL contexts, including the present study, an applicable view of language seems to be that of suggested by Llinares et al. (2012: 187) who

> […] consider language in a broad sense, that is, language forms as conveying meanings and functions, which are necessary for students' successful development of specific academic genres and registers.

This notion of language can be considered as the starting point of the present study, followed by a review on the respondents' beliefs about learning and language in CLIL. Since CLIL is based on the premise of teaching content through a foreign language, with interaction with the teacher and peers inextricably intertwined, also the materials used in CLIL are expected to share this view of language, thus conveying meanings and functions. Llinares et al. (2012: 187) maintain that since CLIL has content as the main course objective and content specialists are mostly responsible for teaching in European CLIL contexts, there is an obvious need to also focus on language form in CLIL classrooms. In some CLIL programmes, however, specific language objectives are included in the content curriculum, and language teachers and content teachers co-teach or share courses (Llinares et al. 2012: 187). These instances seem ideal for combining content and language in a natural way in CLIL classrooms, but admittedly, old traditions tend to be persistent. As Llinares et al. (2012: 187) caution, there is a danger that teachers attempt to teach content and language separately, following a 'focus on forms' approach, which is not in line with the holistic view of language in CLIL where language and content are considered as a whole.

Research has not been able to set a clear-cut target for the level of CLIL learners' functional competence. Llinares et al. (2012: 2) suggest that one probable reason for this may be the large variety of CLIL programmes with their individual aims for the learners' target language competence. They also suggest that the background of the majority of CLIL teachers as subject specialists, and not language teachers, may make it difficult to assess the learners' degree of the pursued target language competence. From the materials perspective, CLIL teachers are supposed to quite explicitly know their pupils' level of target language. With a suitable level of language and content in mind, they are able to design materials that are sufficiently challenging to provide new information, vocabulary and structures, but not too demanding to hinder learning. Llinares et al. (2012: 199-200) suggest that when designing CLIL activities, it would be useful to integrate a focus on formal features with the emphasis on meaning and content and in this way push the pupils to use specific linguistic forms while speaking or writing about content.

In CLIL, the traditional principles of learning seem to guide both learning and the use of teaching materials even today. This is demonstrated by Banegas (2012a: 401), for instance, who found out that secondary school CLIL teachers considered CLIL simply as a practice-oriented approach which enabled pupils to 'put the language to use'. In contrast to this, Bakhtin's (1986) proposition of heteroglossic learning of languages seems to be a meaningful view also in the CLIL context. Here, first, second and additional languages are not regarded as closed systems of separate abstract codes (Dufva et al. 2011: 110). This makes sense for the notion of language in CLIL, since operating in two languages simultaneously blurs the boundaries of languages both for the teacher and learners. Learners also encounter a range of language shaping educational knowledge when dealing with content matters in CLIL, also referred to as the language of schooling (Llinares et al. 2012: 8).

No doubt there are efforts all over Europe to develop CLIL in a more learner-centred direction, as indicated by several presentations held in a recent ALP-CLIL (Applied Linguistics Perspectives on CLIL) conference in Madrid. For instance, Somers (2013) suggests in the Belgian context that CLIL may provide a more suitable alternative for immigrant minority students to learn languages, CLIL acting as a kind of an equalizer for them. Such a finding would seem difficult to achieve without a focus on learners. Following Dalton-Puffer (2013) at the same event, it appears to be crucial that teachers know the different discipline-based pedagogies, such as those of science, history, etc. to be able to efficiently involve the learners in their own learning process. Obviously, when the teacher commands the genres of a specific content subject, she has the prerequisites to more prominently lead the classroom interaction in the learner-centered direction.

It is also noteworthy here to look at the notion of scriptism in linguistics (Harris 1980; Linell 2005). This perspective makes sense in the context of CLIL materials, because they, as any teaching materials, are usually in the written form. Scriptism has the written representation of language in focus, and the

ideal of the written form has long guided the practices of language education. Even today, language learning is generally supposed to take place by using textbooks and memorizing grammar from printed sources. In the classroom, this conceptualization easily results in the policy of one correct answer. (Dufva et al. 2011: 113-114.) It might be that CLIL is following the field of teaching languages for special purposes (LSP), which has broken new ground in this respect, partly from necessity due to the lack of textbooks for LSP and CLIL. In addition, the focus on active foreign language use in CLIL is an indication of the tendency towards more oral communication and interaction. After all, one of the foundations of CLIL is to make learners interact and use the foreign language in a natural setting when working with the foreign language content (Sylvén & Sundqvist 2012: 116). However, research shows that teachers still seem to consider written materials "superior" because of the long-term focus on preference to written form by scriptist ideology. Nyman and Kaikkonen (2008: 792), for instance, showed that newly-qualified teachers are often uncertain and use textbooks extensively in their teaching. Pennington's (2001: 343) study indicates that teachers receive more readily information provided by an authority or "expert" in the form of materials than input developed through collaboration and reflection with colleagues. This may be true in mainstream education, but in CLIL contexts with very few applicable textbooks, this is probably more seldom the case.

Language is often referred to as the greatest learning tool of a human being (e.g., Coyle 2011: 51). It is both the conduit for our thinking and the means for articulating, sharing, assimilating and re-shaping human learning and cognitive development. Morton (2012: 88) succinctly summarizes the roles of language in CLIL in two perspectives. First, language is a tool for communication and construction of content knowledge and skills, including language knowledge of the different disciplines. Second, language is an explicit curriculum concern, with specific language goals, linked to content knowledge and skills. As pointed out earlier, one of the aims of the present study is to uncover the beliefs CLIL teachers hold about the roles of learning and language in CLIL and to examine how they correspond to the theories of learning and language described in this chapter.

In the following, the complex web of teachers' beliefs and factors contributing to the formation of beliefs about learning and language will be shed some light on. Special attention will be paid to teachers' beliefs about learning and language in CLIL as reflected in their views of teaching materials for CLIL.

3.3   CLIL teachers' beliefs about learning and language

It is important to understand what kind of beliefs about learning and language CLIL teachers hold and what they make of them in teaching and materials design. After all, teachers' beliefs affect all that takes place in the classroom and

strongly affect teachers' behaviour and choices (Pajares 1992: 326), making them therefore an extremely interesting object of research. It is considered worthwhile here to approach teachers' beliefs through materials, because it is expected that teachers' value judgments about materials, their attitudes towards adaptations, and the status of materials in their teaching, for example, reveal a great deal about their beliefs about learning and language in CLIL. Teachers' choices regarding materials can considerably influence what and how pupils learn in CLIL classroom. Previous research has shown (e.g., Tan 2011 in the CBI context) that teacher beliefs are a crucial factor guiding teachers' pedagogical practices also when teaching through a foreign language.

All teachers hold beliefs about their work, their students, their subject matter, and their roles and responsibilities (Pajares 1992: 314). Freeman (2001: 221) suggests that teachers, like any learners, interpret new content through their existing understandings and modify and reinterpret new ideas on the basis of what they already know or believe. Both teachers and learners bring with them into the language classroom lay theories of learning and language which comprise a complex set of variables based on attitudes, experiences, and expectations, closely relating to their beliefs about the nature of the language-learning task and to their conceptions about what their classroom roles ought to be (Hüttner et al. 2013: 269; Wan et al. 2011: 403). Teachers' prior knowledge and life experiences strongly influence the way they perceive the nature of learning and their students (Huerta 2011: 38) and play a critical role in influencing their teacher education experience (Kubanyiova 2012: 1). Teachers' beliefs provide a basis for their action, reflect the nature of their instruction, and guide teachers' decision making (Basturkmen 2012: 2; Correa et al. 2008: 141; Kagan 1992: 73; Polat 2009: 230; Thompson 1992: 138).

It is important to study teacher beliefs for a number of reasons. First and foremost, as Tsui (2003: 61) points out, beliefs about teaching and learning held by teachers have a powerful influence on their classroom practices, on what and how they teach. Only deep understanding of teacher beliefs enables improving teaching practices, understanding how teachers conceptualize their work, and how these conceptualizations are shown in teachers' practices and decisions in classroom (Mansour 2009: 25; Pena Díaz & Porto Requejo 2008: 152). Tsui (2003: 61) argues that beliefs help teachers to make sense of the complex and multidimensional nature of classroom life, to identify goals, to prioritize actions to be taken, and to shape their evolving perceptions of themselves as teachers.

In a broad sense, Woods and Çakır (2011: 383) define beliefs as something that "is true for a particular individual and therefore subjective and personal". The personal nature of beliefs is also underscored by a range of other researchers. In Kagan's (1992: 65-66) view of beliefs, for instance, personal knowledge and implicit assumptions about students, learning, classrooms, and the subject matter to be taught play a crucial role. For Borg (2011: 371), on the other hand, beliefs are often tacit propositions individuals consider to be true, and they have a strong evaluative and affective component. It seems, then, that besides their individuality, one of the core features of beliefs is their force to

guide a person's activity towards the direction shown to be desirable by her beliefs.

Another characteristic of beliefs is their intricacy. Negueruela-Azarola (2011: 360) and Basturkmen (2012: 1) underline the complex nature of beliefs and the complicated relationship between teachers' beliefs and practices. This perspective also shows in Negueruela-Azarola's (2011: 360) definition of beliefs as "a conceptualizing activity in which contradictions and connections between theoretical ideas, personal understandings, and practical applications emerge". Basturkmen (2012: 1) adds that although teachers' beliefs may be unconscious, they recognise that other teachers may hold alternative beliefs on the same issue. Thus, though teachers may be unaware of their own beliefs, they are able to recognize beliefs held by other teachers.

In research on teacher beliefs, various adjectives have been used to describe beliefs. Barcelos and Kalaja (2003: 232-233), for instance, suggest that beliefs are dynamic and emergent, socially constructed and contextually situated, experiential, mediated, and paradoxical and contradictory. This description seems to aptly define the multi-voiced, complex nature of beliefs. According to Barcelos (2003a: 8), the social dimension of beliefs is initiated from the interaction with other people and the surrounding environment. The many paradoxes beliefs consist of are, for instance, their social but individual nature, their rational but emotional origin, and their unique but shared properties (Barcelos & Kalaja 2003: 233).

Three different approaches to beliefs have been distinguished in research: the *normative* approach, the *metacognitive* approach, and the *contextual* approach (Barcelos 2003a: 16). The term 'normative' refers to studies on culture, considering students' culture as an explanation for their behaviour in class. Within the metacognitive approach, on the other hand, beliefs are defined as metacognitive knowledge, i.e., the stable although sometimes irrelevant knowledge learners have acquired about learning and language. In the contextual approach, the beliefs are embedded in students' contexts. The studies conducted within this approach characterize beliefs as contextual, dynamic and social (Barcelos 2003a: 19-20). This approach also includes studies within the discursive approach (Kalaja 1995), with assumptions such as language use is action-oriented, language creates reality, and scientific knowledge and lay conceptions are social constructions of the world. Beliefs are recognized as part of students' experiences and interrelated with their environment (Barcelos 2003a: 21). What these three approaches, i.e., normative, metacognitive, and contextual (including discursive approach), have in common is that they all suggest beliefs influence students' behaviour, i.e., their language learning strategies or approaches to language learning (Barcelos 2003a: 28). Though this categorization is originally designed to show different approaches to students' beliefs, it seems equally appropriate to apply it to teachers' beliefs. Based on this conceptualization, the present study approaches CLIL teachers' beliefs about learning and language from the contextual approach. Teachers are inevitably situated in certain contexts and derive their

beliefs from a range of previous experiences as a learner and teacher, from their general experience of life, from their social network, etc. However, since beliefs are dynamic, it may be possible, conditions permitting, to alter them when first identified. The view of beliefs in this study is therefore flexible and context-embedded. Due to the relative rarity of CLIL on a large scale, teachers may begin their CLIL career with beliefs about learning and language in CLIL that with more experience turn out to be completely or partially mistaken and may need to be remedied.

Teachers have deeply rooted reasons behind their classroom beliefs, which emanate from their previous classroom experience, motivations, self-reflections, etc. (Polat 2009: 230). Urmston and Pennington's study (2008: 101) showed that newly graduated teachers were quickly absorbed into the traditions of the education system, instead of introducing new ideas and practices. During practice teaching, traditional teaching norms were shown to be reinforced and innovative, alternative approaches discouraged as being too risky (Urmston & Pennington 2008: 91). This finding is reinforced by Nyman (2009a: 70), who found out that such novice teachers who felt uncertain in the classroom tended to stick to the decisions made by textbook authors about teaching and did not have courage or strength to make decisions of their own. This led to going through the textbook in a hasty manner. Teachers who stuck to the textbook found their teaching "boring" already after the first working years, which is not a good sign regarding the length of their career-to-be and coping in working life. These teachers used teaching methods they knew from their school years, as the result of years of 'apprenticeship of observation' (Lortie 1975), the term often quoted in this context. Therefore, a great deal of what teachers know about teaching is derived from their vast experience as learners and is then passed on in their classrooms (Pena Díaz & Porto Requejo 2008: 152). The long period of language learning experiences has been transformed, largely subconsciously, into beliefs about how languages are learnt and how they should be taught (Bailey, Bergthold, Braunstein, Jagodzinski Fleischman, Holbrook, Tuman, Waissbluth & Zambo 2001: 11; Borg 2003: 86; Correa et al. 2008: 141; Kubanyiova 2012: 13; Thompson 1992: 135.)

Research indicates that teachers' beliefs are relatively organized, in other words, individual beliefs seem relatively consistent with one another so that one idea about teaching cannot be changed without affecting another (Correa et al. 2008: 151; Kagan 1992: 76). According to Pajares (1992: 319), this belief system houses all the beliefs acquired through the process of cultural transmission. Thompson (1992: 130) maintains that the notion of a belief system is a metaphor for examining and describing how an individual's beliefs are organized. As a teacher's experience in classrooms grows, her professional knowledge grows richer and more coherent, forming a highly personalized pedagogy – a belief system that constrains the teacher's perception, judgment, and behaviour (Kagan 1992: 74). Individuals generally hold on to beliefs based on incorrect or incomplete knowledge even after scientifically correct explanations are presented to them. Thus, belief change during adulthood is a

relatively rare phenomenon and, according to Borg (2003: 88), teachers' beliefs about learning and language learning may continue to be influential throughout their professional lives. The following figure illustrates the way beliefs are seen in the present study. The figure combines various factors influencing teachers' beliefs, fused together from previous research on beliefs (e.g., Barcelos 2003a; Barcelos & Kalaja 2003; Huerta 2011; Hüttner et al. 2013; Kagan 1992; Lortie 1975; Pajares 1992; Tsui 2003; Wan et al. 2011).
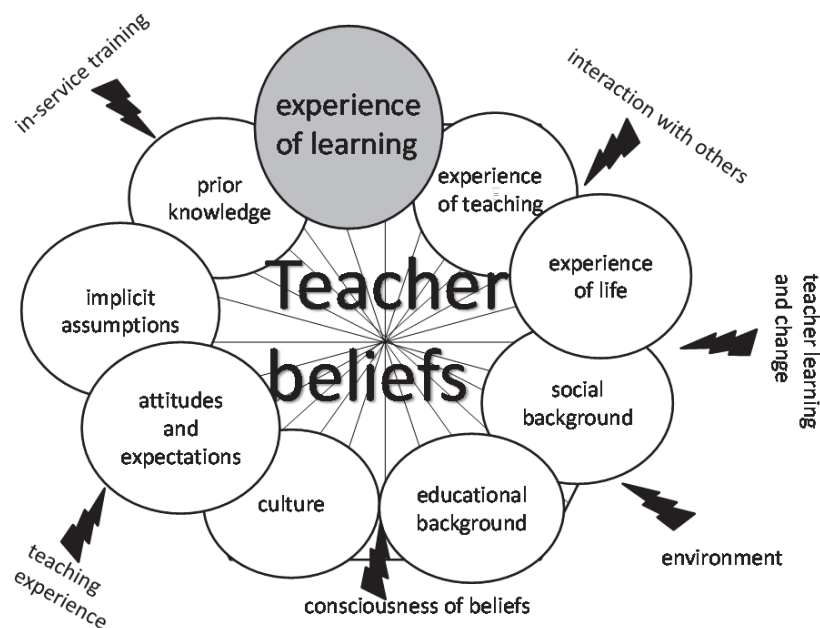
FIGURE 5.   Combination of factors that influence teacher beliefs.

The inner circle with one grey and eight white bubbles shows factors that influence teachers' beliefs, pinpointing the significance of teachers' personal experience of learning (in grey) compared to other factors. Borg (2003: 81) maintains that teacher training programmes which ignore trainee teachers' prior beliefs tend to be less effective at influencing beliefs than programmes that acknowledge the importance of bringing forth student teachers' beliefs based on their own school experiences. As teachers learn and change, the process of articulating their conceptions of practice is not a linear one. Conscious understanding and studying of invidual beliefs makes it possible to alter them. The outer circle with six different points highlights factors that may contribute to altering teachers' beliefs. Freeman (2001: 237) suggests that the process of teacher learning and change through teacher education programmes is dialectical, in which new meanings to familiar perceptions are renamed. Thus, tacit knowledge interacts with, and is reshaped by, newly explicit understandings from the professional discourse.

The stability of beliefs is perceived in very different, sometimes even contradictory ways in research. Thompson (1992: 130) and Kalaja et al. (2011: 49) maintain that beliefs cannot be considered stable mental states or characteristics of the individual, but dynamic and situated processes. They undergo change and restructure as individuals evaluate their beliefs against their experiences. Kagan (1992: 76) and Correa et al. (2008: 141), on the other hand, argue that teacher beliefs are relatively stable because of a high degree of connectedness among beliefs. Furthermore, Kagan argues that due to this stable nature of beliefs, preservice teachers tend to leave teacher education with the same beliefs they brought to them. Rather than modifying their initial biases, teachers appear to grow increasingly comfortable with them.

Studying teacher beliefs has been considered difficult in research literature (e.g., Kagan 1992: 66; Pajares 1992: 307, 319). According to Pajares (1992: 307, 319), reasons for the problematics of studying beliefs may be caused by definitional problems, poor conceptualizations, or differing understandings of beliefs and belief structures. As Correa et al. (2008: 140, 152) maintain, culturally shared beliefs about teaching and learning may be so ubiquitous and familiar that they become difficult to recognize. Teachers are a product of their culture and experiences, and teacher beliefs and practices are embedded in cultural contexts. Therefore, it has been argued that teachers' beliefs should be studied aware of the influence of culture (Mansour 2009: 25).

Even the term 'teacher belief' is not used consistently. Tsui (2003: 61) claims that the term belief has been used together with terms such as assumptions, conceptions, or personal theories. Morton (2012) looked into CLIL teachers' 'knowledge of language', which he equals to language awareness. His study draws largely on research on teacher cognition and beliefs. Even completely new terms have been introduced to refer to beliefs, such as Woods' (1996) term BAK, the letters of which stand for Beliefs, Assumptions and Knowledge. Lankshear and Knobel (2006: 31) and Breidbach and Viebrock (2012: 12), on the other hand, talk about a teacher's 'mindset'. According to Lankshear and Knobel (2006: 31), a mindset is a person's frame of reference that is fixed. It usually refers to a point of view, perspective, or frame of reference through which individuals experience the world. Mindsets can be thought of as sets of assumptions, beliefs, values, and ways of doing things. In CLIL, these mindsets include several interrelated aspects such as school education and subject-specific teaching in general, foreign language teaching, the perception of language in different subjects, learner and teacher roles, learning processes and learning activities, teaching objectives as well assessment and evaluation.

Tan (2011: 325) explored the beliefs of math, science and language teachers, and their influence on teachers' pedagogical practices in CBI and concludes (2011: 328) that teachers' beliefs seem to determine lesson planning and activities used in the classroom, for example. She suspects that this is due to the absence of the formal teacher training on integrating content and language teaching. This may well be an important factor contributing to the strong role of teacher beliefs also in CLIL. It seems that only in a few countries CLIL is a part

of teacher education, and more frequently, the capabilities for teaching in CLIL are achieved through in-service training, or simply through trial and error in classroom situations.

A teacher's belief about the importance of content is reflected in the materials she designs and uses or in the way she applies materials, i. e. what she does with them in classroom. Pajares (1992: 309-310) claims that teachers often teach the content of a course according to the values they hold of the content itself. This combination of affect and evaluation can determine the energy a teacher will expend on an activity, or which activity she will choose in the first place. Further, Pajares (1992: 328) argues that beliefs influence teachers' knowledge acquisition and interpretation, task definition and selection, interpretation of course content, and comprehension monitoring. According to Kagan (1992: 67-68), a teacher's content-specific beliefs influence her judgments about appropriate instructional activities, goals, forms of evaluation, and the nature of learning. Content-specific beliefs have been found to correlate with a wide variety of instructional and noninstructional variables. In the use of materials, this is manifested so that teachers with conceptual understandings of their fields tend to emphasise contextual explanations and to modify textbooks, whereas teachers with superficial understandings tend to lean heavily on prepared texts, rarely modifying them.

As the previous discussion shows, the content perspective in teacher beliefs has been studied extensively whereas the role of the other key element of CLIL, that of language, seems to require further research. Undoubtedly, language has a different role in CLIL compared to traditional foreign language learning. Morton (2012: 12) argues that in CLIL, language is not only the intended outcome in terms of plurilingual competence, but an essential prerequisite for content learning to take place. Therefore, investigating CLIL teachers' beliefs about language is extremely important to develop teaching and, consequently, learning outcomes in CLIL. In general, it would seem productive to approach teachers' beliefs about learning and language in CLIL from various perspectives, e.g., from that of a teacher, a learner, content, and language, for instance. Interesting openings to the topic have been recently made (e.g., Hüttner et al. 2013; Morton 2012; Skinnari 2013), but the unexplored territory is still vast. Nevertheless, research on teacher beliefs in CLIL would be of great significance to allow the consistent development of this considerably new teaching ideology.

4   TEACHING MATERIALS FOR CLIL

Teaching materials comprise almost everything from books and worksheets to internet pages and real-life items. Traditionally materials have been described as a source of information that includes the subject matter to be learnt (Lahdes 1997: 234). Materials in a broad sense include "realia" (real objects such as a pencil), and representations (such as a drawing or a photograph), as defined by McGrath (2008: 7). The focus in this study, however, is primarily on teachers' accounts of textual materials, including text- and workbooks, teachers' materials, written tasks and activities, and other printed materials. In fact, teaching materials and textbook are often characterized along the same lines, due to the long tradition of textbook as the major material for teaching and learning. Henceforth, *teaching materials* or shorter, *materials,* will be the term used here, including all the above mentioned types of textual materials for the purposes of teaching and learning. Since this study investigates materials from the teachers' point of view, it is relevant here to refer to *teaching* materials instead of *learning* materials. However, it is acknowledged in this study that also learners play an active role as the users of materials, because materials are always intended for learning and, according to many (e.g., Jalkanen & Vaarala 2012), learners themselves should also have a central role in designing them.

4.1   The role of texts in education

Teachers' views of texts and literacy practices are worth a closer investigation in order to understand the underlying assumptions affecting teachers' materials design. The concept of literacy is essential when dealing with texts. According to Pitkänen-Huhta (2003: 15), literacy, as understood in the modern context, is used to refer to broader notions of using texts, which cover the activities of both reading and writing. Literacy practices are established and maintained in particular literacy events through the interaction with texts and participants of those events. Simultaneously, the discursive practices of the institution shape

their interaction and actions. This view is important from the perspective of the present study where the focus is on teachers' beliefs as reflected in their accounts of materials design. Teachers' ways of seeing materials, the aspects of materials they value over some others, and the interaction they encourage learners to have with texts largely determine the conceptions of texts and literacy practices the learners will have. Therefore, it is worthwhile to study teacher beliefs through their views of materials.

A special feature of a text is that it produces meanings. Meanings arise when the writer and the reader encounter at the text (Kupiainen & Sintonen 2009: 97). The text as a meaningful structure would not exist without this communication between the agents. An individual's reading skill can be described as the exchange of these meanings between the writer and the reader. The traditional concept of so-called autonomous literacy skills has today given way to the notion of multiliteracies, i.e., versatile literacy skills connected with the significance of the community (Barton & Hamilton 1998). There is not only one, general literacy skill applicable to all purposes, but instead, what are required are versatile, context-bound literacy skills. As an integral part of people's social reality, texts mediate many daily activities and play a central role even in the most every-day practices (Pitkänen-Huhta 2008: 335). Based on conventional literacy practices, texts are recognized to be a part of certain literary genres. One recognizes a particular text as teaching material, because one has been accustomed to the nature of textbooks during the long period of time of attending school. CLIL texts, however, face special demands due to their particularity as texts intended for non-native readers. These challenges will be dealt with in-depth in chapter 4.3.

The concept of *genre* is worthwhile to introduce at this point, because education tends to be based on texts with subject-specific genres. Genres and *text types* are often mixed up also in research (Paltridge 1996: 237), although they have profound differences. According to Biber (1988: 70), the basic difference between the terms is that genre categorizes texts on the basis of external criteria, while text types represent groupings of texts which are similar in linguistic form, irrespective of genre. From the point of view of the present study, Biber's perspective to genre seems to remain on the surface level, ignoring the internal features of texts that are included in Karvonen's (1995) view, suggesting that genres differ from each other in their aims, structures and linguistic features because they are always related to a certain cultural context. Genres exist in social communities and under their ideologies, e.g., school science genre is subordinate to the general aims of teaching and learning. Textbooks used in the classroom look the way they do with a particular audience in mind, and similarly, they reflect the intentions of their writer. In Pahl and Roswell's words (2007: 30), "texts […] carry the motivations of the producer". The texts used on a daily basis are clues to a particular culture, values, and belief systems. Tardieu and Dolitsky (2012: 10) argue that with texts from different cultures, CLIL classes can enable teachers and learners to compare cultural differences in the processing of subject matters and the

different ways "facts" are presented and interpreted. This resonates with Morton (2013: 129) who found out that CLIL teachers regard materials produced in another context as an opportunity to expand their own and their learners' pedagogic thinking. On the other hand, texts used in classroom are not invariably products of a restricted culture, but at one and the same time they are local and global, "glocal" (Pahl & Roswell 2007: 44). Textbooks, for example, depict local worlds with a global overlay. Publishers with global partnerships often recycle content in other contexts but put a local overlay on the same texts. From the CLIL perspective, glocal dimension seems to refer to content rather than language, thus aiming at more global content in the local context.

In educational settings, but particularly in CLIL where teachers are often responsible for designing materials and therefore have to command literacy practices, it is also important to distinguish the difference between genre and *register*. Different schools in research use different terms (cf. Biber's definition of *genre*). Halliday and Hasan (1976) understand *register* as linguistic features which are associated with a configuration of situational features. Thus, register is a variety of language used for a particular purpose or in a particular social setting. Llinares et al. (2012: 12) point out that the awareness of genres and registers facilitates teachers to design learning activities by sequencing the kinds of texts learners are to use (genres) and aspects of the language learners need to express knowledge of the school subjects (registers). Llinares et al. (2012: 14) use the broad term *subject literacy* to refer to the spoken and written language forms and texts through which content knowledge is accessed by CLIL learners. They define genres in the following way:

> Genres imply the different text types which learners of all subjects have to understand and produce. (Llinares et al. 2012: 14)

Llinares et al's definition of genre seems very explicit and easily applicable for CLIL and is therefore also adopted for the purposes of the present study. Further, using Halliday and Hasan's terminology, register can in the CLIL context, and also in this study, be referred to as "the grammatical and lexical resources used in building these genres" (Llinares et al. 2012: 14). Though the definition is narrow, it is considered sufficient in the present context where the focus is not in the textual features of materials but in teachers' beliefs about learning and language in CLIL as reflected in their accounts of materials. The profit for CLIL materials about teachers' knowledge of genres and registers is that teachers can identify these features in the materials they retrieve from various sources and highlight them for learners, thus enhancing CLIL as a context for content learning and language development (Llinares et al. 2012: 14, 16). Teachers' views of materials, as investigated in the present study, are also expected to reveal something about their understandings of genres and registers of the materials for CLIL and on their aims at certain genres and registers when designing materials for CLIL.

For a successful learning experience, educational texts require a repertoire of ways of dealing with them. Educational texts, first and foremost, aim at

stimulating, guiding and supporting learning (Krumm 2010: 1214). For example, Tan (2011: 328) argues that learning to engage in the discourse of science requires interaction with people, texts, technologies, knowledge and assumptions about the world. Many scientific texts are written for a highly literate audience, making them inaccessible for those who do not possess the requisite skills, though they would be excellent sources or complementary materials for teachers and learners. Given that educational texts in L1 are as demanding as Tan suggests, there is a true reason to be concerned about the level of understandability of CLIL texts which tend to be even more demanding than the educational texts in L1 (e.g., Pihko 2010). The language of science is also interesting from the CLIL perspective, since in many countries science is one of the most common subjects in primary education taught through a foreign language (see Méndez García's (2012: 197) study in the Andalucian context).

4.2   Introduction to CLIL materials

Materials are often considered a second class issue when developing teaching. However, it has been argued that high-quality teaching depends very much on the availability of high-quality teaching materials and without them, reformation of teaching is slower and more difficult (Heinonen 2005: 244). From this perspective, providing high-quality materials for CLIL is very important and it is often considered one of the keys for a successful CLIL programme (Nikula 2008b: 279). However, the Europe-wide debate on CLIL materials often focuses on the questions of "what isn't there" and "what should be there" (Morton 2013: 114). In fact, Finland is far behind many other European countries in the shared production of CLIL materials. Spain and the Netherlands, for example, have had a systematic, state-run production of materials for CLIL in English since the mid-2000s (see e.g., de Graaff, Koopman & Westhoff 2007b: 13; Muñoa Barredo 2011: 297). In the United States, on the other hand, the lack of teaching materials for CBI was recognized as early as the beginning of the 1980s in English-Spanish education (Mahone 1985: 6). Though plenty of materials were then available, teachers and researchers soon found out that materials could not be readily applied for local use because they did not respond well enough to the local needs. The challenge has remained the same for the last three decades and the problematics of designing materials for teaching through a foreign language has been widely recognized and considered one of the major drawbacks both in CLIL and CBI (e.g., Banegas 2012a: 48, 2014: 348; Cammarata 2009: 562; Ioannou Georgiou 2012: 500; Mehisto et al. 2007: 73; Mustaparta & Tella 1999: 20; Tedick & Cammarata 2012: S43). Yet, opposite views have also been expressed (e.g., Pena Díaz & Porto Requejo 2008: 154).

During the age of print, the book has comprised the text paradigm by mediating authorial voice as the voice of expert and authority, and by defining

relatively stable textual formats to ensure conformity. As long as over 30 years ago, however, demands were made to reduce the central position of textbook and take different learning styles into account (Gökce 1980: 103). According to many pedagogical orientations, such as Freinet pedagogy and Steiner pedagogy, materials are not a given. In Freinet pedagogy, the principle is to support learner autonomy and encourage teachers to create their own pedagogy (Finnish Union for Freinet Pedagogy 2013; Krumm 2010: 1216). Textbooks are not necessarily appropriate in this orientation. Similarly, Steiner education relies on the learners' activity in producing materials (Finnish Union for Steiner Education 2012). Still, the learning results are assured to be high even without standard textbooks. Through the ages, there have been individual pedagogical experiments in- and outside official education systems where textbooks have been abandoned and materials have been produced in a learner-oriented way (e.g., Mänttäri 1993). The success and life cycle of these experiments are very much dependent on the enthusiasm of an individual teacher.

It is noteworthy that pupils have been shown to prefer textbooks to other teaching materials due to their stable nature and flexibility in the case of rehearsing, for example (Elomaa 2009: 31). This holds true also for adult learners, as Olivares Leyva and Pena Díaz' (2013: 92) study on teaching materials in CLIL teacher training in the Spanish context revealed. CLIL teacher students expressed they felt more confident when using the textbook as teaching material. As Olivares Leyva and Pena Díaz remark, this is a striking observation since textbook-centred pedagogy is not recognized as an ideal for a modern language classroom and neither does it comply with the aims of CLIL. It also does not seem to be the way CLIL teachers usually work with materials. Morton's (2013: 129) study showed that most commonly CLIL teachers from four countries in Europe used a mix of different materials: textbooks intended for native speakers, CLIL textbooks, adapted authentic materials and their self-made materials.

A definition of good materials in all teaching and learning, also relevant for CLIL, has been expressed by Tomlinson (1998: 7):

> Materials should maximize learning potential by encouraging intellectual, aesthetic and emotional involvement.

This argument seems to support particularly the versatile nature of CLIL materials by encouraging teachers to the utilization of many different types of materials. What makes the designing of CLIL materials so special is the requirement to meet two learning aims simultaneously: content learning outcomes and foreign language development (Morton 2013: 117). This may be enhanced by involving learners in the subject matter at hand which is possible, for instance, through the stimulation of many senses and approaching matters from sometimes unexpected perspectives. This challenges learners to become active participants in the learning situation and ideally, to take more responsibility for their learning. (Illés 2009: 152-153.)

The lack of appropriate teaching materials for CLIL has emerged in many recent studies on CLIL (e.g., Morton 2013). Moate's (2011b: 338) results on CLIL teachers' sense of professional integrity in Finland show that it is extremely difficult for CLIL teachers to find suitable materials to supplement classroom teaching. Thus, some teachers of her study produced dozens of pages of text for a single course, or even scripted their lessons with bracketed pronunciation in advance. Studies conducted all over Europe support this finding. Sylvén (2010: 35), for example, describes that in Swedish CLIL classrooms, teaching materials are often compiled by an individual teacher, or they are collected of existing texts in the target language produced for other markets. In Hungary, several books and teaching materials for CLIL have been adapted from the target language countries as well as written by national material developers (Bognár 1998: 100-101). Also, studies conducted in Germany show that CLIL teachers spend more time on lesson and materials preparation than other teachers (Bonnet 2012: 67). CLIL studies conducted in Germany and Austria show that two thirds of the German biology teachers in CLIL (Kozianka and Ewig 2009: 137), 53 % of Austrian CLIL teachers of various subjects (Gierlinger 2007: 92) and 50 % of the Austrian history teachers in CLIL (Ziegelwagner 2007: 292) were not satisfied with the current situation of teaching materials in their CLIL subjects. An increased workload surfaced as another major complaint in these three studies, as many as 90 % of Austrian history teachers in CLIL complaining about the additional expenditure of time for materials design (Ziegelwagner 2007: 292). On the other hand, there are attempts (e.g. in Argentina) to promote the sales of EFL course books by adding value to them by labelling them as "CLIL books". Banegas (2014: 345) showed, however, that those books actually have very little to do with CLIL.

What often seems to follow from the lack of appropriate teaching materials for CLIL is the difficulty of ensuring the coverage of the contents of the national curriculum. To reach this aim, CLIL teachers often translate parts of or the complete L1 textbook into the CLIL language (e.g., Gierlinger 2007: 98; Kozianka & Ewig 2009: 139). However, translating textbooks in CLIL is strongly opposed by some researchers. Fernández and Halbach (2009: 54) argue that the lack of adequate training for CLIL teachers might end up with L1 textbooks translated into the CLIL language, an outcome which Fernández and Halbach do not consider desirable. They argue that very little change in classroom practices will take place if new CLIL teachers are not provided with time to rethink and reshape their own personal subjective theories about teaching. By translating somebody else's texts, this aim will not be met. In Finland, at least, textbooks strictly follow the curriculum and thus, keeping the textbook as a "guide", with occasional translations of it, may provide CLIL teachers with a reliable way of covering the contents of the curriculum. However, it would not do any harm if CLIL materials were proofread by a third party, as Viiri (2000: 163) suggests to be done for all teaching materials. In CLIL, in particular, revising the two aspects, language and content, would be highly beneficial to ensure the quality of the materials.

Since CLIL teachers all over Europe seem to face similar problems with materials design, it is of importance to look into this phenomenon through teachers' views, as attempted in the present study. Materials play a central role not only for teachers but also for pupils. On the basis of her study with children with immigrant background, Rapatti (2009: 77) remarks that children learning through a second language tend to be more dependent on teaching materials, usually on textbook, than children learning in their mother tongue. With the help of a textbook, it is possible to continue studying the subject matter at home if it has not become clear-cut during the lesson. Self-made materials (in any educational setting) are, however, supported by many. Kauppinen, Saario, Huhta, Keränen, Luukka, Pöyhönen, Taalas and Tarnanen (2008: 229) maintain that they advance learners' textual skills, including new media skills (in case the teacher promotes the use of ICT in teaching), and provide variation for teaching methods. In an ideal case, teaching without textbooks in CLIL might have the consequences described above, but on the other hand, shared, public teaching materials might better contribute to the uniformity of teaching and consequently pupils' equality in CLIL. This is how CLIL could be gradually developed from many different implementations towards a coherent concept with a uniform basis and goals. From the learner perspective, however, the lack of course books may not work in the desired way. Skinnari (2012: 81, 86) found out that the value of a CLIL lesson might have suffered in the eyes of pupils when no course books were used. Her study demonstrated that course books provided notably the successful pupils with many possibilities for learning.

Recent studies on CLIL materials suggest slightly contradictory results on the use of textbooks in CLIL. Morton's (2013) study on CLIL materials in four European countries, including Finland, indicated that more than 90 per cent of the teachers who participated preferred preparing materials from scratch and almost 90 per cent of them adapted authentic materials to make them more suitable for CLIL purposes. Instead, only 29 per cent of the teachers used textbooks intended for native English speaker learners. However, two other recent studies on CLIL materials show that pupils regard texts intended for CLIL as difficult, sometimes to such a degree that they drop out of CLIL (Apsel 2012; Pihko 2010). In Pihko's (2010: 53-55) study, conducted among CLIL learners of two Finnish secondary schools, several pupils reported great, continuous difficulties in the comprehension of history texts. This was caused specifically by the target language (English) coursebook used in CLIL history lessons. According to the respondents, the greatest hindrance with the coursebook was that it had not been designed to the level and needs of Finnish learners, but for the L1 learners of the target country. Pupils reported that the foreign coursebook used in teaching history through English was too difficult for their level of English.

Pihko's results are supported by Apsel's (2012) study conducted on CLIL dropouts in Germany. Apsel (2012: 54) found out that pupils who dropped out of CLIL faced difficulties with textual materials and with the learning of vocabulary. In the ample research on textbooks in mainstream education, the

difficulty of textbook texts to the intended target group has often been suggested (Aalto & Tukia 2009; Julkunen 1988; Julkunen, Selander & Åhlberg 1991; Mikkilä-Erdmann 2002; Mikkilä-Erdmann, Olkinuora & Mattila 1999; Saario 2012). Similar findings have been reported in research on texts for immigrant students. In Rapatti's (2009) study on Finnish-language history texts for pupils with immigrant background in Finland, the results showed that pupils could not read history texts, because they did not understand anything about them. However, elaborated history texts were considerably easier for them, and they were able to read and debate enthusiastically about them. It seems, then, that difficulties with foreign language texts can be, if not completely overcome, at least reduced by adapting them. Thus, the present study focuses on a remarkable research gap, teachers' beliefs revealed through their views of adapting authentic texts for CLIL and of the adaptation strategies they resort to.

4.3 Taking learners' level of language and knowledge into account in materials design for CLIL

The challenge with CLIL materials both from the teacher and learner perspectives rises from the fact that materials have to be addressed to the applicable linguistic and cognitive level of their intended target group. In all teaching and learning, of course, the target group has to be taken into account, but this demand becomes more visible and pronounced in CLIL where teaching and learning take place in a foreign language. Therefore, it is widely acknowledged in CLIL literature that materials may be adapted or written specifically for a particular CLIL programme (e.g., Llinares et al. 2012: 2; Morton 2013: 114). In this way, the content and language of authentic texts are adjusted to the level of the target group. It has been shown earlier (Morton 2013: 127) that the applicability of materials to learners' age and cognitive and language levels is one of CLIL teachers' major concerns. Morton's results suggest that when not adapted (or produced completely from scratch) CLIL materials cannot meet the linguistic or cognitive needs of CLIL learners.

Despite adequate theoretical frameworks for appropriate materials for teaching through a foreign language, it seems that the demands for effective materials are not always met. Stoller (2004: 268-269), for example, argues in the CBI context that few, if any, teaching materials are appropriately placed at the centre of the language and content continuum. Also in CBI, Snow (1993: 52), on the other hand, gives priority to language over content, claiming that "since we are in the business of language teaching first and foremost, all decisions about curricula and materials must consider their exploitability for language teaching purposes". From this point of view, it might be concluded that materials for teaching through a foreign language should primarily support language learning. This study, however, takes a stand that language and content are

equally important in CLIL, both being key elements where one cannot exist without the other. In CLIL materials, this can be taken into account by varying the focus of an activity, for instance. As Llinares et al. (2012: 199-200) suggest, some activities could integrate a focus on formal features which would push the learners to use specific forms while focusing explicitly on meaning and content. Some activities, on the other hand, could have vocabulary and concepts as their premise, thus bringing the content into focus.

An interesting finding about CLIL teachers' views of language was revealed in Banegas (2012a: 402), illustrating that CLIL teachers felt they failed to achieve the language-in-use aim since the activities they designed were content-orientated and did not provide vocabulary or grammar practice. This finding seems to imply that teachers consider language in CLIL primary to content and prefer vocabulary and grammar practices to content-orientated activities. Therefore, teachers seem to consider language as a set of words with syntax arranging them (formal view) and not as action (functional view). However, all teaching includes language teaching because people operate through language. Materials design for CLIL has also been approached from a language perspective by de Graaff, Koopman and Westhoff (2007b: 14) who introduce five basic assumptions related to effective teaching performance in CLIL:

1. text selection in advance
2. text adaptation in advance
3. adaptation of teacher talk in advance
4. text adaptation during teaching
5. tuning of teacher talk

This study benefits most from de Graaff et al's (2007b) assumptions 1, 2 and 4, which specifically focus on the use of texts in CLIL. These three arguments will be dealt with more in-depth in the following paragraphs. The remaining two assumptions (3 and 5) are not relevant for the present data which do not have classroom interaction in focus. De Graaff et al. explain the first assumption, text selection in advance, by stating that a CLIL teacher is expected to select input material before a lesson in order to have it challenging but comprehensible for learners. Teachers facilitate exposure to input at an appropriate level of the learners by selecting attractive authentic texts which they adapt up to their level. Kumaravadivelu (2006: 65) and Schleppegrell and O'Hallaron (2011: 13) are in line with this argument. Kumaravadivelu argues that language should be presented to learners in such a way that they recognize it as potential language input. Further, Schleppegrell and O'Hallaron point out that content teachers need to understand the language demands of the genres of their subjects and to analyse the texts they plan to use in teaching with this understanding in mind. Content teachers should also be able to discuss language features with their pupils, and for this, they need to develop a metalanguage. Indeed, the language aspect cannot be underlined too much in

CLIL, given that many CLIL teachers do not have a language teacher background or a university degree in a foreign language.

For de Graaff et al's (2007b) second assumption, text adaptation in advance, various ways of adaptation can be used. For example, teachers can facilitate the learning process by stimulating learners to request new vocabulary items, or check their meaning. Thus, de Graaff et al's suggestions for adaptation call for varied, high-quality materials. De Graaff et al's fourth assumption relates to text adaptation during teaching. Under this category, de Graaff et al. found that teachers facilitate output production by encouraging learners' reactions, working in different interactive formats and practicing creative forms of oral and written output production. From the point of view of the present study, it can be argued that well-prepared teaching materials also facilitate teachers' management of texts in classroom. This might also support Moore and Lorenzo's (2007) suggestion of producing materials from scratch by relying on a teacher's thorough competence of both the content and language of the self-produced materials.

Sometimes, CLIL teachers resort to the use of L1 in CLIL materials. This topic has, in fact, seldom been highlighted in CLIL research. Although the general opinion among researchers about the use of L1 when teaching through a foreign language is reserved, if not negative, it seems that a few researchers are in favour of using L1 in certain materials (e.g., Coelho 1998: 151; Peachey 2003: 2). Peachey (2003: 2), for example, suggests that at lower levels the teacher could either use texts in L1 and then make pupils use the target language for the sharing of information and end product, or have texts in the target language, but allow the pupils to present the end product in L1. Coelho (1998: 151), on the other hand, maintains that a teacher should provide reading materials both in L1 and the target language. Depending on the aims of different CLIL programmes, the position of L1 varies from weak to strong. A general approach seems to be the aim of learning the content in both L1 and the target language. In such cases, teaching materials in both languages would be useful, but if not available, providing learners with glossaries would be a minimum requirement to ensure learning the concepts in both languages.

As the above discussion indicates, it seems evident that in order to provide learners with materials on the appropriate language and content level, materials generally have to be adapted (e.g., Brinton, Snow & Wesche 2003: 93; Cammarata 2009: 580; Doyé & Héloury 2007: 188; Lasagabaster & Sierra 2010: 372; Moore & Lorenzo 2007; Schleppegrell & O'Hallaron 2011: 13; Tan 2011: 327). As Moore and Lorenzo (2007: 29) point out, the aim of adapting texts is to make them linguistically accessible at the learners' level and cognitively suitable for the learners' age. However, as McGrath (2008: 63) alludes, definitions of adaptation can be very broad, ranging from Madsen and Bowen's (1978: ix) "supplementing, editing, expanding, personalizing, simplifying, modernizing, or localizing" to Tomlinson's (1998: xi) "reducing, adding, omitting, and modifying" and Simensen's (2009: 192) "abridging, retelling, and rewriting". Brinton et al's (2003: 93) description of adaptations in the language class as

"individualiz[ing] materials to more closely correspond to the needs and types of students" is very illuminating also in the CLIL context. Hence, Brinton et al's definition will serve as the guideline of understanding adaptations in this study, interpreting all the afore-mentioned means of modifying texts as adaptations.

More specifically, in the analysis of this study, the teachers' accounts of the adaptations of CLIL materials will be reflected on Lorenzo's (2008) three-fold classification of adaptations in CLIL texts. Lorenzo's model is based on a range of research conducted on adaptations, but the ones worth mentioning here are Chaudron (1983), who found out that syntactic simplification and elaboration (i.e., reducing cognitive complexity without major alterations of the original) supported young adult second language learners' recognizition of words. Moreover, Yano, Long and Ross (1994) discovered that a group of Japanese college students understood simplified and elaborated texts considerably better than texts in a native baseline form, and Oh (2001) showed that elaboration, in particular, facilitated the EFL reading comprehension of Korean high school students. Lorenzo's (2008) classification will be introduced at length a few paragraphs below.

When looking at materials, CLIL is not the only educational approach where materials are often adapted. In fact, as Tomlinson (2012: 151) argues, teachers of all subjects working at all levels adapt materials systematically or intuitively every day. Given the frequency of adaptation, however, there is surprisingly little help for teachers in the literature. This is distinctly an important topic in this study and worth exploring further in future research. Depending on the target group, subject, and other factors, teachers resort to different methods of adaptation. A review on research literature on the challenges with teaching materials for pupils with immigrant background (e.g., Aalto 2008; Rapatti 2009; Saario 2012) reveals many similar features between CLIL and teaching pupils with immigrant background. Hence it can be assumed that also adaptations in CLIL materials and in materials for pupils with immigrant background share a number of features.

Research suggests that CLIL teachers use more written material than teachers in corresponding L1 instruction (Nikula & Marsh 1999). As textual materials play an important role in CLIL, also adapting texts to suit the target group is a key issue. It has been indicated (e.g., Ziegelwagner 2007: 292) that teachers generally regard authentic foreign language materials as too difficult to CLIL learners as such and recognize the need for didacticising and simplifying them. According to Howard and Major (2005: 101), by adapting materials, teachers can take the particular learning environments of their groups better into account. However, CLIL teachers often face difficulties with adaptations. As Barbero (2007: 290) argues, adapting materials requires that teachers' linguistic awareness allows them to determine readability levels of different texts. Another option is to work closely with language specialists in order to be able to accurately judge the linguistic demands of specific texts and genres. Attention needs to be paid to the quality of language, degrees of authenticity, etc. Awareness of the complexity of CLIL language allows teachers to adapt

materials to allow comprehensible input and to elaborate activities. Rasinen (2006: 46) argues that searching and preparing linguistically applicable teaching materials for CLIL is every-day life for CLIL teachers. This is the major reason why teachers need to fully understand the linguistic demands of pedagogical texts for CLIL.

One significant challenge in adaptations is adopting materials from other countries. This poses a number of different problems, e.g. different curricula between countries, cultural differences, etc. Materials designed for one country are usually not readily transferrable to another. In Schleppegrell and O'Hallaron's words (2011: 13), when aspiring to offer their learners a challenging and motivating curriculum, teachers may modify prepackaged curricula in light of the needs of a particular group of pupils without reducing the cognitive demand of the curriculum. When modules are taught through CLIL, combining materials from different environments can also have positive effects by providing different perspectives towards the content matter (Nikula & Marsh 1999). Curricula in different countries include various views of learning and language, often implicit and difficult to perceive. These views have in times been an object of some criticism. Tapscott (2009: 139) equally maintains that in the US context a curriculum is based on predigested information and structured for optimal transmission. In Finland, however, the object of criticism in the national curriculum has been the opposite: not providing specific enough advice for implementation. Further, Tapscott's argument does not seem to take into consideration that following the curriculum and using learner-centred teaching methods are not exclusive. In Finland, for example, curriculum is the guideline for teachers to cover the contents while their teaching methods, materials and other external factors in classroom are their individual decisions.

Several researchers have categorized adaptations in CLIL materials in different ways (e.g., Borzova 2008; Gierlinger 2007; Lorenzo 2008). The most applicable for the present study seems to be Lorenzo's model which will be presented here with suggestions for its application for the needs of the present study. Lorenzo's (2008) model of three major ways of adaptations is based on Moore and Lorenzo's (2007) study on CLIL teachers' adjustments of authentic texts for CLIL classroom. This model is applicable to the purposes of the present study when looking into CLIL teachers' accounts on adaptations reflecting their views of learning and language in CLIL. In Moore and Lorenzo's study, 23 CLIL teachers in Spain were given an authentic history text from an on-line site with instructions to adjust it in ways they considered appropriate. The target group consisted of lower secondary students who study through CLIL for the third year and are approximately on a B1 level according to the CEFR. As a result, Moore and Lorenzo identified three distinct approaches to adaptation: *simplification, elaboration* and *rediscursification*. Lorenzo (2008) has further defined these stances, and since this is seen to be of use for the purposes of the present study, it will be applied when showing the present respondents' adaptation measures.

Lorenzo (2008) names *simplification* as the most basic input modification strategy. It involves an attempt to lower linguistic intricacy by less complex vocabulary and syntax (Oh 2001: 70). In Moore and Lorenzo's (2007: 31) data, simplifications were primarily lexical, such as replacing the term *cruciform* with a more descriptive word *cross-shaped,* or omitting the text, e.g., explaining that *there are common characteristics to cathedrals* but not specifying what those characteristics are. According to Day and Bamford (2009: 237), simplification can be used for at least two different types of materials: texts simplified from first language originals and texts written specifically for second language learners. Crossley, Louwerse, McCarthy and McNamara (2007: 16) point out that simplified texts are often seen as valuable aids to learning because they reflect what the reader already knows about language and can on this basis extend this knowledge. Simplified texts also contain increased redundancy and amplified explanation. However, this strategy entails a danger of oversimplification, as shown by Banegas (2014: 345) in the case of CLIL-oriented EFL course books in Argentina. Lorenzo (2008) names typical simplification strategies to be reducing mean length index, i.e., the number of words per sentence, and restricting the range of vocabulary. However, Lorenzo remarks that the latter strategy cannot be totally followed in CLIL settings where subject-area vocabulary must appear to be able to deal with complex scientific phenomena.

Simplification has not only been favourably reacted to. It has been argued, for example, that when simplifying authentic texts for young learners, the real-life characteristics of the original text will be lost (Widdowson 1983), which will deny learners the opportunity to learn the natural forms of language (Crossley et al. 2007: 16). Further, according to Crossley et al. (2007: 16), research has not shown that simplified input would facilitate language acquisition. Another concern with simplification has been artificially restricting language structures (Miramontes et al. 2011: 66). A general claim has also been (e.g., Crossley et al. 2007: 17; Ellis 1994; Oh 2001: 71) that the use of simplified texts may complicate the message of the text, the intention thus turning to counterproductive.

The second adaptation practice suggested by Lorenzo (2008) is *elaboration*. Texts that undergo elaboration aim at reducing cognitive complexity without major alterations of the original linguistic texture. The purpose is to make the meaning clear, but not by reducing the language. In Moore and Lorenzo's (2007: 31) data on CLIL teachers' adaptations of a history text for lower secondary school children, elaboration showed, for instance, as increased personalization through the use of the pronoun *we* and as redundancy by highlighting and rephrasing important points. Indeed, as Lorenzo (2008) points out, elaboration strategies tend to lengthen original sentences further, through paraphrasing, repetition and appositions. Elaborated texts often have more words per sentence and more nodes than the original, since they add information to help contextualize the difficult bits.

Research supports elaboration as a worthwhile adaptation practice. Oh's (2001: 69) comparative study on Korean high school students' EFL reading

comprehension between simplified and elaborated texts shows that modifying texts in the direction of elaboration is more profitable than simplification. Oh found out that elaboration retains more nativelike qualities than simplification and is at least equally successful as simplification in improving comprehension. Consequently, the learners' progression to fluent reading of authentic materials is supposed to be accelerated through elaborated input. After all, as Oh (2001: 91) mentions, the ultimate goal of foreign language reading instruction is for pupils to read unmodified materials. Elaboration has also been developed to a great extent in teaching pupils with immigrant background where the results of the use of elaborated texts have been encouraging (Rapatti 2009: 84).

Last, Lorenzo (2008: 24) brings out *rediscursification* as the third means of adaptation. Rediscursification is particularly a way of making content more understandable for learners with limited competence in L2 (Lorenzo 2013: 375). Rediscursification does not operate only on sentence or text level. Although the process of rediscursification modifies sentences and texts, the changes predominantly arise from a discursive interpretation of the educational context where the text will be read. Lorenzo (2008: 24) describes the end product of rediscursification in the following way:

> The new discursive reality prevails over the original text retention, and only the naked macrostructure of the text is retained. Adjustments tend to be bolder and have a larger scope […]

In Moore and Lorenzo's (2007: 31, 33) data, "easification devices" typical of rediscursification were found: adding visuals and glossaries as well as redesigning the text layout. Most importantly, the genre of the text changed: a scientific text became a pedagogic text.

Some critical voices have been heard in the context of adaptations. Musumeci (1993: 174-175), for instance, warns teachers not to "dummy down" the text for learners, because too simple a text will destroy its discourse features. Hajer (2000: 267) shares Musumeci's fear by giving an example of teachers who transformed, or "skeletonized", materials promoting higher-order thinking skills in the target language into lower order tasks. Musumeci's solution to the target language texts of an applicable level is to make the learners evaluate whether the text is at an appropriate linguistic and cognitive level. She does not believe that teachers could in all cases estimate the appropriate level of texts, because learners can, according to Musumeci (1993: 174), tackle texts that teachers think are too advanced. She emphasizes that textbooks are not written to be read independently by learners, but instruction provided by the teacher is assumed to accompany the text. Further, adaptations have been criticized from the perspective of communication. Hondris et al. (2007: 321) argue that by using artificial, unauthentic sentences, pupils can never acquire communicative competence, i.e., naturalness in the use of the target language. They also suggest that prefabricated texts describe the language not as it really is but as the adaptor considers it to be. As a counterargument one could claim that texts are

always their writers' interpretations of the world. There are no neutral texts, because the writer is always present in the text.

In the field of SLA, a widely held assumption seems to be that authentic materials, signifying non-adapted materials, should be used in language teaching, originated with the communicative turn in language teaching in the 1970s (Day & Bamford 2009: 233-234). Many attempts have been made to define authentic materials, often resulting in parallel conclusions. Nunan's (1988: 99) commonly quoted definition is as follows:

> 'Authentic' materials are usually defined as those which have been produced for purposes other than to teach language.

A common factor in the attempts to define authentic materials used for SLA is that they are not originally intended for learning, but rather to fulfill a social purpose in the language community for which they were intended (Crossley et al. 2007: 17). According to van Lier (1996: 13), authentic materials are texts (or pictures, realia, etc.) not especially prepared for the language learner, but rather "taken from the world at large". Morrow (2009: 156) emphasizes the real context authentic materials are produced in, regarding an authentic text as "a stretch of real language, produced by a real speaker or writer for a real audience". In the CLIL context, Gierlinger (2007: 96) adds that authentic materials are produced for native speaking children of the language learner's age.

One reason for preferring authentic materials in language learning is the possibilities they provide for authentic communication, which means practicing real-life situations, such as booking a hotel room or ordering a meal. In the field of SLA, Tomlinson (1998: 7; 2012: 162) defines authentic tasks described above as something that "involve the learners in communication in order to achieve an outcome, rather than practice the language". Underlining learners' exposure to language in authentic use through applicable materials, Tomlinson's perspective can be seen as learner-orientated, positioning learners in the centre of language use. According to Clarke (2009: 211), recognizing the original communicative value of authentic texts entails an understanding that every detail of the text does not have to be understood and scanning-type of reading is accepted. In the CLIL context, Moore and Lorenzo (2007: 29) take authentic to imply both non-pedagogic materials from the general media and specifically didactic content materials produced for the native speakers of the target language. They underline that one of the prime requisites of authenticity is genuine communication: the text must convey a message. The present study shares Moore and Lorenzo's view of authentic materials because both non-pedagogic and didactic materials from the target language country represent an authentic way of expressing content through these particular media.

Research suggests that authentic materials are also favoured from the learner perspective. Ylönen (2008) showed in her survey on the use of the German Euromobil programme that learners value an approach that applies authentic, learner-orientated materials. By aiming at high authenticity of

materials, tasks and text types will be varied and "exploitable", i.e., include a range of language functions and structures (Brinton et al. 2003: 89; Snow 1993: 52). However, it is more difficult to find authentic materials, which do not require some form of treatment or adaptation, for young learners, that being the target group of the materials of the CLIL teachers in the present study. As Moore and Lorenzo (2007: 30) argue, one of the biggest challenges for the teacher lies in ensuring that the materials in CLIL are both linguistically and cognitively accessible for the level of their learners.

CLIL learners will inevitably face incomprehensible input when dealing with authentic texts. Hondris et al. (2007: 321) claim, however, that the more authentic materials are used in CLIL classroom, the more comfortable pupils will gradually feel with them and, in time, can study texts with unfamiliar words more and more fluently. This may be true for older students, but young learners with modest CLIL language competence will presumably face constant difficulties dealing with authentic texts. Communication and interaction in the classroom seem practicable ways of making challenging input understandable for learners. From the point of view of intercultural awareness, authentic materials are also applicable. According to Ylönen (2008: 24), they allow learners to experience linguistic behaviour as context-bound interaction which will ultimately promote transfer between receptive and productive output in the target language.

However, as van Lier (1996: 126) remarks, it is easy to bring genuine pieces of language into the language classroom, but to create authentic opportunities for language use appears to be quite another matter. Van Lier's and many other researchers' usage of the term "authentic" in the context of language learning is problematic because communication in teaching situations is also authentic as such. The question is rather if this kind of communication for teaching purposes is relevant and meaningful for students in "real life". The importance of creating such opportunities is widely shared in research literature (e.g., Brinton et al. 2003; Coyle et al. 2010; Howard & Mason 2005; Jalkanen & Vaarala 2012; Tomlinson 2012). In Brinton et al's (2003: 94) words, not only the materials, but the actual use to which materials are put has to be authentic (or again, preferably relevant or meaningful). Another question is how to assess learners in bilingual education in an authentic way. Martínez López and Cantero García (2014: 137) introduce the term authentic assessment, defining it as "valuing the capacity of the student to solve competently the problems they meet in real life". In the CLIL context, Coyle et al. (2010: 11) suggest that providing learners simultaneously with instruction in a foreign language and a possibility to experience real-life situations in which they can acquire the language in a naturalistic way is a means for successful language learning. Undoubtedly, natural situations for language development also build on other forms of learning.

Researchers seem to disagree on the appropriate proportion of authentic materials in CLIL. Promising results about using authentic materials have been obtained e.g., by Latifi, Youhanaee and Mohammadi (2013: 18) who studied in

the Iranian context the learning results of two intermediate learner groups, one of which used pedagogical films and the other authentic films as teaching materials. The results indicated that when allowed the same training and exposure time as for pedagogical materials, authentic materials were, in fact, more effective than pedagogical materials. For example, the use of authentic materials had a significant positive effect on the listening comprehension improvement of the learners (Latifi et al. 2013: 18). In contrast, Gierlinger's (2007) study on Austrian CLIL teachers' views of teaching materials for CLIL clearly showed two-fold attitudes towards the use of authentic materials. Less than one half of the teachers approved of the use of authentic materials, and though approved, four out of five teachers used simplified materials, adapting authentic texts linguistically to the learners' level of competence. Also, teachers seemed to consider the concept "authentic" from a normative linguistic rather than from a practical usage point of view, which might imply that the concept is indeed not, as argued above, a successful choice to describe classroom activities relevant and meaningful for students' real life and may therefore be seen as remote and too ambiguous to be fully understood by teachers.

The learning aims of a particular age, theme or subject constitute an important framework for primary school materials. From the point of view of the present study, by adapting materials teachers do not aim at conveying a simplistic view of the subject matter. Instead, they make every effort to enable learning at the level appropriate for the pupils' current content and language level. Thus, in careful professional use, adapting should not be seen as a threat for pupils' educational development, but as a way of facilitating their learning in a foreign language.

4.4 Future of teaching materials for CLIL

Today, the traditional teaching materials are not nearly the only source of information for learners. Since searching information from various sources, e.g., the Internet and social media, seems to be rapidly increasing in all educational settings, it is important to shed light on the various forms of teaching materials available in the future. As Luukka et al. (2008), Suoranta (2003), Sylvén (2006) and Sylvén and Sundqvist (2012) have demonstrated, it is more often a rule than an exception that learning, including language learning, takes place uninstructed and spontaneously beyond the classroom through e.g., the Internet, online games, TV, music, etc. Suoranta (2003: 151) acknowledges that schools are also a part of media culture today, since subject contents are recycled through popular culture. This view is supported by Kalaja et al's (2011: 53) study on the foreign language learning of Finnish university students of English. The results indicate that besides materials used in classroom, students utilized a number of materials and social resources beyond the classroom, e.g., television, movies, music, radio, the Internet, books, magazines, and other people. It is probable that also in CLIL, foreign language is learnt through many

channels. However, the pupils' age is an important factor to be taken into account in materials selection in primary school. Cooperation in materials production (e.g. between content teachers and EFL teachers, curriculum designers and publishers) is suggested as one of the keys to quality CLIL materials (Banegas 2014: 357).

While there seems to be a tendency towards a differentiation of the textual worlds of school and students' freetime, Jalkanen, Järvenoja and Litola (2012: 67) suggest a fundamental rethinking of the contents of learning, as well as learning approaches and environments. In a similar vein, Suoranta (2003) and Wedell (2009) maintain that school and education systems today need to be updated to better answer the demands of modern society. Suoranta (2003: 144) argues that the significance of school in transferring knowledge has decreased in the modern media culture. According to Wedell (2009: 15), education systems should prepare learners for a world in which knowledge is continuously being constructed and re-constructed. The authority of school no longer functions in the present society where a galore of information is available beyond the classroom. Learning is no longer about transferring knowledge but about creating new learning environments and ways of information retrieval and continuous update of knowledge. (Suoranta 2003; Wedell 2009.)

The application of ICT for teaching is currently in the centre of vivid public discussion particularly in the social media (see, e.g., ICT in Education 2012; Opeblogi (Teacher blog) 2012; Social media as learning support 2012; Sillanpää 2012). The trend in these discussion forums seems to be towards digital learning environments, with printed materials condemned as outdated, not only because of their long writing, printing and delivery process (Gutiérrez Bermúdez 2014: 99). Since the participants in the social media forums are mostly teachers who are experts in using ICT for educational and other purposes, it is obvious that the perspective of a teacher who is not able or willing to use ICT in teaching is easily ignored. CLIL teachers are bound to command a great deal of ICT for educational purposes due to their need to design materials. The tendency in CLIL seems to be more and more towards digital materials. Again, teachers' beliefs play a crucial role in adopting technological innovations for teaching (Lam 2000: 391; Sarýçoban 2013: 77). Lam (2000: 405) found out that one of the reasons why teachers did not apply computers for language teaching was that they did not want to give up their expert role in the classroom. In this light, Sarýçoban's (2013: 86) suggestion of providing teachers with knowledge of ICT and making them competent users of educational technologies already in teacher training is to be supported.

What is especially important in learning during the Internet era is the skill of analyzing and combining information, and, above all, taking up a critical attitude towards it. Pahl and Roswell (2007: 27) point out that texts that young people deal with are typically multimodal and this has shifted how young people engage with literacy. Learners move across and among texts, design texts, render images, and so on. For the learners of the Internet generation, it is natural to design, surf and write on-screen. These activities are well in line with

CLIL materials, typically combined from many different sources and not always directly applicable to the curricula, thus requiring learners to critically assess the knowledge they contain. Along with the development of educational technology, CLIL materials are likely to contain more and more multimedia elements and possibilities to search for more details when necessary.

Research shows that utilizing information technology in teaching supports building knowledge structures, sharing, searching for and presenting knowledge, promoting interaction and publishing knowledge in a visible form. Technology-based learning environments offer possibilities for understanding complicated phenomena, e.g., by enabling learners' participation in challenging cognitive tasks (Järvelä, Järvenoja, Simojoki, Kotkaranta & Suominen 2011: 42). Barab, Kling and Grey (2004) maintain that environments that utilize modern learning theories and ICT can at best challenge teachers and learners for creating a new learning culture and offer substantial benefits for teaching materials. From the perspective of CLIL materials design, it seems essential that CLIL teachers possess good ICT skills. Accessing Internet materials banks and numerous video clips, sounds and images enables a teacher to create varied multimedia materials, keeping up learners' attention and thus contributing to better learning results. According to Arnold and Rixon (2008: 51), multimedia materials also offer considerable resources to learners who wish to work independently.

It is hard to predict the future of printed teaching materials, and the only thing possible to say for certain is that the development of giving up printed materials has been extremely slow, considering that ICT for educational purposes has progressed leaps and bounds in a relatively short time. This may imply that the status of printed materials will not be easy to challenge, though there are various small-scale experiments in schools to introduce digital textbooks (Laaksonen 2014: 30). Undoubtedly, equipping classrooms with relevant ICT and providing teachers with training for the use of different ICT applications will support the more general use of ICT for educational purposes. CLIL, as a forerunner in many respects, could also lead the way in adopting digital materials and other innovations of the latest ICT for educational purposes.

5   METHODOLOGY

The present study aims at exploring CLIL teachers' beliefs about the role of learning and language in CLIL as reflected in their accounts of teaching materials. Special attention will be paid to the ways beliefs direct teachers in the design and use of materials which, in turn, has been shown to have a considerable effect on learning results (Niemi 2004). Another purpose is to find out what CLIL teachers' assessments about the need to adapt teaching materials for CLIL reveal about their views of learning and language in CLIL and what strategies they use for adapting materials for CLIL. Further, the study attempts to explore how CLIL teachers' expertise is reflected in their understanding of CLIL materials and, consequently, in their views of learning and language.

The theoretical foundation of the study is based on wide research on CLIL, teacher beliefs, theories of learning and language, and teaching materials. As described above, the theoretical models applicable for the roles of language in CLIL will also be applied. One of these models is Cummins' (2000) quadrant, which has BICS/CALP as its theoretical foundation (see chapter 3.1). To put it simply, Cummins' quadrant can be described as an instrument for classifying tasks in teaching materials. In this study, however, rather than investigating materials, Cummins' model will be applied to classifying teachers' views of materials. When presenting the results, the teachers' views of the level of content and language in materials will be constantly reflected to this quadrant. Furthermore, the teachers' assessments about the need to adapt teaching materials for CLIL are expected to reveal how they understand CLIL and how they see learning and language. The model of three adaptation methods, i.e., simplification, elaboration, and rediscursification, introduced by Lorenzo (2008) and Lorenzo and Moore (2010), will assist conceptualizing and outlining the various ways of adaptations CLIL teachers assess necessary. This outline of adaptations was introduced in detail in chapter 4.3.

As pointed out above, teachers' beliefs about the role of learning and language in CLIL are a productive object of investigation, because beliefs influence all human action, e.g., the way one perceives things and acts in the world and how one sees oneself. It has also been demonstrated that teachers'

beliefs about learning and language have a significant influence on their pupils' beliefs about them (Correa et al. 2008: 140; Pena Díaz & Porto Requejo 2008: 151; Tsui 2003: 61). In this study, CLIL teachers' beliefs are looked into through the extensive research on teacher beliefs summarized in chapter 3.3. The fundamental idea in all research on beliefs is that teachers' prior knowledge and life experiences strongly affect the way they perceive the nature of learning and language (Huerta 2011: 38; Kagan 1992: 67) and have a powerful influence on their classroom practices and ways of designing and using materials (Tsui 2003: 61). Teachers' professional growth often gives rise to revising beliefs. The data will also be looked into from the perspective of teacher expertise because the level of CLIL teachers' expertise is expected to have an influence on their beliefs about learning and language. In this way, the present study recognizes the connection between the growth of teacher expertise and the change of teacher beliefs. The influence of expertise on teachers' beliefs will run like a thread throughout the Results section.

Combining methods of different research orientations was considered a necessity to reach the goals set for this study in as a reliable way as possible. Therefore, this study also adopts some basic ethnographic techniques, the link with ethnography being essentially methodological (Wolcott 2008: 44). Ethnography is understood as descriptively "telling it like it is from the inside" (Brewer 2000: 10). Like ethnographic research, this study focuses on a specific cultural phenomenon (Riemer 2009), i.e., CLIL teachers' understanding of learning and language through teaching materials for CLIL. The phenomenon is partially approached through ethnographic data collection, e.g., by conducting in-depth interviews and collecting documents (diaries and teaching materials) designed by the respondents. Similar to ethnographic research, this study aims at understanding and interpreting the behaviour and values of a social group, i.e., CLIL teachers, in relation to their teaching materials. On the other hand, the analysis of the present data has been inspired by Jackson and Mazzei's (2012) aspiration to hear contradictory voices in the data, voices that do not necessarily conform with the 'mainstream' views. Thus, rather than consistently seeking stability within the data, the intention of this study is to examine both the differences and similarities emerging in the analysis. Looking into the data through different theoretical "lenses", such as Cummins' (2000) quadrant and Lorenzo's (2008) and Lorenzo and Moore's (2010) model of adaptations is expected to bring a fresh perspective to CLIL research. In the following chapter, the purpose of the study and the research questions will be dealt with.

5.1 Aims and research questions

The main purpose of this study, finding out what teachers' beliefs about the design and use of materials for CLIL reveal about their understanding of learning and language, is divided into three main areas of interest. The first aim is to explore how CLIL teachers in Finnish primary schools refer to the

questions of learning and language in their views of teaching materials for CLIL. The object of interest will be in the distinct ways teachers refer to learning and language in the connection of the design and use of CLIL materials. The second aim is to discover if and how CLIL teachers express the need to modify materials they adopt for CLIL, and in the case of adaptations, to illustrate what strategies they use. It is important to investigate adaptations as an individual topic, because the teachers' views of them are expected to reveal, whether implicitly or explicitly, their beliefs about learning and language in CLIL. By searching answers to the questions about adaptation, the purpose is also to shed light on the goals teachers at primary level aim at with CLIL materials and on the measures they resort to in order to reach these goals. The third topic worth investigation is how teacher expertise is reflected in CLIL teachers' understanding of CLIL and their views of learning and language. Teacher expertise is here understood as the combination of teaching experience in CLIL and training received in CLIL. Thus, the research questions of this study are the following:

1) What do CLIL teachers' accounts of materials design and use reveal about their beliefs about learning and language?

2) What do CLIL teachers' accounts of the need to adapt materials and their strategies of adapting materials for CLIL reveal about their beliefs about learning and language?

3) How is CLIL teachers' expertise reflected in their views of learning and language?

With the help of these research questions, the aim of the present study is to open insights into CLIL teachers' beliefs about learning and language, provide CLIL practitioners and publishers with general suggestions about designing CLIL materials, and contribute to language political suggestions for CLIL teacher education and in-service training.

5.2   Data collection and research process

5.2.1   Respondents

The respondents of the study consist of thirteen primary school teachers who teach content subjects to grades 3 – 6 in English, the pupils' ages ranging from 9 to 12. The teachers come from ten different schools from Southern, Western and Eastern Finland. All the schools are situated in cities with populations ranging from 20 000 to 250 000 which corresponds to Kangasvieri et al's (2011: 25, 55) observation that CLIL is offered mostly in urban areas in Finland. The number of pupils in these schools ranges from 250 to 400, which in the Finnish context

exceeds the average school size. The respondents' ages span from 28 to 60 (median = 43.5 years), and they form a rather homogeneous group in respect to their ethnic and educational backgrounds. The majority of the respondents are class teachers with a qualification to teach English in the elementary school. Only one of the respondents does not have a class teacher's degree, but is an English language teacher. Eight of the respondents have formal training in CLIL, received either during their teacher training or as in-service training. Courses shorter than a week are not included here as formal training. As a rule, the participants' training in CLIL was undertaken as a "CLIL component", a part of a Master's level teacher education programme (such as Juliet programme at the University of Jyväskylä) or through a large in-service course, which generally took more than a year (while simultaneously working as a teacher) and could also include a training period in an English-speaking country. The diversity of the participants' CLIL training received reflects the situation in many other European countries, such as the Netherlands (Koopman, Skeet & de Graaff 2014: 128).

The respondents were recruited from a pool of ca. 300 Finnish CLIL teachers by e-mailing information on the study to all Finnish primary schools that offer English-medium education and asking CLIL teachers to participate in the study. All the teachers of this study volunteered and were not randomly chosen. The criteria for selecting the participants were teaching content subjects through English in grades 3 – 6 and having English as a foreign language. A few English-as-a-mother-tongue respondents volunteered in the study, but it was considered important to focus on teachers who design materials in a foreign language. In this way, also the challenges related to the foreign language in materials design were expected to emerge. Furthermore, this choice was guided by the frequency of non-native speakers as CLIL teachers. The aim was to gather a group of teachers who would differ from each other in regard to their work experience, CLIL training received and subjects they taught through English. Originally, this was not a criterion for selecting participants, but incidentally, the group finally consisted of both novice and experienced teachers with and without CLIL training. The participants' teaching experience in CLIL spanned from 2 to 16 years (median = 8.3 years). With these differences between the participants, it was considered possible to compare the materials design of experienced and novice teachers and teachers with different CLIL training backgrounds and to investigate if and how materials design differed in different content subjects. The selection of the subjects that the respondents taught through English covered almost all the subjects of grades 3 – 6 in Finnish primary schools.

All the CLIL teachers involved in the study have Finnish as a mother tongue. All but one of them has acquired their English skills by studying the language at the university. The teacher with the different language learning background has learned English in an immersion-like way by living in an English-speaking country for a long time. Eleven of the respondents are female and two are male, which reflects rather accurately the sex ratio in Finnish

primary teacher education (Jokikokko 2010). As is often the case in qualitative research, also this study with its limited number of participants presents challenges with regard to the ethical issue of securing anonymity. Easy identification is a particularly relevant ethical threat because of the small number of CLIL teachers in Finnish primary schools. In the present study, an attempt was made to resolve this dilemma by using pseudonyms for the respondents and not revealing from which part of Finland an individual respondent comes from. Because the majority of the respondents is female, all of them will be referred to as 'she' as a generic reference in the forthcoming text. However, the pseudonyms have been given according to the gender of the respondents. The intention behind all these measures was to reduce the risk of breeching anonymity, though not to be completely eliminated (Kubanyiova 2007: 133). As a qualitative research report has to provide as much contextualised information as possible for the research findings to make sense, no other modifications were made to the respondents' identification.

Class teachers, who are first and foremost content teachers and generally teach almost all of the content subjects to their particular class, were considered an ideal research group in this study for at least two reasons. Firstly, there are certain similarities between teaching in CLIL and teaching primary school children in general. In both, attention has to be paid to make teaching more explicit and more illustrative than in a classroom for older students. In CLIL, effective learning of new content-specific foreign language terms requires illustration and visual aids. As Sylvén (2006: 50) puts it, CLIL teachers are more prone to taking advantage of any extracurricular exposure to teach new foreign language concepts, not least due to the lack of appropriate teaching materials in subjects taught through English. Also primary school children in general benefit from illustrative teaching materials in that they facilitate perceiving and adopting new concepts. Materials that imply the realization of something concrete and offer practical, hands-on experiences give primary school children the best opportunities to promote holistic ways of learning (Infante et al. 2009: 161; Pavesi, Bertocchi, Hofmannová and Kazianka 2001: 89).

Another reason for choosing primary teachers as the respondents of this study is the prevalence of CLIL in primary schools compared to its generality in secondary schools (see Kangasvieri et al. 2011). Despite this, CLIL in primary schools has been studied less than CLIL in older age groups. In this respect, this study will contribute to filling a gap in CLIL research in Finland. Further, primary teachers' views of teaching materials for CLIL are particularly interesting because materials have traditionally had a very special role in primary schools. Beginning with ABC-books, children's first touch with materials is in primary school. Besides subject contents, primary school children are taught how to use materials, which makes them, often unconsciously, adopt the significance of materials in teaching and learning. Finally, it is worthwhile to mention one more common nominator between primary school and CLIL, namely the notion of integration. Within a CLIL framework, content and language are learnt in integration as the two subjects – a language and a content

subject – are related to each other and dealt with as a whole. In primary school, though, integration of subjects has traditionally been a pedagogical principle where subjects are often included into larger content fields (Wolff 2009: 547, 550).

The data collection started out with thirteen respondents, but all of them were not willing to commit themselves to all the three stages of the study. Finally, eight respondents agreed to continue in the study after the first interview. In the cases of refusal, the reasons for not proceeding further cannot be stated with certainty, but the reasons expressed by some respondents included swapping for an ordinary Finnish-stream school, uncertainty of continuing in CLIL, or regarding the second stage of the study, that is, diary-keeping and materials design for the research purposes, as too time-consuming alongside the hectic work of a CLIL teacher. Thus, it was considered sufficient to proceed with the eight respondents, with the original aim of investigating their views of learning and language through their materials design and use.

The respondents who participated in all stages of the study cover Finland geographically as comprehensively as in the first stage. Four of them comes from Eastern Finland, two from Southern Finland and two from Western Finland, representing seven different schools. Also the gender ratio of the respondents in the later stages of the study is congruent with the beginning: seven respondents are female and one is male.

In the write-up of the study, the participants were given the following pseudonyms:

Female teachers: Arja, Heidi, Kaisa, Kerttu, Kirsi, Liisa, Meeri, Riitta, Sirpa, Tellervo, and Tiina

Male teachers: Jaakko and Tarmo

The following respondents proceeded until the end of the data collection (Stages 1 - 3):

Female teachers: Arja, Heidi, Kaisa, Liisa, Riitta, Tellervo, and Tiina

Male teacher: Tarmo

Since teacher expertise and its influence on teachers' beliefs about learning and language are touched upon throughout this study, the expertise of the respondents will also be assessed. Research on teacher expertise shows that work experience is frequently linked with expertise. According to Ropo (2004: 160), developing to an expert requires more than ten years of experience and full-time practice. Berliner (1991), however, defines five years' experience as the minimum time of developing to an expert. It is noteworthy that long experience is not the only requirement for an expert, because expertise also requires many other characteristics. According to Jaakkola (1997: 78), the most striking

difference between an expert and a non-expert is their attitude towards problems. An expert sees problems as challenges and actively seeks to solve them whereas a non-expert may feel distressed when confronted with a problem and spends a considerably longer time for solving it. Rauste-von Wright, von Wright and Soini (2003: 118) argue that true expertise also requires an ability to efficiently utilize all means of avoiding restrictions and to acquire a great amount of knowledge from one's field of interest. An expert also has efficient working strategies where this knowledge is reflected.

However, as researchers seem to disagree on the number of years of work experience required as a trait for expertise, a compromise was made to regard the respondents with six or more years of teaching experience in CLIL as experienced teachers and teachers with five or less years of experience as novice teachers. Because work experience is not the only factor contributing to a person's growth to an expert, it was considered worthwhile in this study to also take account if the participants had received formal training in CLIL. These two criteria of an expert teacher will be mentioned in the excerpts of the data in the Results section. It is recognized, though, that many other criteria contribute to a teacher's development to an expert, but in the present study, which does not primarily focus on exploring teacher expertise, these criteria were considered sufficient, since it would be beyond the scope of this study to evaluate other features of an expert teacher.

The following table shows the division of the participants into experienced and novice teachers with information on the teachers' formal training in CLIL. This division will henceforth serve as the basis for reflecting the influence of work experience and CLIL training on teachers' beliefs about learning and language.

TABLE 1.   Division of participants into novice and experienced teachers.

Name	CLIL experience in years	Training in CLIL	Novice	Experienced
Arja	6	x		x
Hanna	16	x		x
Jaakko	6			x
Kaisa	2	x	x	
Kerttu	6	x		x
Kirsi	8			x
Liisa	4	x	x	
Meeri	12	x		x
Riitta	9			x
Sirpa	2		x	
Tarmo	4		x	
Tellervo	15	x		x
Tiina	14	x		x
	Average 8.3	**8**	**4**	**9**

It was also considered useful to map the approximate time the respondents spend weekly designing materials for CLIL. Almost all the respondents were able to estimate the number of hours, but three of them found it impossible, because the time tended to vary from week to week or because they had never paid attention to the exact number of hours spent for designing materials. Yet, these three respondents agreed that the weekly number of hours they spent on materials design was significant, and therefore, this has been indicated in the following table with the phrase "a great number of hours". In the following table, the weekly time the respondents estimated to use on materials design will be presented.

TABLE 2.   Novice and experienced teachers' weekly hours spent on materials design for CLIL.

Novice teachers		Experienced teachers	
Name	Weekly time spent for materials design (in hours)	Name	Weekly time spent for materials design (in hours)
Kaisa	1-2	Arja	5
Liisa	2	Heidi	*
Sirpa	3	Jaakko	2-3
Tarmo	3	Kerttu	2-3
		Kirsi	3
		Meeri	5-6
		Riitta	5-6
		Tellervo	*
		Tiina	*
Average 2.4		Average 4.0	

*A great number of hours (cannot estimate in weekly hours)

The table shows a considerable difference in weekly hours spent on materials design between novice and experienced teachers. Whereas novice teachers' average preparation time is 2.4 hours a week, teachers with the longest work experience in CLIL spend almost double that time, an average of 4 hours a week. Interestingly, the respondents with the longest CLIL experience (12 - 16 years) still use approximately five hours a week preparing materials. Consequently, it seems that experience does not diminish CLIL teachers' work load. It is also noteworthy that all but one of the teachers who spend the longest hours for designing materials have formal training in CLIL. On the other hand, the number of hours spent preparing materials is not the only perspective on the issue. Naturally, there may be great differences in the efficiency and ways of working between individuals and also in what they count in their working hours. For instance, the time spent searching for materials on the Internet may be problematic to count precisely if searching is not systematic and also includes other than work-related Internet searches. The divergence in novice and experienced teachers' preparation times may also imply that when a

teacher's experience in CLIL increases, combining content and language turns out to be more complex than first thought. Despite one's work experience, it seems that one inevitably needs to spend time searching, combining, adapting and refining materials from different resources into a high-quality product. In addition, teachers seldom use the same materials year after year, but tend to modify them.

5.2.2   Data

In this study, the intention of the various types of data collected from the respondents is to deeply understand the phenomenon in focus (cf. Eskola & Suoranta 2005: 62). In this case, the combination of three types of data had two-fold consequences. On the one hand, interviews, diaries and teaching materials supported each other by making it possible to verify the observations emerging from the data. On the other hand, different types of data challenged each other for instance in a case where a respondent's diary indicated a view that contradicted what she had expressed in her interview.

Examining beliefs, a multifaceted phenomenon with underlying assumptions and experiences, is not an easy or straightforward task. In this study, the expectation was that teachers' beliefs are worth approaching through narrative accounts. It has previously been shown that narrative accounts are an ideal method to investigate beliefs, because there is a relationship between beliefs and experiences; beliefs yield a thicker description of the teachers' experiences and aim at bringing forth their personal voice (e.g., Barcelos 2008: 37; Dufva, Kalaja & Alanen 2007: 130). As beliefs are constructions of reality, ways of seeing and perceiving the world, and are co-constructed in our experiences, narrative accounts are a natural form of investigating beliefs. Beliefs are intrinsically related to narrative accounts, because both of them constitute practical and selective tools used to make sense of the world (Barcelos 2008: 37). Also in the CLIL context, narrative accounts, or more precisely interviews, are recommended for investigating teachers' beliefs (Dalton-Puffer & Smit 2013: 550). Therefore, this study relies on the analysis of teachers' narrative accounts to offer a valuable insight into teachers' beliefs.

The data consist of two thematic interviews, oral and written diaries, and teaching materials designed by the respondents. The data were collected in three stages during May 2009 – February 2010. These types of data were considered the most relevant ways of collecting information on the research questions at hand. When investigating beliefs, listening to the respondents' talk about the subject and asking them to produce a diary about the process of designing teaching material, with the material attached, were expected to produce rich data which would bring out teachers' individual voices. By relying on teachers' interviews as the major data of this study, the purpose was also to increase the value of teachers' talk as an important way of obtaining information on educational matters.

My background as a language teacher with experience in teaching through CLIL was brought up from the beginning when informing the respondents

about the course of the research. Knowing my background as their peer was expected to contribute to the easiness of talking. In this way, interviews had features of informal talk between teacher colleagues (Avalos 2011: 16). Also, circumstances for discussion in the interviews were made natural and informal. The teachers were mostly interviewed in their classrooms after their last lesson of the day, and the atmosphere was pleasant and relaxed with a feeling of trust between each respondent and me. The teachers talked open-mindedly even about the most difficult issues and seemed to express their opinions freely and I felt I managed to turn my knowledge of the professional environment of the respondents and similar experiences with many of them to an asset. However, despite our professional similarities, I view my role in the interview situations very much as that of an active listener, though in a researcher's role I was well aware of my authority and responsibility to guide the interview situations. The participants also understood the purpose of the study very well and were in fact pleased about the topic. Many of them agreed that teaching materials in CLIL is an overlooked area in research and expected the results of this study to facilitate also their work.

The aim of high trustworthiness is pursued here by triangulation, combining different types of data (interviews, diaries and teaching materials). As Thompson (1992: 138) and Kalaja et al. (2008: 198) point out, one research method cannot capture the multiplicity of meanings present in the views of an individual. In this study, having interviews alone, for example, as evidence of teachers' beliefs about learning and language would have been insufficient, and, therefore, triangulation through several different types of data (oral/written, researcher-initiated/respondent-initiated, formal/informal) was aimed at. According to Richards, Ross and Seedhouse (2012: 124), using triangulation with other data limits the likelihood of misrepresentation in interviews. The use of a variety of methods in data collection enables achieving a collage of dynamic and situated beliefs and at tapping on factors that help these to emerge (Dufva et al. 2007: 137), as was aimed at in the present study. Further, triangulation enables examining how the phenomenon in focus is seen from different perspectives, through "cross-lighting" (Kalaja 2011: 127). It is also expected to strengthen the accuracy of conclusions (Kalaja et al. 2011b: 22; Riemer 2009: 209). In the following, the different types of data collected for this study will be presented in more detail.

5.2.2.1 First interview

In the interviews of this study, the aim was, following Takala (2012: 156), to give space to the interviewee and skillfully but sensitively ask questions and listen to the answers. The primary aim for the use of interviews as data was, following Peräkylä and Ruusuvuori (2011: 529), that the researcher can reach areas of "reality" that would otherwise remain inaccessible, such as people's subjective experiences and attitudes. The purpose was to generate data which would give an authentic insight into the teachers' views and experiences.

The first stage, initial interviews, was carried out in May - June 2009. The interviews were semi-structured thematic interviews, conducted in a

conversational, in-depth way. In a semi-structured interview, the questions are the same for all the respondents. When necessary, the interviewees were asked for extra information, and they were given a chance to lead the interview to the direction relevant in each case. The contents of the interview, or themes, were designed in advance (see Appendix 1). The questions were not asked exactly in the same form and order with all the interviewees, but they varied according to each interview situation. Nevertheless, the structure of the interview was followed with my subtle leading to the interview themes. It has been shown in research on elementary mathematics teachers' beliefs about student learning in China and the United States (see Correa et al. 2008: 142) that direct questions about beliefs, such as "What is your philosophy of teaching?", do not, in fact, reveal teachers' beliefs as reliably as indirect questions. Therefore, a decision was made in this study to dig into teachers' beliefs as reflected in their views of materials through more tacit questions, such as "How would you describe the role of teaching materials in your teaching?", or "How would you describe good teaching materials in CLIL?".

The first interview had four major themes: 1) teaching through CLIL, 2) teaching materials for CLIL, 3) preparing teaching materials for CLIL, and 4) taking learners' language level into account when preparing materials for CLIL. The first theme, teaching in CLIL, covered the respondents' background as a CLIL teacher. The first section also worked as a way of "breaking the ice", not focusing on the main object of interest, teaching materials. First, the interviewees were asked detailed background questions about their education, work experience and present work environment in order to perceive the contexts they were situated in. As Pitkänen-Huhta (2011: 91-92) argues, understanding the respondents' views of the phenomenon in focus means that interpretations of people's behaviour or values cannot be searched for before recognizing the historical and cultural context where the individuals are situated. However, the purpose of the first section was not only to find out practical information about the interviewees' work, but also on their views of characteristics of an ideal CLIL teacher, satisfaction with their work, and their potential co-operation with colleagues or other CLIL schools.

The second theme aimed at prompting the interviewees to the core of the study, teaching materials for CLIL. The questions ranged from defining the word "teaching material" to the differences in the significance of materials between CLIL and mainstream teaching. The third theme focused on the ways the respondents designed their own materials for CLIL. They were asked, for example, what types of materials they designed, what references they used and if they asked a colleague or a native speaker proofread their materials before using them. Last, the focus was on taking the learners' level of CLIL language into account when preparing materials. The teachers were asked about using visualisation in teaching and about the ease or difficulty of assessing learners' level of CLIL language competence. Also, the questions covered different ways of adaptation and the need for adaptations in CLIL materials in general. All in all, the intention was to construct a firm framework for the interview to ensure

that all the crucial topics would be covered. Conducting a pilot interview was considered necessary in order to check the intelligibility and accuracy of the interview questions. The framework for the interview was tested before the actual interviews in April 2009 with a female CLIL teacher from Eastern Finland. She was not amongst the participants of the study. With the help of this test, the interview questions were slightly modified and the order of the questions reconsidered.

The interviews were audiotaped and transcribed. The transcribed data were then transferred to Atlas.ti software and coded in line with the interview questions. As Aro (2009: 59) points out, transcribing oral speech into written text includes the researcher's interpretation, entailing decisions about the level of detail of the transcript. In the present study, the decision was made not to transcribe the sounds of breathing or sighs, intonation or volume. However, the sounds of laughter and pauses (including their lengths) and other interruptions of talk were expected to reveal something about the teachers' attitudes, and they were transcribed. In this way, attempts were made to distinguish different nuances in the interviewees' talk. The rationale for the transcription is shown in the following table.

TABLE 3.   Transcription key

Transcription	Explanation
(.)	a pause shorter than a second
(1.0)	a one-second pause
(he he)	laughter
[a word]	a word added by the researcher to supplement a missing word in the quote
[…]	data eliminated from the quote because of its irrelevancy for the particular context

5.2.2.2 Diary

Encouraged by the valuable results obtained from oral diaries in previous research (see Huhta, Kalaja & Pitkänen-Huhta 2006), a decision was made to collect data for the present study also with the help of the diaries, both oral and written. Therefore, at the second stage of the data collection, the respondents were asked to keep a diary while designing teaching material for CLIL in order for the researcher to gain a deeper understanding of the process of materials design and to find out the different stages included in it. They were also asked to return the teaching materials designed during the process to the researcher, because the materials were expected to support the analysis of the diaries. The respondents were informed of keeping the diary and designing materials for research purposes at the end of the first interview. They were asked about their preference to keep an oral or written diary and given the instructions for keeping the diary. As the respondents received this information in May - June 2009, they could start thinking about the topic of the diary over the summer and accomplish it in three months' time during the first half of the autumn term. The diaries were asked to be returned in October 2009. A few respondents completed the diary after the deadline, the last ones arriving in November 2009.

In the present study, diaries are understood as a form of narrative accounts. As Tedlock (2011: 335) puts it, narrative is a fundamental means of imposing order on otherwise random and disconnected events and experiences. According to Traianou (2007: 142), narratives are often used as a means of helping teachers to reflect on their understanding of educational issues. When planning the data collection of this study, it was assumed that with the every-day rush the teachers face at work, they might experience the materials design as a process of random events, the aims and values of which they do not have enough time to thoroughly consider. Keeping a diary about the process and consequently producing an informal narrative account was expected to shed light on the respondents' views of the phenomenon which would be difficult to investigate by other means.

Diaries were expected to offer a rich account of the teachers' reflections, suggesting why they acted as they did and how they saw contextual influences, (Hyland 2010: 197). Since a diary is usually written or audiotaped under the immediate influence of an experience, it can be particularly effective in capturing teachers' most intimate thoughts about materials design and use, revealing their beliefs about learning and language behind their choices. In the present study, using diaries as one method of data collection was considered useful, because looking into the teachers' views of their process of designing materials for CLIL and all the various factors related to it required involving the teachers in describing and analysing their own process of materials design as deeply as possible. With this method, the teachers had a possibility to concentrate on the process itself, leaving more space for their self-motivated, spontaneous observations. The aim was that the diaries would bring out issues that had not come up in the interviews.

The respondents were given a free choice between keeping an oral or a written diary. By letting them choose the most convenient way of keeping the diary, the intention was to give them as much freedom as possible to express themselves, whether it was a stream-of-consciousness technique or a precise account. With this freedom of choice, the intention was to obtain diaries produced in the most natural way for each respondent and thus receive as rich data as possible. As Hänninen (2010: 165) mentions, profound narrative data is composed only by letting the respondent as many chances as possible to perform her views and experiences in her own way. For some respondents, however, technical considerations may have affected the choice between an oral and written diary. Although modern technology offers various ways of recording speech, some respondents perhaps did not have sufficient skills of utilizing the technology, and therefore chose to keep a written diary. When negotiating the choices of keeping the diary with the respondents, suggestions were made by the researcher to speak aloud to a Dictaphone, for instance, or to record talk on the computer by the Media Player software or by the mobile phone. All the respondents who chose the written form particularly emphasized that for them writing is the most natural way of putting their thoughts into words. Five respondents preferred keeping an oral diary and

three were inclined to the written diary. For the oral diary, the technical instructions for recording were rather precise in order to guarantee a high level of sound. Except for that, the instructions for keeping the diary were the same for both oral and written forms. The respondents were asked to plan the teaching materials of one of their CLIL lessons, regardless of the subject, and describe the process of preparing teaching material from one phase to another.

The respondents were provided with a possibility to base their diary on the questions sent by the researcher in advance (see Appendices 2 and 3). The reason for the many options offered to the respondents was the wish to take the different preferences of the respondents into consideration: some might appreciate a fixed structure they could follow while others might not want any restrictions from outside for keeping such a personal record as a diary. The aim of the think-aloud protocol was that teachers could explain the phases of the process of designing teaching material either based on the researcher's questions, or completely informally, without being strictly tied to any fixed structure. Furthermore, with this procedure the intention was to background the researcher's voice in order to hear the respondents' voices. Nevertheless, the ultimate reason behind the many choices with the diaries was to make this stage of the study as simple for the respondents as possible. It was recognized that keeping the diary was the most demanding stage of the study for them, spending a lot of their free-time on a voluntary basis.

In the final interview, the respondents primarily expressed positive feelings about keeping the diary. The form of the diary, oral or written, did not seem to make a difference to how the respondents felt about it. The technical aspects of keeping the diary were not a hindrance either. One respondent, however, reported on technical problems with recording her oral diary, but after managing to solve those problems, produced a technically excellent diary. One respondent reported that keeping the diary was difficult because of her uncertainty of what to talk or write about. The majority of the respondents, however, considered keeping the diary a positive experience. Many of them described the process as "easy" or "not very difficult". Several respondents used the expression "nice" about keeping the diary. It was also regarded as a purifying experience which made a teacher profoundly think and justify her solutions.

5.2.2.3 *Teaching materials designed during diary-keeping*
Along with the diary, the respondents were asked to attach the teaching materials they designed during the process of keeping the diary. For the purposes of this study, the materials were supposed to support the narrative accounts of the respondents and to give the researcher a better understanding of the process of designing materials with the possibility to compare the materials with the diary at different phases. However, the materials were not obtained from two respondents. The reasons for this were that one teacher did not design any particular material when keeping the diary, but rather described her procedures of designing material on a general level, and another teacher had her pupils prepare the materials of the unit she was dealing with at the

time and could not thus provide her personal teaching materials. One respondent made a wish not to publish the material she had designed for the purposes of this study, and consequently, a decision was made, for the sake of consistency, not to publish any respondent's teaching material as an appendix of this dissertation. Only short extracts of them are occasionally used to illustrate the points at hand.

Since it is beyond the scope of this study to carry out a text analysis for the materials designed by the respondents or in some other ways investigate the lexical, semantic or content level of the materials, a decision was made not to use materials designed by the teachers as primary data. They were useful in understanding the decisions about materials explained in the teachers' diaries and showed a general view of the type of materials the teachers aimed at designing. In some places, they are used to illustrate a point emerging from the interviews or diaries. In this way, they are a valuable complement to the data of this study, but examining CLIL materials on a more detailed level will remain an object of another study.

5.2.2.4 Final interview

Finally, after analysing the diaries of the eight respondents and comparing them with the materials they designed, these teachers were interviewed a second time. Whereas the first interview aimed at gathering data with similar questions, the final interview focused more on specific issues raised in each respondent's first interview and diary. With all the respondents, the interview began with complementary questions common to all respondents not asked in the first interview. These questions concerned, for example, the possible similarities between CLIL and special needs education, differentiation with teaching materials and the significance of authenticity in materials. All the respondents were also requested to describe their feelings about keeping the diary. The interview then proceeded to the individual questions about each respondent's diary and teaching materials. The focus was on the materials design and on the details of their individual processes of designing materials for CLIL. Therefore, the questions were not identical to all the respondents.

The final interviews were carried out in February 2010, the interval of the two interviews being approximately 8-9 months. This time lapse was considered optimal because the data collection took place during one academic year, and in this way the respondents were able to carry out the whole process of participating in the study while teaching one and the same class. From the perspective of reliability, it was considered important that the respondents were teaching the same class during all the phases of data collection. In addition, 8-9 months was expected to be an optimal time for teachers to deepen their consciousness of the materials design after the first interview. The intention was also to get an opportunity to recheck functions of the thematic structure of the interview and collect data from the same participants on several occasions (Lapan & Armfield 2009: 168-169).

The final interview was conducted by telephone with six respondents and face-to-face with two respondents at their work place. All the interviews were

audiotaped and transcribed. The length of the final interview varied between 10 to 50 minutes. The decision to interview the majority of the respondents on the telephone was made due to long distances and because a confidential atmosphere with the respondents had already been successfully created during the first interview. Instead of face-to-face interviews, the use of telephone interviews has increased during the last decade (Eskola & Vastamäki 2010: 29).

The table below summarizes the stages of the data collection, participants and the types of the data.

TABLE 4.   Summary of the stages of data collection, respondents and data

Stage	Participants	Data
1) First interview	13 primary school CLIL teachers from 10 different schools, of whom: 5 teachers from Southern Finland from 3 different schools 4 teachers from Eastern Finland from 3 different schools 3 teachers from Western Finland from 3 different schools 1 teacher from Central Finland from 1 school	13 interviews (audiotaped), length 34 - 83 min, altogether 663 min
2) Written or spoken diary about materials design for CLIL	8 primary school CLIL teachers from 6 different schools, of whom: 4 teachers from Eastern Finland from 3 different schools 2 teachers from Southern Finland from 2 different schools 2 teachers from Western Finland from 2 different schools	5 oral diaries (audiotaped), length 2 - 19 min, altogether 53 min 3 written diaries, length ca. 1.5 - 2 pages, altogether 5 pages
3) Teaching materials	6 of the 8 respondents of stage 2, of whom: 3 teachers from Eastern Finland from 3 different schools 1 teacher from Southern Finland 2 teachers from Western Finland from 2 different schools	- text for Science: "Life in the garden" - powerpoint presentation for Science: "Elk is a big animal with hooves" - text for Geography: "The World Geography" - text for Geography: "What does Europe look like?" - text for Religious Studies: "Noah's ark" - text for Science: "Ancient times"
4) Final interview	The same respondents as in stage 2.	8 interviews (audiotaped), length 11 - 47 min, altogether 232 min

The data collection timeframe below, following Kubanyiova's (2007) model, summarizes the different phases and times of collecting data in this study.

TABLE 5:   Data collection timeframe (January 2009 – May 2010)

PHASE	TIME	ACTIVITY
PRELIMINARY PHASE	January 2009	Sending an e-mail request to participate in the study for all CLIL teachers of Finnish primary schools
IDENTIFICATION OF RESEARCH PARTICIPANTS	February – March 2009	Investigating the e-mail replies of potential research participants
		Selecting the participants matching the framework of this study (nonnative English speaker, primary school CLIL teacher)
		Finalising the number of participants in the first interview: 13 volunteers
		Sending the volunteers an e-mail confirmation about participating in the study by e-mail
		Settling the times and locations for the first interview with the participants
PILOT INTERVIEW	April 2009	Interviewing a CLIL teacher from Eastern Finland who was not a research participant
		Modifying the interview questions on the basis of the pilot interview
FIRST INTERVIEW	May – June 2009	Interviewing 13 CLIL teachers from ten schools in different parts of Finland
	May - June 2009	Sending a thank-you e-mail for the participants and informing about the next stage of data collection
	June – September 2009	Transcribing the first interviews
DIARIES ABOUT THE PROCESS OF DESIGNING TEACHING MATERIALS FOR CLIL INCLUDING THE MATERIAL DESIGNED DURING THE PROCESS	August 2009	Sending the participants e-mail information about data collection through diaries produced by the participants
	August 2009	Sending the participants a reminder with the same contents
	September 2009	Finalizing the number of participants in producing the diary: 8 volunteers
	September 2009	Sending the participants e-mail with the instructions, logistics and schedule of producing the diary

	October – November 2009	Obtaining 5 oral diaries, 3 written diaries and 6 teaching materials
	October - November 2009	Sending a thank-you e-mail for the participants and informing about the next stage of the data collection
	November- December 2009	Transcribing the oral diaries
FINAL INTERVIEW	January 2010	Sending the eight participants of the first two stages of data collection e-mail information about the last stage of data collection
	January 2010	Finalizing the number of participants in the final interview: 8 volunteers
	January 2010	Settling the times, locations and practicalities for the final interview with the participants
	February 2010	6 telephone interviews and 2 face-to-face interviews
	March 2010	Sending a thank-you e-mail to the participants and informing about the rough schedule about completing the dissertation
	March – May 2010	transcribing the final interviews

5.3 Data analysis

The data of the present study were analysed by qualitative content analytical methods. Content analysis is widely used for analysing qualitative data in various fields. In this analysis method, the contents and structure of the data are condensed, analysed and interpreted with the help of different categorisations (Krippendorff 2004: 18) and the data are described in a systematic way (Schreier 2012: 1). This is carried out by classifying data as instances of the categories of a coding frame. A code is here defined according to Guest, MacQueen and Namey (2012: 50) as a textual description of the semantic boundaries of a theme. In the present study, coding implied giving relevant labels for the teachers' responses, e.g., belief, expertise, adaptation, etc. Coding helped better understand the similarities and differences between the various topics involved in the research questions. As Eskola and Suoranta (2005) argue, the intention of coding is to creatively utilize different ways of organizing and describing the phenomenon in focus. It requires "translating" all the meanings in the data that are of interest into the categories of a coding frame and classifying parts of the data according to these categories (Schreier 2012: 5). In the process of analysis, however, it is important to bear in mind that qualitative content analysis is not simply about coding and sorting out the data. The purpose of coding is to reduce the data so that it is possible to interpret the findings from the point of view of the research questions and, finally, to present the new information obtained this way (Schreier 2012: 6). The ultimate aim is, following Krippendorff (2004:

18), to provide new insights and increased understanding of the phenomena in focus.

From the perspective of this study, qualitative content analysis was considered the most suitable method of finding out what is particularly interesting about CLIL teachers' views of teaching materials in CLIL and how to dig into their beliefs about learning and language behind these views. There were a number of factors to be taken into account in the choice of the most relevant analysis method. First, the intention was to find a framework for analyzing the manifold data of the present study. As the data consist of three different types of material, it was considered important to find an analysis method that would not limit the analysis process of any of these data. Second, an attempt was made to keep the variety of responses obtained in the interviews, diary entries and teaching materials as the thread of the analysis, not squeezing them into unnatural categories or generalizations which would not express the views of all the respondents. Further, the premise of this analysis was not to set up any hypotheses or predetermined categories about the research questions in advance. Teachers were relied on to freely reflect their lived experiences and knowledge of the research questions (Pawan & Craig 2011: 306). When analyzing, however, it was kept in mind that the teachers had already filtered, processed and interpreted their responses. It is therefore recognized in this study that data is partial, incomplete, and always being re-told and re-membered (Jackson & Mazzei 2012: 2).

The most dynamic categories in the present analysis were expected to be found by looking into the responses across all the data. While coding the data, the responses were condensed, and the codes achieved through condensation were given labels, such as belief, expertise, adaptation, etc. Richards et al. (2012: 80) call this stage abstracting the themes from the segments and, if necessary, refining them. The experience of condensing the present data was that it helped better perceive and understand the meanings and themes emerging from the data. According to Aro (2009: 58), condensing can be compared to simplifying or reducing the observations so that the researcher can combine the observations into a manageable whole.

The following table shows an example of condensing the data at hand. The condensed expressions worked as "check lists" which facilitated examining the recurring, or in other ways interesting, issues in order to form the final thematic categorization.

TABLE 6.   Example of condensing the data.

Original expression in the interview	Condensed expression	Code
sanalistaa tai sanastoa joko on valmiina tai sitten tehdään yhdessä oppilaiden kanssa kun sitä käsitellään sitä tekstiä *word list or vocabulary is either ready or we do it together with pupils when dealing with the text* (Arja INT1)	sanalistaa tai sanastoa *word list or vocabulary*	language as form
kielellisesti heijän taitotasoonsa sopivaa *linguistically applicable to their proficiency* (Jaakko INT1)	kielellinen taitotaso *linguistic proficiency*	language as form and function

This stage of analysis produced 58 codes, which will be presented with examples in Appendix 5. The following graph (Figure 6) shows an example of combining and grouping of codes.
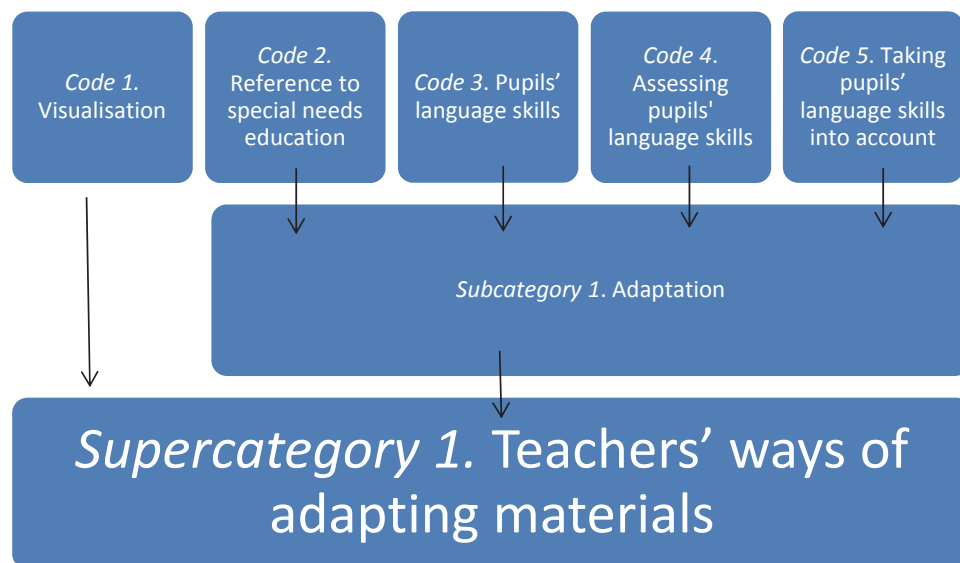
FIGURE 6.   Example of combining and grouping of codes.

As indicated, codes Nr. 2 - 5 were combined, because it turned out in closer inspection that the responses under these codes overlapped and were more useful to be examined under simply one subcategory "Adaptation". Further, a

supercategory "Teachers' ways of adapting materials" was created to cover all the subcategories referring to this theme. As the figure shows, an individual code could also be combined directly to a supercategory, not belonging to any subcategory first. This was the case with code Nr. 1. This method "forced" the researcher to carefully consider the relations between the codes and make comparisons between them.

Finally, the following supercategories, or themes emerged under the first two research questions:

TABLE 7.   Final categorization of themes.

Research Questions	Themes
1. What do CLIL teachers' accounts of materials design and use reveal about their beliefs about learning and language?	a) Role of CLIL language competence in materials design and use b) Role of curriculum in materials design for CLIL c) Separate vs. context-bound language d) Authentic vs. non-authentic materials from the perspectives of learning and language in CLIL e) Visualisation in CLIL materials in relation to teachers' beliefs about learning and language
2. What do CLIL teachers' accounts of the need to adapt teaching materials and their strategies of adapting materials for CLIL reveal about their beliefs about learning and language?	f) Teachers' strategies of adapting and designing materials

Exploring the data from the perspective of the first research question, i.e., teachers' references to language in relation to CLIL materials, five major themes turned out to be relevant. The first theme is the role of CLIL language competence in materials design and use. Second, teachers' beliefs about the role of the curriculum in CLIL will be explored. Thirdly, it is possible to identify teachers' references to language as a system, i.e., highlighting the correctness of formal features of language (Nikula 2012: 133), in the interviews, on the one hand, and language as a practice, on the other, which offers interesting insights into teachers' beliefs. The fourth theme reveals teachers' views of the importance of the use of authentic materials in CLIL. Fifthly, visualisation as a major tool for enhancing learning in CLIL emerges as an important factor in the data. Chapters 6.1 – 6.5 will demonstrate what the discovered themes reveal about teachers' beliefs about learning and language as reflected in their views of materials design and use for CLIL.

The second research focus is materials adaptation as reflection of teachers' beliefs about language and learning in CLIL. Previous studies have shown that various measures are used to adapt teaching materials to the learners' age and language level. The aim here is to find out if this is also the case amongst the primary school CLIL teachers of this study. Themes regarding adaptation that

emerged from the data form the framework of this research focus, showing which issues teachers bring forth when describing their process of materials design for CLIL. Looking at teachers' strategies of adapting and designing materials aims at discovering teachers' understandings about learning and language through the various ways they talk about adaptations or make adaptations in teaching materials. Chapter 6.6 will highlight this issue with excerpts from the data.

The findings from the data in terms of the third research question, that is, teachers' beliefs about learning and language in CLIL as reflected through their professional experience in CLIL, will be carried throughout the presentation of the results. In the excerpts, experienced teachers are referred to as ETs and novice teachers as NTs. Information on their potential training in CLIL will be given with abbreviations –CT (no CLIL training received) or +CT (CLIL training received). Where appropriate, the influence of teachers' professional experience and of the training in CLIL they have or have not received, will be reflected onto the beliefs that the teachers express about learning and language. Since it was considered more natural to deal with the relationship of teacher experience and beliefs about learning and language in this way, paying regular attention to teachers' accounts revealing these themes and returning to them along the way, it was not considered necessary to devote a separate chapter to this topic.

The table below shows the abbreviations used in the excerpts of the data.

TABLE 8.   Abbreviations used in the study with their explanations.

Abbreviation	Explanation
-CT	No formal training in CLIL received
+CT	Formal training in CLIL received
ET	Experienced teacher
INT1	First interview
INT 2	Final interview
NT	Novice teacher
O DIARY	Oral diary about designing teaching materials
TM	Teaching materials designed by respondents
W DIARY	Written diary about designing teaching materials

6 RESULTS

This chapter will present the results of the study. The data provided clear evidence of the variety of teachers' beliefs about learning and language in CLIL since a multitude of beliefs concerning the research questions were found. In order to clarify the complexities of teacher beliefs related to the design and use of teaching materials in CLIL, this section will, drawing on the excerpts from the data, demonstrate what observations related to the research questions finally emerged. Further, the purpose is to show what conclusions are to be drawn from the teachers' accounts of materials design reflecting their beliefs about learning and language in CLIL.

The last two research questions will be explored in a different way. The influence of expertise on teacher beliefs will run like a thread throughout this section, the abbreviation *NT* (novice teacher) or *ET* (experienced teacher) shown in the connection of the respondents in each excerpt. Moreover, information on whether the respondents have received training in CLIL will be given with the excerpts, the abbreviation +*CT* (+ CLIL training) signifying that the teacher has received training and –*CT* (- CLIL training) showing that she has not. Where appropriate, the uniform or contradictory views of novice and experienced teachers will be investigated and the effect of CLIL training on teachers' beliefs observed.

The following table summarizes the seven themes that emerged in the analysis in connection with the first two research questions.

TABLE 9. Seven themes concerning teachers' beliefs about learning and language in CLIL based on their accounts of materials design and use.

Research questions	Themes
1. What do CLIL teachers' accounts of materials design and use reveal about their beliefs about learning and language? 2. What do CLIL teachers' accounts of the need to adapt teaching materials and their strategies of adapting materials for CLIL reveal about their beliefs about learning and language?	a) Role of CLIL language competence of teachers and pupils in materials design
	b) Role of curriculum in materials design for CLIL
	c) Separate vs. context-bound language
	d) Authentic vs. non-authentic materials from perspectives of learning and language in CLIL
	e) Visualisation in CLIL materials in relation to teachers' beliefs about learning and language
	f) Learner perspective in materials adaptation
	g) Teachers' strategies of adapting materials

The chapters to follow will look into each theme with excerpts from the data, interpreted by the principles of qualitative content analysis described in the previous chapter. In the excerpts, boldface is used to show the main points referred to when discussing the results.

6.1 Role of CLIL language competence in materials design and use

There is not much teacher-oriented research on the relationship of CLIL learners' language competence and the linguistic level of teaching materials in CLIL. Therefore, this study attempts to demonstrate how teachers observe their pupils' CLIL language competence and if and how teachers take it into account in their materials design. It is important to observe both teachers' and pupils' CLIL language competence and its role in materials design for CLIL because first, it is assumed that teachers need to know, at least roughly, their pupils' level of CLIL language competence in order to design materials of an appropriate linguistic level and second, teachers themselves must have a sufficient level of CLIL language competence to be able to design materials in that language in the first place (Barbero 2007: 290; de Graaff et al. 2007b: 14). Teachers' views of these two dimensions of CLIL language competence, as reflected in their materials design, are expected to reveal their beliefs about learning and language in CLIL.

In this chapter, the focus will first be in the various ways the teachers understand their pupils' CLIL language competence and in the factors they take into account when assessing pupils' language competence. Second, the role of the Common European Framework of Reference for Languages (CEFR) in

assessing pupils' level of CLIL language will be considered. Third, the focus will be in differentiating materials for CLIL and the reasons behind it. Fourth, the teachers' views of pupils' English language competence will be introduced. Fifth, the focus will be in the teachers' CLIL language competence with the intention to describe how they see their personal English proficiency, what influences the level of the CLIL teachers' target language proficiency may have on their materials design, and which role the native speaker ideal plays in the teachers' views.

6.1.1 Assessing pupils' CLIL language competence

The teachers' views of the difficulty of assessing pupils' English language competence seem to vary regardless of their professional experience. The following excerpts show the prevailing view found in the present data, suggesting that assessing pupils' level of English is generally not considered very difficult. The first excerpt indicates that in Arja's case, the reason for this seems to be that she had taught the same group since grade 1, that is, for more than four years at the time of the data collection. This is rather typical of Finnish primary schools where class teachers usually work with the same group for several years, sometimes for all the six years of primary school. Thus, the perceived easiness of assessing pupils' level of English seems to rise from the teachers' highly developed sensitivity of knowing their pupils.

Further, as Kerttu points out in the second excerpt, with English as the school language, teachers hear their pupils speak English and read their English output on a daily basis and consequently get used to the continuous assessment of their level of English. This excerpt also implies that Kerttu considers her long experience in CLIL as a factor contributing to her professional development in assessing pupils' CLIL language competence, summarized in her words *the touch a teacher has after so many years of work is pretty much right.*

(1) Arja: **ei** se [oppilaiden kielitaidon arviointi] mitään **hirveen vaikeeta** oo
Eveliina: mhm
Arja: tietysti on **saman luokan kanssa** ollu **eka luokasta lähtien** ni
Eveliina: nii se on
Arja: **aika hyvin tietää**
*Arja: it [assessing pupils' linguistic level] is **not very difficult***
Eveliina: uhu
*Arja: of course I've been **with the same class since the first grade** so*
Eveliina: so it is
*Arja: **one knows pretty well***
Arja ET +CT, INT1

(2) on se [oppilaiden kielitaidon arviointi] **helppoa** (.) kyllä **siihen tulee sellainen tuntuma koska niiden koulukieli on englanti ja ne käyttää sitä koko ajan mun kanssa** (.) se **tuntuma** minkä opettaja näinkin monen vuoden työskentelyn jälkeen saa **on aika paikkansapitävä**
*it [assessing pupils' linguistic level] is **easy** (.) **one gets a kinda touch to it because their school language is English and they use it all the time with me** (.) the **touch** a teacher has after so many years of work **is pretty much right***
Kerttu ET +CT, INT1

Interestingly, however, one of the most experienced CLIL teachers still found it demanding to assess pupils' level of English. It seems that for this teacher, perceiving the actual skills behind pupils' characteristics poses the greatest challenge. In the following excerpt, Meeri contrasts *brave* pupils who *put their hand up and say something like that* and *timid* pupils who *may know* but are *more self-critical* and *do not so easily bring themselves out.*

(3)   no se [oppilaiden kielitaidon arviointi] on **vaikeeta** kyllä joo (.) ne **oppilaat jotka on rohkeita nii ne nostaa käden ylös ja sanoo jotaki sinne päin** ja siin (.) siin täytyy olla opettajan tarkkana kun miettii sitä et onks se todellist taitoo se vaan vai vaan sitä että et he haluaa sanoa jotaki (.) ja se **oppilas joka on arempi kenties tietääki mut on itsekriittisempi eikä (.) niin helposti tuo itseään esille**
*well it [assessing pupils' linguistic level] is **difficult** yeah (.) those **pupils who are brave so they put their hand up and say something like that** and there (.) there the teacher has to be careful thinking if it's real skill or just that they want to say something (.) and **a pupil who is more timid may know but is more self-critical and does not (.) so easily bring herself out***
                             Meeri ET +CT, INT1

The fact that the teacher has learnt to know her pupils over the many years of teaching them as a group seems to be the key for understanding how advanced the pupils are in their CLIL language competence. Work experience, on the other hand, does not seem to have a major influence on the teachers' views of assessing pupils' linguistic skills, as suggested by excerpt 3. However, one difficult area for teachers seems to be to distuingish the different components of the pupils' CLIL language competence and to assess them separately. As the following excerpt illustrates, since pupils' CLIL language competence is *continually developing,* it seems difficult to follow it up, demanding the teacher to be *awake all the time* and to do *continuous check-ups.* Kirsi explicitly raises the skills of *oral comprehension* and *reading and listening comprehension* as the components of language competence to be separately assessed. Her awareness of these components and the need to assess them individually may be due to her wide educational background as a class teacher, language teacher and special needs education teacher.

(4)   sehän [kielitaito] on jatkuvasti kehittyvä kaikilla että siis niinku siinä on hirveen vaikee pysyy perässä jos (.) kun **pitää arvioida niin monia osa-alueita** niinku **suullista (.) ymmärtämistä** ja (.) ja **luetun ymmärtämistä kuullun ymmärtämistä** niin (.) se on **jatkuvaa hereillä oloa** (.) **jatkuvaa** sellasta **pientä tsekkausta (.) ei se helppoa oo**
*it [language competence] is continually developing so you know it's terribly difficult to follow if (.) when **you have to assess so many areas** like **oral (.) comprehension** and (.) and **reading comprehension listening comprehension** so (.) it is **being awake all the time** (.) like **continuous check-ups (.) it's not easy***
                             Kirsi ET –CT, INT1

The pupils' competence in CLIL language seems to be the starting point for the teachers when designing materials. Arja describes the different phases of her materials design in the following excerpt (5). Interestingly, she mentions both the pupils' level of language and age as the two factors behind her materials

design. *The pupils' level of language* in mind, she first starts retrieving information and materials on the topic at hand from the *books and the net*. She then *reads through* the texts she has ended up with, considering whether the text is *applicable for the* intended *age* of the target group. Further, she *picks the words* she thinks may be *unfamiliar* to the pupils and *writes them in* a *word list*. What Arja does not tell is whether the word list is English-Finnish or only in English, with explanations provided for the new terms.

(5) Arja: **se [oppilaiden kielitaidon taso] on se mistä** niinku **lähden (.) liikkeelle** (.) ensi- tai siis **ensin katson sen aiheen** mitä mitä **mistä aiheesta oon tekemässä sitä materiaalia** (.) ja sitte ku **sitä löytyy** toki **kirjoista ja netistä ja muualta** nii sitte se on se seuraava on se että **luen niitä läpi (.)** ja **yritän miettiä et onko tämä tälle ikätasolle sopivaa tekstiä (.) onko se liian helppoa onko se liian vaikeaa** (.) ja sitte sitte sen jälkeen **ku on valinnu sen tekstin** niin sen jälkeen **käyn sen tekstin läpi** sillä tavalla et **poimin sieltä ne sanat jotka oletan että ovat heille vieraita (.)** ja **kirjotan ne sitte sanastolistaan**
*Arja: it [the pupils' level of language] is what I begin (.) with (.) firs- I mean **first I check the topic** that that the topic **I'm making material for (.)** and when **I find it in the books and the net and elsewhere** then that's the next thing is that **I read them through** (.) and **I try to think if this is applicable text for this age** (.) if it's **too easy if it's too difficult (.)** and then then **after I've chosen the text** then **I go through the text** so that **I pick the words that I expect to be unfamiliar for them** (.) and **I write them in the word list***
Arja ET +CT, INT1

The above excerpt also suggests that Arja attempts to assess the difficulty of materials in relation to the pupils' foreign language competence by *trying to think if the text is too easy or too difficult*. However, Arja does not seem to be very certain about her ability to assess this, shown by her choice of the verb *expect* when she talks about picking words unfamiliar to the pupils in the word list.

The importance of taking into account the young age of the primary school pupils when designing materials for CLIL is highlighted in the following excerpt (6). Heidi underlines that the pupils will have to *understand what to do* with the materials, not wanting her pupils feel like being *on shaky ground*. Her reference to *something certain* in the materials might be interpreted in the light of the constructivist view of learning suggesting that new knowledge is always reconstructed on pupils' previous knowledge. It seems evident that CLIL materials for primary school are faced with a special challenge because of the young age of the target group, demanding constant alertness from the teacher in the process of materials design.

(6) mä koitan että se ois tota tavallaan niinku **varsinkin nyt kun on** tää niinku **pienemmät oppilaat** [kolmas luokka] nii et ne et **kun ne katsoo sitä niin ne** niinku ne niinku **ymmärtää et mitä siin pitää tehdä** […] **ettei kaikki koko ajan oo** sillai et ne ois koko aika **niinku heikoilla jäillä** (.) et jotaki semmost niinku **varmaa**
*I try that it would be well in a way like **especially now that I have** this like **smaller pupils** [the third grade] so that they that **when they look at it** then they like **they like understand what they have to do** there […] **so everybody isn't all the time** as if they were all the time **like on shaky ground (.)** like something kinda like **certain***
Heidi ET +CT, INT1

Excerpts 5 and 6 aptly summarize several central features related to the teachers' materials design for CLIL. Taking into account the pupils' level of language, on the one hand, and their age, on the other, as the major premises for materials design will be dealt with as separate entities in chapters 6.1.2 and 6.6.1. The importance of providing the pupils with special field vocabulary in materials was also expressed by the majority of teachers, and this will be returned to in chapter 6.3.2. It can be concluded that although the teachers' first impression may be that assessing pupils' CLIL language competence is not difficult, a more careful consideration reveals factors that make assessment more complicated and problematic than at first thought. What facilitates assessing pupils' language competence is the fact that CLIL teachers in Finnish primary schools often teach the same group for the whole six years and therefore know their pupils' abilities very well. What seems to be difficult, however, is separately assessing the different components of the pupils' target language competence. Even a long teaching experience in CLIL does not seem to have an effect on all the teachers' views of the problematics of assessing pupils' CLIL language competence. Teachers' training in CLIL, on the other hand, does not seem to make a difference in this respect either.

It is interesting as such that in many teachers' views language is seen to be constituted of different "elements". This may be influenced by the use of the Common European Framework of Reference for Languages (CEFR) for assessing pupils' foreign language competence also in CLIL. The CEFR separates four different areas of foreign language competence: speaking and writing, and listening and reading comprehension. Many of the teachers seem to be well acquainted with the CEFR and the reference levels of language provided by it for assessing pupils' foreign language competence. The CEFR describes foreign language proficiency at six levels: A1 and A2, B1 and B2, C1 and C2. According to the NCCBE (2004: 94), the requirements of good English language skills in the CEFR by the end of the last year of primary school (sixth grade) range from A1.3 in speaking and writing (which equals to a beginner's level) to A2.1 in listening and reading comprehension (equalling to the elementary level). However, the CEFR levels seem to be an inefficient tool in measuring familiarisation with the language at early ages because the differences between the first competence rates are not very significant. In secondary school, the rates accelerate and rise more prominently and are thus of greater value then.

The data suggest that many of the teachers consider the levels of the CEFR as the basic tool for assessing pupils' foreign language competence, and consequently, they report applying the CEFR also for assessing pupils' level of language in CLIL. In the first of the following excerpts (7), Meeri explicitly mentions the levels of the CEFR (*the background is the Common European Framework of Reference for Languages*), maintaining that they are *followed all the time* when assessing pupils' level of language. Similarly, the latter excerpt (8) expresses the need for taking the pupils' level of the CEFR into account when

designing materials for CLIL, stating that materials have to be *linguistically applicable to* pupils' *skill level.*

(7)   [oppilaiden kielitaidon arvioinnin] **tausta on nää kielen taitotasot** mitkä on on laitettu opetussuunnitelmiinki nii on **koko ajan mukana**
the background [of assessing pupils' language competence] **is this Common European Framework of Reference for Languages** *which has been written down in the curricula too so it is being* **followed all the time**
Meeri ET +CT, INT1

(8)   se [oppimateriaali] on myöski **kielellisesti heijän taitotasoonsa sopivaa**
it [teaching material] is also **linguistically applicable to their skill level**
Jaakko ET –CT, INT1

However, the respondents do not take a stand on how easy or difficult it is to follow the CEFR in assessing CLIL learners' target language competence. This might indicate that despite their apparent commitment to the use of the CEFR, internalizing all its levels and layers can, after all, be problematic. Research supports this suggestion because it has been shown (e.g., Penttinen & Kyyrönen 2004: 162) that the CEFR is not very familiar to language teachers in Finland. Also the references to the CEFR in the NCCBE seem to be contradictory in places. Penttinen and Kyyrönen (2004: 162) suspect that this is a complicating factor when introducing any changes in foreign language teaching.

In CLIL, following the CEFR in assessing pupils' foreign language competence is presumably even more difficult, because the levels of the CEFR to be met in the target language competence have not been nationally defined unlike in formal foreign language teaching. Undoubtedly, as CLIL in Finland also includes formal English language teaching as a separate subject, the levels of the CEFR as such might provide with a useful guideline for assessing CLIL learners' English language competence. However, the ultimate purpose of CLIL is to provide learners with better foreign language skills than they would obtain by traditional language teaching methods, and therefore, it could be argued that the target language skills of CLIL learners are supposed to exceed the reference level of the CEFR set for their peers in traditional foreign language teaching. This has been evidenced by Laitinen (2001) who found out that the pupils of an English immersion class finishing their fifth grade had reached and partially exceeded the level of English language competence of the mainstream ninth grade students. Likewise, in materials design for CLIL, teachers do not simply follow the levels of the CEFR in the NCCBE (2004), but set higher goals for their pupils. Individual CLIL schools in Finland have already developed CEFR-based English language curricula with higher goals of competence rates for English than the NCCBE (2004) sets (e.g., FISTA in Tampere [FIS-STEPS 2014]).

6.1.2   Taking different learners into account in materials design for CLIL

In the first interview, a few respondents referred to similarity between the materials for learners in CLIL and in special needs education. Since this seemed to be an interesting comparison, and scarcely known in CLIL literature, a

decision was made to ask the respondents more about the relationship of materials for CLIL and special needs education in the final interview. This dimension, with the assumed resemblance in materials, was expected to provide more information on teachers' beliefs about learning and language in CLIL. Many teachers recognized that the two approaches share *clarity* and *simplicity* in materials. Thus, the connection between materials for CLIL and special needs education seems to be that both aim at a simpler level of language than mainstream textbooks. In excerpt 9, Heidi observes the similarity of the materials in CLIL and special needs education, implying that a workbook for special needs education follows the principles of CLIL. Likewise, excerpt 10 shows that Tarmo suggests elements from materials for special needs education to be included in the basic materials for CLIL.

(9) selasin alkuopetuksen niinku erityisopetuksen työkirjaa (.) se oli just erityisopetuksen materiaalii ja **CLIL menee aika paljon [yksiin]** tiäksä **selkeys** ja ja tota **yksinkertasuus**
*I was browsing the workbook of early education like special needs education (.) it was exactly the material for special needs education and **CLIL is pretty much [consistent]** like you know **clarity** and and well **simplicity***
Heidi ET +CT, INT1

(10) jotenki **se vois olla** jotenki **e-tyyppistä** se **[CLIL-opetuksen] perusmateriaali** sitte siihenhän voi sit opettaja tuoda lisää (.) hyville ryhmille (.) sitä juttua
*somehow **it could be like material for special needs education this basic material [for CLIL]** then the teacher can bring more (.) for good groups (.) that stuff*
Tarmo NT –CT, INT1

These teachers' views reveal that they believe that learning in CLIL requires simplified materials. However, referring to materials for special needs education in the CLIL context evoke strong feelings among some respondents, thus turning out to be a very controversial topic. This might be connected to the professional identity of teachers, i.e., class teachers not willing to enter the traditional field of special needs teachers. Those who did not see any similarities between the materials of CLIL and special needs education argued that applying the characteristics of special-needs-education materials to CLIL would be severely underestimating CLIL learners' skills. Riitta says in excerpt 11 that she may provide her pupils with *really challenging and difficult* texts, and Kaisa's view in excerpt 12 is that *a lot* would *remain untaught* if only *the central elements* of the content were *taught through the foreign language*.

(11) Eveliina: pitäiskö sun mielestä CLIL-oppimateriaalin olla samantyyppistä kuin erityisopetuksen materiaalin niin että että siinä keskitytään vain niihin ydinasioihin ja se ois mahdollisimman
Riitta: **ei ei ei ei ei ollenkaan ei**
Eveliina: joo
Riitta: **ei ei ei vaan** tota noin niin **se voi olla tosi haastavaakin ja vaikeitakin tekstejä mä annan lapsille luettavaks**
Eveliina: do you think CLIL materials should be similar to materials for special needs education in that that it focuses on the basics only and it would be possibly
*Riitta: **no no no no not at all no***

Eveliina: yeah
*Riitta: **no no no but** well **it can be really challenging and difficult texts I give the kids to read***
                    Riitta ET –CT, INT2

(12) mä **olin** ite aika **järkyttyny** siitä **ajatuksesta [että CLIL-opetuksen ja erityisopetuksen materiaaleilla olisi jotakin yhteistä**] koska […] et tavallaan niinku mä ymmärrän sen että mihin siin pyritään et se **keskeinen aines saatas opetettua sillä [vieraalla] kielellä** (.) mutta että kyllä mää koen että siinä **sitte sen kielen kustannuksella aika paljo jätetään myös opettamatta**
*I was personally rather **shocked about that idea [CLIL and special needs education having something in common]** because […] well in a way I sort of understand it what it aims at that **the central elements would be taught through that [foreign] language** (.) but I feel that **at the expense of the language quite a lot will remain untaught***
                    Kaisa NT +CT, INT2

The teachers' vigorous denial of the similarities of the materials for CLIL and special needs education may also imply that they see attaching the label of special needs education to CLIL somewhat stigmatizing. This notion may make some teachers strongly object to any comparisons between materials for CLIL and special needs education. A major reason for this may be, as suggested earlier, the professional identity of class teachers, separate from special needs education. The latter excerpt interestingly reveals Kaisa's view of teaching and learning in CLIL. Her phrase *the central elements would be taught through that [foreign] language* implies that for her, language and content are combined, and the implication of her phrase *at the expense of the language quite a lot will remain untaught* seems to be that when reducing the language, also something from the content will be lost.

Differentiation through materials is another interesting topic not touched upon in previous research on CLIL. In this study, the teachers' views and practices concerning differentiated instruction through materials varied. When discussing how to take into account pupils' different levels of CLIL language within a group in materials design, teachers' views were divided. In excerpt 13, Meeri's approach to designing materials is to *try and take the average linguistic level of the class into account* which implies that she considers pupils rather as a group than as individuals and designs materials she estimates to be of the average linguistic level of the group. On the other hand, an opposing view is shown in excerpt 14 where Kirsi maintains that a teacher *can't talk in only one way and serve only one group in the classroom*, thus giving an emphasis to the personality and individual learning styles of pupils. This gives an impression that in materials design, Kirsi aims at taking all the pupils with different levels of language and knowledge individually into account in the classroom. One reason for Kirsi's distinguished views of pupils as individuals with different learning abilities may be her broad educational background, including a special needs teacher's degree.

(13) Meeri: **yrittää** siis **luokan keskitaso** siin **kielellinen taso ottaa huomioon** (.) kun sen [materiaalin] tekee

> *Meeri: you **try and take the average level of the class the linguistic level into account** there (.) when you prepare it [material]*
> Meeri ET +CT, INT1

(14) **ei voi** niinku **puhuu vaan yhellä tavalla ja palvella vaan yhtä ryhmää** siellä luokassa
*you can't like just **talk in one way and serve only one group** in the classroom*
Kirsi ET –CT, INT1

Kirsi's perspective evidently refers to differentiated instruction, which, according to Hall, Strangman and Meyer (2011), is based on the premise that instructional approaches should vary and be adapted in relation to individual and diverse learners in the classroom. In mainstream classrooms, materials-based differentiated instruction has long been provided with many possibilities. For example, publishers produce so-called facilitated text- and workbooks for primary and secondary school pupils with learning disabilities. These books have a bigger size and font, less content and simpler sentences. There are no statistics on how much facilitated course books are applied in Finnish schools, but it has been estimated that they are not very widely used in Finland (Centre for Educational Assessment 2013).

The reason the teachers give for not designing materials of different levels to their pupils seems to be the extra time and effort it would require. The teachers report they do not differentiate their teaching through materials, because it would be *too hard* to them and *demand too much,* as illustrated in the following:

(15) on kyllä **liian työlästä** (.) opettajan tehä (.) monentasosta materiaalia (.) valitettavasti kyllä se miun vastaus on **en tee**
*it is **too hard** (.) for a teacher to make (.) material of many levels (.) unfortunately my answer is **no I don't***
Tiina ET +CT, INT2

(16) mul on ollu itelläni se yks moniste jonka oon sit kaikille antanu et sitä **[eriyttämistä] en oo** kyllä sitte (.) en oo lähteny sinne mittään vaihtoehtosia kysymyksiä kyllä ikinä (.) kehittämään (.) et se ois jo ehkä **vaatinu vähä liikaa**
*I have had this one handout that I've given out to everybody so **I haven't [differentiated]** then (.) I have never developed any alternative questions there (.) because it **might have demanded a little bit too much***
Liisa NT +CT, INT2

In both of these excerpts, the respondents interestingly leave it open what it is exactly that would be demanded too much of if they designed materials of many levels or *alternative questions* on the *handouts*. Would it require too much time or too high a level of professionalism, and if the latter, would the challenge be in language or content? The respondents did not explain their statements any further and therefore it is difficult to deduce the precise meanings behind them. It is also noteworthy that although Tiina and Liisa have received training in CLIL, they still consider materials design hard and demanding. It may be concluded that pre- and in-service training in CLIL does not pay enough attention to materials and CLIL teachers' central role in preparing them.

The results of this study show that CLIL teachers provide differentiated instruction through other means than materials. In the following quotes, teachers describe how pupils differentiate themselves by *writing* less or more than their peers on the handouts or notebooks, by deciding how much they *talk* or how *active* they are in the classroom, or by choosing to *answer in English* or *in Finnish*.

(17) siinä jo tulee sitä eriytymistä et joku kirjottaa enemmän ku toinen (.) joku puhuu enemmän ku toinen (.) joku on aktiivisempi ku toinen et siinähän **he** jo **itse eriyttävät itseään** huomaamattakin
*it is differentiation when somebody writes more than another (.) somebody talks more than another (.) somebody is more active than another so there **they differentiate themselves** without noticing it*
Heidi ET +CT, INT2

(18) ympäristötiedossa ni **ne jotka osaa nii kirjottaa englanniks vastaukset ne jotka ei osaa ni ei kirjota […] toiset vastaa tunnilla englanniks ja toiset suomeks**
*in science **the ones that can write the answers in English and the ones who can't don't […] some answer in English in the lesson and the others in Finnish***
Kaisa NT +CT, INT1

(19) ne sitten eri tasot mitä oppilailla nii ne on sitte vähän vaikeempi siinä vaiheessa ottaa huomioon […] **jos pystytte nii mielellään kirjottakaa se englanniks se vastaus mutta sitten saa suomeksi**
*the different levels of pupils they are a little more difficult to take into account at that point […] **if you can then preferably write it in English the answer but then you are also allowed in Finnish***
Tarmo NT –CT, INT1

Besides showing the teachers' views of how differentiation takes place in the CLIL classroom, the excerpts above also indicate that the language practices in CLIL seem to be permissive. The use of the mother tongue is allowed with no compulsion to use the foreign language only. In excerpt 17, however, the teacher's assumption about pupils differentiating themselves by not being as active as some others or by not talking as much in the classroom seems misleading. At its simplest, differentiation is defined as an individual way of teaching (Centre for Educational Assessment 2013) and this unquestionably implies that it is something that a teacher is responsible for. In fact, what the teacher describes in excerpt 17 does not appear to be differentiation in the first place. Rather, not talking much or being passive in the lesson may be a serious signal of the pupil's need for differentiation, scaffolding or other special support provided by the teacher or other professional.

When looking into the specific ways in which the teachers take the different levels of pupils' language into account in materials design, there appears to be a multitude of different approaches to this issue. For example, a teacher may *explain* parts of an unfamiliar text to the pupils, as Kaisa points out in extract 20, or a teacher may *go through* the text together with her pupils and in that way *make it familiar to them*, as shown in extract 21. However, it does not become evident from neither of the following extracts whether the teachers explain or go through texts in the CLIL language or mother tongue.

(20) jos [oppilas] ei vieläkää ymmärrä [tekstiä] nii sitte sitte **mä kerron mitä se tarkottaa** että ei se koskaan meil tyssää siihen et oppilas ei ymmärrä
*if [a pupil] still doesn't understand [the text] well then then **I explain what it means** so it never stops there that a pupil doesn't understand*
Kaisa NT +CT, INT1

(21) jos joku historian osio siinä heidän oppikirjassaan jo sinänsä on liian vaikeeta englantia joillekii niin sit **se käydään läpi** (.) **tehdä sitä** niinku **läheisemmäks niille**
*if a history unit in their textbook is too difficult English language as such for some then **we go through it** (.) to **make it** like **familiar to them***
Riitta ET –CT, INT1

Both novice and experienced teachers and teachers with and without training in CLIL seem to share the principle of supporting pupils with texts that are at a higher level of language than the pupils' CLIL language competence by explaining difficult points and not leaving the pupils alone with the reading and comprehension process. However, differentiation by providing pupils with different levels of materials is not a common practice to the respondents of this study, due to the extra time and effort it would require.

6.1.3 Pupils' CLIL language competence as an asset or obstacle

Many teachers of this study considered it important to offer the pupils materials just above their level of CLIL language in order to teach them new vocabulary and grammatical structures and also to make them learn to live with the fact that one may not know every word of the text but can and should still understand the main points. The following two excerpts show how teachers apply such texts in the classroom and how the different backgrounds of the teachers are related to their approaches to foreign language teaching. In excerpt 22, Riitta refers to *unfamiliar words* or *topic area* while in excerpt 23, Tellervo uses an established term of the field of SLA, *rich input sessions,* both respondents meaning they regularly offer their pupils materials with words or structures new to them. Tellervo's professional use of the SLA terms may be explained by the fact that she works with student teachers and therefore keeps up with the latest developments of the field.

(22) tekstiosioissa (.) mä koetan etsii semmost joka ei on ehkä **just siinä rajoilla** että niinku mä tiedän että **ne sen kanssa pärjää vaikka siel on semmosta materiaalia mitä he ei ihan** ihan (.) **tuntemattomia sanoja** ja **tuntematonta aluettaki** saattaa olla
in texts (.) I try and find something that is perhaps just about that I kinda know that they can manage with it though there are materials that they may not exactly (.) there may be unfamiliar words and unfamiliar topic area
Riitta ET –CT, INT1

(23) ns. **rich input –tuokiot**, jolloin jokaista sanaa ei välttämättä käännetä tai selitetä, pääkohdat vain pyritään tekemään selviksi
*so called **rich input sessions** where every word is not necessarily translated or explained, the aim is just to clarify the main points*
Tellervo ET +CT, W DIARY

The above views seem to correspond to Cummins' (2000) quadrant III with high context and high cognitive demand, offering the most ideal setting for learning in CLIL. However, also opposite opinions emerged. According to two respondents, pupils' restricted skills in the CLIL language may have a negative effect on learning. In excerpt 24, Sirpa maintains that the CLIL *language competence has in all* of her *classes been an obstacle* which has compelled her to *remain in* very *basic things* in content subjects. Moreover, excerpt 25 shows that Tarmo is *afraid that the* foreign *language may hinder learning.*

(24) **kielitaito on ollu** oikeestaan kaikissa luokissa semmonen (.) **este** […] heil on paljo sanottavaa ja usein näkee et **he turhautuu** oikeesti et hitto kun pitää englanniks koittaa keksiä […] joskus on ollu **pakko jäädä niin perusasioihin**
*in fact **language competence has** in all classes **been** a kind of (.) **an obstacle** […] they have a lot to say and you can often see that **they get frustrated** really like damn you have to try and make this up in English […] sometimes you just have to **remain in so basic things***
Sirpa NT –CT, INT1

(25) Tarmo: sitä välillä pelkää että se **kieli estää saattaa estää** sen **oppimisen** jos se on hirmu monimutkasta (.) nii siinä ei toteudu se tarkotus ollenkaa sitte
*Tarmo: sometimes you are afraid that that **the language will hinder may hinder** this **learning** if it is terribly complicated (.) so the aim will not be fulfilled at all then*
Tarmo NT –CT, INT2

It is worth noting that Sirpa and Tarmo both have a relatively short teaching experience in CLIL, ranging from two to four years. In addition, neither of them has received formal training in CLIL. According to Sternberg and Horvath (1995: 10), one difference between novice and expert teachers pertains to insight, in that experts are more likely to arrive at novel and appropriate solutions to problems than novices. Sirpa and Tarmo's short experience on CLIL and lack of CLIL training may explain their challenges with solving the problem of too demanding teaching materials. Obviously, they lack knowledge of strategies of adapting texts to pupils' level of CLIL language and of scaffolding pupils with demanding texts. Alternatively, they may not know the level of their pupils' CLIL language competence well enough to be able to offer them appropriate materials. A further reason why Sirpa, in particular, sees the pupils' level of CLIL language as an obstacle, contrary to the majority of the respondents, may be her educational background (a subject teacher of English with no class or content teacher education).

The contradiction between the teachers' views of pupils' CLIL language competence is interesting because the way they approach pupils' CLIL language skills is also expected to have an influence on their materials design and consequently on what and how will be learnt in CLIL.

6.1.4 Teachers' views of their own CLIL language competence

The present data suggest that the teachers are uncertain about their CLIL language competence, which is reflected in their materials design and use. A recurrent observation is that teachers often feel insecure about their English and

sometimes even consider it insufficient for designing materials for CLIL. The expressions teachers use to refer to their English skills in the context of materials are considerably strong, such as *bad English, I feel insecure all the time*, or *one begins to suspect,* as shown in the following excerpts. In fact, feeling deep insecurity about one's work reveals a view of the fundamental role of language in CLIL. This is an important finding also from the point of view of learning in CLIL. The teachers' attitudes to foreign language as an obstacle or a threat may hinder them from freely expressing themselves in the classroom, resulting in larger consequences to the learning results of their pupils. This finding resonates with Nikula's (2008b) observation in the Finnish secondary school context that a CLIL teacher's richness of expression suffers when teaching through a foreign language.

Work experience or CLIL training do not seem to have an influence on how the teachers see their CLIL language competence in materials design and use. With a large in-service course in CLIL and 15 years of CLIL teaching experience, Tellervo is one of the most experienced teachers among the respondents but despite that, in some cases she seems to consider her English proficiency insufficient for designing materials for CLIL. Tarmo, on the other hand, is a novice teacher with no training in CLIL and seems to feel continuously insecure and suspicious about his English proficiency, which, however, is not the case among all the novice teachers or all the teachers with no CLIL training in this study.

(26) **mä en** niinku **omassa päässäni rupea millään huonolla englannin kielellä** niinku yks kaks **kääntämään tämmöstä** vaan mä koetan saada et se on niinku englannin kieltä eikä eikä suomen kieltä vähän muistuttaen englantia
I'm not you know going to translate just all of a sudden in poor English, but I try to make it sound English and not Finnish that somehow resembles English
Tellervo ET +CT, INT2

(27) **tunnen [epävarmuutta] koko ajan** (.) niin tota **rupee epäilemään** (.) epävarmuudetki semmoset aina ihmettelee välillä että miten mä nyt tätä taas mietin
I feel [insecure] all the time (.) so one begins to suspect (.) kinda suspicions you sometimes wonder why you are thinking about this again
Tarmo NT –CT, INT2

CLIL teachers' inadequate competence of CLIL language has been brought up by a range of researchers (Admiraal et al. 2006: 92; Llinares & Whittaker 2010: 126; Massler 2012: 42; Moate 2011b: 341; Olivares Leyva & Pena Díaz 2013: 94; Takala 2000: 52; Tardieu & Dolitsky 2012: 5). It may also hamper motivating the children to use the CLIL language (Doyé & Héloury 2007: 189). Two recent studies (Massler 2012: 43; Tardieu & Dolitsky 2012: 5) suggest that CLIL teachers themselves may also recognize their deficiencies in CLIL language competence. During the first school years, in particular, a CLIL teacher plays an important role as a language model for her pupils (Rasinen 2006: 39). This may explain why primary school CLIL teachers in Finland mention the development of their foreign language competence as the greatest professional challenge (Nikula & Järvinen 2013: 154).

The teachers' responses suggest that they often struggle alone with their materials design and do not ask a colleague or a native speaker's support for proof-reading their materials. Novice and experienced teachers' practices seem to differ in this issue, since novice teachers more often said they do not have anybody proofread their materials. In the following two excerpts (28 and 29), Sirpa and Liisa, both novices, do not have their colleagues proofread their materials. Sirpa maintains that finding the best way of *saying* something *in English often does need thinking* and for Laura, *language is rather a demanding thing* when designing materials. Excerpt 30, on the other hand, shows that Tiina, an experienced teacher, has a native speaker colleague at school who checks *the most important things* in Tiina's materials, *particularly those that also parents will see.*

(28) **en [lueta materiaalejani kollegoilla]** (.) että sitä joskus miettiikin (.) sitä joskus miettiikin että että tota et **miten ihmeessä mä** (.) **tän englanniks sanon siinä** (.) **on kyllä monta kertaa miettimistä**
no I don't [have colleagues proofread my materials] (.) sometimes you wonder (.) sometimes you wonder well **how on earth am I going to say this in English it (.) often does need thinking**
Sirpa NT –CT, INT1

(29) **en yleensä lueta [materiaalejani kollegoilla]** […] eli tuota tuota **kieli on** tuossa **aika haastava asia** välillä
I don't usually have them proofread [by colleagues] […] so well well **language is rather a demanding thing** *sometimes*
Liisa NT +CT, INT1

(30) miulla on **natiiviopettaja** siellä **koulussa** (.) koulussa paikalla että tuota (.) hänellä **tarkistutan** ainakin **kaikki tärkeimmät jutut** (.) ja **varsinki semmoset** mit- minkä **mitkä** myös **vanhemmat näkee**
I've got **a native teacher** *there* **at school** *(.) present at school so well (.)* **I let her check** *at least* **all the most important things** *(.) and* **particularly those** *th- that that also* **parents will see**
Tiina ET +CT, INT2

Excerpt 30 suggests that it is important for a CLIL teacher to give parents an impression of a perfect English competence. Striving for native-like English and materials of a high standard may be due to the nature of CLIL teachers' work. When materials design is very much the teacher's responsibility, the pressure of preparing flawless materials is high. Teachers may be afraid of negative feedback from parents or school administration if they give out materials with mistakes. Overall, the above views seem to reflect the teachers' ideal of CLIL language as flawless, pursuing perfection.

The data do not provide an explanation to the difference between the novice and experienced teachers' practices of having somebody proofread their materials. However, many reasons may lie behind this. First, with a great amount of materials already designed, experienced teachers may be more self-assured about showing their materials to other people than novices are. Novice teachers, on the other hand, may have a fear of losing face if showing self-made materials, which may not be completely flawless, to a colleague. Another explanation may be the long-term tradition within the teaching profession to

work alone behind the closed doors of the classroom, with a high threshold of asking for help even if needed. Third, different teacher personalities may also play a role in that some teachers simply prefer working alone and do not want to cooperate. Fourth, sometimes a reason for not asking a colleague to proofread materials may be as simple as not having a person to cooperate with. This is more probable for novices who have not yet built up a network of colleagues to cooperate with.

The results of the present study suggest that the lack of collaboration in language problems occurring in teachers' self-made materials is clearly something many respondents continuously struggle with. However, the benefits of CLIL teacher collaboration have been highlighted in many studies. Moate (2013) found out in her study on teacherhood in foreign-language mediation that a form of teacher collaboration she calls "dialogic struggle" served as an analytical tool and was an important characteristic of teachers' thought-in-progress. Also research on teacher talk, understood as professional discussions between teacher colleagues, shows the importance of teachers' interaction and sharing of work-related experiences and ideas (Avalos 2011: 16; Doecke, Brown & Loughran 2000: 343).

The data indicate that CLIL teachers' pursuit for "correct" English and native speaker ideal seem to be their main objective when designing and using materials. The following two excerpts illustrate how Tellervo considers the way *a native English-speaker would say* something and having *everything correct* in a handout delivered to pupils as the ideal for a CLIL teacher to aim at.

(31) siinä tulee juur se että (.) et **millä tavalla** se sanoo (.) se englanninkielinen se **native speaker tämän sanos**
*that´s exactly it (.) like **how would a native English-speaker say this***
Tellervo ET +CT, INT2

(32) jos taululle tulee tekstiä tai heille [oppilaille] annetaan joku handout joku (.) monistepaperi ni **siinä pitää olla kaikki oikein** (.) et tosiaan se on sit sitä työteliäisyyttä et (.) pitää tarkistaa ja (.) pitää pitää sitä omaa kielitaitoa yllä ja kehittää
*if there's any text on the board or they [pupils] are given a handout a (.) copy so **it must have everything correct** (.) so that is diligence really that (.) you have to check and (.) keep up keep up your own language competence and develop*
Tellervo ET +CT, INT1

The native speaker ideal has traditionally prevailed in second language acquisition, manifested by the focus on the correctness of language and the mastery of grammar rules (Canagarajah 2007: 238). In sociolinguistics, Davies (2007: 149) argues, the standard language of a native speaker is the model for language learners. In CLIL literature, however, the ideal of near-nativeness has been questioned and the methodological expertise set in focus (Moate 2013: 19; Ortega 2011: 175).

The following excerpt is from the material Tellervo designed for the third grade Science, showing that she carefully follows the principles uttered in the two previous excerpts. Excerpt 33 from her self-made material has no grammatical or lexical mistakes.

(33)

When pollen from one flower lands on a carpel of another, a seed will start to form. This is called pollination. Bees often carry pollen from flower to flower.

Draw a picture of your favourite flower here.

Tellervo ET +CT, TM Science 3

Regardless of the teachers' experience in CLIL, their views of language seem to emphasise correctness and nativeness as a point of reference. In the excerpts below, expressions such as *equivalent to mother tongue*, *excellent* or *good English language* and *exactly correct* suggest that the native speaker ideal still prevails in the views of the teachers of this study. All of these respondents seem to aim at language as *correct* as possible.

(34) totta kai sujuva kielitaito et sen kielen täytyy olla niinku **äidinkieltä vastaava** (.) ja sanaston myöskin
*of course fluent language competence so the language has to be **equivalent to your mother tongue** (.) and the vocabulary too*
Arja ET +CT, INT1

(35) **erinomainen kielitaito** minun mielestä (.) mun mielestä siinä ei saa niinku tinkiä (.) jos ei puhu **hyvää [englannin] kieltä** nii sillon ei kannata opettaa CLILissä mun mielestä (.) koska sillon tehdään enemmän hallaa ku hyö- hyö- hyvää
***excellent language competence** I think (.) if you don´t speak **good [English] language** it´s no use teaching in CLIL I think (.) because then you do more harm than good*
Riitta ET –CT, INT1

(36) **kieli** ois mahollisimman **tarkkaan oikeaa** pyritään siihen **mahollisimman oikeaan** (.) **kieleen**
language** would be as **exactly correct** as possible aiming at **possibly correct (.) language
Liisa NT +CT, O DIARY

These teachers' beliefs about language seem to be in line with cognitivist SLA where taxonomies such as "native speaker" are characteristic (Ortega 2011: 168) and where native-speaker-like foreign language competence is aimed at. What these excerpts also imply is that believing in the superiority of native-speaker-like English in materials sets a heavy extra burden on teachers. Their materials design seems to be characterized by an unconditional attempt for perfection, which in the long run is very exhausting and may gradually even endanger their coping in CLIL. These excerpts indicate that the teachers consider correct English in CLIL materials as such an important aim that they are willing to devote a lot of extra time for keeping up and developing their English. Gierlinger (2013) talks about the identity struggle of CLIL teachers where their outburst "I'm not a native speaker" aptly reveals their difficulty to cope with this issue.

However, it can also be argued that the belief about the native speakers' English being the ideal English is somewhat outdated in today's world where, due to the strong status of English as the *lingua franca*, English is used more in non-native than native contexts (Canagarajah 2007: 235). People will have to accept many kinds of Englishes, spoken with various accents. The fact that teachers tend to adhere to the normative standard of native speaker implies that there is an obvious contradiction between the ideals of education and the practices of real world. Canagarajah (2007: 235) reckons that in the near future, an international standard of speaking English will be the starting point, with British, American and other varieties seen as optional localizations. This would imply a shift away from the pursuit of correctness in second language acquisition and, according to Canagarajah (2007: 238), aiming at developing sensitivity to intuitively understand the way linguistic communication works to cope in the postmodern world.

In the light of the above discussion, it is interesting that the teachers' attitudes towards mistakes in their self-made materials are, however, very tolerant. This implies that they see their foreign language competence in a realistic light, accepting imperfection. Yet their professional demands for themselves are enormous, as shown above. However, the fact that teachers often refer to mistakes in language suggests that the norm of correctness implicitly guides their decisions in materials design. The following excerpts (37 and 38) illustrate that teachers openly admit they do not design flawless materials but often make mistakes, which, however, belongs to their work as materials designers and simply has to be accepted. Tiina acknowledges in excerpt 37 that her materials contain *many mistakes* and Sirpa, in 38, says that *mistakes happen all the time* when designing materials. However, teachers do not specify what kind of mistakes they refer to. Nevertheless, these quotes suggest that striving for perfect English does not seem to be as important for these teachers as for the teachers in excerpts 31 - 36.
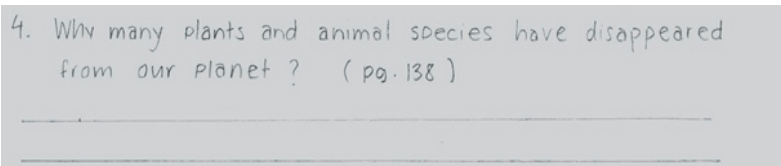
(37) siellä on toki sitten **paljon** myöskin **virheitä** (1.0) **kun sen itse tekee**
       *there are of course **many mistakes** too then (1.0) **when you do it yourself***
       Tiina ET +CT, O DIARY

(38) **tietysti tapahtuu virheitä** (he he) **koko ajan mutta ei sille sitte vaan**
       *of course mistakes happen (he he) **all the time but you just can't***
       Sirpa NT –CT, INT1

Excerpts 37 and 38 conform especially to Canagarajah's (2007) arguments about moving away from the pursuit of correctness towards the tolerance of mistakes and about the status of English as the most frequently spoken language in nonnative contexts.

The following two excerpts show a question from Kaisa's material for the fifth grade Biology and the corresponding part of the diary where she describes writing that particular question. She faced some difficulties expressing the question in English and explains that lacking the exact word, *become extinct*, she

made a decision of using the word *disappear* instead. This solution does not seem to be a problem for her as long as *pupils understand the sentence.*

(39)

4. Why many plants and animal species have disappeared from our planet? (pg. 138)

Kaisa NT +CT, TM Biology 5

(40) Joskus **tiedän, etten keksinyt parasta tai oikeinta tapaa ilmaista jotain asiaa**. Nyt minua jäi vaivaamaan kirjoittamani kysymys "Why many plants and animals species have disappeared from our planet?". Oikeasti minun olisi tullut käyttää ilmaisua "kuolla sukupuuttoon" mutta **tyydyin tähän, koska en voinut tarkistaa sanaa sanakirjasta ja oppilaat ymmärsivät tämän lauseen**. Tavallaan on välillä mahdollista, että **teen kielivirheitä tietoisesti ja tahallisesti.**
*Sometimes **I know I didn't come up with the best or the most correct way of expressing something**. Now the question I wrote "Why many plants and animals species have disappeared from our planet?" bothered me. To be exact I should have used the expression "die out" but **I thought this was ok because I couldn't check the work in a dictionary and pupils understood this sentence**. In a way it is sometimes possible that **I make linguistic mistakes intentionally, aware of them.***
Kaisa NT +CT, W DIARY

Kaisa's statement about making linguistic mistakes sometimes *intentionally* is interesting, particularly as the excerpt from her teaching material confirms that there are several formulations in her material that differ from the English language a native speaker would use. A grammatically and lexically correct sentence in extract 40 would be *Why **have many species of plants and animals become extinct on** our planet?* Since Kaisa does not explain any further why she intentionally makes mistakes in her materials, it is difficult to interpret her intentions. Presumably, aiming at "correct" English may not be important enough for Kaisa to spend much time on thinking about correct grammatical or lexical expressions. Her language aim in CLIL may not be achieving the native speaker level. It is also possible that Kaisa's mistakes are related to her short experience as a CLIL teacher, acknowledging her deficient English by not trying to hide it.

In excerpt 41, Jaakko maintains that although a *teacher makes mistakes* and does not have to speak *top level English*, it is important to be *confident* with the foreign language. He also uses the often-quoted phrase *the most widely spoken language in the world is bad English.*

(41) semmonen tietty varmuus (.) en sano loistavaa kielitaitoo en sano en sano että et et se pitää olla niinkun huippua se kieli mutta mutta siis se että että on semmonen varmuus siinä puhumisessa (1.0) joka niinkun henkii sitte sinne oppilaillekin että (.) et **ope tekee virheitä** siellä (.) mutta se että että **maailman eniten puhuttu kieli on huono englanti**
kind of confidence (.) I'm not saying brilliant language competence I'm not saying I'm not saying that that that it has to be like top level the language but but the fact that that you are confident when speaking (1.0) which then also breathes to the pupils that

> *(.) that **the teacher makes mistakes** there (.) but the fact that **the most widely spoken language in the world is bad English***
> Jaakko ET –CT, INT1

Jaakko's view of language seems to be in line with Canagarajah's (2007) argument about the increasing tolerance of mistakes in the use of English, suggesting that native-like English is no longer the norm. Jaakko's attitude towards mistakes as a natural part of practising to use foreign language shows his pupils, from a pedagogic point of view, that mistakes are allowed both from the teacher and pupils. With this attitude, Jaakko reinforces his pupils' views of language as something that is not and does not have to conform to the native speaker ideal. On the other hand, Jaakko's reference to *bad English* may also imply that after all, the level of native English speaker is the ideal to be aimed at.

One of the main findings of this chapter is that the native speaker ideal still emerges as a strong belief in the CLIL teachers' views of good foreign language competence reflected in their materials design and use. The reason for this may lie in the persistence of teachers' beliefs and in the years of "apprenticeship of observation" as a language learner (Lortie 1975), as shown in chapter 3.3.

6.1.5 Summary

As a result of the analysis of the teachers' beliefs about both learners' and their own CLIL language competence, the data show that the teachers' observations about CLIL language competence are based on many beliefs. First, the teachers seem to believe that assessing pupils' level of English is, in general, easy. However, it requires constant alertness and observing the different elements of language competence. During the actual process of preparing teaching materials for CLIL, pupils' language level seems to be the top priority in the teachers' minds. With primary school children as the target group, the young age of the users of the materials poses a special challenge for teachers. Second, many teachers argue that the CEFR is the guideline for assessing foreign language learning in CLIL and follow its principles when assessing their pupils' level of language. However, the vagueness they refer to the CEFR suggests that their knowledge of its levels and application is, after all, problematic. Consequently, it might be useful to develop 'a CLIL-specific CEFR' which would show the levels of the target language to be met in the exact years of CLIL. In Finland, this has been in progress in individual schools, but a national CEFR to assess CLIL English is still lacking (CLIL Network 2013).

Third, a reference to the similarities of materials for CLIL and special needs education aroused strong views for and against. Some teachers believed that the materials of the two approaches resemble each other in their clarity and simplicity while the others vigorously opposed to this notion, believing that CLIL learners can and need to cope with texts above their level of language and knowledge. Possibly, these teachers feared that comparing the materials of CLIL and special needs education might stigmatize CLIL as an approach with a

distinct need for special support. Also the beliefs about the need for differentiation through materials in CLIL varied. On the one hand, a teacher was expected to follow the average level of the group when designing materials while on the other, taking the needs of different learners into account was called for. However, the data showed no evidence of differentiation through materials, explained by the extra time and effort it would require. Instead, other means to facilitate understanding were commonly used, such as glossaries, explaining difficult words, and reading texts together in class.

Fourth, pupils' CLIL language competence was seen both as an asset and an obstacle, often depending on the teachers' CLIL experience. The way the teachers approach their pupils' CLIL language skills is of primary importance because it is expected to have an influence on their materials design and consequently on what and how will be learnt in their classrooms. Fifth, even experienced CLIL teachers were insecure about their English competence, reflected in their materials design and use. The native speaker ideal still seems to be a strong belief among CLIL teachers despite the prevalent views of language in modern linguistic research which are more socially-oriented, considering language as a socially conditioned activity and a local practice (e.g., Pennycook 2010: 1).

6.2   Role of curriculum in materials design for CLIL

The results of the present study suggest that the problematics of following the national curriculum in CLIL largely seem to derive from the tradition of using the textbook as the framework of all teaching and learning. Textbook orientation is, however, not possible in CLIL, because there are very few target language textbooks available in Finland that would cover all the topics of the national curriculum. Therefore, it is of interest to investigate CLIL teachers' views of the connection between knowing the national curriculum and designing teaching materials for CLIL.

6.2.1   The role of curriculum in designing CLIL materials

According to the teachers' views of the significance of knowing the national curriculum, it becomes obvious that CLIL teachers seem to know the requirements of the curriculum very well. This is aptly summarized in excerpt 42, showing that Riitta has not only carefully studied the curriculum but has also prioritized the central areas of it to be taught to her pupils, indicated by her statetement *the curriculum **I want to teach** them*. Knowing the curriculum also facilitates materials design, not having to continually check which contents are supposed to be taught and when.

(42) **mulla on päässäni** se **ops jonka mä heille haluun opettaa**
the curriculum I want to teach them is in my head
Riitta ET –CT, INT2

The findings related to the CLIL teachers' knowledge of the curriculum are in contradiction with previous research on mainstream teachers' views of curricula, which indicates that teachers regard the curriculum rather as a legislative and administrative document than as a tool supporting their work (Kosunen 2002: 57; Niemi 2004: 38). A major reason for this may be that mainstream teachers, at least in Finland, do not have to know the curriculum very well, because they trust high-quality textbooks to include all the required content matters (Atjonen 1993), which, no doubt, often is the case. In the present data, no negative comments about the curriculum were expressed, suggesting that CLIL teachers might be more interested in knowing its content than mainstream teachers. The respondents consider the curriculum a very important framework for teaching in CLIL. An explanation for this may be that because of the lack of textbooks for CLIL, it is necessary for CLIL teachers to know the curriculum to be able to teach the content in accordance with it. In excerpt 43, Tellervo underlines the importance of teaching *all the content included in the curriculum* and reaching its goals. Similarly, Sirpa highlights in excerpt 44 what she thinks is the difference between teaching CLIL and mainstream classes by arguing that in CLIL, teachers *have to know the curriculum* and its goals *to a larger extent*.

(43) pitää **taata että opetetaan kaikki opetussuunnitelman sisältämät asiat** eli eli et niihin **tavotteisiin päästään**
*you **have to assure that all the content included in the curriculum will be taught** I mean I mean that the goals will be reached*
Tellervo ET +CT, INT1

(44) **enemmän pitää** pitää vaan niinku **osata** tavallaan se **ops** ja katsoa et mitä (.) siel nyt **mihin siel oikeesti pyritään** (.) ja sitte lähtee siit niinku (.) kehittään
*You kinda **have to know the curriculum to a larger extent** and see what (.) **what it really aims at** (.) and then start like (.) developing it*
Sirpa NT –CT, INT1

However, the teachers do not seem to refer to the role of language in CLIL when talking about curricular concerns. This suggests that the teachers view the curriculum from the content perspective which poses challenges to the integration of content and language. According to Gibbons (2002: 119), successful integration requires systematically relating content to the uses of language in the curriculum, thus taking a functional approach to language. Also Arnold and Rixon (2008: 43) underscore that the success of CLIL depends very much on teacher skills in mediating language, curriculum content and the development of learners' inquiry skills.

On the other hand, some teachers openly recognize the difficulty of the requirements set for a CLIL teacher as a curriculum expert and a materials designer. Liisa admits in excerpt 45 that she does not use the curriculum as the basis of her materials design because it would require *very much time and energy*.

Instead, she states elsewhere that she uses Finnish textbooks accompanied by classroom conversations in English and also searches authentic English-language materials from the Internet.

(45) jos ois pelkästään (.) niinku **opetussuunnitelma eessä** että (.) sieltä vaan **kattos aiheen ja rupeis ite luomaan** sitä **sisältöä** siihen niin se **vaatis** niinku ihan (.) **ihan hirveesti aikaa ja energiaa** et **en** niinku **ite valmis oo kyllä sellaseen**
*if you only had (.) like **the curriculum in front of you** and (.) you just **looked for the topic** there and **started creating the content** for it so it **would demand** like very (.) very much time and energy that **I'm** like **not ready for that***
Liisa NT +CT, INT1

In this individual case it seems that training in CLIL does not provide with capabilities of large-scale materials design for CLIL. However, a complicated search-and-select process inherent to resulting high-quality materials applicable to the content and language level of the learners seems to be the key in successful materials design for CLIL. The greatest challenge for teachers seems to be finding the time for searching for relevant materials on the Internet and other sources, repeatedly brought up by almost all of the teachers, as also shown by Morton (2013). The following excerpt summarizes in Meeri's words the teachers' common concern about the contradiction of materials search and time management: *finding suitable material* on the Internet *requires terribly much time from the teacher.*

(46) haen sielt [internetistä] paljon materiaalia (.) **sopivan materiaalin löytyminen** sieltä ni se **vaatii opettajalt** taas **aivan hirveesti aikaa**
*I retrieve a lot of material there [on the Internet] (.) **finding suitable material** there **requires terribly much time from the teacher***
Meeri ET +CT, INT1

This finding conforms to the results of previous CLIL research, indicating that materials design for CLIL is very time-consuming and hard work (Massler 2012: 67; Moate 2011b: 338; Morton 2013: 131). When assessing the quality of materials found on the Internet and searching for the "pearl" among the multitude of them, the professional skills of the teacher play a critical role (Vainionpää 2005: 41).

Although there are contradictory voices, knowing the curriculum seems to be very important from the point of view of materials design to the majority of the CLIL teachers studied. Since there are generally no textbooks for CLIL in Finland, the most obvious premise for materials design is knowing the contents of the national core curriculum. Designing materials for CLIL independently seems to be the only option for CLIL teachers, unlike for mainstream teachers who have a variety of high-quality textbooks by many publishers available.

6.2.2   Effects of liberation from textbook on learning

The lack of ready-made textbooks and other materials for CLIL can also be examined from a different point of view. The data suggest that teachers' liberation from the textbook may offer them new insights into teaching,

providing them with more freedom to prioritize the topics of the subject content and to design materials best applicable for a particular group. The excerpts to follow will demonstrate the effects of careful studying of the curriculum on the teaching practices of two respondents. In both of the following excerpts (47 and 48), the ability to prioritize is one of the major gains mentioned in terms of CLIL materials. These teachers believe that the need to prioritize certain content over some other is hardly encountered by mainstream teachers due to their extensive use of textbooks. The respondents have experienced the advantages of thoroughly knowing the curriculum and describe it with powerful terms, such as *valueing* or *purifying*. Due to his positive experience, Jaakko recommends exploring the curriculum and prioritizing subject content for all class teachers, not only for those working in CLIL. Heidi, on the other hand, has compared the contents of a Finnish science textbook with the national core curriculum and found out that the textbook contains a lot of information beyond the curriculum. Therefore, the need for prioritizing seems to be remarkable when selecting and using materials in CLIL.

(47) jos aatellaan niinku CLIL-opettajan semmosia erityisvaatimuksia niin mitä tietysti toivoisin että olisi ihan kaikillakin (.) luokanopettajilla mutta on ehkä nimenomaan tää tää kyky analysoida sitä opetettavaa aihetta (.) sillä tavalla et et se pystytään nimenomaan pilkkomaan pienempiin palasiin ja **arvottamaan** siellä omassa päässä (.) että **mikä on se arvojärjestys**
*if you think about sort of special demands for a CLIL teacher then what I would of course wish was that all (.) class teachers had in particular is this this ability to analyze the topic at hand (.) in a way that that it can be cut into smaller units and **valued** in your head (.) that **what is the order of preference***
Jaakko ET –CT, INT1

(48) oikeastaan jokaisen opettajan pitäs pitää muutama CLIL-tunti niin niinku ku joutus miettimään et **mitkä käsitteet on tärkeitä opettaa** (.) nii se tekee hir- se on hirveän **puhdistavaa** kun sä huomaat et siinä tekstissä on todella paljon semmost mitä ei tarvii millään kielellä opettaa (.) saati sitte sillä CLIL-kielellä
*actually every teacher should teach a few CLIL lessons so they like had to think **which concepts are important to be taught** (.) so it does ter- it is terribly **purifying** when you notice that there is so much in the text that does not have to be taught in any language (.) not to mention in the CLIL language*
Heidi ET +CT, INT1

Teaching in CLIL forces teachers to reflect the precedence of certain contents over some others. It seems that the respondents have processed the contents to be taught in-depth before converting them into teaching materials. This obviously differs from the practices of many mainstream teachers whose curriculum is claimed to be comprised by the textbook (Atjonen 1993: 116). In general, CLIL teachers seem to agree on the significance of knowing and following the national core curriculum. Their responses give the impression that they have carefully thought about this issue. Confronted by the almost non-existence of textbooks for CLIL, the respondents cannot but to only rely on the curriculum in their materials design. This seems to have liberated them from slavishly following the textbook. Morton (2013: 132) suggests that this may also be an advantage for pupils' learning in CLIL, because instead of using

"one-size-fits-all" textbooks, teachers tailor materials to the needs of their individual learners and classes.

An interesting question emerging from the data in connection with the curriculum is the focus of teaching in CLIL, which seems to vary in the teachers' views. In excerpt 49, Kerttu maintains that the CLIL teacher *does not teach the book or the content or the curriculum but the pupil*.

(49) CLIL-opettaja opettaa nimenomaan sitä oppilasta (.) vaikkaki se opetussuunnitelma on se joka ohjaa mut mut **ei opeta kirjaa eikä asiaa** eikä **eikä opetussuunnitelmaa** (.) **vaan opettaa** sitä sitä **oppilasta**
*what the CLIL teacher teaches is the pupil (.) though the curriculum is the one that guides her but but **does not teach the book or the content or** or **the curriculum** (.) **but teaches** the **the pupil***
Kerttu ET +CT, INT1

Thus, Kerttu's view of learning seems to highlight the teacher's role as the transmitter of knowledge, the pupil as a recipient. In excerpt 50, however, Riitta's target of teaching seems to be the curriculum or the contents of the textbook. Riitta states that *we teach the curriculum and the contents of the book* and thus raises the tools of learning, i.e., curriculum and textbook, into focus.

(50) tää oppikirja ei oo mikään (.) se ei oo niinku se mihin me ainoastaan tuetaan vaan et (.) ku me **me opetetaan opsia ja kirjan asioita** (.) me haetaan niinku sillon vaan niinkun tukee ku tarvitaan
*this textbook is nothing (.) it's not like what we only lean on but (.) when we **we teach the curriculum and the contents of the book** (.) we only look for like support when we need it*
Riitta ET –CT, INT2

It may be that training in CLIL provides teachers with a wider view of learning in CLIL, as suggested by the different foci of learning in CLIL that the teachers express in excerpts 49 and 50.

As a result of the lack of textbooks for CLIL, CLIL teachers' ICT skills seem to be of quite a high level. For the purposes of materials design, they have to know how to retrieve information on the Internet, how to use search engines and how to design attractive layouts for materials, for instance. In the following, Arja reports of *searching for activities suitable for Science books on the Internet* and Riitta highlights the access to the U.K. *materials intended for teaching in primary school through the net*.

(51) oon sitte […] etsiny internetistä niihin [**Science-kirjoihin**] sopivia tehtäviä
*then I've […] searched for **activities suitable for them [Science books]** on the Internet*
Arja ET +CT, INT1

(52) netin kautta on paljon **Englannista** nimenomaan mä oon käyttäny **materiaalia** jotka on tarkotettu **ala-asteen opetukseen**
*through the net there's a lot **from England** in particular I've used **material intended for teaching in primary school***
Riitta ET –CT, INT1

Also the increasing introduction of modern educational technology in classrooms seems to have a positive effect on teachers' use of digital materials and possibilities for large-scale materials design. Excerpt 53 illustrates how Kaisa, in cooperation with her colleagues, has designed all the electronic material for primary school mathematics to be used on the interactive whiteboard in her school.

(53) **mehän ollaan ite valmistettu se sähkönen materiaali** siihen **matematiikkaan**
we have prepared the electronic material for this mathematics by ourselves
Kaisa NT +CT, INT2

This example indicates that with the support of technology and colleagues (and probably also with some financial support), subject-specific projects for materials design have been carried out in schools to improve the poor state of affairs of CLIL materials. Kaisa's short experience on teaching in CLIL does not seem to be an obstacle in this respect. A short CLIL experience may even have a contrary effect in that Kaisa may not be as self-critical about her materials as more experienced CLIL teachers, with fewer opportunities to make comparisons between different materials. Also, as a novice teacher, she may not have been socialized to the strong role of textbooks in teaching.

With the use of materials retrieved from other sources but textbooks, such as the Internet, an interesting influence on teaching can be detected. Webpages on a topic to be learnt seem to provide a tool for assessing the quality of information in materials together with pupils, simultaneously teaching them a critical attitude towards information derived from various sources. In the following quote, Kaisa describes how investigating information retrieved from the Internet and showing it on the interactive whiteboard in the classroom provides the pupils with a possibility to *assess* the *level of information* and its application to the required purposes in classroom:

(54) pystyn näyttään Smartboardilla (.) kaikki näkee sen mitä tietoa sieltä tulee ja me **voijaan arvioida** mikä **minkä tasosta tietoa se** milloinkin **mahtaa olla**
*I can show on the Smartboard (.) everybody sees it the information there is and **we can assess what** what **level of information it happens to be** at any given time*
Kaisa NT +CT, INT1

This is in line with the constructivist learning theory, highlighting the learner's self-directed role and active involvement in the learning process. Research on the application of technology in education also suggests adopting healthy criticism towards the information flow from the digital media and the skills of information retrieval (Pahl & Roswell 2007: 27).

Another effect of the increased digitalization of classrooms seems to be better possibilities for sharing materials between colleagues. Digital materials banks and Smartboard files for the interactive whiteboard are easy to share if desired. Excerpt 55 illustrates the use of a digital materials bank in Jaakko's school. It seems to be a very organized system with separate *files* for different *grades* and *subjects*. An interesting point is that teachers are freely allowed to

improve each other's products, a procedure that Jaakko calls *parastaminen* in Finnish, a self-invented neologism referring to something contrary to stealing. The expression cannot be literally translated into English, but a short introduction to Finnish may help an international reader to understand the meaning behind this combination of two words: *paras = the best, varastaminen = stealing*. Thus, through the combination of *stealing* (in the sense of using materials designed by others) and improving the materials to the *best* possible form, the teachers aim at designing high-quality materials in cooperation.

(55) **se [materiaalipankki] on** tuossa **sähkösessä muodossa** sillä tavalla että siel on **siel on luokat** yks kaks kolme neljä viis kuus (.) se on niinku se kansion muodostus ja sitten (.) siellä **alla on** sitten **aineet** (.) aineet sitte siellä mistä mistä (.) löytyy (.) materiaalia sitte sinne että […] sitte se on tämmöstä **ei varastamista mutta parastamista** (.) että **otetaan se toisen** toisen **tuotos käyttöön ja** ja (.) **muokataan sitä**
it [the materials bank] is there in electronic form so that there are there are grades one two three four five six (.) that's like the formation of the files and then (.) there are the subjects below (.) the subjects there then where where (.) are (.) the materials then there so […] then it's kinda not stealing but improving (.) taking the other other person's product into use and and (.) editing it
Jaakko ET –CT, INT1

Interactive whiteboards offer another way of sharing materials with colleagues. Kaisa points out in excerpt 56 that she *swaps* her *personal Smartboard files* with a teacher colleague in the beginning of a new term, thus sharing all the materials she has designed on the interactive whiteboard for one particular class.

(56) mul on nyt neljäs ens vuonna viides ja nyt se joka opettaa viidettä sillä on ens vuonna neljäs **me vaihetaan** (.) **meijän omat Smartboard-tiedostot keskenämme**
I've got the fourth now the fifth next year and now the one who teaches the fifth will have the fourth next year we will swap (.) our personal Smartboard files together
Kaisa NT +CT, INT1

According to many respondents, however, teacher cooperation is not as abundant in all CLIL schools as suggested in these examples. In the following, Tarmo reports of almost nonexistent cooperation between CLIL teachers in his school. However, he would welcome cooperation, because *it might make* CLIL teachers' *work easier*.

(57) Tarmo: tuntuu että **jokainen tekee siellä omissa lokeroissaan** ja tota noin nii ehkä vähän **päällekkäin samoja juttuja** et **voi vähän helpottaa toistenki työtä ku tehtäs yhteistyötä**
Eveliina: nii kyllä joo nii no teetkö yhteistyötä muiden CLIL-opettajien kanssa?
Tarmo: mietitäänpäs (4.5) käytännössä siis **todella vähän**
Eveliina: mhm
Tarmo: siis **eipä juuri ollenkaan**
Tarmo: it feels like everybody is doing in their own boxes and well maybe the same things overlapping a bit so it might make other people's work easier if we collaborated
Eveliina: yes yes yeah so well do you collaborate with other CLIL teachers?
Tarmo: let me think (4.5) in practice very little
Eveliina: mhm
Tarmo: so not at all really
Tarmo NT –CT, INT1

A good question at this point is if there is a connection between the teachers' use of ICT and professional collaboration. The above excerpts, at least, indicate that sharing materials through electronic means is commonplace. Excerpt 57 suggests, however, that cooperation between CLIL teachers is still not self-evident though research undeniably shows the many benefits of teacher cooperation in CLIL, ranging from developing CLIL expertise to better satisfaction with work, diminished work load and new perspectives on issues to be taught (Kozianka and Ewig 2009: 144; Traianou 2007: 140).

6.2.3   The role of culture of CLIL language countries in materials

This chapter examines teachers' views of the possibilities to include cultural aspects and interculturality in CLIL materials, comprising an integral part of the curriculum. Coyle's (2005) 4Cs framework, introduced in chapter 2.3, shows the close integration of content learning and language learning and a symbiotic relationship between the four elements, Content, Cognition, Communication and Culture. The role of Culture seems to be the most central in the 4Cs framework, infiltrating all the other elements. In the present data, it is possible to detect teachers' views that confirm the importance of knowing and conveying cultural aspects of the L1 countries in the CLIL classroom.

In excerpt 58, Arja maintains that a teacher *has to have interest in and knowledge of the culture of English-speaking countries* to be able to convey them to the pupils. In excerpt 59, Heidi considers bringing cultural aspects into the CLIL classroom a necessary *complement*, *the extra spice* introduced to pupils *whenever possible*. It may be that the particular interest of these teachers in Science subjects, often dealing with other countries and cultures, affects their views. In fact, Arja designed her material for the purposes of this study for the fifth grade Geography and Heidi for the fourth grade Science.

(58) [opettajalla] täytyy olla **kiinnostus ja tuntemus englanninkielisten maitten kulttuurista** (.) että tietää mistä puhutaan ja ja minkälaisia piirteitä **erityispiirteitä** siinä on **joita voi** sitten myöskin **lapsille tuoda** (.) tuoda esiin
*[the teacher] has to have **interest in and knowledge of the culture of English-speaking countries (.)** so that you know what's up and and what kind of features **special features** it has that you can also **bring to the kids (.)** bring forth*
            Arja ET +CT, INT1

(59) tää **kulttuurinen lisä tulee** siihen sitte **aina** (.) **kun mahdollista** (.) ja **se on se lisämauste**
*this **cultural complement will always be there** then (.) whenever possible (.) and that's the extra spice*
            Heidi ET +CT, INT1

As the excerpts illustrate, Arja and Heidi seem to recognize the importance of conveying the cultural aspects of English-speaking countries to the pupils and aim at intercultural awareness in CLIL, as demanded by Coyle et al. (2010: 42). Materials from L1 countries have a significant role from the culture perspective, providing with an opportunity to bring aspects of the culture of the L1 country into the CLIL classroom. In primary school, authentic materials give valuable

insight into different ways of thinking, allowing pupils a wider perspective on issues at hand. Furthermore, the respondents of this study tend to consider CLIL materials as "special products" which cannot be imported from English-speaking countries to be used as such, because the curricula of those countries do not correspond to the Finnish one. Equally important, the level of language in L1 materials is often too high.

In the three excerpts below, all the respondents quoted agree that the curricula of the L1 countries differ so much from the Finnish one that applying L1 materials as such is impossible, and that the language level of L1 materials does not match with the level of pupils' CLIL language competence. It is an interesting observation that bringing forth cultural aspects of English-speaking countries is seen in a positive light by the teachers, as shown in the two previous excerpts, but teaching materials designed in an English-speaking country are seen as a *problem* that do not apply to Finland because *they can't know what we want*, as Kaisa says in excerpt 60. Another worthwhile observation about the three excerpts below is that the respondents seem to draw attention to the connection of content and language when referring to the curriculum (e.g., excerpt 62: *to find materials where language and content match).*

(60) meil on käytössä näitä tällasia niinku materiaaleja jotka on joko Jenkeistä tai sitte Britanniasta mutta että ensinnäki se **opetussuunnitelma on niin erilainen** ja toisekseen niissä se **kielen taso menee niin yli** (.) et sitte tavallaan jos taas Englannissa he laatis Suomeen tarkotettuu CLIL-materiaalii niin en mä usko et sekään toimii koska **ei** se niinku (.) **pysty tietämään** et **mitä me halutaan**
we have some of these materials that are either from the States or Britain but first of all **the curriculum is so different** *and secondly* **the level of language goes so much beyond ours** *in them (.) so in a way if they in England designed material intended for CLIL in Finland I don't think it would work because it like (.)* **they can't know what we want**
Kaisa NT +CT, INT2

(61) sehän noissa on **ongelmana** noissa oppimateriaaleissa et jos niitä tilaa vaikka Englannistaki nii **eihän ne vastaa suomenkielistä opetussuunnitelmaa** (.) et sitten niitä joutuu ylleesä aika paljo aina niinku sitte jotenki muokkailemaan ja (.) jättämään asioita ottamatta ja (.) sitte lisäilemään (.) asioita sinne lisäks
that´s exactly **the problem** *with materials like if you order them from Britain* **they don´t correspond to the Finnish curriculum** *(.) so then you usually have to like somehow edit pretty much and (.) omit things and (.) then add (.) things there too*
Liisa NT +CT, INT1

(62) täs se **ongelma** just **onkin** tota **löytää kielellisesti ja aihepiiriltään yhteensopivii materiaaleja**
this is exactly **the problem** *well* **to find materials where language and content match**
Meeri ET +CT, INT1

The observation of this study suggesting that teachers do not find L1 materials applicable for CLIL in the Finnish context is in line with Ziegelwagner's (2007: 292) proposition that materials acquired from L1 countries for the purposes of teaching through CLIL in another country do not cover the topics of the national curriculum and are inevitably context- and culture-bound. Ziegelwagner argues that therefore, a teacher's knowledge of the culture of the

countries where the CLIL language is spoken becomes an inseparable part of her process of materials design and use. As Coyle et al. (2010: 42) argue, culture infiltrates all that takes place in the CLIL classroom and thus makes intercultural awareness fundamental to CLIL. Previous research on teaching materials for CLIL reveals that teachers may compile their materials from target language texts designed for other markets (Sylvén 2010: 35) or use a textbook supplied from the target language country but modify it to a large extent (Ziegelwagner 2007: 307).

Another point of view to the relation of language and culture can be detected in excerpt 63 where Tellervo considers each *language an individual way of thinking*. This view of language suggests that language includes aspects related to the country where it is spoken, i.e., the social structures, culture, or traditions of that country. Thus, language is seen to be affected by the communities and environments where it is spoken, regarded as social practice:

(63) jo- **jokainen kieli** niinku tavallaan **on** semmonen **oma ajattelutapansa**
      ev- every language is like in a way **an individual way of thinking**
                Tellervo ET +CT, INT2

Thus, an implication of this excerpt is that it is not only content and language that are to be mediated in CLIL but also cultural and social awareness of the target language countries. It might be argued that on the one hand, CLIL is about spreading out English as the *lingua franca*, but on the other, it is about the dominance of English-speaking countries.

Based on these results, it seems that the theoretical outlines of CLIL as an approach to increase cultural awareness do not correspond to the practices in the field. The most important reason for this is probably the lack of a specific CLIL curriculum in Finland. CLIL teachers follow the same national curriculum as mainstream teachers. However, standardizing CLIL practices, which at the moment seem to vary a great deal, between CLIL schools in Finland would demand developing a special curriculum for CLIL. The problematics caused by the lack of a CLIL curriculum has also been noted in other recent CLIL studies, e.g., Czura and Papaja (2013: 332). The results of the present study suggest that there is a demand for teacher training involving cultural awareness in CLIL and materials used. In sum, CLIL teachers' intercultural awareness seems to be twofold. On the one hand, teachers are interculturally aware of materials design by keeping up with the culture of English-speaking countries and actively conveying it to the pupils. On the other hand, however, they tend to consider teaching materials designed in an English-speaking country highly problematic in that they do not correspond to the national core curriculum. In conclusion, CLIL materials applicable for the Finnish context are required.

6.2.4   Teachers' expectations about potential textbooks for CLIL

The teachers of this study seem to be well aware of the problematics behind the scarce textbook publication for CLIL in Finland, sharing the observation that

publishers' unwillingness to produce textbooks for CLIL is due to small editions which would result in unprofitable business. In the following, Liisa and Tiina seem very pessimistic about ever receiving textbooks for CLIL from a Finnish publisher. Liisa says that *the message* from the publisher *is very negative* (64) and Tiina maintains that the *idea* of publishing textbooks for CLIL *would be absolutely crazy* (65).

(64) hänen [kustantamon edustajan] kans juttelinki tästä mutta sieltä tuli kyllä ihan selvästi se viesti että se on niin arvotonta tai niinkun siis **he ei saa siitä mittään voittoa** et jos he tekkee näitä materiaaleja englanniks (.) että **turha odottaakaan** melkeinpä **et sitä on** […] et sieltä tulee ainaki hyvin semmonen **negatiivinen** (.) **viesti** siihen
*I talked to him [the publisher's agent] about this but the message from there was very clear that it is so worthless or like **they don't get any profit** if they make these materials in English (.) so it is pretty much **in vain to wait for it** […] so **the message** from there is very like **negative***
Liisa NT +CT, INT1

(65) varsinki **suomalaiset kustantajat ei** iki- **ikinään lämpene** tämmöselle **ajatukselle [CLIL-kirjojen kustantamisesta]** sehän olis ihan mieletöntä
*particularly **Finnish publishers will ne- never warm up to this kind of an idea [about publishing textbooks for CLIL]** it **would be absolutely crazy***
Tiina ET +CT, INT2

It is noteworthy that both of these teachers have received training in CLIL. A question one might ask here is if CLIL training ignores materials and the teachers' central role in preparing them. After all, Tiina and Liisa would prefer CLIL textbooks if they existed instead of designing materials themselves. The same is true also for Arja (cf. excerpt 66), an experienced CLIL teacher with training in CLIL. This may signify the lack of knowledge and strategies of materials design offered in pre- and in-service CLIL teacher training. In some European countries, such as Spain and the Netherlands, teaching materials for CLIL in English have been systematically produced on a state-run basis since the mid-2000s (de Graaff et al. 2007b: 13; Muñoa Barredo 2011: 297). In Finland, this has never been experimented and publishers have, in the first place, been reluctant to produce textbooks for CLIL probably for the very reason expressed by the respondents above: the low profits. The major requirement the teachers set for a CLIL textbook, whatever the subject, is that it should be equivalent to the NCCBE (2004). In the following two excerpts, Arja would warmly welcome anything a publisher offers for CLIL as long as *it corresponds to the national curriculum*. She also admits being very *active* and *interested* in knowing what is going on in the field of publishing materials for CLIL.

(66) kyllä semmonen sellanen tilanne on että mitä vaan mistä vaan joku tarjoaa niin (.) jos se olis **meijän opsin mukaista** nii (.) ehdottomasti
*yes the situation is now that whatever wherever anybody offers so (.) if **it corresponded to** our **national curriculum** so (.) absolutely*
Arja ET +CT, INT2

(67) mä **oon** niinku **vielä enemmän siinä [CLIL-materiaalien tilanteen selvillä pysymisessä]** niinku **aktivoitunu** ja (.) ja tota **ollu viel enemmän siitä** (.)

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> **kiinnostunu** just että (.) **mitä tapahtuu** ja **onko jotain tapahtumassa** ja
> **minkälaista [materiaalia] ollaan tekemässä**
> *I have like **become even more active in it** [finding out what is going on with
> materials for CLIL] and (.) and well **been even more (.) interested in it** exactly in
> (.) what's happening and **is something happening** and **what kind of [material]**
> they are making*
> Arja ET +CT, INT2

The demand that materials should be applicable to the Finnish context seems to be raised in many different connections in the interviews, implying that teachers consider the Finnish perspective very important in materials. This is obviously due, first, to the fact that education is to a large extent a national matter and, second, to the strong role of the curriculum guiding all teaching and learning. This finding suggests that, again, a specific CLIL curriculum to the Finnish context might offer at least a partial solution for CLIL teachers' obvious demand for CLIL materials. With common guidelines, the CLIL curriculum would unify the varied practices of CLIL programmes around the country. Though teachers appear to be rather pessimistic about publishers' initiatives to produce textbooks for CLIL, they still seem to wish for some improvement to take place, as shown, for instance, in Arja's enthusiasm to know more about publishers' intentions regarding CLIL materials.

It becomes evident from the responses of the majority of the teachers that they consider themselves first and foremost as content teachers, which is shown as their occasional insecurity in materials design for CLIL. As excerpt 68 indicates, Tellervo would welcome ready-made materials for CLIL designed by someone else more competent in English than herself, illustrated in her expression that she *would need exactly all those ready-made materials for CLIL*. This shows her view of language as a challenge where she needs support.

> (68) **mä en oo kielen opettaja** niin (.) **mä tarvitsisin juuri** niitä (.) **niitä kaikkia
> [valmiita CLIL-oppimateriaaleja]**
> *I'm not a language teacher so (.) I'd need exactly those (.) all those [ready-made
> materials for CLIL]*
> Tellervo ET +CT, INT1

This finding is in line with previous research showing that content teachers, used to being positioned as disciplinary experts, often face problems with language issues (Moate 2011a: 17; Schleppegrell & O'Hallaron 2011: 6-7). However, this is not surprising in the light of the scarce teacher training for CLIL teacher profession throughout Europe (Marsh et al. 2011). As Nikula and Järvinen (2013: 153) point out, CLIL teachers can be considered to represent a new teacher type in Finland: a teacher who is not a language teacher but who teaches in a foreign language and thus also teaches that language.

On the other hand, Tellervo's wish to have ready-made materials for CLIL may imply that she does not consider materials of her own to be of sufficiently high quality and would therefore rather use materials designed by an "expert". Pennington's (2001: 343) study supports this interpretation, suggesting that teachers more readily accept materials provided by an authority or expert than by a colleague. In McGrath's (2008: 10) words, teachers may believe that behind

textbooks, there is somewhere an "expert" who can solve problems for the teacher and pupils. However, in Tellervo's case this seems to be in contradiction with her almost two-decade long experience as a materials designer for CLIL. Alternatively, the reason for her wish to use ready-made materials for CLIL may be as simple as saving time, effort and energy. After all, many CLIL teachers have begun their teaching career in mainstream classrooms, getting used to high-quality textbooks for every subject and therefore so emphatically wish the same system also for CLIL.

6.2.5 Summary

To summarize, CLIL teachers seem to know the contents of the NCCBE (2004) better than average mainstream teachers who probably rely more on ready-made textbooks and other teaching materials. This can be explained by the CLIL teachers' pronounced role as materials designers, which results from the lack of ready-made teaching materials for CLIL. Knowing the curriculum liberates CLIL teachers to design materials of their own for content subjects and makes them prioritize the contents of the curriculum in an in-depth way unfamiliar to most mainstream teachers who are often claimed to follow the textbook as a "hidden curriculum" (Atjonen 1993: 116). The teachers' observations about the incompatibility of the NCCBE (2004) and L1 textbooks from abroad reveal that they consider materials from L1 countries very difficult to match with the national curriculum. If L1 materials are used, a great deal of modification is required to achieve the aims and standards set in the NCCBE (2004). Therefore, teachers would welcome ready-made textbooks for CLIL on condition that contents match with the national curriculum. This resonates with Morton's (2013: 130) results which showed that CLIL teachers expected ready-made materials to make their lives easier. Undoubtedly, high-quality materials applicable to the requirements of the national curriculum and learners' age and linguistic and cognitive level would greatly facilitate CLIL teachers' work load.

Teachers' liberation from the textbook also seems to reinforce their ICT skills. For the purposes of materials design, teachers have to be able to use the computer rather proficiently. An in-depth knowledge of the use of the Internet and various search engines is the first and foremost skill in order to efficiently retrieve information and materials on various topics. Further, the increasing introduction of modern educational technology in classrooms offers more possibilities for large-scale materials design for teachers. The interactive whiteboard, for instance, seems to be a particularly applicable tool for designing, saving and sharing materials for CLIL.

The teachers' views of the role of the culture of the target language countries seem to be two-fold. On the one hand, teachers are interculturally aware in materials design by actively conveying updates on the culture of English-speaking countries to the pupils. On the other hand, they tend to consider teaching materials designed in an English-speaking country highly problematic in that they do not correspond to the NCCBE (2004). Thus, English CLIL is about the dominance of English-speaking countries, but at the same

time it is about spreading out a *lingua franca*. A recurrent belief about the relation of CLIL and intercultural awareness seems to be that it is not only content and language that are to be mediated in CLIL but also the cultural and social awareness of the target language countries. An introduction of a specific CLIL curriculum in Finland might be useful not only for supporting materials design for CLIL, but also for standardizing CLIL practices which at the moment vary a great deal around the country.

The majority of the CLIL teachers seemed to regard themselves primarily as content teachers, which was shown as their occasional insecurity in materials design for CLIL. As a rule, teachers seemed to prefer ready-made materials to the ones designed by themselves. Teacher expertise or training received in CLIL did not seem to have an influence on this preference. The most obvious reason behind it seemed to be the time-and-effort saving aspect together with the challenges the teachers face with the foreign language. However, the teachers also seemed to believe that published or Internet materials were, as a rule, of a high quality and made by an expert that they did not consider themselves to be. Consequently, this respect of an "expert" emerged as an important reason for the teachers' wish for ready-made materials for CLIL. It seems reasonable to argue that CLIL training does not provide teachers with sufficient knowledge and strategies of materials design.

The problematics of combining content and language in CLIL will be discussed more in-depth in the following chapter which focuses on teachers' beliefs about the role of language in CLIL.

6.3   Separate vs. context-bound language

This chapter reports the respondents' views on language in CLIL as reflected in their talk about teaching materials and their design and use. As discussed in chapter 3.2, teachers' views on language have an effect, among other things, on their use of materials, and it is therefore important to investigate what their views on materials for CLIL reveal about their beliefs about language. Miramontes et al. (2011: 13) argue that in bilingual teaching and learning, pupils move from the first language to the second language, and this task involves a whole new system for expressing their knowledge and understanding. For young learners, this may pose particular challenges, which the following paragraphs aim to shed more light on. Investigating the teachers' views on whether they see language as a separate or context-bound element is also expected to provide new insights into learning in CLIL.

6.3.1   Language as a tool for mediating content

In the interviews and diaries, teachers often referred to language as either a separate or a context-bound element. Most teachers maintained that in CLIL, language is a tool for mediating content to learners. The following excerpts

differ slightly from each other in their emphasis on language versus content. In the first quote (69), Jaakko's expression *language is always related to some context used* implies that he sees language as social activity, not as a system, suggesting that in his view, language does not only provide instrumental value, but both elements, language and content, are to be conveyed, language in relation to the context. In the latter two quotes, 70 and 71, one gets an impression that language is understood as a separate system, as if it was not part of the practice. In 70, *conveying the content* and *conveying the language* seem to be understood as two separate things, implying that the respondent thinks it is possible to keep them apart. In excerpt 71, on the other hand, language is given the priority since the respondent says *they learn this foreign language and **then** use it as a tool for learning things,* implying that language comes first.

(69) nään sen **kielen** niinkun tämmösenä yhtenä **työkaluna**, että sillä ei oo tavallaan semmosta semmosta omaa itsenäistä merkitystä oikeestaan yksinään vaan vaan vaan **kieli on aina suhteessa** johonkin johonki **kontekstiin** missä sitä kieltä käytetään
*I see **language** like **as a tool** that in a way it doesn't have a kinda kinda independent meaning of its own alone really but but but **language is always related to** some some **context** where this language is used*
Jaakko ET –CT, INT1

(70) CLIL-opetukses nimenomaan kaks juttua et on se se **asian välittyminen** ja sit on se **kielen välittyminen** (.) nii CLIL-opettaja hallitsee sen kentän silleen et se ottaa huomioon ne molemmat
*there are exactly these two things in CLIL there is **conveying the content** and then there is **conveying the language** (.) so the CLIL teacher commands the field by taking both of them into account*
Kerttu ET +CT, INT1

(71) opitaan sitä **kieltä** sitä vierasta kieltä ja käytetään sitä sitten **välineenä** niiden asioiden oppimisessa
*they learn this **language** this foreign language and then use it **as a tool** for learning things*
Tellervo ET +CT, INT1

In excerpt 71, Tellervo's view of the precedence of learning the CLIL language before learning content through it may be characterized by her long experience with the youngest pupils in primary school where the starting point often is that children know no or only little CLIL language. Obviously, in such cases the first step is to begin with the basic concepts of the subject matter using both languages, the mother tongue and the CLIL language, bearing in mind that in Finland, CLIL programmes follow the NCCBE (2004) and generally, the content will have to be learnt in both languages.

Though the teachers largely share the view of language as a mediator of content in CLIL, some nuances can be separated between their understandings of language in CLIL. The conceptualisation of language as *a tool* of teaching and learning content is repeated by many respondents. Yet, teachers seem to understand the function of the *tool* in slightly different ways. While Tellervo above (71) considered language separate from content and as a prerequisite for learning content in CLIL, Meeri (72) regards *language* as the *tool and not the target*

of teaching. This seems to suggest a view that language does not have to be learnt separately to be able to learn content in the foreign language but language learning is intertwined with content learning.

(72) **kieli on väline eikä opettamisen kohde** ni sen tän välineen kautta pitäis saada kielen kautta pitäis **saada ne asiat oppilaille** oppilaille **selvitettyy**
language is a tool and not the target of teaching so through this tool you should be able to **clarify the matters to the learners** learners
Meeri ET +CT, INT1

On the other hand, Meeri's reference to *the matters* that should be *clarified to the learners* implies that she regards subject content as a set of facts to be transferred to the learners, thus suggesting that language is seen as a portal through which content is accessed (Barwell 2005: 144). A similar view is expressed in the most explicit way by Liisa who points out in excerpt 73 that the foreign language in CLIL is the only extra element compared to mainstream teaching. She says that *language is just the tool and otherwise all studying is the same* as in mainstream teaching, irrespective of the language.

(73) **kieli on** kuitenki nii pitkälti vaan se **väline** siinä että **muuten kaikki opiskelu on** sinänsä ihan **samaa**
*anyway **language is** so much just **the tool** there and **otherwise all studying** as such is the same*
Liisa NT +CT, INT1

These views do not seem to conform to previous research on the nature of teaching through a foreign language (e.g., Massler 2012; Snow 1993), which shows that it differs from mainstream teaching also in many other respects than language. For instance, visualisation and classroom interaction appear to be more common in CLIL than in mainstream classrooms. The prevailing view on the role of language in CLIL that the teachers hold according to these data seems to be that language is a tool for conveying content. In this way, language and content are rather seen as separate elements in CLIL than intertwined. The otherwise uniform views the teachers hold in this respect appear to differ only in the time of beginning to learn the target language: whether the pupils should first know the target language to be able to learn the content through that language or whether they could learn content and language simultaneously. The young age of the target group, primary school pupils, obviously plays a role in the teachers' beliefs about the role of language in CLIL.

6.3.2 Language as a set of vocabulary

In this chapter, the teachers' ways of referring to vocabulary when talking about teaching materials will be discussed. The various ways teachers talk about lexical items reveal explicitly their beliefs about language in CLIL. In fact, it seems to be very common for teachers to refer to words and vocabulary when talking about language in CLIL. For instance, the majority considers offering vocabulary in both the mother tongue and CLIL language very important for

learning content. This is highlighted in the following excerpts where the respondents describe how they provide pupils with keywords, glossaries or explanations of words. In the first excerpt (74), Kaisa says she *translates the keywords* in the text, and similarly, the second excerpt (75) illustrates that Meeri finds it important to have the new vocabulary in both languages attached to the text, shown in her expression *the words are clearly written in Finnish in the end of the booklet*. The new vocabulary is technically practiced as a part of the learning process (*these words are repeated in different ways*).

(74) **suomennan** sinne [tekstiin] niinku **keywords** […] ne jotka selviää siitä tekstistä niin lukee sen suoraan ja ne jotka ei selviä niin saattaa ehkä saaha niistä avainsanoista jotain hyötyä
*I **translate** like **the keywords** there [in the text] […] the ones who can manage with the text will read it straight away and the ones who don't may benefit from the keywords*
Kaisa NT +CT, INT1

(75) [itse tehdyn] kirjasen lopussa on tämmönen **Keywords -säkki** mis on noi **sanat** ja **ne laitetaan selvästi suomeks** sinne; niit **eri tavoil toistetaan** niit niit **sanoja**
*in the end of the [self-made] booklet there is this **Keywords sack** where these **words** are and **they are clearly written in Finnish** there; these these **words are repeated in different ways***
Meeri ET +CT, INT1

The aim of using the mother tongue and foreign language in teaching and learning vocabulary is presumably based on the previously-mentioned requirement of assuring that pupils will know the content in both languages, in order to be able to later apply for either Finnish- or English-language vocational or upper secondary schools. The strong status of vocabulary in the teachers' talk about language may result from three things. First, language competence is often connected to the knowledge of vocabulary which is also shown in the teachers' views. Second, the young age of the primary school pupils as the target group may have an effect on the strong role vocabulary plays in the teachers' views on language. Since the foreign language vocabulary of primary school pupils is generally not very large, teachers may find it necessary to pay special attention to teaching the key words of the special fields. When teaching older pupils, the focus in vocabulary is probably not as strong since their range of the basic terms of special fields has already been acquired during primary school.

Another explanation for the teachers' focus in vocabulary, revealed from their views on language, may be the specific nature of the subjects most of the respondents teach through English. Science is the most common CLIL subject taught among the respondents, and admittedly, terms play an important role when examining scientific phenomena. Sometimes, however, one cannot help wondering if the teachers pay even too much attention to getting the vocabulary right, to the detriment of other properties of CLIL texts. There may be a danger that keeping only on the vocabulary level hinders teachers from thinking deeper about the principles required from a high-quality CLIL text. For instance, Tarmo's oral diary (76) about his materials design reveals his

special focus in vocabulary and words. He describes this process with expressions such as *search for words, write vocabulary,* and *take vocabulary* from the Internet.

> (76) se mitä mä teen niin on **etsin sanoja** me puhutaan paljon asiaa englanniksi ja kirjotetaan taululle ja muistiinpanot esimerkiksi tästä ympäristötiedosta työkirjathan meillä on suomeksi joten mä en niitä pääsääntösesti en rupea kääntämään oppilaille valmiina monisteina vaan **me sitten siinä kirjotetaan sitä sanastoa** sitten suomenkielisen kysymyksen päälle esimerkiksi kokeita ensimmäisen ympäristötiedon kokeen tänä syksynä pidin suomeksi ajattelin siellä oli kuitenkin tämmöstä suomenhevosta ja na- pihattonavettaa ja **tämmöstä sanastoa** […] pyörin paljon tuolla netissä etsimässä Primary Resources sivuilta jos sais vinkkejä ja sitten tota tietysti ihan googletan englanniksi ja sitten tota **otan sanastoa sieltä** ja tulee vähän tutuksi se aihe
> *what I do is **I search for words** we talk a lot in English and write on the board and notes for example in science workbooks are in Finnish so I mostly don't start translating them for pupils as ready-made copies but **we write vocabulary** above the Finnish question for example tests the first science test this autumn I made in Finnish I thought there were things like a Finnish horse and cowshed and **this kind of vocabulary** […] I hang out on the net a lot on primary resources web pages looking for hints and then of course just google in English and then like **take vocabulary from there** and I get to know the subject*
> Tarmo NT –CT, O DIARY

Excerpt 76 seems to confirm that many content teachers have a "layman's" understanding of what vocabulary is. Vocabulary takes precedence in Tarmo's process of designing materials for CLIL, and understanding language as a collection of words seems to be prominent to him. The subject-specific ways of expressing content matters or taking linguistic features into account, such as the suitable level of language for pupils, do not appear to play as an important role for Tarmo as does the correctness of vocabulary. This view coincides with the structural view of language, as presented by Richards and Rodgers (2001) in chapter 3.2. Structural view sees language as a system of structurally related elements for the transmission of meaning. The target of language learning is the mastery of these elements, that is, grammatical units and words. However, the role of vocabulary in language competence has been redefined since the 1970s. Lewis (1997), one of the fathers of the lexical approach, defines words as single units, multi-word units, loose and fixed collocations, and prefabricated chunks. He maintains (1997: 204) that "rather than trying to break things into ever smaller pieces, there is a conscious effort to see things in larger, more holistic ways". In this way, the lexical approach aims at showing a more realistic view of language. Another aspect of vocabulary in CLIL is viewing words as concepts, and concepts as a part of the subject matter. From this viewpoint, it is not sufficient to know the meaning of a word, or a concept, but also its position in the particular discipline.

Research has shown mother-tongue educational texts difficult to the learners at the level of vocabulary, linguistic structures and expressions, sentence length, and cohesion of the text. Textbooks almost invariably contain language too complicated for the intended target group (Julkunen 1988, Julkunen et al. 1991; Mikkilä-Erdmann 2002; Mikkilä-Erdmann et al. 1999).

Given that mother-tongue textbooks are difficult to pupils at the lexical level, it is not surprising that also CLIL teachers struggle with foreign language specialized vocabulary. CLIL research has shown (e.g., Coyle et al. 2010; Mehisto et al. 2007) that a major concern for teachers is finding correct terms for the special fields of content subjects. Thus, the respondents' focus in the words in CLIL texts may be due to the difficulty they experience with the specialist vocabulary in a foreign language, which presumably results from the lack of content teachers' training in specialised English. This is one factor worth taking into account when further developing CLIL teacher training.

At this point, also Llinares et al's (2012) view of language in the context of different disciplines is worth a short discussion. They (2012: 111) maintain that "language is not simply a means of transport for ideas, carrying the knowledge of a subject, but, in fact, it constructs, structures and even restricts knowledge through discipline-specific texts". This implies that a subject and its language are inextricable and as a result, words cannot be treated separate from the entirety of discipline-bound language. The teachers' orientation to the vocabulary of CLIL texts reflects their understanding of language in the first place. Tarmo's relatively short experience as a CLIL teacher may contribute to his obvious focus in the level of words. In a way, foreign language terms are the first challenge a CLIL teacher faces when dealing with texts to be used for CLIL. Without knowing the terms to be taught both in Finnish and English, teaching content is, of course, impossible. At the beginning of the CLIL teacher career, it may be difficult to see beyond the surface level of texts (words and grammar), because searching for correct terms may be problematic and time-consuming. Commanding the special field vocabulary of many content subjects is a demanding task and it takes years to collect and develop it, not to mention remembering the discipline-specific terms when rarely used in every-day language. Another difficulty for novice teachers is to find the most relevant sources for the desired terms in English since even the largest dictionaries do not usually know special field terms.

Excerpts 77 and 78 intriguingly show two novice teachers' struggle with vocabulary when designing materials for CLIL. In the first excerpt, Liisa is concerned about achieving *correct translations* for the terms, and in the second one, Kaisa admits that she has to *search for words very much*.

(77) totta kai niinku **aina sitä sanastoo miettii** että tuleeko nyt varmasti **oikeet käännökset**
*of course **you always think about the vocabulary** like are these really **the correct translations***
Liisa NT +CT, INT2

(78) kyllä sitä materiaalia laatiessa sitte et kyl mä **jouvun hirveesti hakeen** niitä **sanoja**
*yes when designing materials then **I** very much **have to search for** those **words***
Kaisa NT +CT, INT2

The excerpts suggest that striving for correct language is important particularly for novice teachers, but training received in CLIL does not seem to make a

difference in this aspect. Liisa and Kaisa's view of language seems to be characterized by the strong role of words and vocabulary, considering language as a code which consists of a set of symbols and syntax for arranging them (Atkinson 2011b: 4-5). This also indicates a contradiction typical of CLIL, resulting from its dual aim: developing content and language. In content subjects, such as Science, correct terminology is very important. In this light it is understandable that teachers are concerned about conveying the correct terms in the foreign language. Therefore, interpreting CLIL teachers' views of language through their talk about vocabulary cannot be as straightforward as one might first conclude.

From the learner perspective, it is essential to know the vocabulary both in L1 and in L2 to be able to attach a new term in the old knowledge schemes (Coyle et al. 2010). Therefore, it is important that teachers are provided with support in the search for the appropriate vocabulary and applicable ways of handling the vocabulary challenge. To illustrate, regular (online) meetings with CLIL teacher colleagues and in-service training on the lexically demanding areas in content subjects in the CLIL language would support teachers in coping with foreign language specialist vocabulary.

6.3.3 Summary

When examining the teachers' views on language in CLIL, a category of separate versus context-bound language emerged. For this theme, strong evidence of a belief about 'language as a tool' was found. First, teachers seemed to consider language a tool for mediating content in CLIL, thus separating content and language as independent elements in CLIL rather than seeing them combined. The fact that the target group consists of primary school pupils resulted in two beliefs of the primacy of language: some considered knowing the foreign language a prerequisite for learning the content through that language while others referred to learning content and language simultaneously.

For many CLIL teachers, finding correct vocabulary seemed to be a major concern. The tendency to approach language through vocabulary occurred more frequently in novice teachers' responses. Obviously, a teacher's short experience in CLIL may explain the focus in vocabulary, because novice CLIL teachers are posed with a great professional challenge. Further, training received in CLIL did not seem to provide teachers with concrete tools to cope with special field vocabulary in a foreign language. However, conveying exact terms (such as *photosynthesis* or *freshwater*) through a foreign language is a big demand where teachers need training and professional support. Previous research supports this, suggesting that in materials design for CLIL, the level of general and subject-specific specialist vocabulary needs careful consideration (Coyle et al. 2010). From the learner perspective, it is essential to know the vocabulary both in L1 and L2 in order to attach the new term in the old knowledge schemes. Therefore, support for handling this challenge is required. Potential ways of support could be regular (online) meetings with CLIL teacher

colleagues and in-service training on the lexically demanding areas in content subjects.

In the following, authentic materials and the teachers' beliefs about learning and language revealed in this context will be discussed.

6.4 Authentic vs. non-authentic materials from perspectives of learning and language in CLIL

The use of authentic versus simplified texts in second language acquisition has been in the focus of heated academic debate for quite some time (Crossley et al. 2007: 15). According to research, authenticity is considered an important, or even a necessary aspect of foreign language learning materials (Crossley et al. 2007: 17; Latifi et al. 2013: 18; McGrath 2008: 105). However, the use of authentic materials for teaching young learners is not unambigious, because the level of language in authentic materials does not generally correspond to the young learners' level of language. Therefore, the practical value of simplified texts is emphasized for the beginning and intermediate foreign language learners, whether young or old. For more advanced students, authentic texts are expected to provide more natural language and naturally occurring cohesion than simplified texts.

Aware of the centrality of authentic materials in CLIL, authenticity was chosen as one topic of the interviews in the present study. In line with researchers' stands for and against authentic materials in foreign language teaching and learning, the present data show that the teachers hold controversial attitudes towards authentic materials. For most teachers, authenticity seems to be an important guideline for designing materials, though understood in slightly different ways. For some teachers, in fact, authenticity in materials is an unfamiliar concept they have not given much weight on.

It was possible to detect three different views of authenticity in the teachers' responses. First, authentic materials were understood as target language materials not originally intended for the purposes of teaching and learning. The second view of authentic materials regarded them as materials for the purposes of teaching and learning from the target language countries. According to the third conception, materials applicable to the Finnish context were considered authentic.

6.4.1 Authentic materials = target language materials not originally intended for purposes of teaching and learning

As shown in chapter 4.3, authentic materials are generally defined as texts produced for purposes other than to teach language (Nunan 1988: 99), "taken from the world at large" (van Lier 1996: 13). The following excerpt (79) suggests

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that the respondent understands authentic materials along these lines, intending to include *small video clips*, among other things, in her CLIL lessons.

> (79) mä nyt koitan tuoda sitä **autenttisuutta niitä pieniä videonpätkiä ja tiäksä**
> *I try and bring this **authenticity** those **small video clips and you know***
> Heidi ET +CT, INT1

The use of materials not originally designed for teaching and learning purposes recurred by the majority of the respondents, though not in the context of authentic materials. The teachers do apply a wide range of different types of materials in CLIL, but most of them do not explicitly think of them as authentic, which, on the other hand, is related to the teachers' varied understandings of the term. There is evidence of the teachers understanding authentic materials even more largely than Nunan and van Lier's definitions above suggest, referring to a wide range of textual materials available from target language countries. The following quote (80) indicates that Riitta considers the multitude of English, whether it is *text* or *talk*, brought about by authentic materials, very important and repeats twice that the pupils should hear English *all the time*. She particularly mentions that the English they are expected to hear is either British or American English. Thus, for her *lingua franca* English does not seem to be the target level of the CLIL language proficiency but native-like English.

> (80) kaikki tämmönen mitä mä nyt sillä lailla **koen** au- **autenttiseks** et se on **englannin kieltä mitä ne kuulee koko aika** (.) kun siinä on se kieli koko aika pyörii (.) se on sit joko **englannin- tai amerikankielistä** sitte se **tek- tai** se **puhe** sieltä (.) nii se on se on tärkee joo
> *all this that **I** in a way **feel** to be au- **authentic** that it is **English** that **they hear all the time** (.) when there is this language around all the time (.) the **tex-** or the **talk** there is either **British or American English** then (.) so that's important yes*
> Riitta ET –CT, INT2

In the above instance (80), the abundant use of English contributes to teaching social and cultural aspects of English-speaking countries. The advantage of seeing the use of authentic materials as largely as the above respondent is summarized in Hondris et al's (2007: 320-321) argument that authentic materials allow observing the real use of the target language in different social and cultural settings. Following this definition, however, also Finnish-language textbooks used for CLIL in Finland can be considered authentic.

Occasionally, the teachers deliberately choose materials, the language of which is distinctly above the pupils' level of CLIL language. In the following, Riitta describes that the texts she uses in her CLIL lessons can be *really challenging and difficult*.

> (81) se [CLIL-oppimateriaali] voi olla **tosi haastavaakin** ja **vaikeitakin tekstejä** mä annan lapsille luettavaks
> *it [CLIL material] can be **really challenging** and even **difficult texts** I give the kids to read*
> Riitta ET –CT, INT2

In this case, a factor contributing to Riitta's view may also be the age of her pupils. She teaches class 6 with pupils aged 12-13 who, after almost six years of learning through a foreign language, may be more mature to deal with authentic texts than younger pupils. By offering the pupils input (i.e., materials) above their cognitive and linguistic level, Riitta seems to aim at an ideal setting for learning in CLIL, introduced in Cummins' (2000) Quadrant III. However, one has to pay special attention not to (at least constantly) exceed pupils' level of language and knowledge so much that the input will correspond to the one described in Cummins' (2000) Quadrant IV with low context and high cognitive demand. In the long run, this will not lead to the desired learning results.

Using authentic materials somewhat above the pupils' level of CLIL language can also be detected in the following excerpt (82) from Sirpa's interview. She wants her pupils to get accustomed to *difficult words* and to learn to tolerate them as something that is part and parcel of foreign language texts. In her view, more important than understanding the meaning of every word is to *understand the text as a whole*.

(82) täytyy opettaa lapset siihen että niit **vaikeita sanoja tulee aina** (.) ja **niiden yli täytyy päästä** (.) et **täytyy saada se teksti kokonaisuutena** (.) **ymmärretyks**
*I'll have to teach the kids that **there will always be these difficult words (.) and you'll have to get over with them (.) that you have to understand the text (.) as a whole***

Sirpa NT –CT, INT1

It seems that the reason behind Sirpa's aim of providing materials with high context and high cognitive demand is her belief that working on input just above the pupils' level of CLIL language will be the most beneficial for their learning. Excerpts 81 – 82 indicate that the use of materials that exceed the learners' linguistic level is the teachers' conscious choice and that they understand the advantages of such materials for learning in CLIL. In these cases, it seems that the teachers have formed their conceptualisations of good CLIL materials in their practical work and not through training because neither of them has received formal training in CLIL.

6.4.2 Authentic materials = materials for the purposes of teaching and learning from target language countries

As discussed above, materials produced for the purposes of teaching and learning in target language countries seem to be highly valued by many respondents. Interestingly, however, some views in the data were detected that regard authentic materials as English-language textbooks intended for teaching native speaker learners. This view of authentic materials is narrower than the general definition of them as materials produced for purposes other than to teach language. In the following quote (83), the *rich language* of the textbook *Science Now* used for the sixth grade Science and the fact that it *covers the themes* to be taught seem to be the most important reasons for Meeri to use the book for teaching Science in English.

(83) **se [Science Now –kirja] on** kuitenki **autenttist materiaalii** kie-**kieli on rikasta**
ja ja siin **tulee aihepiirit katettua** niin tota niin kyl kyl mä joo tykkään
it [Science Now book] is authentic material after all lan- **language is rich** and
and **the themes will be covered** so yes yes I do like it
Meeri ET +CT, INT1

Meeri's view seems to be included in Moore and Lorenzo's (2007: 29) understanding of authentic materials in CLIL who take them to imply both non-pedagogic materials from the media and didactic content materials designed for the native speakers of the target language. One has to bear in mind, though, that the apparently 'authentic' texts typical of textbooks may in fact be considerably adapted or invented by the textbook authors (Kauppinen et al. 2008: 228). This holds true also for textbooks produced in target language countries.

The majority of the teachers reported the level of their pupils' CLIL language competence to be the premise for their materials design, whether they adjusted target language texts to the pupils' level or not. This is also highlighted by a respondent who maintains in the following excerpt (84) that when authentic texts with no modifications are used as teaching materials, it is the teacher's task to assure that pupils will understand them by *going through* the texts together in the classroom.

(84) **jos** joku **historian osio** siinä **heidän oppikirjassaan** jo sinänsä **on liian vaikeeta englantia** joillekii niin sit **se käydään läpi** […] **tehdä** sitä niinku **läheisemmäks** niille
if a history unit in their textbook is too difficult English as such for some then *we go through it […] to* **make it** like **closer** to them
Riitta ET –CT, INT1

This is in accordance with previous research on CLIL materials where providing scaffolding on the authentic texts and not leaving a pupil to tackle alone with texts is underscored (Bonnet 2012: 74; Lamsfuß-Schenk 2008).

Some respondents, on the other hand, understood the concept of authenticity as having *all the facts correct* in the materials. Facts, referring to "a particular situation that exists" or "a thing that is known to be true, especially when it can be proved" (COED 2011) are given a high value by these respondents. Excerpt 85 shows evidence of combining the concept of authenticity to the *correct facts* in materials.

(85) **autenttisuus on todella tärkeetä** (.) mä en jotenki mä **en halua antaa** niille **oppilaille** sit sellasta (.) hätäsesti tehtyä **materiaalia jossa ei oo kaikki faktat oikein**
authenticity is really important (.) somehow I don´t **I don´t want to give pupils** some (.) hastily made **material where all the facts are not correct**
Arja ET +CT, INT2

The belief to be detected behind this response seems to be that authenticity equals to correctness on the content level. Research on authenticity (e.g., Crossley et al. 2007; McGrath 2008) does not, however, identify the correctness of content as a reason for preferring authentic texts. Obviously, being written in

the target language by a native speaker does not alone guarantee the correct content of the text. This excerpt also reveals something about Arja's view of learning, implying that learning facts is the way to learn. It seems that content and language are not connected in this case, since facts are considered valuable as such, and not language-bound.

6.4.3   Authentic materials = materials applicable to Finnish context

In some views, authentic materials were conceptualized as materials applicable to the Finnish context. Two teachers understood authenticity in this way, and an example of this is shown in the following quote (86) where Tiina does not consider English or American map activities authentic because they cannot be applied to the Finnish context. She says that *map activities* concerning *England or the States really aren't authentic,* because they are not applicable to the Finnish or even Nordic context.

> (86) **jos** mie **haen** jotain **materiaalia netistä** (.) niin sitten (.) sitten se kos- **koskee useimmiten Englantia tai Yhdysvaltoja** (.) jotkut **karttatehtävät** tai jotkut muut niinku **eihän me** nyt tosiaan **sillä tavalla asioita opiskella** mut **ne ei todellakaa oo autenttisia** että se **ois todella tärkeetä että ne koskis** sitte **Suomea** (.) miust on tärkeetä että ne koskettais Suomea (.) Pohjoismaita
> *if I search for* some *material on the net* (.) so then (.) then it most often con- *concerns England or the States* (.) some *map activities* or some others like *we really **don't study things that way** but **they really aren't authentic** so **it would be really important that they concerned Finland** (.) I find it important that they concern Finland (.) the Nordic countries*
> Tiina ET +CT, INT2

In fact, materials intended for the purposes of teaching and learning from target language countries are rarely directly applicable to the context other than for which they have been produced. Evidence of this was shown in chapter 6.1.2 and strategies to overcome these differences will be presented in chapter 6.6 when discussing adapting materials to the pupils' level of language and knowledge.

The minority of the respondents did not consider authentic materials in CLIL worth striving for. Excerpt 87 is interesting in that the respondent quite explicitly reveals his attitudes and views of what CLIL is when answering the question about the use of authentic materials. Tarmo justifies his decision not to use authentic materials by saying that *we are in Finland and we have Finnish systems* and *I wouldn´t like* having *similar systems as elsewhere.* He uses rather strong expressions to defend his argument, such as *we don´t want to be any others* and *we want to be us.* His view of CLIL seems to be that it is only the language in CLIL that needs to be developed while the content will be conveyed through the *Finnish systems,* with nothing extra to be taken from English-speaking countries.

> (87) **me ollaan Suomessa ja meillä on suomalaiset systeemit** ja näin poispäin (.) että **en mä nyt tiiä tarviiks meijän** niinku sitä että meijän pitäis **osata samanlaisilla systeemeillä ku muualla** (.) itse asiassa **mä en haluais sellasta ei**

me haluta olla muulla me halutaan olla omia ih- niinku et se **meil on vaan se kieli pyritään sitä kieltä kehittämään**
we are in Finland and we have Finnish systems and so on (.) so **I don´t know if we have to** *like if we should* **know things in similar systems as elsewhere** (.) *actually* **I wouldn´t like that we don´t want to be any others we want to be us** *like* **we only have the language we aim at developing the language**
Tarmo NT –CT, INT2

This excerpt does not only reveal that Tarmo regards authentic materials as unnecessary but also that his belief about the role of language in CLIL seems to be simply the vehicle of developing pupils' foreign language competence while content is the same in mainstream and CLIL classrooms within Finland. Between the lines, one can even detect some fear of the practices of foreign education systems invading the "good old" Finnish traditions of teaching and learning. Tarmo's view of language in CLIL seems to be two-fold: learning through a foreign language is a way to plurilingualism, on the one hand, but language is separate from the content and social practices, on the other. Thus, Tarmo seems to consider the aim of his pupils in CLIL to be achieving a functional competence in English, or English as a *lingua franca.* In fact, a relevant question is what kind of a language competence CLIL, or here rather CEIL (Content and English Integrated Learning, a term introduced by Dalton-Puffer et al. 2010b: 286), should aim at. The majority of the respondents seems to think the aim is native-like proficiency while in most cases, the ability to use English as *lingua franca* might be sufficient.

In fact, hints about the desire to keep foreign influence away from the Finnish education system can also be found elsewhere in the data. In excerpt 88, Kaisa proposes that materials should be made *in the country where* they are *used* by teachers with the *teacher training of that* particular *country. A native speaker* status is not a condition for designing successful CLIL materials, but rather the knowledge of the Finnish education system.

(88) **en** mää sitte taas nii **ajattele että** sen **materiaalin laatijan pitäs** välttämättä **olla** (.) sitte **kielen autenttinen** niinku **puhuja tai natiivi** […] et kyl **se [materiaali] pitää laatia siinä maassa missä sitä materiaalia käytetään** (.) ja niillä **opettajilla pitää** periaatteessa **olla** kuitenki **sen maan opettajankoulutus**
on the other hand **I don't think that the materials designer should** *necessarily* **be** (.) **an authentic speaker of the language or a native speaker** […] so **it [material] has to be designed in the country where the material is used** (.) and **the teachers** *in principle* **have to have the teacher training of that country** *anyway*
Kaisa NT +CT, INT2

Similar to Tarmo, Kaisa appears to believe the 'best' learning can only be achieved in the Finnish education system. Consequently, Kaisa's focus in CLIL is in content learning, instead of language learning. In her view, materials from English-speaking countries based on different values and ideals seem to pose a threat to the Finnish education system. The data also indicate that the reason why teachers do not always value authentic materials intended for the purposes of teaching and learning from target language countries is their incompatibility with the Finnish context. Holding to the Finnish characteristics in materials seems to be very important to some respondents. In the following excerpt (89),

Liisa suggests *translating* materials designed in the Finnish context into English for CLIL purposes, maintaining that materials do not have to originate from *England or America* but could be designed *in the Finnish context by translating*. With her suggestion, Liisa presumably aims at the correspondence of the curricula and consequently, saving time and effort when using a textbook that contains all the required content of the Finnish national curriculum.

(89) mun mielestä se **ei oo olennaista et** se on niinku (.) **se tulee Englannista tai Amerikasta** se materiaali (.) et ihan hyvin sen **vois tehdä** niinku **Suomen pohjalta** vaikka **käännnettynäkin** (.) kääntämisvaiheessa pitäs vaan sit ottaa huomioon se että se (.) teksti ois sellasta (.) ikävaiheelle sopivaa (.) ei mun mielestä ei oo ollenkaan olennaista et se materiaali pitäs tulla Englannista
*I don´t think it´s necessary that it like (.) **it comes from England or America** the material (.) like **you could** very well **do it in the Finnish context** like **by translating** (.) when translating you should just take into account that the (.) text was kinda (.) suitable for the age group (.) I don't find it essential at all that materials should come from England*
Liisa NT +CT, INT2

Presumably, Liisa refers here to translating Finnish *textbooks* into English, which has already been carried out in mathematics at the turn of the millennium when a Finnish book series for mathematics, *Laskutaito,* was translated from Finnish into English under the name *Laskutaito in English* and which, during this data collection, was still widely used in CLIL schools in Finland. It is interesting that mathematics is, at least so far, the only CLIL subject in Finland with an English-language textbook series. It has often been claimed that mathematics is a language as such, independent of "real" languages. Presumably this notion has had an influence on producing English mathematics book series for CLIL in Finland. Still, there are different traditions of counting in different countries and in that sense, mathematics as a school subject has locally biased features, bound to the ways of thinking typical of a particular context.

On the whole, what is to be detected behind Liisa's response is that education is also a context-bound social activity. In the case of CEIL in Finland, the context is still Finnish, though the language of teaching and learning is English. Like Tarmo and Kaisa above, Liisa seems to consider the aim of foreign language competence in CLIL to be some level of *lingua franca* English. This approach was not expressed by experienced teachers and hence, regarding the language aim of CLIL as the *lingua franca* level of English seems to connect the novice teachers. Familiarizing oneself with other cultures and ways of thinking in CLIL does not seem to be an equally important aim for novice teachers. Notwithstanding, a certain caution towards materials from abroad to be used in CLIL is often necessary to make sure the content is applicable to the context of another country. However, some of the views presented above were more than cautious and could, in fact, be even called prejudiced, suggesting the high value given to culture-specific education.

6.4.4 Summary

This chapter shows that it is not self-evident for CLIL teachers what authentic materials entail, shown by the varied ways of understanding the term. The range of meanings teachers give to the concept of authentic materials is surprisingly wide, indicating that clarification of the terms of authenticity and authentic materials is needed for CLIL teachers, e.g., through in-service training. The strong emphasis placed on designing materials in Finland reveals that the influence of foreign cultures in materials used in the local context is not seen necessary or even desirable by the teachers. This seems to slightly contradict with the EU-driven value of CLIL in promoting intercultural understanding and overcoming intercultural barriers (Nikula et al. 2012: 48).

The major observation from the present data is that among the majority of the teachers, authentic materials were understood as one or both of the following definitions: as materials produced in a target language country for the purposes of teaching and learning native speaker pupils, and/or as materials produced in a target language country for the purposes other than teaching and learning. In both of these definitions, teachers maintained that authentic materials were worth striving for, but underlined ensuring them to be both linguistically and cognitively accessible for the level of their learners, as suggested by Moore and Lorenzo (2007: 30). This was one of the greatest challenges with authentic materials for teachers. It became evident that many teachers occasionally provide pupils with authentic materials with no adaptations. This seems to be based on the belief that working on input just above the pupils' level of CLIL language will be the most beneficial for learning.

Since the difficulty of matching the curricula of the target language countries with the Finnish national core curriculum emerged as a major concern among the respondents, an applicable solution for this might be Pahl and Roswell's (2007: 44) suggestion about "glocal" texts, which are at one and the same time local and global. They are not invariably products of a restricted culture, and due to this independence of a certain geographical or cultural context, they might apply to CLIL particularly well.

An important question about the role of foreign language in CLIL, or CEIL, is the level of language to be aimed at. It might be sufficient to have *lingua franca* English as the goal of English language development in CEIL instead of native-like proficiency. It is noteworthy that this view was primarily expressed by novice teachers. However, the role of culture in CLIL poses another challenge when considering the language aim: when aiming at the *lingua franca* level of English, the important foundation of CLIL, i.e., promoting intercultural awareness and getting to know and accept different cultures and ways of thinking, may suffer. Thus, it is crucial to increase teachers' awareness of the role of language in CLIL and the ways it contributes to the other areas of CLIL, such as interculturality. It might even be necessary to reconsider the aims of interculturality in CLIL.

6.5 Visualisation in CLIL materials in relation to teachers' beliefs about learning and language

In this study, teachers' ways of visualising materials were investigated through their accounts of the design and use of materials for CLIL. The results suggest that on the one hand, visualisation showed in the use of concrete objects, such as realia, pictures, images, diagrams, charts, posters, games, and experiments, and on the other hand, in the use of digital materials, such as Powerpoint presentations, video clips, webpages, DVDs, and interactive whiteboard materials.

On the basis of research showing that the use of varied visual means in teaching through a foreign language supports learning (e.g., Cendoya & Di Bin 2010: 13-14; de Graaff et al. 2007), it was considered worthwhile in this study to investigate which purposes the use of various visual means seems to serve in the CLIL classroom. Not only in CLIL but in all educational settings, visuality is considered an important qualification when defining characteristics of good teaching materials (Heinonen 2005: 128).

The present study takes the stand that the various ways CLIL teachers refer to visualisation in materials reveal their understandings about learning in CLIL. The following subchapters will indicate that first, CLIL teachers use visual means to illustrate concepts, processes, and other content matters; second, visual aids are used as eye-catchers or fillers to motivate pupils; third, their role may be to initiate classroom conversation; fourth, the aim of visuals is to involve pupils in materials design by making a poster or a Powerpoint presentation on the topic at hand, for instance, and fifth, visuals are used to bridge the gap between school and freetime.

6.5.1 Visuals as concretizing content

The simple fact that the respondents work with children manifests itself in their strive for concreteness in CLIL. The teachers seem to agree that concrete objects are the ones that pupils will remember and are later able to attach to the new content. This belief seems to be based on the constructivist learning theory. In the following excerpts, learning content seems to be in focus, leaving the language perspective aside. For instance, in the first excerpt (90), Meeri talks about *finding the objects that are dealt with,* and in the second (91), Sirpa uses the scientific terms *observe* and *experiment* which refer to learning content rather than language. In the third excerpt (92), Tellervo gives reasons for using visuals by arguing that *concrete elements are the ones that pupils will remember*.

> (90) Eveliina: minkälaisia visuaalisia keinoja käytät opetuksessasi?
> Meeri: no **paljon kuvia** (.) paljon näyttelemistä heilumist tos edes itte ja muitten kanssa ja ja tota yrittää **löytää niit esineitä** mist puhutaan **konkreettist** (.) tämmöst käsin kosketeltavaa ja katsottavaa (3.0) myöski sitte just **internetistä kuvia** (.) **videoklippejä**
> *Eveliina: what kind of visual means do you use in your teaching?*

*Meeri: well **a lot of pictures** (.) a lot of acting, moving over there in the front by yourself and with others and and well trying to **find those objects** at hand **concrete** (.) something **you can touch and look** (3.0) also **pictures from the internet** (.) **video clips***

    Meeri ET +CT, INT1

(91) Eveliina: millaista on mielestäsi hyvä oppimateriaali CLIL-opetuksessa?
Sirpa: **pelien** ja **havainnoinnin** ja tämmösten kautta että siinä siinä täytyy opettajan itse vähän sitte käyttää sitä luovuutta
Eveliina: what do you think is good teaching material like in CLIL?
*Sirpa: through **games** and **observation** and things that there there the teacher has to use creativity a little*

    Sirpa NT –CT, INT1

(92) Eveliina: minkälaisia visuaalisia keinoja käytät opetuksessa?
Tellervo: vaikkapa nyt puutarhatuotteet niin kasvikset vihannekset kasvikset siis ne on vihanneksia kaikki mut et (.) marjat juurekset hedelmät (.) ne on helppoja ottaa englanniksi kun (.) niist **voi näyttää kuvan** (.) **tai sen esineen** eli eli tota this is a carrot (.) peter rabbit likes carrots eli **konkreettisia kuvia** (.) et kyl ne on ne mitkä **oppilaille jää mieleen**
Eveliina: what kind of visual means do you use in your teaching?
*Tellervo: take for example garden products so greens vegetables greens so they are all vegetables but well (.) berries fruit (.) they are easy to take in English when (.) **you can show a picture** of them (.) **or the object** so so well this is a carrot (.) peter rabbit likes carrots so **concrete pictures** (.) so they are the ones the **pupils will remember***

    Tellervo ET +CT, INT1

On the basis of these data, it is possible to conclude that the teachers use visual means particularly for teaching content in CLIL, and not for teaching the foreign language. Concretizing content through illustrative materials and experiments appears to be related to the teachers' aims to support learning through a foreign language. Interestingly, concreteness is not only aimed at in lower grades but also in the highest grade of primary school, that is, with children up to 13 years. Sirpa, for instance, taught grade 5 (pupils aged 11 - 12) at the time of the data collection and reported about an abundant use of visual means to teach her pupils many concepts from historical periods to the food chain. Pupils seem to be actively involved in materials design, since Sirpa describes designing posters and timelines about historical periods in the person which in every-day speech in Finnish is the first person plural, e.g., *we visualised* and *we put*.

(93) historiasta **havainnollistettiin** et **laitettiin** niinku pronssiaika kiviaika **pronssiaika rauta-aika** niinku (.) semmoset erikseen omina **julisteina ja aikajanat seinälle** (.) ruu- **ruokaketju** sehän on ihan mahtava siihen pystyy tekeen vaikka mitä niinku (.) esimerkiks semmosia **eläimiä joiden vatsan sisällä sit oli toinen eläin** […] tai **pyramidi rakentaa seinälle** niinku (.) siis näitähän on vaihtoehtoja niin paljo
*in history **we visualised** so that **we put** like bronze age stone age **bronze age iron age** you know (.) those separately as **posters and timelines on the wall** (.) foo- **food chain** that's so great you can do all kinds of things with it like (.) for example those **animals who had another animal in their stomach** […] or **build a pyramid on the wall** you know (.) so there are so many alternatives*

    Sirpa NT –CT, INT1

Thus, the reasons why Sirpa uses these visual means seem to be supporting learning by activating pupils to create materials themselves and hence motivating them to learn the concepts in-depth through their own activity.

Visualising teaching through the opportunities provided by modern educational technology was described in very positive terms by the teachers. Interactive whiteboard, in particular, was highly appreciated due to the new, diverse dimensions it provided for teaching and learning in CLIL. One respondent (excerpt 94) maintains that the interactive whiteboard, *Smartboard as such, is material*, due to the large databank it includes for all subjects.

(94) nyt on Smartboard käytössä niin siis on helpottunu aivan mahtavasti […] **Smartti sinänsä on materiaalia** […] Notebookin käyttö eli tää itse luomalla materiaalia mitkä mä oon tehny sitten se- seivannu sinne […] siellä on **aivan mahtavasti saatavissa** niinku **Smartboardin kautta** aivan mieletön määrä kans materiaalia sekä niinku mitä op- nyt ihan Suomessaki opettajat tehny omiansa
*now there's Smartboard available so it has become very much easier […] **Smart as such is material** […] the use of Notebook that is creating materials yourself that I have done and then sa- saved there […] there are **absolutely huge amounts available** like **through Smartboard** an immense amount material and like what teach- like in Finland teachers have done their own*
Riitta ET –CT, INT1

However, the expectations for the opportunities that modern educational technology was expected to provide sometimes appeared to be overrated. The teachers who were expecting to have an interactive whiteboard in their classroom in the near future were very excited but could not, however, define in detail what it would be exactly that would be better when having the interactive whiteboard. For instance, Sirpa vaguely talks in the first excerpt (95), about *utilizing Smartboard,* and Tiina, in the second one (96), maintains that *having Smartboard will have a crucial effect*, not specifying, however, what it will affect, how and why. The only exact change to the previous classroom practices she mentions is the possibility to *show materials simultaneously to the whole class* on the board. This, however, does not require an interactive whiteboard but can be done by a beamer and a screen.

(95) CLIL puolelle ihan siis ihan ehdoton […] ku meillä Smartboard jo tulee niin sitä **entistä paremmin voidaan** voidaan **hyödyntää** ja tietokonetta muutenkin
*in CLIL absolutely I mean absolutely a must […] when we'll have Smartboard we can can **utilize it better than before** and also computer in other ways*
Sirpa NT –CT, INT1

(96) **se [Smartboardin saapuminen luokkaan] vaikuttaa ihan ratkasevasti** (.) se vaikuttaa todella ratkasevasti […] mie oon niinku aatellu että tää tietotekniikka ei oo niin kauheen tärkeetä et kuha opettajalla on (.) mutta nii ei (.) ei kyl mie oon joutunu takkini kääntämään siin asiassa (.) **se on** ihan aivan **aivan oleellista että alakoulun puolella vallanki opettaja saa koko ryhmälle yhtaikaa näyttää**
*it [obtaining the Smartboard in classroom] will have a crucial effect (.) it will have a crucial effect […] I have like thought that this ICT is not that important as long as the teacher has (.) but no (.) no I've had to box the compass in that matter (.) **it is quite** quite quite **essential that in primary school in particular the teacher can show the whole group simultaneously***
Tiina ET +CT, INT2

Thus, teachers' expectations about the interactive whiteboard seem to be very high, though sometimes disguised in humour. In excerpt 97, Heidi laughs and says that if she *sometime in life gets Smartboard* she *will not have to be paid for* her *work any more.* This joke reveals that the assistance of ICT in designing materials for CLIL is very important for Heidi. A belief to be detected behind this seemingly innocent joke seems to be that above all, the use of ICT will facilitate Heidi's materials design, but may also equal to better teaching materials, thus improving teaching and learning.

> (97) vielä **kun saa joskus** elämässä **Smartboardin niin** sittenhän on (.) sit **ei enää tarvii maksaakaa tästä työstä** (he he)
> *when I sometime in life get Smartboard then it is (.) you won't have to pay me for this work any more (he he)*
> Heidi ET +CT, INT2

The results of this chapter imply that the teachers believe that concretizing content supports learning in CLIL. The young age of the target group is probably also an important reason why teachers consider concrete elements as such an important factor supporting learning in CLIL. It may also be deduced from the teachers' positive attitude towards applying modern educational technology for visualisation that they are not afraid of new technology, rather on the contrary. Almost unexceptionally, they are willing to introduce modern ICT in their classrooms and thereby apply it for materials design. This is in line with Lam's (2000: 389) finding in the context of second language teaching that language teachers are not generally 'technophobic'. The teachers of the present study seem to believe that with the help of technology, they will be able to design higher-quality materials.

6.5.2 Visuals as eye-catchers

In the present data, the importance of visualisation was frequently mentioned in the teachers' responses about good CLIL materials. The abundancy of references to visualisation suggests that it is more important in CLIL than in mainstream teaching. Also the nature of a subject affects the need for visual means. In natural sciences, visualisation with the help of tables, charts and figures has traditionally been more common than in human sciences. The frequency of referring to visualisation in the present data may be connected to the age and level of the foreign language competence of primary school pupils. The major reason for the use of visual means in CLIL appears to be the teachers' aim to support learning. The teachers understand visual materials to contain pictures, drawings, video clips, games, comics, animations, tables, charts, concrete objects, etc. Scaffolding learning is not the only reason for the use of varied visual means, but the teachers also aim at increasing pupils' motivation by using them.

Some teachers also have a strong aesthetic point of view, making great attempts to design attractive materials that would motivate pupils to learn. Illustrative and unambigious materials with an attractive appearance are

thought to mediate a positive image of the subject matter and thus increase motivation for learning. Arja describes in excerpt 98 that she finds it important that *a material looks visually beautiful,* because it will *motivate the child*, making her think the material has been *made just for her and is an important paper*. In excerpt 99, Heidi similarly describes good CLIL materials as *illustrative, clear, positive* and *nice,* thus *motivating* learning.

(98) myöski pidän tärkeänä sitä että se oppimateriaali **näyttää visuaalisesti** niinku **kauniilta** ja siltä että se ei oo vaan kopiokoneen sivu (1.0) syötöstä kopioitu vinossa oleva paperi jossa on jotain tekstiä josta ei tiedä mitä siinä lukee vaan että että se ois niinku myöskin sille lapselle **motivoiva** ja sen näkönen että se on **häntä varten tehty** ja se on **tärkeä** paperi
*I also find it important that teaching material **looks visually** like **beautiful** and that it's not just a page of a copy machine (1.0) a paper copied squint with some text that you don't know what it is but it would like also be **motivating** for that child and would look like it's been **made for her** and it's an **important** paper*
Arja ET +CT, INT1

(99) pitää olla **havainnollista** ja **selkeää** sen pitää olla **motivoivaa** sillä tavalla että että siinä on semmosia **osioita mitkä varmasti kaikki osaa** et siin on **yhdistämistä** ja ja ja ehkä jotakin **täydentämistä**; siit tulis semmosii niinku **myönteisiä** et se näyttäs **kivalta** ja et et nii et semmosii **motivoivia** seikkoja
*it has to be **illustrative** and **clear** it has to be **motivating** in a way that that it contains **parts that everybody will definitely know** that there is **matching** and and and maybe some **filling in**; they would be like **positive** that they would look **nice** and that that yes kinda **motivating** things*
Heidi ET +CT, INT1

Heidi also attempts to include *parts that everybody will definitely know* in her materials. This implies that her aim of using visual means in materials is to support the constructivist view of learning: building new knowledge structures on previous knowledge. Her belief that visualisation and constructivist learning theory are combined seems to guide her when making a decision of using visuals. As discussed in chapter 4.3, visual means have been shown to positively influence understanding texts and filling in the learners' gaps of their foreign language competence (Coyle et al. 2010: 91). The other side of the coin in designing visually appealing materials from the teachers' point of view is that it increases their work load and extra time used for designing materials. The teachers in excerpts 98 and 99, Arja and Heidi, belong to the group of teachers who spend the most time designing materials each week. As experienced CLIL teachers, they have had more time and possibilities to improve and develop their materials year by year to make them more attractive and motivating, unlike teachers who are in the beginning of their CLIL career.

6.5.3 Visuals as initiators of classroom conversation

As discussed previously, primary school CLIL teachers appear to be extremely imaginative in the use of visual means, designed both by the teacher and pupils. Frequently, the intention of the use of visuals seems to be to initiate classroom conversation on the topic at hand, thus encouraging pupils to speak the target language. In excerpt 100, Heidi reports about using an image in a Powerpoint

presentation as an initiator of classroom conversation and teaching talk by saying that *when the image appeared questions were asked about it* and *discussed*.

> (100) koitin käyttää sitä **kuvaa** [Suomen metsien eläimistä] sillä tavalla että (.) et **ku kuva** (.) **ilmesty** [Powerpoint-esityksessä] nii siitä **siitä tehtiin kysymyksiä juteltii** ja sitte tekstiä tuli
> *I tried to use **the image** [about animals in Finnish forests] so that (.) **when the image (.) appeared** [in the Powerpoint presentation] then **questions were asked about it** it **discussed** and then there was text*
> Heidi ET +CT, O DIARY

The following excerpt shows one slide of the Powerpoint presentation Heidi designed for the fourth grade Science. A picture and two sentences of a fox and a wolf serve as an introduction to classroom conversation about the life of these animals in Finnish forests.

> (101)

WHAT AM I?

Foxes are omnivores.
They eat almost everything.

Wolves live in packs. They mark their territory with urine.

Heidi ET+CT, TM Science 4

Besides the precise illustration of the two animals in question, Heidi's material seems to serve as a motivator for learning more. As previous research on visualisation in teaching through a foreign language shows, one of the most beneficial purposes of visualisation is, indeed, introducing new thematic units (Miramontes et al. 2011: 66).

6.5.4 Learner-designed visuals

The data reveal that for some teachers, involving pupils in materials design is a natural part of their CLIL classroom practices. In the following, Riitta describes her ways of involving pupils in visualising materials. She may show the pupils' *work on the document camera* or assign them to *make Powerpoint* presentations on the topics to be learnt.

> (102) **visualisointi** on mulle **hirveen tärkee** […] laitan **lasten töitäki** niinku ihan niinku **dokumenttikameran alle** […] voin tosiaan **näyttää** jonku **vihkotyön** tai (.) sitte **lapset tekee** s- **Powerpointeja**
> *visualisation is **very important** for me […] I put **kids' work** like just like **under the document camera** […] I can in fact **show** some **notebook work** or (.) **the kids make** th- **Powerpoints***
> Riitta ET –CT, INT1

This example shows that visualisation does not only belong to a teacher's repertoire. The aim of involving pupils in materials production supports the modern learner-centred views of learning. Teachers who opt for involving pupils in activities traditionally considered teacher-led seem to hold a belief that learner-centred materials design is expected to improve learning results. However, such examples were not detected to a large extent in the data, which suggests that teaching is still predominantly teacher-led activity. Involving pupils in materials design, as illustrated in excerpt 102, is in line with the views of many researchers (e.g., Ilomäki 2012: 64; Jalkanen & Vaarala 2012; Kumpulainen, Krokfors, Lipponen, Tissari, Hilppö & Rajala 2011: 39) who maintain that learners should play a more central role in designing materials, because, as the users of materials, they are considered to be the best experts to observe and develop the characteristics of good materials and because producing knowledge in a self-regulated manner is expected to promote pupils' activity and motivation for learning.

Deploying digital media to assist learning in CLIL seems to be a major way of involving pupils. As excerpt 103 indicates, Tiina provides her pupils with possibilities of producing materials on *class-specific sites, including link lists* to be used both by the pupils and the teacher.

(103) **omat luokkasivustot** jossa on **jokaiselle oppiaineelle oma välilehti** (.) **linkkikirjastot** oppilaitten ja minun itsenikin käyttöön
class-specific sites with a tab for every subject (.) link lists for pupils and also *for myself*
Tiina ET +CT, INT1

Tiina's aim to utilize her pupils' digital skills for the purposes of materials design corresponds to the view of Ilomäki (2012: 64) who argues that the students' surprisingly in-depth competences particularly on digital technologies should be utilized much more in school than has been done so far by allowing pupils an expert role in their specialist fields. In this way, a learner's role from a passive recipient of knowledge would gradually shift towards an active producer of knowledge. Interestingly, however, novice teachers did not report of the use of learner-centred teaching methods which suggests that development towards allowing a learner a more active role in her own learning process may still proceed slowly. Novice teachers' insecurity as materials designers may partly explain why they do not seem to be willing to give pupils much responsibility for preparing materials for CLIL.

Despite the pupils' occasional contribution to materials design shown in the data, teachers consider materials design as an inseparable part of their work and materials designed by pupils subordinate to materials made by the teacher. After all, teachers provide the framework and instructions for pupils' materials design and may also guide it very closely. This finding is not surprising in the light of recent research on learning. Välijärvi (2011: 26), for instance, argues that the image of a learning community based on shared expertise where the learners can feel they are the subjects of their own learning is still rather distant. Given that learning theories have proceeded towards a learner-centred

direction for several decades now, the progress in the teachers' mindsets seems to be very slow.

6.5.5 Digital visuals in bridging the gap between school and freetime

Visualising content matters through digital materials, such as video clips and animations, appears to be typical of the teachers of this study. Simultaneously, they have an important role in bridging the gap between school and young people's freetime by bringing teaching materials closer to pupils' everyday life and their freetime media use (cf. Luukka et al. 2008). The following quote illustrates the use of *comic strips* and *animated clips* from the Internet for visualising teaching. Because these visuals are short, their purpose is most likely to tune the pupils into the topic of the lesson and thus motivate them, or to serve as a filler after a long period of work on books or handouts. In either purpose, digital visuals involve pupils in the similar environment they use in their freetime and thus may awaken pupils' interest in matters to be learnt easier than traditional printed materials.

> (104) katotaan joku **lyhyt sarjakuva** tai sitte joku **lyhyt animaatiopätkä**
> *we watch a short **comic strip** or then a short **animated clip***
> Kaisa NT +CT, INT1

In excerpt 105, besides *video clips*, Jaakko reports of using *educational series on DVD* to visualise his CLIL lessons. They presumably have a more significant role in learning content than video clips or short animations, because due to their educational aim, they tend to focus on introducing subject matters and their relations in an explicit way and to take their target group into consideration by providing information in a format comprehensible for the target group.

> (105) **Youtuben videopätkät** […] **DVD:llä** tämmösiä **opetussarjoja**
> *video clips from the Youtube […] these **educational series on DVD***
> Jaakko ET –CT, INT1

As watching TV is popular in pupils' freetime, Jaakko presumably believes that using a similar format, DVDs, for teaching, will have a positive effect on pupils' motivation and learning. In primary school, however, following an educational DVD in English may, at least at times, exceed the pupils' level of CLIL language, thus providing input in accordance with Cummins' (2000) quadrant III with high context and high cognitive demand. As discussed earlier, being exposed to more difficult language than one can comprehend may have a beneficial effect on getting used to coping with authentic texts with unfamiliar vocabulary and structures. It is highly likely that the significance of digital visualisation as learning support will continuously increase while the use of digital media becomes more and more commonplace among CLIL teachers, thus becoming ever closer to pupils' freetime practices. After all, the Internet or various

applications for tablets, for instance, provide endless possibilities for visualisation.

6.5.6 Summary

Visual support, i.e., contextualizing both oral and written texts with pictures, charts, diagrams, realia, etc. emerged as one of the means of approaching teachers' beliefs about learning and language in this study. Not surprisingly, visualisation has been particularly recommended for introducing thematic units and facilitating pupils' access to dense texts (Miramontes et al. 2011: 66). Studies on plain language show that illustrations and graphics have a positive influence on understanding texts (e.g., Heiskanen 1994: 72). In CLIL, visualisation supports filling in the learners' gaps of their foreign language competence while a teacher can convey a meaning of a new term or phrase by drawing, or using gestures. Indeed, compared to teaching in mother tongue, teachers in CLIL and immersion have been discovered to resort to increased concreteness and visuality, e.g., play and games, drama, and pictures (Coyle et al. 2010: 91; Snow 1993: 47-48).

In this study, the results concerning visualisation in CLIL materials revealed a range of beliefs teachers hold about learning in CLIL. First, teachers seemed to believe that concrete ways of visualisation support combining previously-learnt knowledge to new content matters, thus referring to the constructivist learning theory. Meanwhile, the young age of the target group probably explains why teachers view concrete elements as such an important factor supporting learning in CLIL. Learning content seems to be in focus in the teachers' references to the ways of concretizing subject matters, leaving the language aspect aside. Second, teachers believed that modern educational technology is a key to higher-quality materials, but were not, however, able to define the exact benefits provided by an interactive whiteboard.

Illustrative and unambigious materials with an attractive appearance were thought to mediate a positive image of the subject matter and hence increase pupils' motivation for learning. Another purpose of using visuals was to initiate classroom conversation in English and thereby motivate pupils to go deeper into the topic while using the foreign language. Further, pupils were occasionally given the role of a materials designer. The teachers' belief behind this seemed to be that it would improve learning results. Digital technologies as the support of materials design appeared to be particularly an area where pupils were given an expert role. However, experienced teachers seemed to involve learners in materials design to a larger extent than novice teachers, suggesting that the general development towards allowing a learner a more active role in her own learning process may proceed slowly. In general, the utilization of digital technology for visualising materials did not seem to be dependent on the teachers' CLIL experience, but was rather a question of a teacher personality and teachers' interest and willingness in the professional development as materials designers. Finally, it was possible to detect a belief that using digital visuals would bridge the gap between school and freetime. By

learning in the similar environment pupils use in their freetime, their interest in matters to be learnt was thought to be easier awakened than with traditional printed materials.

6.6 Teachers' strategies of adapting and designing materials

The results presented so far suggest that two major views emerged in approaching adaptations. For the majority of the teachers, adaptations seemed to comprise a natural part of their means of dealing with CLIL materials. They maintained that materials derived from L1 resources have to be adapted to the level of the target group. By contrast, some teachers preferred the use of original, authentic L1 texts for teaching as a valuable means to offer pupils possibilities to learn rich vocabulary and new structures and to accustom them to dealing with texts with some unfamiliarity.

The first subchapter introduces the various factors teachers take into account in adaptations. The data demonstrated that pupils' age, target language level and cognitive level had an influence on the teachers' strategies to adapt materials. Subchapters 6.6.2 – 6.6.4 explore in more concrete ways how teachers understand adapting materials for CLIL. The various ways the respondents describe the use of different adaptation measures in their materials design is approached in a deductive way, comparing what the teachers say in the interviews and diaries to what they do in their teaching materials. The three models of adaptation, simplification, elaboration and rediscursification, based on Lorenzo's (2008) and Lorenzo and Moore's (2010) previous findings about adaptations in CLIL, will be applied for this study. However, focusing merely on adaptation strategies was not considered sufficient, because the interviews and diaries suggested that CLIL teachers very often resorted to two other strategies of designing materials. Therefore, subchapters 6.6.5 – 6.6.6 were constructed to answer the needs of the present study, showing, first, how the teachers design materials from scratch, facing various challenges in the process not included in the above-mentioned models of adaptation. Second, it will be shown that the teachers often translate parts of the Finnish textbook into English as a method of preparing materials for CLIL.

6.6.1 Pupils' age, target language level and cognitive level

The data suggest that the teachers consider the suitability of materials to the pupils' age an important factor when defining good CLIL materials. Evidence of this observation will be shown in the following excerpts by three teachers. These teachers seem to give a high priority to the appropriate level of materials to best serve the pupils' needs. The respondent in excerpt 106 states that the starting point for her materials design is that *the level of language corresponds to the pupils' age*. In the second excerpt (107), the correspondence of materials to *the pupils' skill level and age* is highlighted. The third excerpt (108) indicates that this

respondent does not seem to give any value for texts *not suitable* or *too difficult for a third-grader* saying that such material *has no meaning*.

(106) kielen taso vastaa niitten **oppilaiden ikätasoa** (.) se on se mistä niinku lähden liikkeelle
*the level of language corresponds to **the pupils' age** (.) that's what I begin with*
Arja ET +CT, INT1

(107) se [materiaali] on oo- **oppilaan taitotasoon ja ikätasoon sopivaa** (1.0) sopivaa ainesta (.) ja sitten on se kielellinen aspekti et se on myöski kielellisesti **heijän taitotasoonsa sopivaa**
*it [material] is suitable to the pu- pupil's skill level and age (1.0) suitable material (.) and then there's the linguistic aspect that it's also **linguistically applicable to their skill level***
Jaakko ET –CT, INT1

(108) **jos ei se oo kolmasluokkalaiselle sopivaa tekstiä jos se on liian vaikeaa tekstiä** hänelle niin **sillä ei oo mitään merkitystä sillä** (.) **oppimateriaalilla**
*if it's not suitable text for a third-grader if it's too difficult text for her then **it has no meaning this (.) material***
Tellervo ET +CT, INT1

The teachers seem to be aware that materials retrieved from the Internet seldom apply for primary school pupils as such, whether in mother tongue or foreign language. For young learners, in particular, adapting materials derived from the Internet is generally necessary to provide with the best possibilities for learning both content and language. As Moore and Lorenzo (2007: 29) point out, adapting texts has two major aims: to make them linguistically accessible for the learners' level and cognitively accessible for the learners' age.

The difficulty and abundancy of foreign language for the age of the target group, primary school children, in materials retrieved from the Internet appears to be the major reason for adaptations. This is indicated in excerpt 109 where Heidi says that she *seldom* finds anything readily applicable from the Internet, considering the target group, *primary school* children. The problem seems to be that *the language is too difficult and there's too much of it*.

(109) voin sanoa et mä käytän nettiä (.) mut mä työstän sitä kyl itse […] mutta aika **harvoin mä suoraan sieltä saan mitään** (.) **valmista** niinku ala- **alakouluun sopivaa** […] se **kieli on liian vaikeata ja sitä on liian paljon**
*I can say that I use the net (.) but I do work on it on my own […] but **I rather seldom get anything from there outright (.) anything ready** like **suitable to** primary **primary school** […] the **language is too difficult and there's too much of it***
Heidi ET +CT, INT2

It is to be concluded from excerpts 106 - 109 that the teachers believe pupils are to be provided with materials, the content and language of which correspond to the pupils' age, among other things. Consequently, the teachers seem to hold a belief that the use of materials suitable for the learners' age will support learning. Primary school children in focus, adaptations play a more significant role than with older students. One has to take into account the age and

developmental stage of primary school children as well as their restricted competence in the CLIL language.

It is seldom the case that the level of language in scientific texts on the Internet, for example, is suitable for primary school pupils. Consequently, many respondents report of adjusting such texts to a simpler content and language level. Kaisa mentions in excerpt 110 that the language of authentic scientific texts requires *editing* to match the level of the pupils' CLIL language competence because pupils are supposed *to understand* it to avoid the *image of* the foreign *language* as *overwhelming or negative*. Similarly, Meeri explains in excerpt 111 why authentic L1 materials cannot usually be applied for primary school CLIL by arguing that their level of language is *so much more demanding*. Excerpt 112 illustrates Arja's view that the level of language has to match with the pupil's age so that the texts are understandable.

(110) Muistiinpanojen **kielessä on huomioitava oppilaiden osaamistaso** ja siksi **sanavalintoja on mietittävä tarkasti**. Haluaisin, että **oppilaat ymmärtävät** kirjoittamansa, jotta heille **ei tulisi kielestä ylivoimaista tai negatiivista kuvaa**. […] yleensä [5. luokan biologian oppimateriaalia varten internetistä] löydetyn **kielen taso on oppilaille liian vaativa ja sitä on muokattava**
In the language of note-taking you have to take the pupils' skill level into account and therefore carefully think about the choices of words. I'd like the pupils to understand what they write that they wouldn't get an overwhelming or negative image of the language. […] usually the level of language [in materials found on the internet for the fifth grade biology] is too demanding for pupils and you have to edit it
Kaisa NT +CT, W DIARY

(111) **otan [oppilaiden kielitaidon tason] paljonkin huomioon** et se on just se yks syy et minkä takia se **valmis materiaali ei** monta kertaa **kelpaa ku se on kielen tasoltaan** se niin **paljon** tota **vaativampaa**
I take [pupils' level of language] a lot into account and that's the very reason why ready-made material won't do because it's so much more you know demanding from its level of language
Meeri ET +CT, INT1

(112) sen lisäks että **pitää ottaa huomioon** se se **aihe** jota opetetaan niin (.) täytyy ottaa myöskin huomioon se **kieli** (.) eli joko niinku äsken sanoin nii se että se **kielen taso on** se **oikea** sille lapse- **lapsen iälle sopiva ymmärrettävä teksti**
besides taking the the topic to be taught into account (.) you must also take the language into account (.) so as I just said well the level of language is the right one for the age of the chi- child an appropriate understandable text
Arja ET +CT, INT1

On the basis of excerpts 110 - 112, it can be concluded that in materials design, teachers aim at materials of a linguistically suitable level for primary school children. Further, excerpt 110 reveals Kaisa's view of learning as teacher-centred activity with emphasis on words and vocabulary. She describes in her diary how she carefully *thinks about the choices of words in the language of note-taking* in advance. This implies that the teacher, rather than the learner herself, is in charge of the process of learning, shown by the teacher firmly guiding what the pupils write down about the content at hand.

The following three excerpts reveal the teachers' views of the characteristics of a text relevant for primary school children learning in CLIL. In excerpt 113, Meeri sums up the two major aims to be taken into consideration in CLIL materials: *pupils' level linguistically and also thematically*. In excerpt 114, Riitta seems to put very much weight on the level of language in CLIL materials, particularly emphasizing what *children* can *understand*. Last, in excerpt 115, Liisa describes the characteristics of the foreign language required in CLIL materials with the adjectives *explanatory*, *understandable* and *unambiguous*. She seems to aim at sentence structures and vocabulary simple enough for young learners to be understood with ease.

(113) **oppilaan tasoista** oppimateriaalia **kielellisesti** sen tasoista ja myöski sit **aihepiiriltään**
*teaching material **for the pupil's level linguistically** that level and also **thematically***
Meeri ET +CT, INT1

(114) pitää **vastata lasten kielitasoa** siis sitä **mitä ne ymmärtää** […] **kielen** niinku **sopivuus** sen **oppilaan kielen tasolle**
*has to **correspond to the children's level of language** I mean what they understand […] the kind of **suitability of language to the level of the pupil's language***
Riitta ET –CT, INT1

(115) **kieli** ois myös sellasta **sopivan tasosta**, jollain lailla **selittävää** (.) kielestä tulis kuitenki **ymmärrettävää** […] **lauserakenteet** tai sellaset niinku **perussanat** siellä lukuun ottamatta näitä erikoistermejä niin ne ois niinku sellasia **selkeitä**
*also **language** would be **at a suitable level**, somehow **explanatory** (.) language would become **understandable** anyway […] **sentence structures** or those like **basic words** there in spite of these special terms so they would be like sort of **unambiguous***
Liisa NT +CT, INT1

Excerpt 113 suggests that Meeri follows the aim of dual focus in CLIL in her materials design, considering the level of materials from the perspective of the pupils and their needs. Excerpt 114 reveals Riitta's view that language in CLIL has to be simple enough for the pupils to understand. In this way, the ideal of Cummins' Quadrant III with high content and high cognitive demand does not seem to come true, because input in the form of materials challenging enough to allow learning new language and content items is not offered. However, Riitta does not seem to be consistent in her views about the level of language in materials, because in excerpts 11 and 22 she maintained that the language of CLIL materials has to be demanding enough for pupils to develop their language competence. Finally, the belief to be detected behind Liisa's response in excerpt 115 seems to be that for her, language consists of *sentence structures* and *basic words*, which suggests that she seems to give weight to the structural and lexical aspects of language.

Rarely, the level of language of an authentic L1 text appears to be directly at pupils' level and requires no adaptation. Such a case is, however, reported in Arja's diary. An English-language Geography book, *Regions of the World*, intended for L1 learners provides with some passages of text Arja considers relevant to be used as such in a Geography lesson for the fifth grade. This is

illustrated in excerpt 116 where she states that the *textual level* of the book *conveniently happens to be suitable for* her *pupils*. Due to copyright issues, however, Arja makes a decision to search for pictures and activities elsewhere.

> (116) Heinemann:n kirja Regions of the world, Europe, on oppimateriaaliksi tarkoitettu kirja, jonka **tekstitasokin sattuu olemaan mukavasti omille oppilailleni sopivaa**. **Tästä kirjasta otan** siis **tekstiä** jakson alkuun ja tehtäviä ja kuvia on kai sitten vaan etsiskeltävä jostain […] **Yritän aina** mahdollisuuksien mukaan **käyttää Wordistä löytyviä kuvia**, sillä niitä käsittääkseni **saa tällaiseen tarkoitukseen käyttää**.
> *Heinemann's book Regions of the world, Europe is a book intended for teaching material and its **textual level conveniently happens to be suitable for my pupils**. **I'll take some text from this book** in the beginning of the unit and I guess I'll just have to search for activities and pictures somewhere […] **I always try to use pictures in the Word** as much as possible because I think **it is allowed to use them for this purpose***.
> Arja ET +CT, W DIARY

An excerpt from Arja's teaching material in question is shown below (117). It is a part of the introduction to the topic, The World's Geography, which has, according to Arja's diary, been taken from the above-mentioned textbook, *Regions of the World*, as such. The text Arja considers suitable for the fifth grade pupils does not seem to include very difficult terms, contains mostly short sentences and intends to involve readers in the theme from their personal perspective, e.g., with the abundant use of personal pronouns (e.g., *your* town*).

(117) **1. The World's Geography**

How would you describe your town? Is the land flat or hilly? Does a river run nearby? Who lives in your town? When you answer these questions, you describe your town's geography. Your town is part of the world's geography.

Arja ET +CT, TM Geography 5

The teachers' views of the level of language of materials for primary school pupils in CLIL suggest that they believe learning is best supported by the use of materials at a linguistic level understandable for pupils. If the level of language in materials retrieved from the Internet, for instance, seems to the teachers to exceed that level, they generally adapt the language to make materials more easily comprehensible to pupils. It can be questioned, though, if the ideal of Cummins' (2000) Quadrant III with high context and high cognitive demand, offering the most ideal setting for learning in CLIL, is met if materials do not offer pupils foreign language demanding enough for them to learn new issues.

A long-term knowledge of pupils and their abilities and a follow-up of their development both in cognitive and linguistic skills in CLIL seem to be the teachers' keys for adapting the materials accordingly. As excerpt 118 indicates, a teacher who knows the level of the cognitive abilities of her pupils is better

aware of *what might be difficult* for them and can focus on those points *at the stage of designing* materials.

(118) **oppilaan tuntemushan on ihan a ja o** (.) **laatimisvaiheessa** jo (.) **mulla on** jonkinlainen **kuva siitä** että **mikä** siellä **vois olla vaikeaa** että tietysti sit mä **voin tarjota tukia** niinku **sanastoja** ja ja ja jos on sanotaanpas vaikka nyt moniste niin **(.)** niin tota joskushan voi olettaa että että se on itseohjautuvampaa että oppilaat voi ymmärtää et sen laatii sille tasolle että että he työskentelee itsenäisemmin **(.)** ylemmillä luokilla (.) mutta **ainakin alemmilla luokilla missä opetellaan sitte opiskelutaitoja (.) sitä lähetään kyllä purkamaan ihan alusta asti eikä voi olettaa että siellä olis** niinku **mitään itsestään selvää** että et lähinnä niinku varmaan **kyselemällä luokalta** ja **aktivoimalla rohkasemalla heitä** siihen että **he** myöski **käy mun kanssa** sitä **keskustelua** että et **millasii asioita heille täytyy avata**

*knowing the pupil is absolutely the key (.) as early as **the stage of designing** (.) **I've got** some kind of **a picture of what might be difficult** there well of course I can offer support like glossaries and and and if there are say like a handout then (.) so well sometimes you might assume that it's more self-directed that pupils can understand that you design it at the level that that they work more independently (.) in higher grades (.) but **at least in lower grades where learning-to-learn skills are practiced (.) we begin to unravel it from the very beginning and you can't assume there would be** like **anything self-evident** that mainly it may be like **asking the class** and **activating encouraging them for a conversation with me about what kind of things need to be opened up***

Kirsi ET –CT, INT1

On the basis of excerpt 118, it may be inferred that Kirsi's focus of teaching is both in content and language. Her emphasis on content is suggested, for instance, by her reference to the *glossaries* she would *offer* as the *support* for learning. Her language focus, on the other hand, becomes evident from her encouragement for pupils to communicate with her about things that in their opinion need to be explained. As a result, the teacher can flexibly shift the focus of learning to the points that require most attention and scaffolding, either in content or language aspects.

The respondents who teach the first years of primary school seem to perceive more considerable differences between their pupils' cognitive and linguistic level than teachers with pupils of the later years of primary school. Tiina, teaching in grade 3, expresses her concern about dealing with a very heterogeneous group. She uses rather strong expressions to refer to the differences between her pupils' skill levels, repeating twice that a teacher *is all the time concerned* about her pupils' coping in the foreign language instruction, and particularly referring to *weaker pupils'* abilities to *hang on* in the instruction.

(119) **oppilaitten** (2.5) **tasoerot** on semmonen **huolenaihe kaiken aikaa** opettajalla että tuota jos toisille oppilaille voijaanki opettaa asioita hyvinki syvällisesti ja ja vieraalla kielellä haastavastikin niin sitten on **koko ajan huoli siitä että pysyykö ne heikommat oppilaat mukana**

*differences (2.5) **in pupils' skill levels** are a teacher's **concern all the time** so well if you can teach the content for some pupils in a very in-depth way and and in a foreign language in a challenging way then **you are all the time concerned if the weaker pupils can hang on***

Tiina ET +CT, INT1

This example verifies the general observation in the data suggesting that the younger the children, the greater the differences in their cognitive and linguistic level. From the perspective of adaptations, this also implies that it is necessary to adapt authentic materials for young learners in order to provide them with materials they can understand. The extent of the differences in young learners' skill levels is not a surprising finding, bearing in mind that children enter school with very different linguistic and cognitive backgrounds, some with advanced literacy skills while others may not yet be able to identify the alphabet. Logically, the differences between pupils' skill levels seem to even out towards the end of the primary school. This is contributed by the number of lessons attended in a foreign language during the six years of primary school, which is so remarkable that the CLIL language competence of even the weakest pupils seems to improve to the level where teachers do not show concern of pupils dropping out. It has to be borne in mind, though, that the differences between individual classes can be great. Longitudinal, large-scale research is required to find out more about the development of weaker pupils' CLIL language competence though some interesting openings have already been made (cf. Apsel 2012 on dropouts from CLIL in Germany).

6.6.2 Simplification

Simplification, involving an attempt to lower linguistic intricacy by less complex vocabulary and syntax (Oh 2001: 70), is, according to Lorenzo (2008), the most basic input modification strategy. The present results show that the majority of the respondents aim at simplified language in their CLIL materials and mention simplification as the primary way of making texts more easily understandable for the target group. This echoes Lorenzo's (2008) argument about the prevalence of simplification in adapting materials for CLIL. The teachers explain their practices by using descriptive verbs such as *modify*, *simplify*, or *shorten*, as indicated in the first excerpt (120) below, or illustrative adjectives, such as *easy*, *clear*, or *simple,* as in the second excerpt (121). However, these teachers refer to *modifying* texts or making *simple expressions* rather vaguely, not specifying or analyzing what exactly they understand by *simplifying* a text or by making a text *as clear as possible* and what measures, in their opinion, are included in these practices.

> (120) Eveliina: osaatko sanoa ihan konkreettisia keinoja miten sopeutat oppimateriaaleja oppilaiden kielitaidon tasolle?
> Meeri: no ihan **muuttamalla** sitä [englanninkielistä] tekstiä **yksinkertasemmaks** eli se asia on siinä mut **muuttamalla** ja ehkä **lyhentämällä** jotaki tekstii
> *Eveliina: can you mention any concrete ways to adapt teaching materials to pupils' level of language?*
> *Meeri: well simply by* **modifying** *the [English] text* **simpler** *so the core thing is there but* **modifying** *and maybe* **shortening** *some text*
> Meeri ET +CT, INT1

(121) kielelliset ilmasut sillä vieraalla kielellä niin ne täytyy olla paljo **yksinkertasempia** […] mahdollisimman **vähän tekstiä** […] **mahdollisimman selkeää** […] **yksinkertasta**
*linguistic expressions in the foreign language they have to be a lot **simpler** […] as **little text** as possible […] **as clear as possible** […] **simple***

Tiina ET +CT, INT1

The various strategies of simplification can be detected in the following excerpt from Kaisa's teaching material for the fifth grade Biology. First, the topic of the material, *Dinosaurs*, has been illustrated with two pictures. Second, the structure of the text is simple with two relatively short main clauses, with the blue font stimulating pupils' interest. Third, a new term *reptiles* has been translated into Finnish in brackets.

(122)

Dinosaurs

The climate was warm and it favored different kinds of reptiles (matelijoita).

Kaisa NT +CT, TM Biology 5

Excerpt 123 summarizes the multitude of strategies to simplify authentic texts. This teacher seems to have thought about simplification in-depth, shown by the variety of verbs she mentions for explaining a new term, such as *make easier, open up, reduce, explain,* or *choose synonyms*.

(123) Eveliina: millä tavoin sopeutat oppimateriaaleja oppilaiden kielitaidon tasolle?
Kerttu: pääsääntöisesti siten että käytän **helpotan** sisällöllisesti sopivan [englanninkielisen] oppimateriaalin kieltä (.) **yksinkertaistan** ja **kevennän** […] **avaan** jotain **termejä** (.) **selitän käsitteitä** (.) käytän jotain sanoja ehkä valitsen **synonyymejä** ettei ole hirveesti vieraita
Eveliina: how do you adapt teaching materials to pupils' level of language?
*Kerttu: basically so that I use I **make** the language of [English] materials **easier** which has applicable content (.) **simplify** and **reduce** […] **open up** some **terms** (.) **explain** concepts (.) use some words maybe **choose synonyms** not to have very many unfamiliar*

Kerttu ET +CT, INT1

Such an explicit account of the strategies of simplification, or of any adaptation, was not provided by any other respondent. Tomlinson's (2012: 151) argument about the intuitiveness of adaptations may offer an explanation for the rarity of the teachers' accounts of the different ways of adaptation. He maintains that teachers of all subjects working at all levels adapt materials systematically or intuitively every day. Following Tomlinson, simplifying may have become such an inseparable part of materials design for the respondents of this study that it is unintentionally ignored as a particular method or strategy. Operating in a foreign language also provides an extra challenge for the teachers when they adapt materials.

An ultimate method of simplifying materials seems to be to occasionally abandon English as the language of materials and to allow learning challenging issues in the mother tongue for those who face difficulties with the foreign

language. The first of the following excerpts (124) shows Tellervo's view that *if* English *causes problems* to a pupil, *it is better* to *learn* the subject matter *in Finnish*, and the second one (125) suggests that Kaisa does not consider it necessary to offer *the weakest* pupils *English* materials but rather allow them to use the equivalent mother tongue materials *if they ever get that far*.

(124) **ne on aika vaikeita asioita jotka tulee siel ympäristö- ja luonnontiedossa** (.)
jo aika **aika varhasilla luokilla** (.) **pölytys** nin tai **tai yhteyttäminen** et aattelen näin et **on parempi et hän oppii sen suomen kielellä jos se tuottaa vaikeuksia muuten**
*they are rather difficult things in science (.) already **in quite** quite **early years** (.) **pollination** yes or or **photosynthesis** so I think this way that **it's better she learns it in Finnish if it causes problems otherwise***
Tellervo ET +CT, INT1

(125) sitte **sanallisia tehtäviä** mä **en** välttämättä niille **ihan heikoimmille** edes **tuuppaa eteen englanniks** että **he** (.) **mieluummin** sitte **yrittää** vaikka niitä **suomeks** tai jos edes pääsevät niihin asti
*so **verbal activities I don't** even **give to** those **the very weakest in English** so that they (.) **rather try them** like **in Finnish** then or if they ever get that far*
Kaisa NT +CT, INT1

These excerpts indicate that both Tellervo and Kaisa obviously prefer content to language in CLIL, holding a belief that learning content is primary in CLIL and language is a by-product. Since CLIL is about learning through a foreign language, the teachers' accounts of mother-tongue materials in the data were not expected to be faced. Also CLIL research scarcely touches upon this issue and shows rather reserved attitudes towards the use of mother tongue when teaching through a foreign language, with a few exceptions (Coelho 1998: 151; Peachey 2003: 2). However, this finding confirms the overall impression conveyed by the data: CLIL teachers often struggle with discovering the ways of teaching content through a foreign language so that the learning aims will be covered. Teaching a challenging theme through mother-tongue materials is one of the means the teachers resort to when attempting to reach these aims.

6.6.3 Elaboration

As presented in chapter 4.3, elaborated texts aim at reducing cognitive complexity without modifying the original linguistic texture very much (Lorenzo 2008). The clarity of the meaning is the main purpose, yet keeping the language as close to the original as possible. In these data, elaboration shows as redundancy by highlighting, explaining and rephrasing important points, as the use of easier types of activities and as the choice of more common words instead of specialized vocabulary, and as the increased personalization through the use of the pronoun *we*.

Explaining parts of the foreign language materials seems to be a common nominator when the teachers elaborate texts intended for CLIL. Excerpt 126 shows evidence of a teacher's attempt to describe the meanings of unfamiliar words or sentence structures to pupils by *explaining* and deciphering them.

(126) kyl **täytyy avata ja avata ja avata** ja (.) nyt mulle on tullu sitte joskus palautettaki että ei jankata samoja asioita mut mun mielestä se **on välttämätöntä et niitä kerrataan**

*you do have to **explain and explain and explain** and (.) now I've sometimes got even feedback that let's not go on with the same things but I think **it's necessary to rehearse them***

Kirsi ET –CT, INT1

Though all the adaptation strategies seem to be very much teacher-led, this excerpt specifically implies that it is the teacher who *explains* and makes the pupils *rehearse* the new content. Thus, this shows a view of learning as teacher-centred activity. However, as an earlier excerpt (118) by Kirsi shows, in her classroom pupils are encouraged to ask and discuss which points in the materials require further clarification and in this way, pupils are involved in their own learning process.

A different type of elaboration measure is the use of the pronoun *we* in materials. An illustrative example is to be detected in the teaching material Tellervo designed for the third grade Science. She made a decision to introduce a new topic, Parts of a Flower and Pollination, with a story about the trip the class made to a garden earlier. The story is written in the third person plural and describes flowers and plants the class saw in the garden, labelling them in English. Tellervo has written the story from scratch, not modified from any other text. Though there is no original text that would have been elaborated in this case, this example can be considered to be using strategies of elaboration, such as increased personalization. In this way, Tellervo probably aims at making the text closer to pupils, thereby arousing interest in the new theme to be taught.

(127)

The [____]garden is very beautiful. Apple trees and plum trees and many others are in bloom in spring. Anna, the gardener, takes good care of all the plants. Last spring all the pupils of our school grew vegetables in the garden. Our class planted cucumber and dill. We ate the cucumbers and they were very good. The dill did not grow so well.

Tellervo ET +CT, TM Science 3

At the level of words and phrases, a common practice of the CLIL teachers seems to be editing target language texts retrieved from the Internet or target language textbooks to make them easier for pupils to comprehend. The following two excerpts (128 and 129) illustrate how teachers describe editing authentic texts. In the first one, Meeri says she may reduce an authentic English piece of text into *only a few sentences* or use easier types of activities, such as *missing words exercises* or *matching a picture and a word exercises*. The second excerpt (129) suggests that in Sirpa's materials, *difficult words* are not introduced *right away* in the beginning, but are probably avoided or replaced by a more common word until introduced later in the text.

(128) sanomalla sen [autenttisen englanninkielisen tekstikatkelman] vaan muutamalla lauseella […] tehtävissä nin tekemäl ehkä semmosii **helpompii aukkotehtävii** mitä täydennetään tai **yhdistämiskuvasana yhdistämistehtävii**

by saying it [an authentic English piece of text] only with a few sentences […] in
*activities by preparing perhaps kinda **easier missing words exercises** that are to be*
*filled in or **matching a picture and a word matching exercises***
Meeri ET +CT, INT1

(129) **ei** lähde käyttään **heti** niitä vaikea **vaikeimpia sanoja**
*not using **the most difficult words right away***
Sirpa NT –CT, INT1

The excerpts above suggest various ways included in elaboration, resorted to when editing L1 texts from various sources to better apply to purposes of teaching in CLIL. The teachers describe that their elaboration strategies may include simplifying sentence structures, shortening texts, using increased personalization in texts, preferring rather simple type of exercises, or avoiding the introduction of difficult terms in the beginning.

6.6.4 Rediscursification

As discussed in chapter 4.3, rediscursification is based on the educational context where the text will be read. The modifications made do not operate only on the sentence or text level. Some typical measures of rediscursification, such as redesigning the text layout or changing the genre of the text (Moore & Lorenzo 2007: 31, 33) were detected in the present data. For instance, a religious text became a pedagogic text through a fairy tale genre.

The manifold ways of rediscursification are shown in Tiina's oral diary (excerpt 130), which reveals the methods she resorts to when choosing materials for CLIL. She describes the stages related to preparing materials for the third grade Religious Studies, showing her process of materials design to be very in-depth and to proceed in several different stages. Beginning with *searching* and *choosing* materials, the process continues to *comparing*, *finding a text at the most appropriate level, eliminating*, and *editing* texts to achieve an end result to best apply to the content and language level of her pupils.

(130) no Internetistä (1.0) tällasen yhden oppitunnin aiheen (.) materiaalin etsintä on varsin (.) kovaa työtä se on ensinnäkin aikaavievää (1.0) eri eri sivujen **vertailua** (.) **sopivimman tasoisen tekstin löytämistä ja etsimistä** ja sieltä vielä **valikoimista** ja ja tota **karsimista** ja jo- joissakin tapauksissa jopa **muokkaamista** (1.0) **muokkaamista** jo- johon menee kyllä parhaassa tapauksessa tuntito- tolkulla aikaa
*well from the Internet (1.0) looking for materials for this topic (.) for one lesson is very (.) hard work first of all it is time-consuming (1.0) **comparing** different pages (.) **searching and finding a text at the most appropriate level** and **choosing** from there and well **eliminating** and in some cases even **editing** (1.0) **editing** which in the best case takes ho- hours of time*
Tiina ET +CT, O DIARY

Tiina's material for the third grade Religious Studies she designed while producing her diary proves her aim at materials intended for young learners. Tiina's material for one theme, Noah's ark, consists of 21 pages, including an illustrated children's story about Noah's ark, a question paper about the story,

lyrics for three songs, and four handouts with different types of activities. The following excerpt is from the beginning of the illustrated story.

(131)
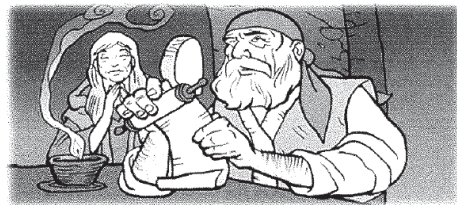
Once there was a very good man. His name was Noah, and he loved God very much. And God loved Noah.

Tiina ET +CT, TM Religious Studies 3

The shortness and explicitness of the sentences as well as the text layout with a bigger font size than ordinary imply that Tiina believes the pupils of this age and skill level need texts easy to comprehend. The fact that the genre of the original text, the Biblical story, has been modified to a fairytale suggests that this adaptation strategy is rediscursification.

6.6.5 Designing materials from scratch

It appeared to be a very common strategy for teachers to design materials independently from scratch. Nevertheless, teachers always base their knowledge of the texts they create or the types of activities they design on some previous knowledge which in their hands is modified into a "new" material. In excerpt 132, Sirpa says that she *does the texts and activities completely* herself *from the beginning*.

> (132) Eveliina: millä tavoin sopeutat oppimateriaaleja oppilaiden kielitaidon tasolle?
> Sirpa: se on (1.0) just se että (.) **tekee** joko **ne tekstit alusta asti ihan täysin itse** (.) **ja tehtävät**
> *Eveliina: how do you adapt materials to the pupils' level of language?*
> *Sirpa: it's (1.0) exactly that (.) you either* **do the texts completely by yourself from the beginning (.) and the activities**
> Sirpa NT –CT, INT1
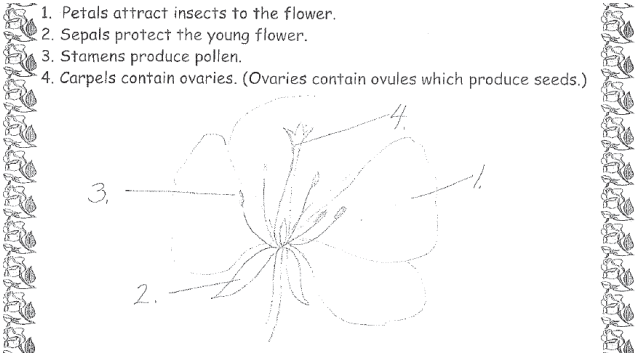
At a conscious level, at least, Sirpa does not seem to adapt materials for CLIL. However, as pointed out above, all knowledge is based on previous knowledge, and consequently, also Sirpa may base her materials on everything she has previously learnt about the particular subject matter.

The following excerpt from Tellervo's diary about her materials design for the third grade Science describes her process of ending up to preparing materials from scratch. As shown in excerpt 133, she first reports of *scanning and comparing source books,* then *choosing the matters she wanted* and finally *making the material herself.* The second excerpt (134) presents a part of the material, the design process of which she reports in excerpt 133.

(133) Kukan osat ja pölytyksen vaiheet löytyivät kuvina ja yksinkertaisina lauseina nopeasti **teoksia silmäillen ja vertaillen**. **Valitsin** haluamani asiat, mutta totesin **kopiointikiellon** joka kirjassa ja muutenkin **päätin tehdä itse materiaalin** monistettavaksi oppilaille.
*The parts of the flower and the phases of pollination were quickly found as pictures and simple sentences **by scanning and comparing source books**. **I chose** the matters I wanted but noticed **the prohibition of extraction** in every book and anyway **made a decision to make the material myself** to be copied for the pupils.*
Tellervo ET +CT, W DIARY

(134)

1. Petals attract insects to the flower.
2. Sepals protect the young flower.
3. Stamens produce pollen.
4. Carpels contain ovaries. (Ovaries contain ovules which produce seeds.)

Tellervo ET +CT, TM Science 3

This type of materials design seems to be particularly relevant to CLIL with a great deal of teaching materials designed from scratch. As has become evident from these data, the fact that the teachers design materials by themselves is frequently the only option to provide pupils with materials applicable to their level of language, age and knowledge equivalent to the NCCBE (2004).

6.6.6 Translating from Finnish textbooks

The present data suggest that one method of preparing materials for CLIL appears to be translating texts directly from Finnish textbooks into English. Direct translations were produced by four respondents, though some of them admitted that translations may become linguistically demanding when no simplification is made in the translation process. In excerpt 135, Jaakko states he translates *summarizing sentences or "important" boxes* from Finnish textbooks directly as such into English, and in 136, Sirpa says her direct translations from Finnish textbooks into English *become* sometimes *rather demanding*.

(135) **tiivistelmälauseita** tai **tärkeää-laatikoita** tai tämmösiä näin niin sieltä aika kylmänviileesti mä **käännän suoraan**
*summarizing sentences or "important" boxes or things like this so **I** rather calmly translate directly*
Jaakko ET –CT, INT1

(136) **oon** mä aika **suoraan kääntäny** ja siit on sit joskus **tullukin suht suht vaativa**
*I've translated pretty much **directly** and so **it has** sometimes **become rather** rather demanding*
Sirpa NT –CT, INT1

It is interesting that both teachers who reported of translating texts from Finnish textbooks into English have not received formal training in CLIL. It may be then that their repertoire of preparing materials for CLIL is more limited than that of those who have been trained in CLIL methodology. In Cummins' quadrant (2000), quotes 135 and 136 can be estimated to represent quadrant IV with low context and high cognitive demand in that word-for-word translations do not take the linguistic or content level of the target group into account. However, it would be very important in the process of materials design to produce understandable CLIL materials. The high level of language is, though, occasionally used in CLIL materials to provide pupils with extra input, but the general line in materials design seems to be to aim at the level of quadrant III which, with input just above the learners' level, provides ideal circumstances for the development of both content and language.

The majority of the teachers react to direct translations from a Finnish text- or workbook into English in a reserved way. The reasons for this range from considering direct translations too demanding for CLIL to regarding language as something that cannot be translated word for word. The first excerpt (137) reveals Heidi's belief about CLIL as an approach where *difficult linguistic activities* cannot be used. Thus, she seems to put more weight on the content side of CLIL than that of language. The latter excerpt (138) reveals that Tellervo would not *translate* texts *from a Finnish book* because in her view, language is not translating *word for word*.

(137) **se** [englanninkielinen työkirja ympäristötietoon] **ei vois olla** ihan **suora käännös** koska siel on taas sit niin **vaikeita kielellisiä tehtäviä** jotka **ei** taas sit **sovi CLIL-opetukseen**
*it [English workbook for science] **couldn't be** quite **a direct translation** because there are so **difficult linguistic activities that don't fit for CLIL***
Heidi ET +CT, INT1

(138) mä **en** ainakaan **osais** itse **kuvitella** niinku **missään tapauksessa että** (.) et mä **itse kääntäsin suomalaisesta kirjasta** (.) et kyllä se (1.5) kun ei **ei kieli** kuitenkaan koskaan **oo sitä että se** (.) se **sanasta sanaan** niinku **käännetään**
*at least **I couldn't imagine** like **in any case** that (.) that **I'd personally translate from a Finnish book** (.) that it does (1.5) because anyway **the language is not** not ever that it (.) it **is translated word for word***
Tellervo ET +CT, INT2

Tellervo's view of translating materials reflects the communicative, or functional, view of language, as described by Richards and Rodgers (2001), among others. According to the communicative view, language is a vehicle for the expression of functional meaning, focusing on the semantic and communicative dimensions of language. Language learning aims at learning to express communicative functions and categories of meaning. Tellervo's proposition that *language is not* transferring content *word-for-word* to another language emphasizes the aims of the communicative view of language.

6.6.7   Summary

The results of this chapter indicate that the teachers have three major factors to consider when designing materials for CLIL: the age, the CLIL language competence, and the cognitive level of their pupils. For young learners, especially, adapting materials according to these factors is important because of the children's restricted knowledge, language competence and abilities to cope with large amounts of new information. The results suggest that the teachers believe that the use of materials adapted to the level of pupils' age, language and cognition supports learning. This is in line with Coyle et al. (2010: 94) who argue that a teacher's consideration of the level of grammatical and syntactical complexity of the intended text for CLIL is important. They further maintain that for CLIL teachers, considering the appropriate amount and level of input is continuous, as new elements of content are introduced and the learners' understanding is extended in breadth, depth or both. In parallel with the process of text selection, teachers also need to consider how much new content they can introduce at any one time, and also to review how familiar the language is (Coyle et al. 2010: 94).

The teachers of this study generally believed that for young learners, above all, adapting authentic materials was necessary in order to provide pupils with materials they can understand. It is noteworthy that novice teachers referred to adaptations more rarely or described their adaptation strategies more narrowly than experienced teachers. It is probable that due to their short work experience in CLIL, novice teachers may not know sufficiently about adapting authentic materials for CLIL. The teachers' references to adaptations also revealed their views of learning as mostly a teacher-centred activity with a great deal of emphasis on words and vocabulary. Further, the key for assessing the appropriate level of content and language in materials seemed to be the teacher's knowledge of her pupils, generally based on teaching the same group for several years.

The analysis of the interviews and diaries suggests that CLIL teachers adapt materials for CLIL in various ways, often not fully aware that they actually adapt them. The strategies of adaptation found in previous research (Lorenzo 2008; Lorenzo & Moore 2010) were also detected in the analysis of the present data. Examples of simplification, elaboration and rediscursification were discovered both in the teachers' accounts of their materials design and in the actual materials they provided with the diary. However, these models were not considered sufficient to describe the various ways the teachers dealt with materials in this study. Therefore, new categories were developed to provide with a more in-depth interpretation for the variation of the teachers' practices with materials design and use: designing materials from scratch, and translating parts of the texts from Finnish textbooks. The variation found in the teachers' practices aptly reflects the challenge of finding the most appropriate ways for materials design in CLIL and suggests that the teachers with training

in CLIL may have more varied ways for adapting materials than the teachers with no CLIL training.

The results also indicate that the need for adaptations appear to be bigger in the first few years of primary school. This resonates with previous findings suggesting that beginning foreign language learners will benefit most from texts that are lexically, syntactically, and rhetorically less dense than authentic texts (Crossley et al. 2007: 18). The teachers' belief behind the use of adaptations in their materials design seems to be that conveying the content is fundamental to language in CLIL. The teachers reported that the major reason for adaptations was assuring that pupils will understand the content. In this way, the teachers seem to believe that adaptations support learning content, paying, however, less attention to the language element of CLIL.

The teachers' views of adapting materials for CLIL and the various ways of designing materials reflect their personal characteristics and experiences. These, in turn, affect the teachers' beliefs, playing a significant role in how they see the roles of learning and language in CLIL. The increase of expertise along with the years as a CLIL teacher does not, according to Nyman (2009b), diminish the significance of the personal characteristics of the teacher. As Tsui (2003: 24) argues, teachers plan their teaching in a way that suits their own personal style. Therefore, also the use of materials is largely influenced by the teachers' personal preferences and beliefs about what they consider beneficial for learning. Since it is important to understand the teachers' beliefs and the factors shaping them to understand and improve their practices and thereby the learning results of their pupils (Tsui 2003: 61), this study attempted to shed light on this interesting phenomenon through CLIL teachers' accounts of teaching materials for CLIL. In the following chapter, the main results of this study will be summarized, the methodology of the study critically considered, and suggestions for further research given.

7 DISCUSSION AND CONCLUSION

The purpose of this study has been to shed light on the various beliefs that the CLIL teachers participating in the study have about learning and language in CLIL. The teachers' views of teaching materials in CLIL were considered a fruitful way of investigating the issue, because it was expected that the multifaceted ways in which the teachers describe designing and using materials in CLIL would also reveal their beliefs about learning and language. The following three chapters will provide the summary of the results with pedagogical implications for CLIL, some critical considerations of the methodology used in this study and suggestions for further research.

7.1 Summary of the study

The results of this study revealed a multitude of teachers' beliefs about learning and language in CLIL. In the following, the results will be summarized in three subchapters. The first one resumes the results of the first two research questions concerning the teachers' beliefs detected from their accounts of their materials design and use and the need for strategies of adapting materials for CLIL. The second subchapter sums up the findings related to the influence of CLIL teacher experience and training in CLIL on the teachers' beliefs about learning and language. Finally, the third subchapter presents some pedagogical implications on the basis of the results.

7.1.1 CLIL teachers' beliefs about learning and language

Approaching CLIL teachers' beliefs through their views of materials not only provided a valuable insight into the teachers' beliefs about learning and language but also indicated several aspects worth taking into account in materials design for CLIL. Setting criteria for good teaching materials is important because research shows (e.g., Niemi 2004: 190) that there is a

significant connection between teaching materials and learning results and that the various ways materials are used in the classroom can have a remarkable impact on learning. Consequently, by designing goal-oriented, meaningful and motivating tasks, a teacher can improve the results of learning (Hildén 2011: 8). The results of this study show that teachers prefer tasks that involve variety and diversity, echoing Ames's (1992: 263) view that such tasks are more likely to facilitate pupils' interest in learning and to provide meaningful reasons for engaging in an activity. In this connection, Coyle et al's (2010: 94) proposition of the clarity of the thread of thinking when designing textual materials for CLIL is apt to show the importance of every single element in producing fluent, interest-evoking CLIL materials with appropriate content, vocabulary, grammar and syntax.

A prominent belief about learning content that recurred in the teachers' descriptions about their process of designing materials and their ways of adapting and reasons for adapting authentic texts for content subjects was that learning is teacher-led activity, leaving the learner the role of implementing tasks that the teacher has designed and decided to apply for learning. Occasionally, pupils also designed materials for CLIL, but it was not a regular or consistent practice, and was completely lacking from the responses of some teachers. These results echo Luukka et al's (2008: 233) findings, showing that learning is still based on the traditional, centuries-old mindset, isolating learning in a separate learning space, that being the classroom. Knowledge is in the teachers' hands and controlled by the teacher whereas the pupils are responsible for participating in education but not actually for their own learning. The pupils seem to be the objects of activities, and not active subjects.

The present finding about the teacher-centredness of CLIL is opposite to the modern learning theories based on the observation that all kinds of learning, including language learning, are socially situated and of a dialogic nature (Dalton-Puffer 2009: 198). According to the constructivist learning theory, knowledge is mutually developed between experts and novices and between peers. The learner is seen as self-directed and innovative. New knowledge is constructed on prior experiences and previous knowledge systems. The teacher's role is more that of a mentor than an instructor. As Barab, Kling and Gray (2004b: 3) suggest, the move towards the learner-centred and community-based models of instruction has been marked in the last few decades. At a practical level, however, this seldom seems to come true, as shown by the results of this study.

On the basis of this study, it can hence be concluded that in the teachers' views, content plays the primary role in CLIL and foreign language competence, achieved while learning content, is a by-product. This might be explained by the class teacher background of all but one respondent, suggesting that class teachers do not reflect the meaning of language for the construction of knowledge and learning. With no teacher training for language teaching, it may be difficult for class teachers to take the role of a language teacher in CLIL. This finding is in line with the tradition of CLIL with the focus of teaching in content

while language is part and parcel of content instruction (Coyle et al. 2010; Llinares et al. 2012: 187). Recently, though, there has been a growing tendency in CLIL research to a closer combination of these two elements (e.g., Dalton-Puffer et al. 2011: 196; Pihko 2013: 13).

Language is seen in two opposing ways by the teachers of this study. The majority of them place emphasis on language as a system or a set of words where the role of grammar is a syntax to arrange them. Thus, the recurring belief seems to be that language serves as a tool to encode the world. This was highlighted in the teachers' focus on the level of words and on their aim to "get the vocabulary correct". Another group of teachers saw the role of language as essential for communicating and conveying content to the learners. Consequently, for them the role of language in CLIL was primarily conveying meanings and functions, which are necessary for pupils' successful development to use specific academic genres (Llinares et al. 2012: 187).

A major question related to language in CLIL, but particularly in CEIL, emerging from the results of this study, is whether teaching through English should aim at the acquisition of English as a *lingua franca* or as native-like proficiency. The teachers frequently referred to their own English proficiency with insecure and dismissive terms, implying that their ideal of English proficiency in CLIL is the native-speaker level. The native speaker ideal has traditionally prevailed in second language acquisition as the model for language learners, manifested by the aim at correct language and mastery of grammar rules (Canagarajah 2007: 238; Davies 2007: 149). In CLIL literature, however, the ideal of near-nativeness has been questioned and the methodological expertise set in focus (Moate 2013: 19; Neuner 2005: 16; Ortega 2011: 175). Dalton-Puffer (2011a: 182), for instance, maintains that in language learning, the CLIL classroom provides the only site for learners' interaction in the target language. In her view, CLIL is about either foreign languages or *lingua francas*. As the results of the present study suggest, however, Dalton-Puffer's view does not seem to meet the expectations related to the language aims of the CLIL teachers.

Another interesting aspect that the teachers' accounts of their materials design and use reveal is their beliefs about the connection of culture, knowledge and learning in CLIL. The emerging question was whether CLIL should convey the social awareness and local culture of the target language countries, or only focus on conveying the content and language to the learners, ignoring interculturality. The results suggest that CLIL teachers' intercultural awareness is two-fold. On the one hand, teachers are interculturally aware in their materials design and use by putting weight on conveying the culture of English-speaking countries to the pupils. On the other hand, however, they tend to consider materials originated from an English-speaking country highly problematic due to the lack of their correspondence to the national core curriculum. Consequently, it can be concluded that the theoretical outlines of CLIL (e.g., Coyle et al. 2010: 42) and the attempts of the EU (European Commission 1995) to promote CLIL as an approach to increase cultural

awareness do not always correspond to the practices of the field. Also, as Morton (2013: 114) rightly argues, the quality of CLIL materials may suffer from a rather disintegrated approach to content and language in the field.

One focus of this study was to discover teachers' beliefs about learning and language through their accounts of adaptations in materials and of their strategies of modifying materials for CLIL. The results suggest that the teachers believe that for efficient learning in CLIL, some degree of adaptation of authentic materials is required. The teachers maintain that adapting authentic materials, often retrieved from the Internet, by shortening, simplifying, or personalizing them, for instance, supports learning both content and language in CLIL. However, teachers do not always seem to be aware of their adaptation strategies or even of the fact that they make changes. Thus, adaptation strategies appear to be intuitive rather than based on the research results of children's language skills related to the age-specific cognitive development. This may be explained by the familiarity of adaptations in CLIL: due to the constant materials design teachers are involved with, editing materials is so common-place to them that they do not pay much attention to specific adaptation strategies during their process of designing materials. It might be concluded that to successfully learn content and language in CLIL, some degree of adaptation of authentic materials is required.

Nevertheless, a small group of teachers was detected who do not adapt materials at all. They believe that with authentic texts, pupils learn to deal with occasional unfamiliar words and also learn new vocabulary and structures. This belief echoes the views of Musumeci (1993: 174-175) and Hajer (2000: 267) who refer to adaptations as "dummying down" or "skeletonizing" texts for learners. On the other hand, a fear that foreign language will hinder learning was also expressed among this group. At some level, then, also these teachers seem to acknowledge that primary school children as a target group, the level of materials should not be too high, or have "low context and high cognitive demand" (Cummins' Quadrant IV). In general, teachers examined the suitable level of content and language in materials from three perspectives: the age, the level of CLIL language competence and the cognitive skills of the target group. Thus, the level of content and language in materials that the majority of the teachers aimed at seems to be situated within Cummins' Quadrant III with high context and high cognitive demand, thus expected to provide the most ideal setting for learning.

7.1.2 CLIL teacher experience and CLIL training affecting beliefs about learning and language

Looking into the beliefs of novice and experienced teachers revealed some differences between their understandings of the research foci but not as systematically as one might have expected. Nevertheless, the results indicate some important points of reference that differed between novice and experienced teachers. First, the above-mentioned general tendency among the teachers to approach language particularly through words and terms occurred

more frequently in the novice teachers' responses. Characterized by the strong role of words and vocabulary, language was seen as a set of symbols where syntax prepared them. Though this belief was to some extent to be detected also among the experienced teachers, the novice teacher group stood out with their highly uniform view of the central role of words in their conceptualization of language. In a way, this is understandable reflected to the context of a beginning CLIL teacher: foreign language terms are the teacher's first challenge to be faced with when dealing with materials for CLIL, and at that point, it may be difficult to see beyond the surface level of texts.

Second, experienced and novice teachers had different views on the origins of materials for CLIL. The experienced teachers mostly believed that successful learning in CLIL requires teaching materials originated from the target language countries whereas novice teachers more often believed that learning in CLIL is based on the Finnish textbook, which they either partially translated into English or dealt with through classroom conversations. Thus, the novice teachers seemed to follow the hidden curriculum suggested by Atjonen (1993: 116), for instance. The experienced teachers' belief about the superiority of materials from the target language countries was shown in their more diverse use of different types of resources for their materials design than that of the novice teachers. Due to their many years of teaching in CLIL, experienced teachers naturally have a wider knowledge of where to search for materials and also a resource bank of their own, collected during the years of work. Exploring materials from many resources may also explain their generally longer hours used for materials design than that of the novice teachers.

Furthermore, the above-mentioned belief that pupils' restricted skills in CLIL language would have a negative effect on their learning, or even hinder learning, was only found in the novice teachers' responses. This may be due to their lack of knowledge and practical tools to adapt demanding materials to the linguistic and cognitive level of their pupils. Alternatively, they may not know the level of their pupils sufficiently to be able to offer them appropriate materials. As research shows, novice and expert teachers differ, among other things, in their insight so that experts are more likely to arrive at novel solutions to problems than novices (Sternberg & Horvath 1995: 10). Finally, an interesting observation in this study related to materials and CLIL teacher experience was that the novice teachers showed their materials to their colleagues for proofreading more reluctantly than the experienced teachers. The reasons for this remained unclear but may result from many things, from the experienced teachers' greater self-confidence with their materials to the novice teachers' adherence, through the long 'apprenticeship of observation' (Lortie 1975), to the tradition of teaching profession to work alone, with a high threshold of asking for help.

When exploring the effect of pre- or in-service training received in CLIL on the teachers' materials design, the results suggest that for the respondents of this study, training does not seem to provide with capabilities of large-scale

materials design for CLIL. The majority of all teachers with or without CLIL training maintained that preparing materials is demanding and time-consuming. Particularly experienced CLIL teachers with training in CLIL demanded ready-made CLIL textbooks to be published instead of developing as materials designers themselves. This may signify the lack of knowledge and strategies of materials design offered in pre- and in-service CLIL teacher training. This is one factor worth taking into account when further developing CLIL teacher training. Regular (online) meetings with CLIL teacher colleagues and in-service training on the lexically demanding areas in content subjects in CLIL language might support teachers in coping with the foreign language vocabulary.

CLIL teachers with language teacher training seemed to understand the different components of language competence better than those with no training in language. Training in CLIL, however, did not seem to grow the teachers' understanding of the complexities involved in assessing pupils' foreign language competence. However, the teachers who seemed to be well aware of the need to adapt authentic materials and of different adaptation strategies were more often experienced teachers who had received training in CLIL. Teachers with short experience in CLIL and with no CLIL training gave an impression of lacking the knowledge of strategies to edit texts and other materials to the pupils' level of CLIL language and to scaffold pupils with demanding texts. Finally, the teachers often had difficulties particularly with the specialist vocabulary in a foreign language, which presumably results from the lack of content teachers' training in specialised English. These results suggest that CLIL training does not pay enough attention to materials and the teachers' central role in designing them.

7.1.3 Pedagogical implications

Teaching materials have a great effect on how pupils approach learning, and hence exploring the various ways tasks and activities are designed is crucially important. Therefore, this study aimed at looking into CLIL teachers' views of materials and designing them to reveal their beliefs about learning and language in CLIL. After all, teachers play a remarkable role in designing materials for CLIL because there are very few ready-made materials for CLIL available. As an integral part of all teaching and learning, materials offer a natural way of approaching teachers' beliefs about learning and language.

The teachers' recurring belief about the level of CLIL materials is that materials have to be simple enough for pupils to understand them but also to contain new elements in an appropriate ratio for efficient learning to take place. To achieve a successful balance between comprehensible and more demanding materials in CLIL, the ideal solution might be using simplified and authentic up-to-date supplies. Many experienced teachers reported of using materials in this way after years of developmental work in materials design.

The results also show that the CEFR, intended for assessing the foreign language competence achieved in traditional foreign language instruction, is

not suited to assess the level of CLIL learners' language skills. Instead, it would be useful to develop 'a CLIL-specific CEFR' which would show the levels of the target language to be met in the exact years of CLIL. Though some steps in this direction have been taken, a national CLIL-specific CEFR in Finland is still lacking. However, the new Finnish national curriculum, coming into effect in 2016, is expected to guide teaching in CLIL more than ever before.

On the basis of these results, it seems necessary to develop CLIL teachers' in-service training in the adaptation of materials. Teachers need concrete strategies of assessing the level of their CLIL groups, adapting texts to suit that level, and scaffolding the comprehension of texts in the classroom in applicable ways for individual learners. With appropriate in-service training, adapted texts might work out considerably better in the CLIL classroom than overly challenging authentic texts with incomprehensible content and language. This is also expected to reduce CLIL learners' pressure of struggling with texts too demanding for their linguistic and cognitive level and to contribute to stopping the growth of the number of CLIL dropouts. In Nikula and Järvinen's (2013: 160) words, one of the tasks of CLIL teacher training is, indeed, guiding to adapt and edit materials. Therefore, CLIL teachers' in-service training in principles of materials design for CLIL would be highly beneficial. For instance, organizing training in the use of hands-on activities with the focus on authentic resources might make CLIL teachers more familiar with the concept of authenticity. Taking care of the teachers' linguistic support and providing them regular language courses in a target language country would also significantly help them to cope with work which on a daily basis is carried out in a foreign language. Coherent CLIL training is required also to make teachers aware of their beliefs about learning and language in CLIL and to support purposeful development of teaching in English. In Finland, CLIL teacher training is scarce and in-service training only offered occasionally. This does not seem to form a solid basis for developing CLIL at a national level. If a national educational authority, for instance, took the responsibility for coordinating CLIL teacher training and in-service training as well as a centralized materials bank for CLIL in Finland, it might provide CLIL teachers and other practitioners with useful tools to develop CLIL locally to a high-quality educational approach.

Another important factor contributing to higher-quality CLIL materials and teachers' coping at their work indicated by the present study is teacher collaboration and sharing of materials. It seems probable that at least in Finland, publishers will not move into CLIL materials business on a large scale because of the relatively small target group and consequently low profits it is expected to offer, though different estimates in other European contexts have been expressed (cf. Morton 2013: 132). This study showed that despite the positive effects of CLIL teacher collaboration proven by research (e.g., Kozianka & Ewig 2009: 144; Traianou 2007: 140), collaboration is still not self-evident for all CLIL teachers. It seems that teachers with advanced ICT skills have better capabilities for sharing materials with colleagues than those with limited ICT skills. For instance, uploading materials in a common data bank, adopting colleagues'

materials to a personal use and improving them appeared to be convenient this way. In the modern era of social media, shared digital platforms and specialized discussion forums, it is surprising that open web-based materials banks for CLIL in Finland have not gained much momentum despite some efforts in the early 2000s (e.g., CCN Platform, CLIL Network). Potential reasons for this may be the complexity of the Finnish copyright law (Toikkanen & Oksanen 2011: 22) and teachers' reluctance to publish their self-made materials. However, an open materials bank might offer invaluable support particularly for novice CLIL teachers and for teachers who, whatever the reason, do not cooperate with colleagues.

This study suggests that the teachers' ways of designing materials seem to a large extent to be a question of teacher personalities. For instance, some teachers prefer pedagogical conversations to materials in print or screen while the others cannot imagine teaching without something concrete to support both the teacher and the learners. Obviously, teachers' personal characteristics matter a great deal in their attitudes towards materials design. By nature, some teachers simply spend much more time on preparing materials than others. Also, some greatly enjoy the freedom caused by the lack of ready-made materials while others regard materials design more as a burden and vigorously call for tailored CLIL textbooks and activity books from publishers. As discussed earlier, CLIL teachers are demanded a lot: hours spent on materials design on a weekly basis and high proficiency in two elements, content and language, to be able to simultaneously teach them both. With the help of successful teacher collaboration and networking combined with possibilities to participate in a specifically focused in-service training, these demands might appear more reasonable.

The majority of the respondents seem to share a view of themselves as life-long learners, showing deep interest in the wide variety of areas related to the aspects of both content and language and eager to continually develop their knowledge and then convey it to their pupils. However, a greater proportion of the experienced teachers than novices represent this view. These teachers gave an impression of a good learner, signifying an ability to question one's own expertise and making it a learning challenge. This is in line with Rauste-von Wright et al's (2003: 214) proposition of an expert of an interactive profession such as teaching. Accepting the challenges of materials design, e.g., time constraints and the occasional difficulties with compiling materials, the majority of the teachers of this study was interested in developing themselves as CLIL teachers. This is consistent with research results on developing to an expert which indicate that experts are keen to acquire more and deeper information on their field to become more competent in it (Jaakkola 1997: 79; Rauste-von Wright et al. 2003: 214).

Though teacher personalities seem to play a critical role in CLIL, as in all educational settings, it is not fruitful to appeal only to personal characteristics as the reason for not preparing teaching materials, for example. This does not advance one's learning and development in teacher profession. The feeling of

the missing aims of CLIL and disorientation may demotivate CLIL teachers, and therefore it would be important to develop a specific CLIL curriculum or at least specify the aims for teaching in English in the Finnish primary school curriculum. Besides providing CLIL teachers (and other stakeholders involved) with the unambiguous content and language aims of CLIL, a CLIL curriculum would probably standardize CLIL practices, which at the moment seem to vary a great deal in different parts of Finland. Furthermore, with specific content and language aims in mind, teachers might benefit considerably from the CLIL curriculum in materials design and use. The way learning and language are understood in CLIL largely affects teaching and learning in CLIL.

7.2 Critical considerations on the methodology of the study

Analysing qualitative data is typically context-bound, and thus the results of this study are not generalizable. Instead of formulating regularities about the behaviour of the research subjects, for example, the purpose of qualitative research is to generate ideas which are sufficient to make us think again about what is going on in the world (Holliday 2010: 101-102). The present study has a limited number of respondents who produced data through interviews, diaries and teaching materials, and it is not meaningful to aim at generalizations in this case. In essence, the purpose of this study was to describe CLIL teachers' beliefs about learning and language as reflected in their accounts of materials for CLIL. This was aimed at by interviewing thirteen primary school CLIL teachers, supplemented by their diaries kept during the process of materials design and the materials attached with the diary. The results only reflect the views of these respondents, and thus, the results have to be considered keeping in mind the scope of the data.

Sometimes the reliability and validity of qualitative research has been questioned suggesting the term "trustworthiness" instead. When considering the trustworthiness of a study, attention is paid to how thoroughly it has been conducted (Kalaja et al. 2011: 19-20). In this study, high trustworthiness was aimed at through data triangulation and approaching the research questions not only from the perspective of applied linguistics but partially through ethnographic techniques, e.g., by conducting in-depth interviews and collecting documents produced by the respondents. This was expected to provide a wider perspective to the research questions at hand.

It must also be borne in mind that the present study can only capture the teachers' conceptions and feelings of the very time of the interviews and design of the diaries and teaching materials. The results might be different at some other time, because people constantly tend to reframe the meaning of events and experiences within the contexts of their current lives. Because people continually reconstruct their pasts, it is highly probable that if the present study was repeated later with the same participants, they might have produced different diaries and the results of the two studies would differ (Mishler 2006:

36). Particularly the diaries, being personal and unique, might very likely produce different information if repeated with the same participants at a later date. Research findings are always tentative, continually revised by new discoveries that function like story endings that change our understanding of past knowledge and present problems (Mishler 2006: 47), and this is true also for the present study.

The study of beliefs has often been judged problematic in many ways (Aro 2009: 156; Kagan 1992: 66; Pajares 1992: 307, 319). In their familiarity, culturally shared beliefs about teaching and learning may have become difficult to recognize (Correa et al. 2008: 140, 152). Studying beliefs through interviews and diaries, as in the present study, raises a question about reliability. The researcher is faced with a moral question: how can I study beliefs of a person only through what she says or writes? As Eskola and Suoranta (2005: 196) maintain, the truthfulness of the respondents is the key problem: people may think in one way and talk in another. In this study, the answer for this moral dilemma follows Aro's (2009: 156) sharp but simple observation: the focus has to be on what the respondents *say* they think and do, because it is impossible for the researcher to see further than that. This was maintained as the guiding principle for investigating teachers' beliefs throughout this study.

In the data collection, the attempt was to interview all the respondents twice, in order to create a trustful and confidential relationship between the interviewer and the interviewees. This was expected to contribute to obtaining deep and rich data and, after the first interview, to offer the possibility to revise and supplement interview questions for the final round. The majority of the respondents of this study were interviewed twice, some only once. As shown earlier, eight of the thirteen volunteers proceeded to the second and third stages of the data collection. The reasons for not continuing in the study ranged from moving to an ordinary Finnish-stream school, uncertainty of continuing in CLIL, or regarding keeping the diary as too time-consuming alongside the hectic work of a CLIL teacher. However, in its length and thoroughness, the first interview formed the framework of the data, and the diaries, teaching materials and the final interview supplemented it. Therefore, it was considered appropriate to proceed with the eight respondents, though regarding all the thirteen respondents equal in the analysis.

Of course, one might see the lack of the five initial volunteers from the whole process of the data collection as a weakness of this study. Admittedly, "travelling" the whole journey with all the initial volunteers might have contributed to deriving deeper and slightly different meanings and emphases from the data. However, obtaining the three-stage data from eight respondents can be considered a good achievement, given that the teachers voluntarily spent hours of their free time for research and that also previously, CLIL teachers have not always been very committed to research, as shown in Markkanen (2012) and Massler (2012). Thus, the number of eight "full-time" respondents was considered a sufficient number for the purposes of this study, not least because generalizing the results of the study was never the goal.

Ethical aspects of the present study are also worth a discussion. In qualitative research, questions of ethics are often intertwined with reliability. A qualitative research report has to provide as much contextualised information as possible for the research findings to make sense (Kubanyiova 2012: 133), and therefore, one has to carefully consider how large modifications are necessary to protect the respondents' anonymity. In this study, with a limited number of participants from a rather narrow special field, preventing the possibility for an easy identification of the participants was seriously aimed at. Pseudonyms were used for the respondents, and it was not revealed from which part of Finland an individual respondent came from. In this way, a risk of breeching anonymity was believed to be reduced, though not completely eliminated.

Attempts were made to minimize the possible harm caused by this study to the participants. Their wishes concerning their anonymity and the publication of their materials were taken into account to the extent deemed possible. For instance, when a respondent made a wish about not publishing the teaching material she had designed for the purposes of this study, a decision was made, for the sake of consistency, not to publish any respondent's teaching material as an appendix of this dissertation. Only short extracts of them were occasionally used to illustrate, for instance, a comparison of what a teacher says about something and how it shows in her material. After all, materials were used as supplementary data and since they played a minor role among other data, the reliability of this study was not expected to suffer from this decision.

The final consideration of importance in this study is aiming at transparency in each stage of the research process. Therefore, all the phases of the study have been described as extensively as required to provide an unambiguous conception of the research process. As Eskola and Suoranta (2005: 210) maintain, in qualitative research the researcher is the central research instrument and also the major criterion for the reliability of the study. As in all qualitative research, also in this study the end result largely depends on the interpretations of the researcher. Analysed by another researcher, the data might be interpreted differently and some other themes might have emerged as significant. A further degree of interpretation will be made by the reader of this study.

7.3   Suggestions for further research

In all research, it is necessary to select what is meaningful for a particular research endeavour. Research questions guided me towards certain aspects of teachers' stories and excluded some others, despite their attraction. The data revealed a great deal of interesting topics worth future research. Certain research gaps in the area of teaching materials, relevant also in the CLIL context, have already been pointed earlier. Following Tomlinson (2012: 167), there is little research into the design and effects of materials, their evaluation, and their

development and use. Aiming at higher-quality materials would require developing research-based, common criteria to be followed by publishers, textbook writers and teachers.

An important perspective on materials would also be that of the learner's. It would be very probable to improve the quality of materials if there was more research focusing on the learner's perspective on the use of materials in the classroom. As this study shows, learners as materials designers would be a critical issue for further research, since the role of learners still mostly seems to be limited merely to the use, and not the design, of materials. Learner-centred materials design would best take place collaboratively in groups where reflecting each other's views of the matter at hand would offer further possibilities for learning. Also project work in learner groups could be applied more than this study showed, bearing in mind that the end results would not necessarily be teaching materials but products of the projects to be evaluated by the teacher. It is, in fact, surprising that, at least on the basis of this study, learning through projects does not seem to be very common in CLIL, given the lack of ready-made CLIL materials. Modern learning theories agree on the learner's central role in the learning process, implying that learners might have a more influential role also in materials design. With older students, an interesting experiment might be, for instance, to give the total responsibility of materials design for one unit in CLIL Science, for instance, for the learners, follow the learning results under such conditions and possibly compare the learning results to those of a class whose teaching materials have been designed by a teacher or a publisher.

The complexity of beliefs raises many questions, some of which research can probably never answer. Since teachers' beliefs have frequently shown to hinder adopting pedagogical innovations, it would be worth studying what exactly lies behind the beliefs of CLIL teachers and if and how they can be modified. Further, a longitudinal study on CLIL teachers' beliefs would be needed to show, for example, if in-service training, suggested in the present study to support CLIL teachers in developing in the different areas of their demanding work, has any influence on teacher beliefs. Previous findings about the connection of teacher beliefs and in-service training provide slightly contradictory evidence (cf. Borg 2011: 370; Correa et al. 2008: 141; Kagan 1992: 76; Mansour 2009: 38). Comparing same teachers teaching the same subject in L1 and in CLIL, as Dalton-Puffer and Smit (2013: 555) suggest, might also reveal interesting differences in their beliefs about learning and language in the two educational approaches. Besides teaching and learning, beliefs are shown to constantly influence many areas of human life, and studying beliefs would therefore benefit from combining different fields of research more than has been done so far.

Since this study only touched on the effect of teacher expertise on teachers' beliefs about learning and language in CLIL, it would be worthwhile to widen this perspective by examining the factors that contribute to CLIL teachers' development to experts. Though a teacher's progress toward expertise has been

largely studied for decades (Bereiter & Scardamalia 1993; Dreyfus & Dreyfus 1986), a CLIL teacher's point of view has not yet been approached very much, though some interesting contributions have been made (e.g., Hartiala 2000; Moate 2013). For instance, focusing on the differences and similarities between novice and expert CLIL teachers' beliefs, the reasons behind them, and on the process of the formation of beliefs might have an influence on improving CLIL practices in general.

An interesting topic of further research would also be the challenges native speaker teachers face in materials design for CLIL. In this study, native speaker teachers were excluded from the group of respondents, because it was expected that their challenges would in some respects differ from those of nonnative teachers. Research on this topic might shed light on the special problematics of the materials design of native speaker teachers in CLIL and clarify if they hold different kinds of beliefs about learning and language because they teach in a nonnative context. Further, considering the scope of this study, expanding the present topic to a European scale would probably open up exciting possibilities for comparing CLIL teachers' beliefs in different countries. In line with the aims of the European Union to promote the expansion of CLIL, research knowledge of teachers' beliefs affecting their decision-making in CLIL might facilitate this progress. Several European CLIL projects are paving the way for the mutual understanding of CLIL. One of the latest examples of such projects is ConCLIL, run by Professor Tarja Nikula from the University of Jyväskylä, Finland, with several partner institutes from Spanish, Austrian and Canadian universities (ConCLIL 2013).

Comparative research on bilingual education outside Europe and particularly on European CLIL and Northern American CBI has also been recently demanded (Nikula & Dalton-Puffer 2014: 119; Tedick & Cammarata 2012: S47). The dilemma seems to be contextualizing studies and findings in CLIL within the CBI knowledge base, and vice versa. After all, as acknowledged in the present study, CLIL and CBI are very similar as curricular and instructional approaches to language and content integration, and referencing to the literature of both would increase the Cross Atlantic understanding of these approaches (Tedick & Cammarata 2012: S47). One of the most rewarding ways of converging CLIL and CBI would undoubtedly be a Cross Atlantic study on a carefully limited topic on teaching and learning through a foreign language conducted uniformly in both contexts.

Investigating teachers' beliefs through their accounts of teaching materials for CLIL using qualitative content analysis showed a fruitful research method in this study. The combination of interviews, diaries and teaching materials as data provided with information that revealed teachers' beliefs about learning and language to a large extent. Furthermore, themes not expected in advance also emerged and supported understanding the many perspectives to teacher beliefs in CLIL. However, it would be interesting to experiment the methods of quantitative research for investigating teacher beliefs to find out if they can offer any extra dimension to this type of research. For instance, the influence of

teacher beliefs on learning results might be approached through quantitative methods. As a conclusion from the results of this study, it is obvious that teacher beliefs in CLIL require further ample research in the future.

YHTEENVETO

Tämä laadullinen tutkimus "Opettajien käsitykset kielestä ja oppimisesta CLIL-oppimateriaaleissa" sijoittuu soveltavan kielentutkimuksen alalle. Tutkimuksen avainkäsite, opetettavan sisällön ja vieraan kielen yhdistävä oppiminen (CLIL = Content and Language Integrated Learning) suomalaisessa alakoulukontekstissa perustuu ajatukselle, jonka mukaan vieraita kieliä opitaan parhaiten yhdistämällä sisällön opetus ja vieraan kielen opetus. Tutkimus pyrkii ensinnäkin selvittämään suomalaisten alakoulujen CLIL-opettajien uskomuksia oppimisen ja kielen rooleista CLIL-opetuksessa. Tähän tavoitteeseen tähdätään sitä kautta, millaisia näkemyksiä opettajat ilmaisevat haastatteluissa ja päiväkirjoissa oppimateriaalien tuottamisesta ja käytöstä CLIL-opetuksessa. Sisällönopetuksen lisäksi CLIL-opetuksen olennainen elementti on vieraan kielen oppiminen, ja siksi on tärkeää selvittää, kuinka opettajat ymmärtävät oppimisen ja kielen roolit CLIL-opetuksessa. Näin ollen tämä tutkimus pureutuu opettajien uskomuksiin oppimisesta ja kielestä siten kuin ne heijastuvat heidän kertomuksissaan oppimateriaaleista. Toiseksi, tutkimuksen tavoitteena on ottaa selville, mitä opettajien kertomukset oppimateriaalien adaptointitarpeesta CLIL-opetusta varten paljastavat heidän kieli- ja oppimiskäsityksistään sekä millaisia adaptaatiostrategioita he käyttävät muokatessaan autenttista materiaalia CLIL-opetuksen tarpeisiin. Lisäksi tämä tutkimus pyrkii antamaan viitteitä CLIL-opettajakokemuksen ja CLIL-opettajakoulutuksen vaikutuksesta opettajien ymmärrykseen siitä, mitä CLIL on sekä heidän uskomuksiinsa oppimisen ja kielen roolista CLIL-opetuksessa.

CLIL-opetuksen juuret ovat kanadalaisessa kielikylpymallissa, joka kehitettiin 1960-luvun lopulla. Samalle perustalle on rakennettu myös Yhdysvalloissa 1980-luvulla kehitetty sisältöpohjainen opetus (Content Based Instruction, CBI). CLIL puolestaan on eurooppalaiseen kontekstiin sijoittuva lähestymistapa kielen ja sisällön opetuksen yhdistämiseksi. Comminsin (2012) mukaan CLIL perustuu "additive bilingualism" –käsitteelle, jossa vieras kieli "lisätään" äidinkielen päälle. Pedagogisena lähestymistapana CLIL-opetuksella on kaksi yhtä tärkeää tavoitetta: sisällön oppiminen ja vieraan kielen omaksuminen. Tähän pyritään käyttämällä vierasta kieltä opetuksen välineenä.

Vaikka CLIL-opetusta on tarjottu osana suomalaista perusopetusta jo noin kahdenkymmenen vuoden ajan, opetuksesta päättävät tahot eivät ole kiinnittäneet juurikaan huomiota CLIL-oppimateriaaleihin. Näin ollen Suomessa on tarjolla vain kourallinen valmiita oppikirjoja CLIL-opetukseen, ja useimmiten opettajat suunnittelevatkin materiaalinsa itsenäisesti. Siitä, millaisia CLIL-oppimateriaaleja Suomessa käytetään ja miten opettajat niitä laativat, ei ole olemassa tutkimustietoa. Myöskään opettajien käsityksiä oppimisesta ja kielestä sitä kautta, kuinka ne heijastuvat heidän kertomuksissaan CLIL-opetuksen materiaaleista, ei ole tutkittu, vaikka CLIL-oppimateriaaleihin liittyvä tutkimustarve on aiemmassa tutkimuksessa usein todettu (esim. Cammarata & Tedick 2012: 259; Coyle ym. 2010: 147; Wyatt 2011: 2). Tämä tutkimus pyrkii siten kattamaan laajan aukon CLIL-tutkimuksen alalla. Hyvän oppimateriaalin kriteeris-

töä on tärkeää kehittää, koska tutkimus on osoittanut (esim. Niemi 2004: 190), että oppimateriaalien ja oppimistulosten välillä on merkittävä yhteys. Nikula (2008b: 279) puolestaan toteaa oppimateriaalit avaintekijäksi vieraskielisen opetuksen kehittämisessä.

Opettajien uskomukset oppimisen ja kielen roolista CLIL-opetuksessa ovat hedelmällinen tutkimuskohde, koska uskomukset vaikuttavat kaikkeen ihmisten väliseen kanssakäymiseen, kuten esimerkiksi siihen, kuinka yksilö havainnoi asioita ja toimintoja maailmassa ja millaisena näkee itsensä. Tutkimus on osoittanut, että opettajien uskomuksilla oppimisesta ja kielestä on huomattava vaikutus oppilaiden uskomuksiin niistä (Correa ym. 2008: 140; Pena Díaz & Porto Requejo 2008: 151; Tsui 2003: 61). Lisäksi opettajien uskomukset kielenoppimisesta vaikuttavat oppijoiden vakiintuneisiin uskomuksiin ja näkemyksiin heidän menestyksestään oppijoina sekä heidän oppimiskäyttäytymiseensä (Allen 1996). Näin ollen opettajat vaikuttavat oppilaidensa menestykseen (ks. Dufva ym. 1996; Kalaja & Dufva 1997; Kalaja, Dufva & Nordman 1998; Sakui & Gaies 2003), joskus huomattavan paljon – joko positiivisessa tai negatiivisessa mielessä (Dufva 2003: 139). Tämä tutkimus tarttuu sisällön ja kielen oppimisen yhdistämiseen ja opettajien uskomuksiin oppimisesta ja kielestä tämäntyyppisessä opetuksessa. Koska opettajien uskomuksilla on osoitettu olevan huomattava vaikutus oppimiseen, uskomusten tutkimiseen on erittäin vankat perusteet. Tässä tutkimuksessa aihetta lähestytään opettajien haastattelujen ja päiväkirjojen kautta, pyrkimyksenä selvittää heidän kieli- ja oppimiskäsityksiään CLIL-opetuksessa.

Uskomuksiin keskittyvän tutkimuksen kantava ajatus on, että opettajien käsitykset, tiedot ja elämänkokemus vaikuttavat voimakkaasti siihen, millaisena he näkevät oppimisen ja kielen luonteen (Huerta 2011: 38; Kagan 1992: 67) ja että ne vaikuttavat voimakkaasti heidän luokkahuonekäytäntöihinsä sekä oppimateriaalien suunnitteluun ja käyttöön (Tsui 2003: 61). Wanin, Low'n ja Lin mukaan (2011: 403) opettajien uskomuksia voidaan kuvailla monimutkaiseksi muuttujien joukoksi, joka perustuu heidän asenteisiinsa, kokemuksiinsa ja oletuksiinsa. Uskomukset muodostavat opettajien toiminnan perustan, heijastavat heidän opetustapaansa ja ohjaavat heidän päätöksentekoaan (Basturkmen 2012: 2; Correa ym. 2008: 141; Kagan 1992: 73; Polat 2009: 230; Thompson 1992: 138). Opettajien ammatillinen kasvu aikaansaa usein uskomusten uudelleentarkastelua. Koska opettajan työkokemuksen oletetaan vaikuttavan hänen uskomuksiinsa oppimisesta ja kielestä, tämän tutkimuksen aineistoa tarkastellaan myös CLIL-opettajakokemuksen näkökulmasta. Näin ollen tämä tutkimus tunnustaa yhteyden opettajan asiantuntijuuden kasvun ja opettajan uskomusten muutoksen välillä.

Tämän tutkimuksen päätarkoitus, CLIL-opettajien uskomukset oppimisesta ja kielestä heidän oppimateriaalinäkemystensä valossa, on jaettu kolmeen alakysymykseen. Ensinnäkin tutkimus pyrkii selvittämään, kuinka CLIL-opettajat suomalaisissa alakouluissa viittaavat oppimiseen ja kieleen liittyviin kysymyksiin CLIL-oppimateriaalien yhteydessä. Tutkimuksen mielenkiinto kohdistuu etenkin niihin eri tapoihin, joilla opettajat viittaavat oppimiseen ja

kieleen, kun he puhuvat tai kirjoittavat CLIL-oppimateriaalien laadinnastaan ja käytöstään. Toinen mielenkiintoinen kysymys on, miten opettajat viittaavat autenttisten materiaalien soveltamis- eli adaptointitarpeeseen CLIL-opetuksessa ja millaisia adaptaatiostrategioita he käyttävät muokatessaan autenttisia oppimateriaaleja CLIL-opetuksen tarpeisiin. Adaptaatioita on tärkeää tutkia itsenäisenä aiheena, koska opettajien näkemysten adaptaatioista uskotaan paljastavan, joko implisiittisesti tai eksplisiittisesti, heidän uskomuksiaan oppimisesta ja kielestä CLIL-opetuksessa. Adaptaatioihin pureutumalla pyritään myös valottamaan, mihin tavoitteisiin alakoulun CLIL- oppimateriaaleilla pyritään ja mitä keinoja opettajat käyttävät saavuttaakseen nämä tavoitteet. Kolmas tutkimisen arvoinen aihe on, kuinka opettajien asiantuntemus heijastuu heidän ymmärrykseensä CLIL-opetuksesta ja oppimisen ja kielen roolista siinä. Näin ollen tutkimuskysymykset ovat seuraavat:

1) Mitä CLIL-opettajien kertomukset materiaalin laadinnasta ja käytöstä paljastavat heidän oppimista ja kieltä koskevista uskomuksistaan?

2) Millaisia adaptaatiostrategioita CLIL-opettajat käyttävät oppimateriaalien laadinnassaan?

3) Miten CLIL-opettajien asiantuntijuus heijastuu heidän oppimista ja kieltä koskevissa näkemyksissään?

Tutkimusjoukon muodostaa kolmetoista suomalaista alakoulun CLIL-opettajaa, jotka opettavat luokkia 3 - 6 englanniksi. Opettajat edustavat maantieteellisesti koko Suomea Pohjois-Suomea lukuun ottamatta. Kaikki kymmenen koulua, joissa tutkimusopettajat työskentelevät, sijaitsevat kaupungeissa, joiden väkiluku vaihtelee 20 000:n ja 250 000:n välillä. Tämä vastaa Kangasvierin ym. (2011: 25, 55) havaintoa, jonka mukaan CLIL-opetusta tarjotaan Suomessa pääasiassa kaupungeissa. Tutkimusopettajien iät vaihtelevat 28:n ja 60:n välillä siten, että keskiarvo on 43,5 vuotta. Etniseltä ja koulutukselliselta taustaltaan opettajat muodostavat hyvin homogeenisen ryhmän. Valtaosa vastaajista on luokanopettajia, joilla on pätevyys opettaa englantia peruskoulussa. Aineet, joita nämä opettajat opettavat englanniksi, kattavat lähes kaikki luokille 3 – 6 opetettavat aineet. Opettajien työkokemus CLIL-opetuksessa vaihtelee 2 ja 16 vuoden välillä siten, että CLIL-työkokemuksen keskiarvo on 8,3 vuotta.

Laadullinen aineisto koostuu kahdesta teemahaastattelusta, opettajien suullisista ja kirjallisista päiväkirjoista sekä heidän laatimistaan oppimateriaaleista. Ensimmäiseen, laajimpaan haastatteluun osallistuivat kaikki kolmetoista tutkimusopettajaa. Seuraaviin aineistonkeruuvaiheisiin tutkimusjoukko pieneni kahdeksaan opettajaan useista eri syistä. Jotkut opettajat siirtyivät alkuhaastattelun jälkeen pois CLIL-opetuksesta, eivätkä siten olisi enää pystyneet tuottamaan päiväkirjaa CLIL-materiaalien laadinnasta. Toiset opettajat ilmeisesti kokivat tutkimuksen seuraavat vaiheet niin työläinä, että kieltäytyivät jatkamasta tutkimuksessa pidemmälle. Koska tämä tutkimus ei pyri yleistettävyyteen, tut-

kimuksen jatkaminen kahdeksan opettajan tuottaman aineiston avulla koettiin riittäväksi oppimista ja kieltä koskevien käsitysten tutkimiseen.

Triangulaatioon pyrkivän aineiston avulla tavoitteena oli tarkastella opettajien uskomuksia oppimisesta ja kielestä siten kuin ne heijastuvat heidän CLIL-opetusmateriaaleja koskevissa haastatteluissaan ja päiväkirjoissaan. Koska uskomukset ovat monimutkainen kokonaisuus, joka sisältää piileviä oletuksia ja vaikeasti havaittavia kokemuksia, niiden tutkiminen ei ole helppo tai yksiviivainen tehtävä. Tässä tutkimuksessa lähdettiin siitä oletuksesta, että opettajien uskomuksia kannattaa lähestyä narratiivisten kertomusten kautta. Aiemmin on osoitettu, että narratiiviset kertomukset ovat ihanteellinen menetelmä uskomusten tutkimiseen, koska uskomukset ja kokemukset ovat yhteydessä toisiinsa (esim. Barcelos 2008: 37; Dufva ym. 2007: 130).

Aineisto kerättiin kolmessa vaiheessa toukokuun 2009 ja helmikuun 2010 välisenä aikana. Opettajien haastattelujen sekä heidän suullisten ja kirjallisten tuotostensa oletettiin tuottavan monipuolisen aineiston, joka toisi esiin opettajien oman äänen. Tärkeimmän aineiston muodosti alkuhaastattelu laajuutensa ja syvyytensä takia. Sillä oli suurin merkitys myös siksi, että kaikki kolmetoista opettajaa osallistuivat siihen, kun taas seuraavissa vaiheissa tutkimusjoukko pieneni. Kolmentyyppisen aineiston yhdistämisellä oli kahtalaiset seuraukset. Toisaalta haastattelut, päiväkirjat ja oppimateriaalit tukivat toisiaan mahdollistamalla eri aineistosta nousevien havaintojen vahvistamisen. Toisaalta taas erityyppiset aineistot haastoivat toisensa esimerkiksi sellaisessa tapauksessa, jossa opettajan päiväkirja toi esiin näkemyksen, jonka hän haastattelussa ilmaisi päinvastaisella tavalla.

Aineisto analysoitiin laadullisen sisällönanalyysin keinoin. Sisällönanalyysia on käytetty laajalti laadullisen aineiston analysointiin eri tutkimusaloilla. Tässä tutkimuksessa eri tutkimusperinteiden menetelmien yhdistäminen koettiin välttämättömäksi, jotta tutkimustavoitteisiin päästäisiin mahdollisimman luotettavalla tavalla. Tästä syystä tutkimuksessa käytettiin myös etnografisia menetelmiä siten, että yhteys etnografiaan oli lähinnä metodologinen (Wolcott 2008: 44). Etnografia ymmärretään tässä tutkimuksessa Brewerin (2000: 10) sanoin "asioiden kertomisena sisältä päin". Etnografisen tutkimuksen tavoin myös tämä tutkimus keskittyy tiettyyn kulttuuriseen ilmiöön (Riemer 2009), tässä tapauksessa CLIL-opettajien ymmärrykseen oppimisesta ja kielestä CLIL-oppimateriaalien kautta. Tutkittavaa ilmiötä lähestytään osittain etnografisen aineistonkeruun kautta, kuten syvähaastattelujen, päiväkirjojen ja dokumenttien (oppimateriaalien) keräämisen avulla. Kuten etnografisessa tutkimuksessa, tämäkin tutkimus pyrkii ymmärtämään ja tulkitsemaan yhden sosiaalisen ryhmän, CLIL-opettajien, käyttäytymistä ja arvoja sitä kautta, mitä näkemyksiä he esittävät oppimateriaaleista. Toisaalta tämän tutkimuksen analyysiä inspiroi Jacksonin ja Mazzein (2012) pyrkimys kuulla ristiriitaisia ääniä aineistosta. Tällä he tarkoittavat ääniä, jotka eivät välttämättä mukaudu valtavirran näkemyksiin. Niinpä tämän tutkimuksen tarkoitus oli tutkia sekä yhtäläisyyksiä että eroja, joita analyysissä ilmenee eikä pyrkiä löytämään yksinomaan stabiliteettia aineistosta. Aineiston tarkastelun useiden erilaisten teoreettisten "linssien" läpi

(esim. Cumminsin (2000) nelikenttä ja Lorenzon ja Mooren (2010) adaptaatio-mallit) oletettiin tuovan tuoreen näkökulman CLIL-tutkimuksen kentälle.

Tulokset osoittavat, että oppiminen on CLIL-opetuksessa edelleen melko opettajakeskeistä. Oppilaiden rooli on useimmiten toteuttaa opettajan heille suunnittelemia tehtäviä, joiden hyödyllisyyden oppimiselle opettaja on päättä-nyt. Silloin tällöin myös oppilaat suunnittelivat CLIL-oppimateriaaleja, mutta se ei ollut säännöllistä tai johdonmukaista ja puuttui kokonaan joidenkin opettaji-en vastauksista. Nämä tulokset kaiuttavat Luukan ym. (2008: 233) havaintoja, jotka osoittivat, että oppiminen perustuu edelleen perinteiselle, vuosisatoja vanhalle ajattelutavalle, joka eristää oppimisen omaan oppimistilaansa, luokka-huoneeseen. Tieto on opettajan käsissä ja opettajan kontrolloimaa, kun taas op-pilaat ovat vastuussa opetukseen osallistumisesta, mutta eivät niinkään omasta oppimisestaan. Oppilaat näyttävät olevan toiminnan kohteena, eivätkä aktiivi-sia toimijoita. (Luukka ym. 2008: 233.)

Opettajien näkemykset kielestä vaikuttavat kaksijakoisilta: suurin osa näyttäisi näkevän kielen järjestelmänä tai kokoelmana sanoja, jossa kielioppi toimii niitä järjestävänä syntaksina. Tätä korosti useiden opettajien keskittymi-nen sanatasolle ja pyrkimys välittää sanojen "oikea" merkitys vieraalla kielellä. Vallitseva näkemys näyttää siis olevan, että kielen rooli on toimia maailman "koodaamisen" välineenä. Toisten mielestä taas kielen olennaisin rooli on olla kommunikaatioväline, joka mahdollistaa sosiaalisen toiminnan ja opetettavan sisällön välittämisen oppilaille. Näille opettajille kielen rooli CLIL-opetuksessa näytti pääasiassa olevan sellaisten merkitysten ja toimintojen välittäminen, jot-ka ovat välttämättömiä oppilaiden kehittymisessä spesifien akateemisten tyyli-lajien hallinnassa (Llinares et al. 2012: 187).

Tässä tutkimuksessa ilmennyt merkittävä kieleen liittyvä kysymys on, on-ko englanninkielisen CLIL-opetuksen vieraan kielen oppimistavoite englanti *lingua franca*na –taso vai syntyperäisen englannin kielen puhujan taso. Tutki-musopettajat viittasivat usein omaan englannin kielen taitoonsa epävarmoin ja vähättelevin ilmaisuin, mistä oli pääteltävissä, että heidän englannin kielen ta-voitetasonsa CLIL-opetuksessa olisi syntyperäisen englannin puhujan taso. Syntyperäisen puhujan ihanne on perinteisesti ollut vallitseva vieraan kielen oppimisessa, mikä on ilmennyt pyrkimyksenä "oikeaan" kieleen ja kielioppi-sääntöjen hallintaan (Canagarajah 2007: 238; Davies 2007: 149). CLIL-kirjallisuudessa syntyperäisen puhujan ihanne on kuitenkin jo pitkään kyseen-alaistettu ja keskiöön on asetettu metodologinen asiantuntijuus (Moate 2013: 19; Neuner 2005: 16; Ortega 2011: 175).

Toinen kiinnostava näkökohta, jonka opettajien kertomukset omasta mate-riaalin laadinnasta ja käytöstään paljastivat, oli heidän uskomuksensa kult-tuurin, tiedon ja oppimisen yhteydestä. Tutkimuksessa esiin noussut kysymys oli, pitäisikö CLIL-opetuksen välittää kohdekielen maiden sosiaalista tietoisuut-ta ja paikallista kulttuuria vai keskittyä pelkästään sisällön ja kielen välittämi-seen oppijoille, jättäen interkulturaalisuuden vähemmälle huomiolle. Tämän tutkimuksen tulosten mukaan CLIL-opettajien kulttuuritietoisuus näyttää kak-sijakoiselta. Yhtäältä he ovat kulttuuritietoisia materiaalinlaadinnassaan ja käy-

tössään arvostaen englanninkielisten maiden kulttuurin välittämistä oppilaille. Toisaalta he kuitenkin näyttävät pitävän englanninkielisistä maista tulevia materiaaleja ongelmallisina, koska ne eivät ole yhteensopivia paikallisen opetussuunnitelman kanssa. Tästä voidaan päätellä, että CLIL-opetuksen teoreettiset suuntaviivat (esim. Coyle ym. 2010: 42) ja EU:n pyrkimykset (Euroopan komissio 1995) edistää CLIL-opetusta kulttuurista tietoisuutta lisäävänä lähestymistapana eivät aina kohtaa kentän käytäntöjä.

Tämä tutkimus keskittyi myös opettajien CLIL-oppimateriaaleja koskevien adaptaatiostrategioiden tutkimiseen ja heidän adaptaatiotarvetta koskevien kertomustensa kautta ilmenevien kieli- ja oppimiskäsitysten selvittämiseen. Tulokset osoittavat, että opettajat uskovat tehokkaan oppimisen CLIL-opetuksessa vaativan autenttisten materiaalien jonkinasteista adaptaatiota. Opettajat näyttävät olevan sitä mieltä, että autenttisten (useimmiten internetistä haettujen) materiaalien adaptointi esimerkiksi lyhentämällä, yksinkertaistamalla tai personoimalla tekstejä tukee sekä sisällön että kielen oppimista CLIL-opetuksessa. Opettajat eivät kuitenkaan aina näyttäneet olevan tietoisia adaptaatiostrategioistaan tai edes siitä, että he adaptoivat materiaaleja. Adaptaatiostrategiat näyttivät siten usein olevan tiedostamattomia eivätkä perustuneet tutkimuspohjaiseen tietoon nuorten oppijoiden kielellisestä ja kognitiivisesta kehityksestä. Tämän saattaa selittää adaptaatioiden yleisyys CLIL-opetuksessa: koska opettajat ovat jatkuvasti materiaalin tuottajia, niiden muokkaaminen on heille niin jokapäiväistä, että he eivät juuri kiinnitä huomiota erityisiin adaptaatiostrategioihin materiaalinlaadintaprosessinsa aikana.

Opettajapersoonalla näyttäisi olevan suurempi vaikutus materiaalin laatimiseen ja käyttöön kuin CLIL-opetuskokemuksella. Opetuskokemus näkyi kuitenkin opettajien kielikäsityksissä: CLIL-opettajat, joilla oli lyhyt opetuskokemus, näkivät kielen useammin kokoelmana sanoja tai koodijärjestelmänä kuin kokeneemmat opettajat. Tätä selittää aloittelevan CLIL-opettajan työkonteksti: vieraskieliset termit ovat usein opettajan ensimmäiseksi kohtaama haaste oppimateriaaleissa, ja sen takia opettajan voi olla vaikeaa nähdä tekstin pintatason, ts. sanojen, taakse. Aloittelevat CLIL-opettajat myös uskoivat useammin, että oppiminen CLIL-opetuksessa perustuu suomenkieliseen tekstikirjaan, jota opettajat joko osittain käänsivät englanniksi tai käsittelivät opetuskeskusteluissa englanniksi. Aloittelevat opettajat näyttivät siten noudattavan mm. Atjosen (1993: 116) havaitsemaa piilo-opetussuunnitelmaa.

Vain aloittelevien CLIL-opettajien haastatteluista ja päiväkirjoista oli tulkittavissa uskomus, jonka mukaan oppilaiden rajallisilla CLIL-kielen taidoilla olisi negatiivinen vaikutus heidän oppimiseensa tai jopa oppimista estävä vaikutus. Tämä saattaa johtua siitä, että aloittelevilla CLIL-opettajilla on puutteelliset tiedot CLIL-opetuksesta yleensä ja erityisesti käytännön työkaluista liian vaativien materiaalien adaptoimiseksi oppilaiden kieli- ja taitotasolle. On myös mahdollista, että heillä ei ole riittävästi tietoa oppilaidensa kieli- ja taitotasosta, jotta he voisivat tarjota heille sopivan tasoista materiaalia. Opettajien tunne CLIL-opetuksesta puuttuvista johdonmukaisista tavoitteista sekä CLIL-kentän moninaisuus ja sekavuus saattaa vähentää opettajien motivaatiota työskennellä

CLIL-opetuksessa. Sen vuoksi olisi tärkeää kehittää erityinen CLIL-opetussuunnitelma tai vähintäänkin tarkentaa englanninkielisen opetuksen tavoitteita suomalaisen alakoulun opetussuunnitelmassa. Sen lisäksi että CLIL-opetussuunnitelma tarjoaisi opettajille (ja muille CLIL-toimijoille) selkeät sisällön ja kielen oppimiseen liittyvät tavoitteet CLIL-opetuksessa, se todennäköisesti myös yhdenmukaistaisi CLIL-opetuksen käytäntöjä, jotka näyttävät tällä hetkellä suuresti vaihtelevan eri puolilla Suomea. Tarkkojen sisältö- ja kielitavoitteidensa avulla CLIL-opetussuunnitelma hyödyttäisi opettajia myös materiaalien laadinnassa ja käytössä. Se, miten oppiminen ja kieli ymmärretään CLIL-opetuksessa, vaikuttaa suuresti siihen, miten CLIL-opetuksessa opetetaan ja opitaan.

Tarvitaan yhtenäistä CLIL-opettajakoulutusta ja –täydennyskoulutusta, jotta CLIL-opettajien tietoisuus heidän piilevistä uskomuksistaan lisääntyisi ja jotta voitaisiin tukea englanninkielisen opetuksen tarkoituksenmukaista kehittämistä. Suomalaisessa kontekstissa CLIL-opettajakoulutus on vähäistä ja täydennyskoulutus satunnaista. Tämä ei nykisellään muodosta tukevaa pohjaa CLIL-opetuksen ja –oppimisen kansallisen tason kehittämiselle. Jos jokin kansallinen opetuksen kysymyksistä päättävä taho ottaisi vastuun esimerkiksi CLIL-opettajakoulutuksen ja –täydennyskoulutuksen kehittämisestä sekä keskitetyn oppimateriaalipankin ylläpitämisestä Suomessa, se todennäköisesti tarjoaisi CLIL-opettajille käytännöllisiä välineitä kehittää CLIL-opetusta paikallisesti korkealaatuiseksi opetusmuodoksi.

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APPENDIX 1

CLIL-OPETTAJIEN ALKUHAASTATTELU
FIRST INTERVIEW OF CLIL TEACHERS

Taustatiedot/Background information

Nimi?/Name?

Ikä?/Age?

Koulu ja paikkakunta?/School and town?

Koulutus?/Education?

Työkokemus?/Work experience?

CLIL-opettajuus/CLIL Teacherhood

Kuinka kauan olet toiminut CLIL-opettajana?
How long have you been a CLIL teacher?

Mitä luokka-asteita opetat?
Which grades do you teach?

Mitä aineita opetat vieraalla kielellä?
Which subjects do you teach through a foreign language?

Miten päädyit CLIL-opettajaksi?
How did you end up being a CLIL teacher?

Oletko tyytyväinen nykyiseen työhösi?
Are you satisfied with your current work?

Mitä hyviä puolia työssäsi on?
Which pros are there in your work?

Mitä huonoja puolia työssäsi on?
Which cons are there in your work?

Millaisia ominaisuuksia hyvällä CLIL-opettajalla mielestäsi on?
What kind of properties do you think a good CLIL teacher has?

Saatko tukea työssäsi? Keneltä ja millaista tukea?
Do you gain support at your work? From whom and what kind of support?

Teetkö yhteistyötä koulusi muiden CLIL-opettajien kanssa? Entä toisten
CLIL-koulujen opettajien kanssa?

Do you cooperate with the other CLIL teachers of your school or with the CLIL teachers of other schools?

Oletko osallistunut CLIL-opettajille suunnattuun täydennyskoulutukseen?
Have you participated in in-service training intended for CLIL teachers?

CLIL-oppimateriaali/Teaching materials for CLIL

Mitä kaikkea ymmärrät sanalla "oppimateriaali"?
What do you understand by the term "teaching materials"?

Millaista on mielestäsi hyvä oppimateriaali CLIL-opetuksessa? Eroaako se jollain tavalla äidinkielisen opetuksen materiaaleista?
What do you think is good teaching material in CLIL? Does it somehow differ from mother-tongue materials?

Millaista oppimateriaalia käytät?
What kind of teaching materials do you use?

Miten kuvailisit oppimateriaalien roolia opetuksessasi?
How would you describe the role of teaching materials in your teaching?

Miten kuvailisit luokkakeskustelun roolia opetuksessasi?
How would you describe the role of educational conversation in your teaching?

Missä aineessa oppimateriaalilla on sinulle suurin merkitys? Miksi?
In which subjects do teaching materials have the most significance for you? Why?

Entä missä oppiaineessa oppimateriaalin merkitys on sinulle vähäisin? Miksi?
In which subjects do teaching materials have the least significance for you? Why?

Arvioi oppimateriaalin merkitystä CLIL-opetuksessasi verrattuna suomenkieliseen opetukseen.
Estimate the meaning of teaching materials in your CLIL teaching compared with teaching through a mother tongue.

Mitä mieltä olet valmiista englanninkielisestä oppimateriaalista opettamissasi aineissa (esim. kirjasarja)?
What do you think about the ready-made English-language teaching material in the subjects you teach (e.g., a book series)?

Toivoisitko englanninkielisiä oppikirjoja opettamiisi aineisiin?
Would you like to have English-language textbooks for the subjects you teach?

Minkä niminen kirjasarja opettamissasi aineissa on käytössä?
What is the name of the book series you use for the subjects you teach?

Kuinka paljon käytät internetiä opetuksessa?
How much do you use the Internet for teaching?

Mitä internet-sivuja käytät eniten opetuksessa?
Which web pages do you use the most for teaching?

Kuinka suuri rooli muilla AV-välineillä on opetuksessasi (esim. TV, dokumenttikamera, Smartboard)?
How big a role do other audiovisual devices play in your teaching (e.g., TV, document camera, Smartboard)?

Onko koulussanne yhteisesti koottua materiaalipankkia CLIL-aineisiin?
Is there a common materials bank for CLIL subjects in your school?

Oppimateriaalin laatiminen/Designing teaching materials

Teetkö oppimateriaalia itse?
Do you design teaching materials yourself?

Kuinka monta tuntia viikossa arvioit käyttäväsi oppimateriaalin laatimiseen?
How many hours a week do you estimate using for designing materials?

Millaista oppimateriaalia teet (tekstit, tehtävämonisteet tms.)?
What kind of materials do you design (e.g., texts, activities on handouts)?

Mitkä ovat tärkeimmät lähteesi oppimateriaalin laatimisessa?
What are your most important resources when designing materials?

Luetatko laatimiasi oppimateriaaleja kollegalla tai natiivipuhujalla ennen niiden käyttöä luokassa?
Do you let a colleague or a native speaker proofread your materials before you use them in the classroom?

Maksetaanko sinulle erilliskorvausta oppimateriaalin laatimisesta?
Are you paid any extra compensation for designing materials?

Oppilaiden kielitaidon tason huomioiminen/Taking pupils' language level into account

Miten otat huomioon oppilaiden kielitaidon tason oppimateriaalia laatiessasi?
How do you take pupils' language level into account when designing teaching materials?

Millaiseksi koet oppilaiden kielitaidon arvioinnin? Helppoa/vaikeaa? Miksi?
What is assessing pupils' level of language like? Easy/difficult? Why?

Millä tavoin sopeutat oppimateriaaleja oppilaiden kielitaidon tasolle?
In what ways do you adapt materials to the pupils' level of language?

Millaisia visuaalisia keinoja käytät opetuksessasi?
What kind of visual means do you use for teaching?

Kuvaile esimerkki käyttämästäsi visuaalisesta keinosta opetustilanteessa.
Describe an example of a visual means in a classroom situation.

Mitä seuraavista keinoista käytät CLIL-opetuksessasi?
Which of the following means do you use in your CLIL teaching?

- laulut, lorut, kuorotoisto/songs, chants, repetition
- miellekartat, kaaviot/flow charts, diagrams
- piirrokset, valokuvat/drawings, photos
- fyysiset harjoitukset/physical exercises
- mimiikka/mimics
- pelit, leikit, drama/games and drama
- videopätkät (esim. Youtube)/video clips (e.g., Youtube)
- opetusvideot/educational videos
- älytaulu/interactive whiteboard
- internet-sivut videotykin kautta/web pages through a beamer
- verkko-oppimateriaali/online material

Lopetus/End

Haluatko sanoa vielä jotain oppimateriaaleista?
Would you like to say something else about teaching materials?

APPENDIX 2

OHJEITA KIRJALLISEN OPPIMATERIAALIPÄIVÄKIRJAN PITÄMISEEN
INSTRUCTIONS FOR KEEPING A WRITTEN DIARY ABOUT DESIGNING TEACHING MATERIALS

Valitse aine ja oppitunti, jonka oppimateriaalin laadinnasta haluat pitää päiväkirjaa. Kirjoita päiväkirja materiaalien laadinnasta joko välittömästi laadinnan jälkeen tai myöhemmin samana päivänä. Voit käyttää apuna seuraavia kysymyksiä:
Choose a subject and a lesson which you will design teaching materials for. Write a diary about designing materials either right after designing them or later on the same day. You can use the following questions as support:

- Minkä aineen materiaaleja laadit? Mille luokkatasolle?
- Which subject did you design materials for? For which grade?

- Millä tavalla laadit materiaaleja?
- How did you design the materials?

   o Mitä apuvälineitä käytit?
   o What kind of aid did you use?

   o Millaisia työvaiheita prosessissa oli?
   o What kind of stages did the process have?

   o Millaisia taustamateriaaleja hyödynsit laadinnassa?
   o What kind of resources did you use when designing materials?

- Mikä materiaalien laatimisessa tuntui helpolta, mikä haastavalta? Miksi?
- What was easy, what challenging in designing materials? Why?

- Millaisia tunteita tai tuntemuksia materiaalien laadinta herätti?
- What kind of feelings did the designing arouse?

- Miksi laadit materiaalin juuri näin?
- Why did you design the material in exactly this way?

- Oletko tyytyväinen laatimaasi materiaaliin? Miksi/miksi et? Jos ennätit käyttää materiaalia oppitunnilla, millaisia havaintoja teit sen toimivuudesta?
- Are you satisfied with the material you designed? Why/why not? If you had a chance to use the materials in your lesson, how do you think they worked?

KÄYTÄNNÖN OHJEITA:
PRACTICAL INSTRUCTIONS

- Päiväkirja voi olla "tajunnanvirtamaista", ts. älä huolehdi liiaksi muotoiluista. Tärkeää on kokemuksesi materiaalien laadinnasta, ei päiväkirjan muoto.
- The style of the diary can be "flow of conscience", in other words, do not worry about formatting. What is important is your experience about designing materials, not the form of the diary.

- Päiväkirjan pituudella ei ole ala- eikä ylärajaa.
- The length of the diary does not have a minimum or maximum limit.

- Lähetä päiväkirja minulle tekstitiedostona sähköpostin liitteenä mieluiten syyskuun loppuun mennessä.
- Send me the diary as an e-mail attachment preferably by the end of September.

Jos sinulla on kysyttävää päiväkirjan pitämisestä, ota yhteyttä tutkijaan sähköpostitse tai puhelimitse.

If you have questions about keeping the diary, please contact the researcher via e-mail or telephone.

APPENDIX 3

OHJEITA ÄÄNIPÄIVÄKIRJAN PITÄMISEEN
INSTRUCTIONS FOR KEEPING AN ORAL DIARY ABOUT
DESIGNING TEACHING MATERIALS

Valitse aine ja oppitunti, jonka oppimateriaalin laadinnasta haluat pitää päiväkirjaa. Nauhoita äänipäiväkirja materiaalien laadinnasta joko välittömästi laadinnan jälkeen tai myöhemmin samana päivänä. Voit käyttää apuna seuraavia kysymyksiä:
Choose a subject and lesson which you will design teaching materials for. Record a diary about designing materials either right after designing them or later the same day. You can use the following questions as support:

- Minkä aineen materiaaleja laadit? Mille luokkatasolle?
- Which subject did you design materials for? For which grade?

- Millä tavalla laadit materiaaleja?
- How did you design the materials?

   o Mitä apuvälineitä käytit?
   o What kind of aid did you use?

   o Millaisia työvaiheita prosessissa oli?
   o What kind of stages did the process have?

   o Millaisia taustamateriaaleja hyödynsit laadinnassa?
   o What kind of resources did you use when designing materials?

- Mikä materiaalien laatimisessa tuntui helpolta, mikä haastavalta? Miksi?
- What was easy and what challenging in designing materials? Why?

- Millaisia tunteita tai tuntemuksia materiaalien laadinta herätti?
- What kind of feelings did the designing arouse?

- Miksi laadit materiaalin juuri näin?
- Why did you design the material in exactly this way?

- Oletko tyytyväinen laatimaasi materiaaliin? Miksi/miksi et? Jos ennätit käyttää materiaalia oppitunnilla, millaisia havaintoja teit sen toimivuudesta?
- Are you satisfied with the material you designed? Why/why not? If you had a chance to use the materials in your lesson, how do you think they worked?

KÄYTÄNNÖN OHJEITA:
PRACTICAL INSTRUCTIONS

- Aseta nauhuri pöydälle mahdollisimman lähelle itseäsi.
- Set the recorder on the table as close to you as possible.

- Testaa nauhurin toimivuus ja puheesi kuuluvuus ennen varsinaisen äänityksen aloittamista.
- Check that the recorder works and your sound is audible before you start the actual recording.

- Kun tunnet olevasi valmis aloittamaan äänipäiväkirjan, käynnistä äänitys.
- When you think you are ready to start the oral diary, start recording.

- Sano äänityksen aluksi nimesi ja nauhoituksen päivämäärä.
- In the beginning, say your name and the date of recording.

- Voit halutessasi pysäyttää nauhoituksen välillä, jos esim. haluat hetken miettiä jotain asiaa, ennen kuin puhut sen auki.
- If needed, you can pause the recording for example if you want to think about something before saying it aloud.

- Jos pidät tauon, käynnistä sen jälkeen äänitys uudestaan ja jatka siitä, mihin viimeksi jäit.
- If you have a pause, start recording again after it and continue from the same point where you stopped.

- Päiväkirja voi olla "tajunnanvirtamaista", ts. älä huolehdi liiaksi muotoiluista. Tärkeää on kokemuksesi materiaalien laadinnasta, ei päiväkirjan muoto.
- The style of the diary can be "flow of conscience", in other words, do not worry about formatting. What is important is your experience about designing materials, not the form of the diary.

- Päiväkirjan pituudella ei ole ala- eikä ylärajaa.
- The length of the diary does not have a minimum or maximum limit.

- Lähetä päiväkirja minulle tekstitiedostona sähköpostin liitteenä mieluiten syyskuun loppuun mennessä.
- Send me the diary as an e-mail attachment preferably by the end of September.

Jos sinulla on kysyttävää äänityksestä, ota yhteyttä tutkijaan sähköpostitse tai puhelimitse.
If you have questions about recording the diary, please contact the researcher via e-mail or telephone.

APPENDIX 4

LOPPUHAASTATTELU
FINAL INTERVIEW

YLEISET KYSYMYKSET/COMMON QUESTIONS

Millä nimellä koulunne CLIL-opetusta kutsutaan ja kuinka paljon opetusta on englanniksi (esim. %-luku)?
What is the official name of teaching through English at your school and how much is taught through English (e.g., the percentage of subjects/lessons)?

Millainen tunnelma sinulle jäi oppimateriaalipäiväkirjan tekemisestä?
How did you feel about producing the diary about teaching materials?

Oliko päiväkirjan pitäminen helppoa vai vaikeaa? Miksi?
Was it easy or difficult to keep the diary? Why?

Saitko tuotua ilmi kaiken haluamasi oppimateriaalipäiväkirjassa?
Were you able to say everything you wanted in the diary?

Oliko päiväkirjassa kuvaamasi materiaalin laatiminen sinulle tyypillinen tapa tehdä materiaalia?
Was the way of producing teaching material you described in the diary typical for you?

Miten päiväkirjassa kuvaamasi oppimateriaali mielestäsi toimi oppitunnilla?
How do you think the teaching material you described in the diary worked in the classroom?

Miten opetustekniset apuvälineet (esim. älytaulu, dokumenttikamera, dataheitin) ovat vaikuttaneet oppimateriaalin laatimiseesi?
How has the improvement of pedagogical technology (e.g., interactive whiteboard, document camera, beamer) affected your way of designing teaching material?

Jos kustantajat tarjoaisivat johonkin oppiaineeseen sähköistä CLIL-oppimateriaalia, olisitko halukas käyttämään sitä?
If the publishers offered electric teaching material for any subject in CLIL, would you be willing to use it?

Millä tavoin valmista CLIL-oppimateriaalia tulisi mielestäsi kehittää?
How do you think the existent teaching material in CLIL could be improved?

Kuinka tärkeää autenttisuus mielestäsi on CLIL-oppimateriaalissa?
In your opinion, how important is authenticity in CLIL materials?

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Onko CLIL-opetuksen ja erityisopetuksen oppimateriaaleilla mielestäsi jotain yhteistä?
Do you think there is something in common between the teaching materials of CLIL and SEN
(special education needs)?

Miten toteutat eriyttämistä CLIL-oppimateriaaleissasi?
How do you differentiate pupils with your teaching materials in CLIL?

Millaisia kokemuksia sinulla on englanninkielisen ja suomenkielisen oppikirjan käyttämisestä
samanaikaisesti?
What kind of experiences do you have about using an English textbook and a Finnish textbook
abreast in your classroom?

Oletko saanut oppilailta palautetta laatimistasi oppimateriaaleista? Entä vanhemmilta?
Have you ever obtained any feedback about your teaching materials from pupils or parents?

Tunnetko koskaan epävarmuutta oman kielitaitosi suhteen CLIL-opettajana tai laatiessasi CLIL-
oppimateriaalia?
Do you ever feel insecure about your English language competence as a CLIL teacher or as a
designer of teaching materials for CLIL?

Tarvitsisitko mielestäsi enemmän tukea oppimateriaalin kieliasun tarkistamiseen esim.
natiivipuhujalta?
Do you think you would need more support from a native speaker for checking the language of
the materials?

Onko oppimateriaalin laatimisesi muuttunut jollain tavoin sen myötä, että olet osallistunut
tähän tutkimukseen?
Has your production of teaching materials changed in any way during your participation in this
study?

Miten vertaisit tämänhetkistä tilannettasi CLIL-oppimateriaalin laatijana ensimmäisen
haastattelun ajankohtaan? Onko tapahtunut muutoksia esim. työnkuvassa, olosuhteissa,
opetusvälineistössä?
How would you compare your present situation as a designer of teaching materials for CLIL
with the time of the first interview? Have there been any changes in your job description,
working conditions, teaching tools etc.

**Yksilölliset kysymykset (alkuhaastattelua ja päiväkirjaa täydentäviä)/individual questions
(supporting the first interview and the diary)**

APPENDIX 5

CODES

The analysis of the data produced the following 58 codes, illustrated by examples:

Code Nr.	Code	Example
1.	authenticity	katotaan joku lyhyt sarjakuva tai sitte joku lyhyt animaatiopätkä we watch a short comic strip on cartoon (Kaisa INT1)
2.	properties of a CLIL teacher	joustavuus ja ää hyvä kontaktikyky (.) erilaisuuden huomioon ottaminen (.) tilannetaju flexibility and uh good contacting skills (.) taking differences into account (.) discretion (Kirsi INT1)
3.	challenges of teaching materials in CLIL	sehän noissa on ongelmana noissa oppimateriaaleissa et jos niitä tilaa vaikka Englannistaki nii eihän ne vastaa suomenkielistä opetussuunnitelmaa the problem with the teaching materials is that if you order them from England, for example, they don't correspond to the Finnish core curriculum (Liisa INT1)
4.	differences between teaching materials in CLIL and mother tongue teaching	se ei oo meijän kulttuurissa niin olennaista se visuaalisuus (.) me ollaan hyvin tekstipainotteisia must perinteisesti suomalainen opetus visuality is not so essential in our culture (.) we are traditionally very text-orientated I think traditional Finnish teaching (Heidi INT1)
5.	criticism towards CLIL teaching materials	WSOY:n se [matematiikan] kirja mutta se ei sinänsä ole hirveen hyvää CLIL-materiaalii koska se on käännös (.) että se on aika haastava opettajalle ja oppilaille the [maths] book by WSOY is not very good CLIL material as such because it's a translation (.) so it's pretty challenging for the teacher and pupils (Heidi INT1)
6.	influence of work experience in CLIL	nyt alkaa itsellä tuntua niinku helpottavalta koska sitä on jo ja metodit on hallinnassa ää ja sillä tavalla ei oo niinkun se sama tuska mikä oli siinä alussa (.) hyviä kirjoja on löydetty ja itse tietää mistä hakee materiaalia now it's getting easier for me because you have and you know the methods uh and that way you don't have like the same pain you had in the beginning (.) you've found good books and you know yourself where to fetch material (Riitta INT1)
7.	visualisation	havainnollistaminen eri näkösten kuvien ja taulukkojen avulla (.) yrittää sen esittää viel monel eri taval tääl luokassa visualisation with the help of different pictures and tables (.)

		also trying to show it in many different ways in the classroom (Meeri INT1)
8.	textbook in history	historiassa on käytössä (2.0) kenenkähän se oli Pearsonin kirjat in history we use (2.0) whose was it Pearson's books (Arja INT1)
9.	observations about CLIL	kieli on kuitenki nii pitkälti vaan se väline siinä (.) että muuten kaikki opiskelu on sinänsä ihan samaa language is like mainly just the instrument there (.) otherwise all studying is the same (Liisa INT1)
10.	good teaching material for CLIL	selkeää ytimekästä ydinsanat tulee hyvin esille ehkä ne on jopa suomennettu kuva-sana yhistelmiä hyvin tämmöstä niinku perustavanlaatusta ja vähän tekstiä mutta paljo informaatiota clear concise the core words come out well maybe they have even been translated combinations of pictures and words very like fundamental and little text but a lot of information (Kaisa INT1)
11.	web pages	Googleen Wikipediaan www.youtube.com to Google Wikipedia www.youtube.com (Jaakko INT1)
12.	use of internet	pienten lasten opetus ei perustu siihen et ollaan siel tietokoneella teaching small children is not based on being at the computer (Tellervo INT1)
13.	translating	nimenomaan CLIL-kirjoja että en käännetty käännetty kirja ei oo sama kun CLIL-materiaalit CLIL books in particular that I a translated translated book is not the same as CLIL materials (Heidi INT1)
14.	role of classroom conversation	täytyy ensin täs vaihees antaa ne välineet siihen et se keskustelu onnistuu first at this stage you have to give the tools for making a conversation possible (Meeri INT1)
15.	source materials	opetussuunnitelma on se pohja (.) netti (.) materiaalipankissa national core curriculum is the basis (.) internet (.) in the materials bank (Kirsi INT1)
16.	teaching materials in mathematics	matikan kirja on englannin kielellä maths book is in English (Laura INT1)
17.	materials bank	opettajanhuoneessa meil on kansioita (.) nyt se joka opettaa viidettä sillä on ens vuonna neljäs me vaihetaan meijän omat Smartboard-tiedostot keskenämme in teachers' room we have files (.) now the one who teaches the fifth grade will have the fourth grade next year we switch our Smartboard files together (Kaisa INT1)

18.	opinion about maths book	matematiikan kirja on tosiaan mä oon tyytyväinen mathematics book is really I'm happy with it (Sirpa INT1)
19.	opinion about science book	ei se opetussuunnitelman vastaavuus ollu kovin hyvä it didn't correspond very well to our national curriculum (Liisa INT1)
20.	physical exercises	kyl me joo vitosten kans käydään biologiassa ihmisen ruumiinosat yes we go through the parts of the human body with the fifth grade (Riitta INT1)
21.	weg pages through data projector	aika paljon ihan viikottain pretty much every week (Sirpa INT1)
22.	songs, chants and repetition	jonkun verran luokassa lauletaan we sing in the class to some extent (Tellervo INT1)
23.	mindmaps and flowcharts	melkein joka päivä almost every day (Jaakko INT1)
24.	mimic art, gestures and expressions	opettaja jo- s- näk- huomaa tekevänsä sitä teacher ye- I me- see- notices doing it (Tiina INT1)
25.	educational DVDs and videos	en (.) pahemmin not (.) much (Meeri INT1)
26.	games and drama	pelejä ja leikkejä aina ku vaan mahdollista games and play whenever possible (Sirpa INT1)
27.	pictures and drawings	jos ajatellaan jotain valokuvia jossain kirjoissa niin kyllä me niitä tutkitaan if you think about some photos in books so yes we do investigate them (Kerttu INT1)
28.	on-line teaching material on the internet	käytetään kyllä mut että sitä ei niin hirveästi CLIL-opetukseen oo tehty yes we do use it but it hasn't been done so much for CLIL
29.	video clips from the internet	hyvin vähän very little (Meeri INT1)
30.	self-made teaching material	aika paljo se on suullistakin (.) DVD:eitä (.) pelejä (.) laulujen sanat on niitä niitä käytetään paljo ja ne annetaan heille vihkoon ja ja sitte monisteita (.) tehtävämonisteitaki it's pretty much oral too (.) DVDs (.) games (.) lyrics are they they are used a lot and they are given them into the notebook and and then work sheets (.) with exercises too (Tellervo INT1)
31.	having somebody read self-made teaching materials	luetan (.) meil on täällä englanninopettajana natiivi yes (.) we have a native English speaker as an English teacher here (Heidi INT1)

32.	teaching method	yhteistoiminnallinen oppiminen co-operative learning (Jaakko INT1)
33.	national core curriculum	koen sen vastuullani sen opetussuunnitelman toteutumisen (.) et CLIL-opetushan ei voi olla mitä vaan (.) vaan se se on opetussuunnitelman toteuttamista ja käytetään vaan tätä menetelmää I feel it's my responsibility to carry out the curriculum (.) CLIL teaching can't be just anything (.) but it it is carrying out the curriculum and this is only the method that is being used (Heidi INT1)
34.	educational technology in the classroom	dokumenttikamera kyllä joo (.) ja se on ihana nyt ku se saatiin tänne luokkaan (.) et se on vast nyt saatu niin tota sitä käytetään kyl ihan päivittäin document camera yes (.) and it's great now that we got it into the classroom (.) so we've just got it and um it's used every day really (Meeri INT1)
35.	Assessing pupils' language skills	ei se kyllä hirveen helppookaan oo it's not very easy either (Riitta INT1)
36.	Taking pupils' language skills into account	ku siinä on se suomenkielinen perusjuttu (.) nii mä niinku yritän saada sen menemään (.) englanniks (.) oppilaille (.) että tota ne sitten eri tasot mitä oppilailla (.) nii ne on sitte vähän vaikeempi siinä vaiheessa ottaa huomioon when there's the Finnish basic stuff (.) I kind of try to make pupils understand that (.) in English (.) so well the different levels that pupils (.) so they are a little more difficult to take into account at that point then (Tarmo INT1)
37.	pupils' language skills	kielitaito on ollu oikeestaan kaikissa luokissa semmonen (.) este language skills have been a kind of (.) an obstacle in all classes (Sirpa INT1)
38.	role of teaching materials	ihan keskeinen (.) materiaalia voi käyttää niin eri tavoin very central (.) material can be used in so many different ways (Riitta INT1)
39.	Subjects where teaching materials have the most significance	science-aineissa mutta siinähän se ei oo ainoostaan kirja vaan sit meil on kaikkii tällasia niinku se että on olemassa ne niinku hands on –materiaalit in science subjects but there it's not just the book but we have all these like those kind of hands on materials exist (Riitta INT1)
40.	Subjects where teaching materials have the least significance	taito- ja taideaineet art and physical education (Kerttu INT1)
41.	Weekly time spent for preparing materials	yks kaks tuntia viikossa one two hours a week (Liisa INT1)

42.	Significance of teaching materials in CLIL and mother-tongue education	molemmissa on ihan yhtä lailla (.) merkityksellistä it's equally significant in both (Arja INT1)
43.	Definition of teaching materials	kaikki aineisto joka edistää jollakin tavalla oppimista all material that somehow promotes learning (Jaakko INT1)
44.	Financial compensation	ei penniäkään not a penny (Arja INT1)
45.	vocabulary	laatimalla siihen sanaston erillisen sanaston (.) tai (5.5) tai sanaselityksiä tekstin loppuun by preparing a vocabulary for it a separate vocabulary (.) or (5.5) or word explanations to the end of the text (Tiina INT1)
46.	Smartboard	CLIL (.) puolelle ihan siis ihan ehdoton (.) ku meillä Smartboard jo tulee niin sitä entistä (.) paremmin voidaan voidaan hyödyntää ja tietokonetta muutenkin for CLIL absolute indeed (.) as we are getting Smartboard already it can can be utilized even (.) better than before and computer in other ways too (Sirpa INT1)
47.	e-materials in CLIL	älkää painako niitä vaan pistäkää ne sähköseen muotoon don't print them but put them in an e-form (Jaakko INT1)
48.	Wishes for teaching materials in CLIL	ainut toive vielä on se että sitä tulis sitä materiaalia et ku sitä nii vähän on the only wish is that they would produce the material as there is so little of it (Liisa INT1)
49.	gaining support	rehtorilta paljonki tukea (.) joiltaki kollegoilta (.) CLIL-ryhmä koulussa yks semmonen avaintyöryhmä from the head a lot of support (.) from some colleagues (.) CLIL group at school is one of the key collegial groups (Kirsi INT1)
50.	work experience	olen xy-vuotiaana vasta valmistunu opettajaksi NN:ssa I was already xy years old when I graduated as a teacher in NN (Riitta INT1)
51.	disadvantages of work	ettei pysty keskittymään siihen yhteen juttuun et monesti se saattaa vaikka kaatua johonki mitä yllättävimpään asiaan (.) ajan puute that you can't concentrate on that one thing because often it may fall down to the most surprising thing (.) lack of time (Kaisa INT1)
52.	advantages of work	työn vapaus (.) vetää omalla tyylillään sitä hommaa freedom of work (.) leading it with your own personal style (Tarmo INT1)
53.	satisfaction with work	hyvin kovasti (.) hyvin organisoitu (.) hyvä johtajuus (.) hyvä yhteishenki (.) aktiiviset vanhemmat

		very much (.) well organized (.) good leadership (.) good team spirit (.) active parents (Sirpa INT1)
54.	teaching materials in religious studies	Bible songs uskonnon tunnil mitä lauletaan ja niihin liittyy aina sitten leikit (.) uskonto on ehkä kuitenki semmone niinku tunneaine osittain et tota sitä joo käytän englantii siinä mut en ehkä niin paljon Bible songs in religious studies lessons when we sing and there are the plays attached (.) religious studies is perhaps after all a kind of emotional subject partially that well that yeah I use English in it but perhaps not that much (Meeri INT1)
55.	reference to SEN	näin sen sen ne keinot ja ne tavat ja ne ja ne tuota hhh menetelmät joita erityisoppilaitten kanssaki paljon käytettiin ja joita sitten siinä vähän sai iteki oppia niin niistä on kyllä todella paljon hyötyä I saw that that the means and ways and those and those well hhh methods that were used a lot with pupils with special needs and that I was able to learn a little myself so they are very useful indeed (Tiina INT1)
57.	co-operation with colleagues	meillä on ees niinkun CLIL-tiiminä mahollisuus tavata säännöllisin välein (.) periaatteessa hyvin mut vaihtelevasti we have at least a possibility to meet regularly as you know a CLIL team (.) in principle well but variably (Riitta INT1)
58.	co-operation with other CLIL schools	satunnaisia tapaamisia (.) tänä vuonna ollaan peräti tavattu kahdesti NN:n CLIL-opettajat occasional meetings (.) this year we have met the CLIL teachers of NN as often as twice (Kerttu INT1)
59.	science book	ympäristötietodossa (1.0) meillä ei ole mitään oppikirjaa in science (1.0) we don't have a textbook (Arja INT1)