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Citation style: Papaja Katarzyna. (2010). A qualitative evaluation of content and language integrated learning (CLIL) in Polish secondary education. Praca doktorska. Katowice : Uniwersytet Śląski

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**A QUALITATIVE EVALUATION OF CONTENT AND
LANGUAGE INTEGRATED LEARNING (CLIL) IN
POLISH SECONDARY EDUCATION**

**Ph.D. dissertation
written under the supervision of
Prof. dr hab. Maria Wysocka**

Katowice 2010

TABLE OF CONTENTS

Introduction	1
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PART ONE

THEORETICAL ASPECTS OF CLIL

I. The concept of Content and Language Integrated Learning (CLIL)	5
1. A definition of CLIL	5
2. An outline and history of CLIL	8
3. Variations of CLIL	13
3.1. Typologically induced variations	13
3.2. Environmentally induced variations	15
3.3. Modular variation	17
4. CLIL in the context of the European integration	18
5. CLIL in Poland	21
II. Content and Language Integrated Learning – important issues	30
1. The CLIL learner	31
2. The CLIL teacher	34
3. Language aspects in CLIL	37
3.1. The development of speaking skills	39
3.2. The development of writing skills	41
3.3. The development of listening comprehension skills	43
3.4. The development of reading comprehension skills	46
3.5. The development of vocabulary	48
3.6. The development of grammar	50
3.7. The development of pronunciation	52
3.8. The use of L1 (Code-switching)	53

4. Content aspects in CLIL	57
4.1. Subjects in CLIL	58
5. CLIL learning environment aspects	63
5.1. Classroom interaction	64
5.2. Methodological approach	66
5.3. Learner's evaluation	71
5.4. Teaching materials	74
5.5. Classroom setting	75
6. Attitudinal aspects and motivation	75
6.1. Attitudinal aspects (learners and teachers)	76
6.2. Motivation (learners and teachers)	77
III. Recent research on CLIL	80
IV. Recapitulation	85

PART II

A QUALITATIVE STUDY ON CLIL

V. The empirical study	88
1. Research questions	88
2. Study aims	89
3. Scheme of the study	91
3.1. Description of the pilot studies	92
3.1.1. The pilot study in Poland	93
3.1.2. The pilot study in Germany	110
3.1.3. The outcomes of the pilot studies	126
3.2. The main study	127
3.2.1. Learner participants	128
3.2.2. Teacher participants	129

3.3. Instruments of data collection	130
3.3.1. Observation sheets	130
3.3.2. Questionnaires	132
3.3.3. Interview with the teachers	135
3.3.4. Tests' analysis	136
3.4. Categories of data analysis	137
3.4.1. Language aspects	137
3.4.2. Content aspects	140
3.4.3. Learning environment aspects	141
3.4.4. Attitudinal aspects and motivation	144
4. Course of the study	146
VI . Data presentation	147
1. Scheme of data presentation	147
2. Data presentation - September 2006 (1 st Semester)	150
2.1. Language aspects	150
2.1.1. Second language development	150
2.1.2. The use of L1 (code-switching)	155
2.2. Content aspects	157
2.3. Learning environment aspects	158
2.3.1. Classroom interaction	158
2.3.2. The teacher's methodological approach	160
2.3.3. Learner's evaluation	162
2.3.4. Teaching materials	163
2.3.5. Classroom setting	164
2.4. Attitudinal aspects and motivation	165
2.4.1. Attitudinal aspects	165
3. Data presentation – November 2006 (1 st Semester)	167
3.1. Language aspects	167
3.1.1. Second language development	168

3.1.2. The use of L1 (code-switching)	175
3.2. Content aspects	177
3.3. Learning environment aspects	179
3.3.1. Classroom interaction	179
3.3.2. The teacher's methodological approach	182
3.3.3. Learner's evaluation	184
3.3.4. Teaching materials	184
3.3.5. Classroom setting	185
3.4. Attitudinal aspects and motivation	186
4. Data presentation – January 2007 (1 st Semester)	186
4.1. Language aspects	187
4.1.1. Second language development	187
4.1.2. The use of L1 (code-switching)	194
4.2. Content aspects	196
4.3. Learning environment aspects	203
4.3.1. Classroom interaction	203
4.3.2. The teacher's methodological approach	206
4.3.3. Learner's evaluation	208
4.3.4. Teaching materials	209
4.3.5. Classroom setting	210
4.4. Attitudinal aspects and motivation	211
4.4.1. Attitudinal aspects	211
5. Data presentation – February 2007 (2 nd Semester)	213
5.1. Language aspects	214
5.1.1. Second language development	214
5.1.2. The use of L1 (code-switching)	224
5.2. Content aspects	226
5.3. Learning environment aspects	229
5.3.1. Classroom interaction	230
5.3.2. The teacher's methodological approach	233
5.3.3. Learner's evaluation	235

5.3.4. Teaching materials	236
5.3.5. Classroom setting	237
5.4. Attitudinal aspects and motivation	238
6. Data presentation – April 2007 (2 nd Semester)	238
6.1. Language aspects	238
6.1.1. Second language development	239
6.1.2. The use of L1 (code-switching)	250
6.2. Content aspects	253
6.3. Learning environment aspects	256
6.3.1. Classroom interaction	256
6.3.2. The teacher’s methodological approach	260
6.3.3. Learner’s evaluation	262
6.3.4. Teaching materials	263
6.3.5. Classroom setting	264
6.4. Attitudinal aspects and motivation	265
7. Data presentation – June 2007 (2 nd Semester)	265
7.1. Language aspects	266
7.1.1. Second language development	266
7.1.2. The use of L1 (code-switching)	275
7.2. Content aspects	278
7.3. Learning environment aspects	283
7.3.1. Classroom interaction	283
7.3.2. The teacher’s methodological approach	287
7.3.3. Learner’s evaluation	289
7.3.4. Teaching materials	290
7.3.5. Classroom setting	291
7.4. Attitudinal aspects and motivation	292
7.4.1. Attitudinal aspects	292
7.4.2. Motivation	296
8. Second language development – a questionnaire	299
9. The use of L1 (code-switching) – a questionnaire	304

10. Bilingual education – an interview with the teachers	307
VII. Data analysis	310
1. Scheme of data analysis	310
2. Language aspects	311
2.1. Second language development	311
2.2. The use of L1 (code-switching)	318
3. Content aspects	320
4. Learning environment aspects	329
4.1. Classroom interaction	329
4.2. The teacher’s methodological approach	331
4.3. Learner’s evaluation	333
4.4. Teaching materials	335
4.5. Classroom setting	336
5. Attitudinal aspects and motivation	337
5.1. Attitudinal aspects	337
5.2. Motivation	338
VIII. Final conclusions	340
Appendix	348
Bibliography	384
Summary (English)	404
Summary (Polish)	407
List of figures, graphs and tables	
Figure 1. Status of CLIL provision	12
Figure 2. Subjects in the CLIL curriculum in mainstream school provision in primary education	60

Figure 3. Subjects in the CLIL curriculum in mainstream school provision in general secondary education	62
Graph 1. Marks (the end of 1 st semester, geography)	200
Graph 2. Marks (the end of 1 st semester, biology)	201
Graph 3. Marks (the end of 1 st semester, mathematics)	202
Graph 4. Marks (the end of the school year, geography)	280
Graph 5. Marks (the end of the school year), biology)	281
Graph 6. Marks (the end of the school year) mathematics)	282
Graph 7. Marks (the end of 1 st and 2 nd semester, geography)	326
Graph 8. Marks (the end of 1 st and 2 nd semester, biology)	327
Graph 9. Marks (the end of 1 st and 2 nd semester, mathematics)	328
Table 1. Marks - test in geography	177
Table 2. Marks - test in biology	178
Table 3. Marks - test in mathematics	178
Table 4. Marks - test in geography	196
Table 5. Marks - test in biology	197
Table 6. Marks - test in mathematics	198
Table 7. Marks - test in mathematics	198
Table 8. Marks - test in geography	227
Table 9. Marks - test in biology	228
Table 10. Marks - test in mathematics	228
Table 11. Marks - test in geography	253
Table 12. Marks - test in biology	254
Table 13. Marks - test in mathematics	255
Table 14. Marks - test in mathematics	255
Table 15. Marks - tests in geography	321
Table 16. Marks - tests in biology	322
Table 17. Marks - tests in mathematics	324

INTRODUCTION

The political, technological, economic and social realities of the modern world have led and still lead to more contact between people of different linguistic and cultural backgrounds. Globalization has made the world interconnected. The world is rapidly becoming a mixed global village where the role of languages is extremely important. In an integrated world, integrated learning is viewed as a modern form of educational delivery.

Content and Language Integrated Learning (CLIL) is an innovative approach which refers to educational settings where a language other than the learners' mother tongue is used as the medium of instruction. The other language can be found in use from kindergarten to tertiary level, and the extent of its use may range from occasional foreign language texts in individual subjects to covering the whole curriculum. Rationales for the use of CLIL tend to direct their arguments towards the perception that outcomes of foreign language learning in school settings are frequently seen as unsatisfactory, especially in terms of productive skills (Dalton-Puffer, 2007a: 2).

CLIL classrooms are not typical language classrooms due to the fact that language is the medium through which content is "transported". Non-linguistic content is used to teach a language and learners acquire new knowledge but in a foreign language. Naturally, they must have some basic knowledge of the language they are learning and be capable of understanding the content. As knowledge of the language becomes the means of learning content, the learner is highly motivated and language acquisition becomes crucial.

There are number of generally agreed principles underlying CLIL (Darn, 2006: 2), namely:

- language is used to learn and communicate,
- a CLIL lesson should combine content, communication, cognition and culture;
- language is functional and it is adapted to the subject;
- language is approached lexically, grammar is not important;
- learning styles are taken into account in task types;

Thus, the concept of CLIL is in many respects similar to ESP, but does not necessarily include explanations relating to the language itself, but simply integrates language and content which involves understanding and production of the second language. Although

subject specialists and language specialists have to work very closely in designing materials that are appropriate for the CLIL classroom and as a result of that invest a large amount of time, there are a lot of advantages which make CLIL an innovative methodology that has emerged to cater for this interconnected age:

- it introduces a wider cultural context;
- it prepares the learners for international activities and exchanges;
- it gives access to international certification;
- it improves general and specific language competence;
- it prepares for professional life and provides more job opportunities;
- it develops multilingual interests and attitudes;
- it increases the learner motivation to learn a second or even a third language;

The aim of this dissertation is to present and analyse the changes which take place in a CLIL classroom in secondary education. The title of the dissertation is “Qualitative evaluation of Content and Language Integrated Learning (CLIL) in Polish secondary education” but the word “evaluation” does not mean assessment. The purpose of this dissertation was not to assess Content and Language Integrated Learning (CLIL) but to describe it.

A further aim of this study is to raise the CLIL teachers’ awareness of certain changes which occur in the CLIL classroom, and consequently, to help them understand the process of Content and Language Integrated Learning.

The dissertation is organized in two parts: theoretical and empirical. These parts consist of eight chapters. The first four chapters review the professional literature relevant to this study and other four chapters are devoted to the empirical study.

Chapter One (The concept of Content and Language Integrated Learning) describes the concept of Content and Language Integrated Learning (CLIL). A definition of CLIL is provided and followed by the outline and history of CLIL. Then different variations of CLIL are presented divided into: typologically induced variations, environmentally induced

variations and a modular variation. In the next part of this chapter, CLIL is presented in the context of European integration and finally in Poland.

Chapter Two (Content and Language Integrated Learning – important issues) presents CLIL according to four aspects: language, content, learning environment and attitudinal and motivation. All these aspects are further elaborated on and closely linked to the empirical part of the thesis. In addition, the main features of the CLIL learner and the CLIL teacher are described.

Chapter Three (Recent research on CLIL) presents recent research on CLIL in terms of second language development and the influence of CLIL on content knowledge. According to Wolff (2005), there are five fields of interest concerning CLIL: the acquisition of linguistic competence in a CLIL classroom; the acquisition of content subject competence in a CLIL classroom; the acquisition of intercultural competence in a CLIL classroom; content subject methodology in a CLIL context and the evaluation of CLIL by teachers and learners. A brief description of the recent research on CLIL in the above mentioned field is provided in this chapter.

Chapter Four (Recapitulation) presents the beneficial effects of CLIL. The beneficial effects are presented with reference to learners, teachers, school and society. Additionally, a summary of the theoretical part is provided.

Chapter Five (The empirical study) serves to orient the reader to the empirical part of the doctoral dissertation by providing a description of the study, its aims, design and procedure adopted, the main research questions and a description of categories of the data analysis. One of the main objectives of the empirical study is to describe and analyse the changes in language education which occur in the Content and Language Integrated Learning (CLIL) classroom in Secondary Education throughout one school year. Additionally, the pilot studies conducted in Poland and Germany are described.

Chapter Six (Data presentation) presents a detailed description of the study with reference to particular categories of the data analysis (language aspects, content aspects, learning environment aspects and attitudinal and motivational aspects). The main purpose of this chapter is to present the data aimed at investigating the changes in language education which took place during the CLIL lessons throughout the whole school year.

Chapter Seven (Data analysis) discusses the data presented in the previous chapter and presents the results of the main study with regard to the main research question and further research sub-questions. The analysis is done according to the established categories. All the data is based on the observations made by the researcher, questionnaires carried out among the CLIL learners and the CLIL teachers and an interview conducted with the CLIL teachers.

Chapter Eight (Final conclusions). The concluding part of the dissertation attempts to examine the results and major findings of the study in relation to the general research question and further research sub-questions. Recommendations for further CLIL classroom practices as well as recommendations for further research are offered.

The **Appendix**, which consists of 10 parts, contains the study instruments used for the empirical part of the study (the questionnaires, observation sheets and criteria of subjects' evaluation).

PART I
THEORETICAL ASPECTS OF CLIL

I. The concept of Content and Language Integrated Learning (CLIL)

Bilingualism is a phenomenon which can be observed in many parts of the world, particularly in Europe. This is mainly due to extensive migratory movements in Europe which began in the 1960s. At present more than 450 million people with different historical, social and cultural backgrounds live and work in Europe from many diverse nations, communities, cultures and language groups. According to Bialystok (2005) bilingualism “enhances many metalinguistic abilities, including sensitivity to the details and structure of language, early word-referent distinction, recognition of ambiguities, control of language processing, and correction of ungrammatical sentences.” (Bialystok, 2005: 425).

Content and Language Integrated Learning (CLIL) is a term which refers to a dozen or more educational approaches (e.g. immersion, bilingual education, multilingual education, language showers and enriched language programmes). What is new about CLIL is that “it synthesizes and provides a flexible way of applying the knowledge learnt from these various approaches” (Mehisto, Marsh and Frigols, 2008: 12). In this part of the thesis a close look at Content and Language Integrated Learning will be taken starting from its historical background.

The aim of this chapter is to present the outline and history of Content and Language Integrated Learning (CLIL), the definition of CLIL as well as its different variations.

1. A Definition of CLIL

Content and Language Integrated Learning (CLIL) is a common term for a number of similar approaches in Europe to teach content subjects through a foreign language. Other terms used are *Bilingual Content Teaching*, *Bilingual Subject Teaching* or *Content-based Language Teaching* (Wolff, 2003: 211). The term CLIL is now the most commonly used and “it is based on the assumption that foreign languages are best learnt by focusing in the

classroom not so much on language but on the content which is transmitted through language. The novelty of this approach is that classroom content is not so much taken from everyday life but rather from content subjects e.g. mathematics, biology, geography etc. (Wolff, 2003: 211-222).

Marsh (Marsh & Langé, 2000) provides the following definition of Content and Language Integrated Learning (CLIL):

“Content and language integrated learning (CLIL) is a generic term and refers to any educational situation in which an additional language and therefore not the most widely used language of the environment is used for the teaching and learning of subjects other than language itself”(Marsh & Langé 2000, iii)

According to Wolff (2003: 211), there are at least three points which are important in the context of this general definition:

- a). CLIL should not be perceived as an approach to language teaching and learning; it is important to pay attention to both content and language.
- b). In CLIL content and language are learnt in an integrated way. The two subjects are related to each other and dealt with as a whole.
- c). In CLIL another language is used to teach and learn content subjects, i.e. it is the medium of instruction.

Marsland (Marsh & Marsland, 1999b: 21) describes CLIL as an approach which refers to any learning context in which content and language are integrated in order to fulfil specified educational aims. What is more, it could be used to refer to a classroom in which a foreign language teacher instructs learners on non-language subject content in a foreign language. At the same time it may apply to a situation in which a subject teacher uses a foreign language, to a greater or lesser extent, as the medium of instruction in any specific lesson. This does not mean, however, that language as such should not be focussed upon in the classroom. According to Wolff (2003) “language is both content and medium in the CLIL classroom but it is not taught in the same way as in the traditional classroom – it is focussed upon when it is necessary and important for the understanding of a specific aspect of the content subject or the academic discipline” (Wolff, 2003: 211).

CLIL Compendium contributors (Maljers, A., Marsh, D., Coyle, D., Hartiala, A.K., Marsland, B., Pérez-Vidal, C. & Wolff, D., 2002: 65) claim that there are 5 dimensions or reasons for introducing CLIL in schools and universities in order to strengthen the teaching and learning at these institutions.

The 5 dimensions of CLIL are based on issues related to culture, environment, language, content and learning. Each of these includes a number of focus points realized differently according to three major facts: age-range of learners, socio-linguistic environment and degree of exposure to CLIL.

a). The Culture Dimension – CULTIX

- Build intercultural knowledge & understanding
- Develop intercultural communication skills
- Learn about specific neighbouring countries/regions and/or minority groups
- Introduce the wider cultural context

b). The Environment Dimension – ENTIX

- Prepare for internationalisation, specifically EU-integration
- Access International Certification
- Enhance school profile

c). The Language Dimension – LANTIX

- Improve overall target language competence
- Develop oral communication skills
- Develop plurilingual interests and attitudes
- Introduce a target language

d). The Content Dimension – CONTIX

- Provide opportunities to study content through different perspectives
- Access subject-specific target language terminology
- Prepare for future studies and/or working life

e). The Learning Dimension – LEARNTIX

- Complement individual learning strategies
- Diversify methods & forms of classroom practice
- Increase learner motivation

The above mentioned dimensions are based on the most important issues which ought to be present not only in the CLIL classroom but also in a language classroom where building intercultural knowledge preparing for internationalisation or preparing for future studies and working life are also aspects. The learners ought to be made aware of the importance of languages in the world and should be taught how to use them effectively.

2. An outline and history of CLIL

Schools in which the teaching of certain content subjects in the curriculum are offered in a foreign, regional or minority language have existed in Europe for several decades.

Before the 1970s, this type of provision was mainly available in regions that were linguistically distinctive (because they were close to national borders or used two languages, etc.), or in the largest cities. It concerned very limited numbers of pupils who were growing up in somewhat unusual linguistic or social contexts. The aim was to turn them into bilingual children by enabling them to acquire proficiency.

During the 1970s and 1980s, development of this kind of provision has been influenced in particular by the Canadian experiment with immersion teaching (Day & Shapson, 1996: 14). This first began as a result of English-speaking parents living in the province of Quebec who considered that proficiency in French was vital in a French-speaking environment. They sought to offer their children an education in this language that would lead them to acquire significant language skills (Mehisto, Marsh & Frigols, 2008: 9).

In 1965, a group of these parents encouraged the local authorities to establish a language-immersion programme that would make it possible for their English-speaking children to study the subjects in French (Freed, Segalowitz & Devey, 2004: 277). The programme was very successful and it spread throughout Canada and other countries.

Programmes for immersion teaching have been enormously successful in Canada. Support from the education authorities and the involvement of parents have undoubtedly been key factors in their success. These projects have given rise to a great deal of interesting research. “While it has gradually become clear that the Canadian experience is not directly transferable to Europe, it has nevertheless been valuable in stimulating research in this area and encouraging the development of a very wide range of experimental activity” (Figel, 2006: 8).

The provision of immersion teaching may take many different forms. It may be regarded as “early” or “late” depending on the age of the children for whom it is intended. It may be considered “total” if the entire curriculum is taught in what is termed the target language or “partial” if that language is the language of instruction for just some subjects (Figel, 2006: 8). These different approaches are a reflection of the rich variety of linguistic and education environments, as well as the varied ambitions and aims of pupils or their parents and education authorities.

Content and Language Integrated Learning (CLIL) as an educational approach was developed in Europe and is, therefore, very strongly European-oriented. It is based on the assumption that foreign languages are best learnt by focussing in the classroom not so much on language – its form and structure – but on the content which is transmitted through language (Wolff, 2002: 47). Integrated language and content education which fits the working definition of CLIL has had a long history in Europe. Already in the first half of the 20th century private and mostly elitist schools existed which made use of the main principle of CLIL, i.e. using another language to teach content subjects.

Bilingual education in Germany and France was initiated by the political changes which took part in these countries (Iluk, 2000: 2002). There was a peace treaty concluded in 1963 between Germany and France the aim of which was to build up new and stable relationships. According to Mäsch (1993: 155) French which functioned as a foreign language in bilingual streams in German schools did not only serve as means of communication but also as a language of integration and cooperation with the “nearest partner”. During the conference organised in Belgium in 1990 by the European Commission it was said that the German bilingual model was the one to follow due to the

fact that it was promoting cultural and linguistic partnership and not domination (Mäsch, 1993: 156).

In Europe, many people have started understanding the value of multilingualism. There are countries where bilingual education has become an increasing trend initiated by the European Union and supported by the Governments (Brisk & Harrington, 2000: 12). Finland and Holland could be very good examples here. Marsh and Masih (1996: 46) point to the late 80s when greater attention was paid to making the system of education more international. At that time the introduction of bilingual education in schools was considered due to various globalisation processes. In 1991 a legal act was passed making it possible to introduce other foreign languages as mediums of instruction in Finnish schools. A group of experts gathered at the University of Jyväskylä to create an educational programme for the schools which were going to introduce immersion in English.

In the case of Holland, bilingual education started to develop at the beginning of 1990s. In 1991, the Ministry of Education published a document called “Widening Horizons” which contained some recommendations concerning bilingual education. The main aim of this document was to promote bilingual education by creating bilingual classes and organising international exchange projects between the learners and the teachers. As a result, the number of schools with bilingual classes increased and in 1995 there were 11 secondary schools in which content subjects were taught using English (Fruhauf, 1996: 115).

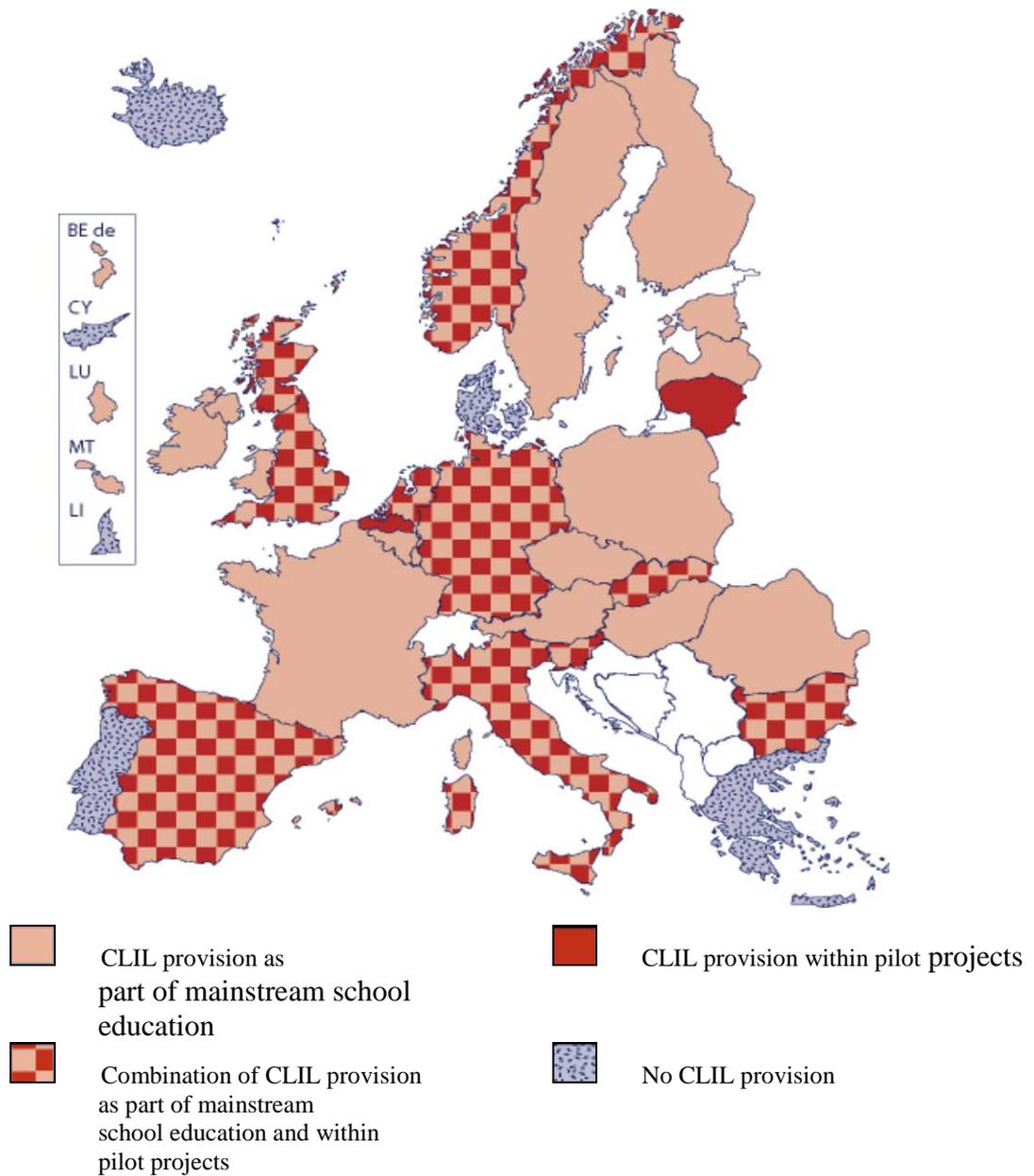
In countries such as Great Britain or Italy, implementation of bilingual education has been limited due to the number of various experimental projects and lack of support on the part of the authorities. According to the Eurydice¹ report (2006) Great Britain does not take into consideration the possibility of introducing bilingual education in the minority languages (Welsh gaelic and Scottish gaelic). The only languages which can be considered in the case of bilingual education are French, Spanish and German. Coyle (1996: 157) stresses the importance of the Educational Reform Act of 1988 which was a lost cause because the minority languages were ignored and the language which became officially taught in all schools was French. Coyle (1996: 158) expresses her strong concern about the state of

¹ Eurydice is an educational network which provides information and analyses of European education systems and policies. It consists of 35 national units based in all 31 countries participating in the EU's *Lifelong Learning Programme* and is coordinated and managed by the EU Education, Audiovisual and Culture Agency in Brussels

bilingual education in Great Britain. While in other countries all over the world bilingual education is becoming more popular, in Great Britain this model of education is not accepted by the British Government (except for Scotland and Wales which have their own governments). Ullman (1999: 96) also notices “bilingual sections are rare to find at the best of times and are almost unheard of in the UK”. In the following sections, Ullman (1999: 96) refers to the examination boards which do not allow the learners to take their final exams (e.g. GCSE) in a foreign language and as a result, the learners do not feel motivated enough to learn subjects in a foreign language. A similar situation can be observed in Poland. The learners are allowed to take their final exams in a foreign language (e.g. Matura) but they do not get any credit for it so as a result they feel de-motivated. In Wales and Northern Ireland, the learners are allowed to take their final examinations in the language in which the subject was studied and what is more, they get credit for it which is very motivating for learners.

The following figure presents the status of CLIL provision in Europe as presented in the Eurydice Report in 2006:

Figure 1. Status of CLIL provision



(source: European Commission, 2006: 13)

As it can be seen from the data provided above CLIL provision as part of mainstream school education exists in countries such as France, Ireland, Finland, Estonia, Latvia, Poland, Czech Republic etc. However, the fact that a CLIL-based approach to learning is part of mainstream school provision does not mean that it is widespread (Eurydice, 2006:

14). In most of the cases, it is offered to only a minority of learners and in just a few schools.

In countries such as Great Britain, Spain, Germany, Italy, Sweden etc. there is a combination of CLIL provision as part of mainstream school education and within pilot projects. What is meant is in these countries CLIL exists as a part of mainstream school education or is introduced in a form of pilot projects. Only Lithuania and the French part of Belgium introduced CLIL within pilot projects. CLIL has not been introduced yet in Portugal, Greece, Denmark and also Iceland.

To sum up, CLIL is becoming a very popular educational approach and as can be seen from the data provided above, most countries have introduced legislation to establish CLIL. Within the next few years, other countries are going to join this group.

3. Variations of CLIL

CLIL as an educational concept is not homogenous. There are certain variations which can be distinguished. According to Wolff (2005: 3) variation depends on a number of factors of which the school type – primary, secondary, tertiary – is the most important. Other factors responsible for variation are country-specific, i.e. environmental. They depend on the specific educational system and on the wider socio-linguistic context in which the approach is embedded.

3.1. Typologically induced variations

The number of primary schools which have adopted some kind of CLIL approach is surprisingly high. A distinction must be made between at least two types of primary CLIL schools (Wolff, 2005: 4):

a). The first type of primary CLIL schools exists in bilingual border regions, in France for example in Alsace or in Italy in Southern Tyrol. These kinds of schools can also be found in large industrial centres, for example in Berlin, Paris, Kraków etc. In France and Italy the minority languages (German and French) are used as languages of instruction, in the CLIL classrooms in Berlin one of the larger minority languages can be the language in which part of

the content is taught such as Turkish, Greek, Spanish or Russian. This type of CLIL is often but not always a combination of additive and maintenance bilingual education (Baker, 1996: 4). Learners acquire their family language together with a higher language competence in the society they live in.

b). The second type of primary CLIL schools exists in all regions. The language of instruction is neither the language spoken in the country or the learners' mother tongue. Primary CLIL branches of this type are the outcome of parents' initiatives, based on private bilingual kindergarten and pre-school. The second type of primary CLIL schools can be mainly found in large industrial centres.

The holistic methodological approach which is characteristic of primary education makes it necessary to integrate the foreign language into the subject areas taught in the classroom. The larger subject areas are Language (mother tongue and foreign language), Natural Sciences, Social Sciences, Arts and Sports (Wolff, 2005: 4). They are taught partly in the majority language and partly in the minority or foreign language chosen.

Having observed the changes taking place in schools across Europe in the last few years, it can be noticed that CLIL has developed differently in various European school systems but there are still some similarities. CLIL schools are organized in such a way that one or more content subjects are taught in a foreign language. The most common subjects are: History, Geography and Social Sciences. According to the Eurydice report "teaching in the target language is primarily concerned with science subjects or those in the field of social sciences" (Eurydice, 2006: 24). The reason why these subjects are chosen to be taught in a foreign language can be due to the fact that they cover the global dimension of subjects which focuses on 'here, then and now' issues. CLIL provision can also cover artistic subjects or physical education which are very popular in primary schools. The most common languages used in a CLIL classroom are: English and French and German. According to Eurydice report "close examination of CLIL target languages reveals that English, French and German are the most widespread foreign target languages in countries in which provision is in one or several foreign languages. Seven countries (Estonia, Spain, Latvia, Luxembourg, the Netherlands, Austria and Sweden) provide scope for trilingual CLIL provision combining the national language and two languages, or the national

language, a foreign language and a minority language” (Eurydice, 2006: 18). The reason why these languages are the most popular is connected with their status in Europe. These languages are the most common ones in the EU.

3.2. Environmentally induced variations

CLIL can have different forms depending on the country in which it is introduced. Wolff (2005: 5) enumerates five environmental parameters which are responsible for the development of different forms of CLIL:

- *Interpretation of the concept*
- *Subjects taught*
- *Exposure time*
- *Curricular integration*
- *Linguistic situation*

These parameters will be described in the following part of the thesis.

a). Interpretation of the concept

CLIL as an education concept is differently interpreted in various countries. In some countries the main focus is on foreign language teaching and in others on content teaching. Marsh (Marsh & Langé, 2000: 21) calls the former interpretation “a language learning” and the latter “a content-learning interpretation”. There is a very important factor which may influence the CLIL concept, namely the qualifications of teachers. In some countries content teachers with a knowledge of a foreign language would adapt the CLIL concept paying attention to content teaching rather than to language teaching. In other countries language teachers who have some knowledge of a particular subject would adapt the CLIL concept paying attention to language teaching. However, in both cases the foreign competence of the learner is improved due to the use of a foreign language as a language of instruction.

b). Subjects taught

The discussion concerning suitability of certain subjects being taught in a CLIL classroom has not ended yet. According to Wolff (2005) “subjects belonging to the Humanities are more suitable when it comes to the promotion of interculturality, as they are characterised by culture-specific features which by contrast lead to consciousness-raising with respect to the cultural particularities of the target language culture” (Wolff, 2005: 5). In most countries subjects belonging to the Humanities are chosen to be taught in the CLIL classroom (cf. Eurydice report, 2006: 24-25). However, in many countries sciences as well as artistic subjects and physical education are also chosen as CLIL subjects. The reason why particular subjects are chosen as CLIL subjects can be also connected with the availability of teachers. Countries such as Poland, Czech Republic or Hungary lack dual education. Teachers are either trained to become subject teachers e.g. geography or language teachers. Teachers are not trained to become both subject and language teachers while in Germany there is such a possibility. All Universities in Germany offer dual education and as a result both subject and language can be taught simultaneously. In Poland or Hungary if any content teacher has got a very good knowledge of a foreign language he or she can teach the subject in a CLIL classroom.

c). Exposure time

The exposure time to content-subject learning in a foreign language varies. In some countries there are three content subjects taught in a foreign language and in some countries there is only one subject.

The number of hours where subjects are taught in a foreign language also differs. In some countries the learners are offered 6 hours per week during which the teacher uses the mother tongue and in others only 3 hour per week during which the teacher does not say a word in mother tongue. According to the Eurydice report (2006) “differences in the amount of lesson time each week on the type of CLIL provision concerned are apparent from one region or locality to the next as in Germany, Spain and Italy, from one school to another as in Belgium (the French Community), the Czech Republic, Slovenia and Finland, or yet again depend on the status of languages in question as in Latvia, Poland, Finland and Romania” (Eurydice, 2006: 27).

d). Curricular integration

Different variations of CLIL are influenced by the decision to implement this approach into the curriculum of an education system. If no curriculum exists for CLIL in a specific country, the approach takes a different character which not only influences its quality but can also lead to its being offered only from time to time which will be followed by its disappearance. A lot of countries offer CLIL within pilot projects which last from one to three years depending on the country and are evaluated on their completion (Eurydice, 2006: 32). The body responsible for funding or managing them is generally the Ministry of Education or a regional education authority (Spain). Additionally, higher education institutions or research institutes may be included in the projects on a partnership basis. If successful, these projects also lead to curricular integration.

e). Linguistic situation

Europe is a geographical unit which can be characterized by two observable facts: linguistic variation within its boundaries and linguistic variation within many of its states (Wolff, 2005: 6). This situation also has an impact on the development of different types of CLIL. In some countries the CLIL language maybe the one officially recognized e.g. in Belgium or Switzerland there are two or three languages, respectively and one of them can be chosen as the CLIL language. In other cases the language of the neighbouring country is chosen as the CLIL language. One can easily draw the conclusion here that in such linguistic contexts specific variations of CLIL develop.

3.3. Modular variation

“Modular CLIL can be defined as an approach to teaching content in a foreign language in non-language subjects over shorter periods of time” (Wolff, 2005: 6). It has already been introduced in many schools recently, especially in Germany. The reason why it has been introduced is connected with the time and finances. It can be introduced fairly quickly and it is not very expensive.

Modular CLIL is based on modules. A teacher decides to teach part of the curriculum in the learners' mother tongue and another part in a foreign language. It is often practised in the case of geography or history where the teacher decides to teach geography or history of a particular country in its mother tongue. In modular CLIL, teachers are responsible for the choice of the topics they intend to work on in the foreign language. There are a lot of topics which are suitable for modular CLIL e.g. topics which are specifically related to the foreign language culture e.g. the American Civil War (in English), Nazism (German), Napoleon (French) etc.

According to Wolff (2005: 7) the aims of modular CLIL are the following:

- It makes learners understand the importance of a foreign language, especially when dealing with different content subjects;
- It helps learners to become more aware of language register;
- It can be attractive;
- It is motivating for the language learning processes;

To sum up, modular CLIL is a useful concept. "It serves as a bridge between traditional language teaching on the one hand and regular CLIL on the other" (Wolff, 2005: 7). In other words, it may help with implementation of CLIL in the future school curriculum.

4. CLIL in the context of the European integration

Bilingual education can be looked at from the perspective of the changes taking place in modern Europe. According to Alder (2006: 8) one of the most important factors which had an influence on bilingual education was the process of European integration. "Due to this process bilingual education started being officially recognised and also supported by European institutions" (Alder, 2006: 8).

A significant legacy, which had an impact on the educational systems in many European countries, was made in the Treaty of Maastricht in 1992. It was written that all European citizens had the right to live and work in any country belonging to the European Union. From this point language competence has become very crucial.

In 1995, the European Commission took a position on bilingual education which was written in the White Papers. It was approved that the knowledge of foreign languages was one of the priorities in educating the society. Additionally some recommendations concerning foreign language education were made:

“It could be even argued that secondary pupils should study certain subjects in the first foreign language learned, as is the case in the European schools” (European Commission, 1995: 47)

It should be mentioned that the European schools were established for the children whose parents work for the European institutions. The aim of these schools is to maintain the knowledge of the mother tongue as well as to support the acquisition of other foreign languages. The first language is the main medium of instruction at the beginning of their education – the children acquire their writing and reading skills in that language. Beatens Beardsmore (1993: 149) points out to two significant differences between European schools and Canadian immersion: firstly, a foreign language (L2) is taught as a separate subject and then it becomes the medium of instruction and secondly, learners also acquire a foreign language (L2) in a natural environment.

In 1998, the Committee of Ministers of the Council of Europe asked all the governments belonging to the EU to take some actions concerning multilingual education by encouraging the use of foreign languages in the teaching of non-linguistic subjects (for example history, geography, mathematics) and the creation of favourable conditions for such teaching.

During the meeting of the EU representatives in 2000, Content and Language Integrated Learning was mentioned for the first time. The European Institutions pointed to Content and Language Integrated Learning (CLIL) as a concept which supported their ambitious aims which were prepared by the European Commission in a document entitled “Action Plan 2004-2006 – Promoting Language Learning and Linguistic Diversity”. According to the “Action plan” each EU citizen apart from his mother tongue should also know two other foreign languages. As a result of that, each EU country should provide pupils and students with a possibility to learn at least two foreign languages. These foreign languages

should be taught through communicative methods. The European Commission considered Content and Language Integrated Learning (CLIL) to be such a method and fully supported it. The next recommendation concerning CLIL can be found in a “Progress Report” from the year 2004:

“National authorities should encourage a generalisation of content and language integrated learning (CLIL) by defining the standards of teacher qualification and supporting the preparation of appropriate teaching materials” (European Commission, 2004: 23).

Additionally, the European Commission supports projects which are connected with CLIL and which are based on international cooperation. CLILiG (Content and Language Integrated Learning in German) is a very good example. The aim of this project is to observe and analyse all the data coming from schools where CLIL exists in German language and also to work out on some teaching methods and innovative practical solutions which could be implemented into other schools.

The Council of Europe also supports Content and Language Integrated Learning (CLIL). In 2004, a new project entitled “CLIL Quality Matrix” was initiated. The aim of this project was to develop innovative teaching “tools” based on modern technology and Internet which could be used in many European countries.

As it can be noticed from the examples given above, the European Institutions have been supporting Content and Language Integrated Learning (CLIL) for more than 20 years now. It should be also emphasized that the increasing popularity of multilingualism is supported by politicians and researchers. During the symposium “The Changing European Classroom – Potential of Plurilingual Education” in 2005, Ján Figel (Commissioner responsible for Education Training and Multilingualism) stressed the importance of language learning promotion which he called fundamental to European economy due to the following reasons: firstly, the more languages employees know, the more chances they have to be employed; secondly, the knowledge of foreign languages has a positive influence on the development of business cooperation.

Beatens Beardsmore (2001: 10-11) emphasizes the changes which are taking place in the European society. The EU society is getting more keen on multilingual education. The

reason behind it is globalisation, modern technology and increasing European mobility. Additionally, European society is becoming aware that in order to get a good job, the knowledge of one foreign language is not enough.

According to Wolff (2005: 10), it is absolutely necessary for each EU citizen to be able to communicate in two foreign languages. It will help to preserve communication as well as European identity and additionally, it will act as a “safety umbrella” for less popular national languages and minority languages.

5. CLIL in Poland

Bilingual education was introduced in Poland in the seventies (Zielonka, 2007: 148). The first school which introduced it was 3rd Secondary School in Gdynia. In the early stages it was English which was introduced as a language of instruction. Some subjects were introduced in English for the whole or part of a lesson. The first bilingual teachers were only content teachers with a certain knowledge of the English language so as a result of that it was rather content which was taught through the medium of English than CLIL. Later on other schools introduced bilingual classes in Polish cities like Cracow or Warsaw. These schools were considered to be elitist schools and their aim was to raise the level of English language knowledge. Bilingual education started being more popular after the political changes in 1989. The borders were open and Polish society started noticing the importance of foreign language learning. In the 1990s, the only schools in which bilingual classes existed were secondary schools. Lower secondary schools were created due to the new Educational Reform from the year 1999 and within a few years bilingual classes started to emerge in some of those schools.

It should be pointed out that implementation of CLIL practice in education has been adopted in Poland under the name of bilingual education (*nauczanie dwujęzyczne*) (Dudek, 2002: 37).

Before the year 2002, pupils who wanted to learn in bilingual classes had to have a very good command of the second language and pass a diagnostic test. In some schools there was additional class “0 class” in which the learners could improve their second language skills. In order to be accepted into “0 class” the candidates did not have to know the second

language very well. Intensive second language learning guaranteed development of second language skills, especially writing and reading (Multańska, 2002: 90). Education in bilingual classes lasted 4 or 5 years depending on the existence of the “0 class”.

After introduction of the Educational Reform, the programme of the “0 class” was introduced into lower secondary schools which had bilingual classes. The programme was supposed to be covered within 3 years (Act. Nr. 61 from 21st May 2001). Bilingual subjects are introduced in lower secondary schools in 2nd grade and are continued until 3rd grade. The pupils have 4 hrs (45 min) of mathematics, 2 hrs (45 min) of biology, physics or history and 1hr (45 min) of geography per week. As noticed by Wierzbicka-Drozdowicz (2005: 242), the pace of learning is slower due to the age of the pupils.

Taking into consideration the secondary schools which have bilingual classes, all the subjects except for Polish, History of Poland, Geography of Poland and additional foreign language can be taught through the second language. Additionally, the learners should be provided with 6 hrs (45 min) per week of the second language during the whole period of their secondary education (Art. Nr. 61 from 21st May 2001). The most common subjects which are taught through a second language are mathematics, physics with astronomy, chemistry, biology, history, geography and computer sciences (Czura, Papaja, Urbaniak, 2008: 1).

At present, there are 107 secondary and lower secondary schools with bilingual classes using English, German, French, Spanish and Italian as the languages of instruction (source: www.codn.edu.pl). It has been attempted to introduce also Russian-medium class units. In order to be called bilingual, a school needs to offer at least two content subjects taught through a foreign language.

One of the major documents describing implementation of CLIL in European countries was Eurydice’s (2006) report *Content and Language Integrated Learning (CLIL) at School in Europe*. This document placed Polish bilingual practice in a broader European context. In an attempt to gain a more detailed insight into the use of CLIL in Poland, the National Centre for Teacher Training (CODN) has been conducting research investigating teaching practice in schools using different content languages. One general report on bilingual education in Poland and in Europe was conducted in 2006 and two other reports on schools

using French and English as a language of instruction have been completed. At the moment additional projects are being carried out on German- and Spanish-medium classes.

The Profile Report (English) presents results of a project coordinated by the National Centre for Teacher Training and the British Council, Poland, which aimed at exploring bilingual schools using English as the content language. The research was conducted in autumn 2007 in bilingual schools throughout the country. This Report provides an overview of practice in Polish secondary and lower secondary schools which teach partly, or largely, through the medium of English language. Nineteen schools allowed the researcher to visit in order to conduct a classroom observation and interviews with students and staff. The schools following MYP and IB programme were excluded from the research. The purpose of this study was to identify operating models, and examine operational features of bilingual education in Poland. The study should not be regarded as an evaluation, but as an overview of practice, intended to support the development of beneficial bilingual procedures within and across the schools. The project allowed the identification of strengths and weaknesses which helped the researchers to formulate a number of recommendations for future improvement. With a view to discerning regularities in bilingual education in Poland, the study helped to distinguish four operating curricular models, which derive from the adoption of differing approaches to bilingual education. Moreover, the research aimed at describing the implementation of bilingual practice in respect to four categories, i.e. teachers, students, schools and system, and finally, materials and resources.

The findings of the Report are based on the qualitative research which consisted of observation of at least one English lesson and one content subject lesson in each school. Additionally, the researchers interviewed the headmasters or coordinators of bilingual streams, teachers and students.

With its aim to achieve a general overview of practice in Poland, the Report not only identifies existing models of bilingual education, but also points to the examples of good practice and reveals the areas for improvement. The findings can be categorised into four groups concerning teachers, students, schools and systems (the educational system and its operating agents - Ministries, Teacher Development Agencies, and Examination Boards), and finally, materials and resources.

a). Teachers

Teachers were mostly Polish with quite common experience of living and working in English-speaking countries and in some cases with experience of teaching abroad. They all showed enormous involvement in teaching, as work with bilingual classes was for them a great challenge as well as the source of personal and professional satisfaction. What was evident was their eagerness for further development. Aware of the significance of the access to resources and opportunity to exchange experiences for the achievement of best practice, the interviewees reported the great need for specific CLIL training programmes (also subject-specific), workshops, symposia, school visits, exchanges including periods of work or study in countries where the target language is spoken. Moreover, the demand for further development of teacher work partnerships (content-language; content-content) within schools was voiced. In order to ensure this, practical support is required, enabling the proper functioning of 'professional partnerships'. Another concern expressed by the teachers referred to lack of financial resources which are crucial for self-purchase development opportunities.

b). Students

Students, in turn, perceived bilingual education as prestigious, broadening horizons, giving them the opportunity to study abroad. Among other advantages, they mentioned access to an extensive range of topics and extra language lessons, studying in better conditions (smaller-sized classes, better learning resources) and participation in foreign exchanges. Being aware of all the benefits, they expressed, nevertheless, their disappointment rooted in the fact that English Matura in many cases does not provide credit for university entrance. Whereas English Matura is difficult and preparation for it requires much effort, students are not granted extra points. Within the disadvantages of bilingual education they also emphasized the lower standard of content subjects in comparison with mainstream classes, as well as the use of traditional methods of teaching. Unsystematic code-switching (Polish-English) was mentioned as another drawback.

c). Schools and Systems

Many initiatives were observed ranging from projects on multiculturalism, cultural festivals, European Union Programmes, to a variety of extra-curricular activities. In spite of that, unfortunately, little networking between bilingual schools in Poland or abroad was reported. Towarzystwo Szkół Twórczych was one of the few examples of such cooperation. Hence, the necessity to build a network which would enable the exchange of materials and experiences is undeniable. Creating conditions facilitating teamwork among the teachers (e.g. embedding team meetings into the timetable) might also contribute to the increase of effectiveness of bilingual education. Furthermore, the need for greater external support from key stakeholders, namely national educational administration, was clearly voiced by the interviewees. Without concrete regulations concerning curricula and insight into the Matura exam the standards of excellence in bilingual teaching will not be achievable. The provision of a bigger range of teacher training is also expected and awaited.

d) Resources and materials

Within the category of resources and materials lack of clearly specified bilingual education (English) curriculum was brought in as the problem underlying confusion among the teachers. The words of one of the content teachers seem to prove such status quo: “My feeling is that when it comes to bilingual classes, there are no rules, no sets of advice available in Poland.” As a result, one of the main observed problems concerns the preparation for the Matura exam. There is no teacher training in this field. Moreover, the Central Examination Board (CKE) does not organize mock bilingual Matura exams and denies both the teachers and the learners access to copies of bilingual Matura exam sets in content subjects used in previous years. The CKE information booklet lacks necessary information, therefore, the teachers prepare the students to bilingual Matura exams without the knowledge of its content, structure and the assessment criteria (“We prepare our students intuitively for the bilingual Matura exams, as no support is provided” English Teacher). Both students and teachers also expressed their frustration resulting from poor access to materials in English. The problem with books adjusted to Polish educational requirements was the reason for additional constraints. Because of their high price and, what is even more important, unsuitability of culturally-bound discourse approaches, the

imported course books do not satisfy Polish students and teachers' needs. Hopefully, the situation will improve soon, as first course books written by Polish authors have been recently published. As far as other materials are concerned, undoubtedly, higher quality of teaching could also be achieved due to the employment of technological teaching devices such as classroom data projectors and portable computers, with which, unfortunately, not all schools are equipped. Certainly much more attention should be given to the provision of quality visual materials both in language and content classrooms.

e). Curricular Models

The curricular models which are to be presented below are the outcome of the observations carried out by the research team in bilingual classes. There are four curricular models of bilingual education in Poland which are further divided into subcategories depending on the adopted educational approach (Marsh, Zajac, Gozdawa-Gołębiewska, Czura, Gapińska, Majewska, Papaja, Roda, Urbaniak, & Wróblewska, 2008: 13-16)

Model A: (Teacher-based instruction with continuous use of student pair/group work tasks)

Extensive English Language Medium Instruction

During the classes it is mainly English which is used for teaching and learning. Polish is only used for translation of terminology and a brief summary of learning concepts. Within this model two other types were distinguished:

Type A

Single Focus: the main focus is on content. English and Polish are referred to only occasionally, especially in terms of pronunciation or spelling.

Type B

Dual Focus: the focus is on both content and language (English or Polish). While teaching content attention is given to language as well, however, the degree of focus is different from lesson to lesson. In most cases, it is the content that becomes more important.

Model B: (Mostly teacher-based instruction with limited use of student pair/group work tasks)

Partial English Language Medium Instruction (Code-switching English-Polish)

English and Polish are used for teaching and learning. There is about 50% of time devoted to the use of each language. This model can be further subcategorised into two types.

Type A

Single Focus: the focus is only on content. The degree of code-switching between English and Polish is significant, depending on the purpose.

Type B

Dual Focus: the focus is on both content and language. Both languages are used during the lessons – English and Polish with a lot of switching between the two languages. While teaching content, a lot of attention is given to the English language. Like in the previous model the degree of focus is different depending on the lesson. In most cases content plays the dominant role.

Model C: (Mostly teacher-based instruction with limited use of student pair/group work tasks)

Limited English Language Medium Instruction (code-switching English-Polish)

Both languages are used for teaching and learning (English or Polish). From 10% to 50% of time is devoted to the use of English language; code-switching is used for different functions during the process of teaching and learning. Two other types can be distinguished within this model:

Type A

Single Focus: the focus is mainly on the content. Polish is mainly used during the lessons with occasional instances of the English language. There is also quite a lot of switching between the languages depending on functional conventions.

Type B

Dual Focus: the focus is on both content and language (English or Polish). English is very often used during the lessons, however, it is the Polish language that remains the main language of instruction. There is also quite a lot of switching between the languages,

however while teaching content the attention paid to languages is of lower importance. The degree of focus varies from lesson to lesson.

Model D: (Variant techniques do not allow for selecting a single type of instructional approach)

Specific English Language medium Instruction

English and Polish are used for teaching and learning. Only limited amount of time is allocated to the use of English. There are a few different types of model D:

Type A

A sequence of lessons taught in Polish is followed by a lesson conducted mainly in English. This technique aims at consolidating the material covered in the earlier course of the lessons.

Type B

A lesson which is mostly taught in English but concludes a lesson conducted in Polish. As in type A above, it aims at revising the previously covered material.

Type C

The materials used in class are in English, however, the lesson is conducted in Polish.

Type D

A large portion of the content material has been acquired earlier in Polish. Then the knowledge is recapitulated in the form of project work prepared and presented by the students in English.

To sum up, a lot has already been done as far as bilingual education is concerned in Poland. However, the changes introduced in the system of education do not seem to be very advantageous due to the fact that different models of bilingual education exist across the schools in Poland. The most common model present in bilingual education was model B with teacher-based instruction and limited use of student/group work tasks. What is more, the focus of tasks presented in the classroom was rather on content than on language (type A). The reason behind it is that most teachers are used to teacher-based instruction which is still the most common one in Polish schools. They think that the teacher is the most

important person in a classroom and they support the authoritative view of teaching. In addition, most teachers who teach a subject through a language are content teachers. They have a very good knowledge of a foreign language but they do not know how to teach it. As a result, their main focus is on content instead of a language. Finally, the teachers are required to prepare their learners for final examinations either in a lower secondary school or in a secondary school. All the final exams are in Polish and this is why they often switch into Polish.

According to the data provided by CODN, there are only 10 lower secondary schools which have bilingual classes. According to Iluk (2002a) there are not enough bilingual lower secondary schools. Lack of these schools leads to the conclusion that a lot of learners experience bilingual teaching in their secondary school which lasts only 3 years. Gajo (2005: 11) points out that 3 years is not enough for bilingual teaching in comparison to 4 years (before the Educational Reform secondary education lasted 4 years). “During 3 years of bilingual education, it is not possible to reach the aims which have been set by the Educational Reform” (Iluk, 2002a: 74). In my opinion, the reason behind it is that the programme has not been changed but rather “squeezed’ and as a result the learners may feel overloaded with huge amount of material in a foreign language.

II. Content and Language Integrated Learning (CLIL) – important issues

Recent discussions have maintained that CLIL offers opportunities to improve the process of language learning and language teaching. CLIL theoreticians and teachers claim that the learning environment created by CLIL increases the learner's general learning capacities, his/her motivation and interest (Wolff, 2005: 9). They also argue that in CLIL the separate roles of the learner as a foreign language learner and a content subject learner merge into one. Cummins (1992: 281-86) claims that the process of acquiring a content subject is similar to first language acquisition where the child acquires the linguistic signs and the underlying concepts at the same time. In CLIL, "the learner's concepts are foreign language based, the mother tongue concepts are built on these foreign language concepts because the learner gets into contact with specific parts of the world around him first via the foreign language" (Wolff, 2005: 9).

According to the research, the learner's linguistic development is influenced positively in a CLIL environment (Marsh & Marsland, 1999b: 43). The learner is able to express himself more easily in the foreign language – he/she knows sophisticated vocabulary and is able to discuss different concepts in the foreign language. Cummins (1987: 57-73) claims that the learner apart from acquiring linguistic competencies also develops academic competences in the foreign language. This means that the CLIL learner is able to use the foreign language and also work independently.

Another concept which has been discussed recently by CLIL theoreticians and also by teachers is the content component. Learners have to deal with content through a foreign language which involves a lot of effort on the part of the learners. As Wolff (2002: 117) notices, motivation, curiosity and involvement can be raised much higher through CLIL than through the contents of the traditional foreign language classroom. In my opinion, this may be due to the variety of topics and concepts that the learners have to deal with. Firstly, the topics are usually connected with the "here and now" issues e.g. the structure of atmosphere (geography). Secondly, the topics are related to the learners themselves e.g. a digestive system and its functions (biology) and thirdly, the learners are usually provided with more visual aids due to the amount of vocabulary and difficulty of particular concepts, which makes learning a content subject more interesting.

In this part of the thesis the important issues concerning Content and Language Integrated Learning will be presented. The extent to which something is more or less important is of a subjective nature. Firstly, the profile of a CLIL learner and a CLIL teacher will be presented since their profiles differ from an ordinary language learner and a language teacher. Secondly, language aspects will be discussed due to the fact that CLIL is an approach concerning second language learning. Additionally, the use of L1 in a CLIL classroom which is an indispensable aspect of learning content subjects in a foreign language where certain difficult concepts may require the use of the mother tongue will be discussed. Thirdly, content aspects will be presented due to the fact that CLIL does not only focus on language learning but also on content learning. Language and content should be taught and learnt simultaneously. The next aspect concerning CLIL which will be discussed from the theoretical point of view is the learning environment which includes classroom interaction, methodological approach, learner's evaluation, teaching materials and classroom setting. The reason why these aspects are considered to be important is that they are all connected with the process of teaching and learning both a foreign language and a content subject. Finally, attitudinal aspects and motivation will be discussed. The reason being that concepts like bilingual education, attitudes, motivation and anxiety are considered important in education all over the world. It has become clear that learning a second language and what is more, learning subjects through a second language is a difficult time-consuming process which requires a positive attitude and a lot of motivation both on the part of a learner and a teacher.

At this stage, it should be pointed out that this part of the thesis is strongly linked with the empirical part. On the basis of the theoretical aspects discussed in this part of the thesis, categories of data analysis were established.

1. The CLIL learner

“In CLIL, the learner's role as a foreign language learner and as a content learner merge” (Wolff, 2007b: 19). This means that the learner acquires content subject and a new language at the same time. Wolff (2007b: 19) compares this process to first language acquisition when a child learns a new language together with the underlying concepts. In

second language learning the learner acquires the concepts through a second language. In CLIL the more complex the content is, the more advanced language skills are required. Although content and language learning are parallel processes in a CLIL classroom, there is a view that content of the content subject can serve as a kind of scaffold for the language learning process. A lot of parents worry that their children who learn subjects in a foreign language may have problems. When looking at the CLIL classroom which will be fully presented in the empirical part of the thesis this view is not true. In most cases “the CLIL learner processes the content more deeply whereas the mother-tongue learner processes the content in a more shallow way”² Lamsfuß-Schenk (2002: 191-206). As a result the CLIL learner in comparison to the mother-tongue learner is more successful at school.

It should be also mentioned that the CLIL learner develops a type of linguistic proficiency “which is characterized to a large extent by speech acts which belong to formal language registers” (Marsh & Wolff, 2007: 20). The learners acquire a high linguistic proficiency due to the constant focus on the development of reading and writing skills. This high linguistic proficiency can be very beneficial in their future lives. High linguistic proficiency is especially valued in working life.

In addition to it, CLIL learners develop a kind of academic competence. Cummins (1987: 57-73) calls it *Cognitive Academic Language Proficiency (CALP)*. According to Cummins “learner use of language related to academic and not to everyday content makes the learner develop a type of linguistic proficiency which is characterized to a large extent by speech acts which belong to formal language registers” (Cummins, 1987: 57).

As far as content is concerned, in many cases, it is a complex one however, learners prefer to work with this kind of content because “they are able to identify with it” (Wolff, 2007b: 20). The learners can easily identify with the content which makes them more involved and motivated.

The next feature of the CLIL learner is that during the process of learning he/she becomes more aware of the language. According to van Lier (1995), “Language awareness can be defined as an understanding of the human faculty of language and its role in thinking, learning and social life. It includes an awareness of power and control through language, and of the intricate relationships between language and culture” (van Lier, 1995: 11). James

² The translation from German into English was done by the author of the PhD thesis.

and Garrett (1991: 3-20) distinguish between five domains as far as language awareness is concerned: cognitive domain, performance domain, affective domain, social domain and power domain.

Due to the fact that language awareness is very important in CLIL, all the domains are to be presented in the following part. Additionally, a brief description of the CLIL learner with respect to each domain is going to be provided.

According to James and Garrett (1991: 8) the **cognitive domain** includes the development of an awareness for patterns, contrasts, categories, rules and systems. This domain is very well developed in CLIL learners. As they are considered to be bilinguals, it can be stated that “CLIL learners have a high cognitive sensitivity for language structure which helps them in learning languages” (Wolff: 2007a: 9).

The **performance domain** which comprises an awareness for language processing and for language learning is also well developed in CLIL learners. According to Cummins (1984), bilinguals have a highly developed capacity for language processing in all its forms. The same can be said about CLIL learners who are able to participate in conversation in both languages.

The **affective domain** which relates to the development of attitudes, attention, curiosity, interests and esthetical feelings is also highly developed in CLIL learners. They develop positive attitudes, curiosity and interest to a very high degree which helps them to learn languages and content easily.

The **social domain** which relates to the development of an understanding for other languages, a tolerance for minorities and their languages seems to be well developed in CLIL learners. Some of them often live simultaneously in two cultures – the family culture and the culture of the environment. Unfortunately, there is still not much research with respect to the development of tolerance in CLIL learners.

The **power domain** which relates to the ability of understanding language with respect to its potential to influence and manipulate others, this domain has not played a role in research on bilinguals or CLIL learners (Wolff, 2007a: 10). What is known is that the learners acquire an understanding of the language potential and they are able to use this potential in order to understand in what way others can be influenced or manipulated.

CLIL learners who are often classified as bilinguals seems to have a highly developed potential for language learning which they can use with a greater degree of flexibility in instructed language learning situations.

To sum up, CLIL learners in general are better language learners because they process the foreign language more deeply and learn it more proficiently. They are also better content learners, because they process content more deeply on the foreign language and finally, they are well prepared for their future professions.

2. The CLIL teacher

Teacher quality and teacher competence are concepts that are often referred to and frequently applied in different educational contexts. Whitty (1996: 89-90) identifies two sets of qualities that characterise a successful professional teacher: professional characteristics and professional competences. Professional characteristics include professional values, personal and professional development, communication and relationships as well as synthesis and application. Professional competences include knowledge and understanding of learners and their learning, subject knowledge, curriculum, the education system and the teacher's role. Professional competences also entail skills such as subject application, classroom methodology, classroom management, assessment and recording and undertaking a wider role. Medley (1982: 1345-1352) distinguishes between three dimensions of teacher quality: teacher effectiveness (the degree to which a teacher achieves desired effects upon students), teacher competence (the extent to which a teacher has the knowledge and skills) and teacher performance (how a teacher behaves in the process of teaching).

CLIL type provision requires of the teachers responsible for it – and this is their common attribute – the ability to teach one or more subjects in the curriculum in a language other than the usual language of instruction and what is more teach that language itself (Eurydice, 2006: 41).

Teachers involved in CLIL recognize the need to change established needs which might be used in the L1 when teaching the same content in L2. What is evident is that a professional teacher will recognize that the CLIL context means that it is not only the teacher's

linguistic competence which is of importance, but also that of the learners. This leads directly to the notion of methodological shift. The main characteristic of this shift lies in the movement from teacher-centred to learner-centred methods.

It is also very important for those teachers who know that their linguistic skills are limited to adapt their content and methods accordingly. According to Marsh (2001: 78), this is where code-switching and preparation become crucial. It is very important to remember that being able to use a L2 does not mean being able to teach in that L2 in a given situation (Hall, 2001: 120). If a CLIL teacher is to teach extensively in the L2 it is essential that she/he has sufficient command of the language.

Marsh (2001: 78-80) outlines the 'idealised competencies' required of a CLIL teacher:

a). LANGUAGE/COMMUNICATION

- sufficient target language knowledge and pragmatic skills for CLIL.
- sufficient knowledge of the language used.

b). THEORY

- comprehension of the differences and similarities between the concepts of language learning and language acquisition.

c). METHODOLOGY

- ability to identify linguistic difficulties.
- ability to use communication/interaction methods that facilitate the understanding of meaning.
- ability to use strategies (e.g. repetition, echoing etc...) for correction and for modelling good language usage.
- ability to use dual-focussed activities which simultaneously cater for language and subject aspects.

d). THE LEARNING ENVIRONMENT

- ability to work with learners of diverse linguistic/cultural backgrounds.

e). MATERIALS DEVELOPMENT

- ability to adapt and exploit materials
- ability to select complementary materials on a given topic.

f). ASSESSMENT

- ability to develop and implement evaluation and assessment tools.

One of the most important abilities of the CLIL teacher is second language competence. Andrews (1999: 163) argues, that the teacher of a language, like any educated user of that language, undoubtedly needs levels of implicit and explicit knowledge of grammar which will facilitate effective communication. At the same time, however: ‘effective L2 teaching requires of the teacher more than just the possession of such knowledge and the ability to draw upon it for communicative purposes. The L2 teacher also needs to reflect upon that knowledge and ability, and upon his/her knowledge of the underlying systems of the language, in order to ensure that the learners receive maximally useful input for learning’ (Andrews, 1999: 163).

To be able to use a L2 should not be automatically equated with “being able to teach in that language in a given situation” (Marsh & Marsland, 1999b: 45). Teaching in CLIL demands much more than the ability to speak or listen in a language. Whether one is dealing with native or non-native speakers of a given language, the key question of linguistic competence for the teaching context remains a key issue. Good linguistic skills in the target language are necessary. According to Marsh and Marsland (Marsh & Marsland, 1999b: 45), teachers who use CLIL need to be linguistically aware, possessing insight into how language functions, in addition to being able to use the language as a tool in the classroom. What is very important is that those teachers who know their linguistic skills are limited need to adapt their content and methods. In fact, “this is where code-switching and preparation become crucial” (Marsh & Marsland, 1999b: 45). It is also reasonable to suggest that teachers with more limited linguistic skills have to pay more attention to lesson planning in order to feel more confident.

Generally speaking, CLIL teachers need to be simultaneously language and content teachers. The emphasis may be more towards one of these than the other, depending on the teacher competences but nonetheless “dual-interest and dual-ability, if not dual-qualification, appear to be highly desirable” (Marsh & Marsland, 1999b: 38).

According to Eurydice in the CLIL type provision teachers are specialists in one or more non-language subjects or have two areas of specialisation, one in a language subject and the other in a non-language subject. However, there are countries in which the teachers do not have dual education and therefore they need to provide a certified evidence of particular

skills (Eurydice, 2006: 41). None of the diplomas or certificates required relates to CLIL type provision as such, or more specifically to particular aspects of its teaching principles and methodology.

According to new regulations (2004) regarding teacher training standards in Poland, all graduates should master a foreign language and have reached level B2 or B2+ of the Council of Europe Common European Framework of Reference for Languages (2001). In addition, teachers are now obliged to specialise in a second subject. If they choose the combination ‘non-language subject plus foreign language’, they have to reach level C2 of the Common European Framework of Reference for Languages, in the case of the language subject (Eurydice, 2006: 44).

3. Language aspects in CLIL

When describing language learning Ellis (1985: 9-20) provides the following assumptions:

- a). Language learning is an activity in which a learner employs a set of cognitive strategies in order to acquire linguistic knowledge.
- b). Language learning is usually not a conscious process, the language learner is not always fully aware of what he is doing.
- c). Language learning does not seem to be different for a first and a second language. Comprehension, retention and automatization are necessary steps in the learning process.

According to Krashen (1982) language acquisition takes place on a subconscious level. The reason why it happens is that “the learner is focussed upon the content” (Krashen, 1982: 26).

As it is noticed by Grabe and Stoller (1997: 6), one of the main theories concerning second language acquisition which became a basic theory of Content and Language Integrated Learning (CLIL) is Krashen’s *Monitor Model* theory. According to this theory (Krashen, 1981; 1982; 1985) learners acquire a language by understanding language that contains structures somewhat beyond their current level of competence (i+1). This is done with the help of context or extra-linguistic information. When input is understood and when there is enough of it, i+1 will be provided automatically.

According to Krashen's theory, one of the main arguments for using a foreign language in content teaching is to create a natural environment for second language acquisition by gradual increase of comprehensible input. In this way, the *Monitor Model* became a theoretical basis for content-based teaching. Content-based teaching provides learners with the possibility to acquire both language and content information (Brinton, Snow & Wesche, 1989: 1-14). Additionally, content which learners acquire in a foreign language is connected with their individual and educational needs, which makes second language acquisition more effective and motivating (Snow, Met & Genesee, 1989: 201-217).

According to Marsh and Marsland (1999b) "language is a tool for everyday use. The CLIL pupils learn by integrating both content and language learning. It's a more natural way and truer to real life" (Marsh & Marsland, 1999b: 78). A basic idea of many CLIL activities is that pupils learn an additional language and at the same time they use it as a tool for learning. In this situation, the language is not learnt for its own sake, but is an additional value in the learning context.

According to Marsh & Marsland (1999b: 81), CLIL has a positive impact on the learners' interest and willingness to acquire and learn the target language.

Another interesting point which should be emphasized here is the claim of some practitioners who have noticed that even low level exposure to CLIL has an influence on the development of the target language (Marsh & Marsland, 1999b: 81). "Small-scale exposure can boost self-confidence, whereas longer exposure would be required to achieve more tangible outcomes such as vocabulary acquisition or pragmatic skills" (Marsh, Marsland & Nikula, 1997: 42).

Having discussed the language in CLIL, it is worth looking at the definition of language use provided by the Common European Framework of Reference for Languages due to the fact that most of the analysis provided in the empirical part will be based on this framework. The following definition can be found "language use, embracing language learning, comprises the actions performed by persons who as individuals and as social agents develop a range of competences, both general and in particular communicative language competences. They draw on the competences at their disposal in various contexts under various conditions and under various constraints to engage in language activities involving language processes to produce and/or receive texts in relation to themes in

specific domains, activating those strategies which seem most appropriate for carrying out the tasks to be accomplished. The monitoring of these actions by the participants leads to the reinforcement or modification of their competences” (Council of Europe, 2001: 9). According to this definition, the main aim of language use is to develop language competences by providing the learners with specific themes (content), which perfectly suits the definition of Content and Language Integrated Learning (CLIL).

The aim of the next part of the thesis is to present language skills such as speaking, writing, listening and reading together with language sub-skills such as vocabulary, grammar and pronunciation in relation to CLIL. Additionally, the use of L1 (Code-switching) during CLIL classes will be discussed.

3.1. The development of speaking skills

The results of the research carried out on immersion in Canada reveal that even though the receptive skills of the learners were highly advanced the productive skills were far from satisfactory. (Swain & Lapkin, 1982; Genesee, 1987; Swain, 1985; Harley, 1986; 1992). Swain (1985: 235-254) argues that these results were due to the lower number of productive activities. According to Swain (1985: 235-254), foreign language learning depends on comprehensible output. Learners need to be provided with an opportunity to use their language. In other words, while using a foreign language, the learner is able to notice his /her “language gaps” and what is more, he/she becomes more motivated to work on these “language gaps”.

It has been suggested that spoken language skills do not develop as well as receptive skills in CLIL. Marsh (Marsh & Marsland, 1999b: 79) suggests that it may be linked to the types of teaching methods or lack of experience of teachers who are not familiar with CLIL. If teaching is teacher-centred – unfortunately, this is the case in many schools where CLIL has been introduced and the learners do not have many opportunities to actively use the target language then the productive skills fail to develop (Eurydice, 2006: 41).

What is evident is the question of self-confidence in trying to speak is the target language. Development of self-confidence is often cited in terms of being increasingly able to speak without planning and formulating sentences or utterances in advance; in other words the

learners believe that they become more able to use the target language spontaneously (Marsh & Marsland, 1999b: 79).

In the CLIL classroom as well as in the regular English teaching classroom learners improve their speech when teachers provide insights on how to organize their ideas for presentation (Wallace, 1991: 4). The CLIL learners can give better speeches and what is more, they can organize their presentation in a variety of different ways e.g. sequentially, chronologically or thematically. They need practice in organizing their speech around problems and solutions, causes and results, and similarities and differences. The CLIL classroom provides them with great opportunities to do it. The CLIL learners deal with different contexts which can be easily discussed by them if they are only given a chance.

After deciding about the best means of organization, they can practise interacting with another learner or with the whole class. Walberg (1998: 173-206) writes that teachers can also help the CLIL learners adapt their speeches and informal talks so as to correspond to the intended audience, the information to be communicated, and the circumstances of the occasion at which they will speak. What is more, “the teachers can illustrate how well-known speakers have adapted their presentations in ways to suit these different circumstances” (Walberg, 1998: 173-206). Teachers can enable the CLIL learners to present ideas to individual peers, peer groups and the entire class. Preparing for debates and participating in them help the CLIL learners to see both sides of various issues. Gassner and Maillat (2006: 15-22) claim that both teachers and the CLIL learners can provide suggestions for learners’ speeches. In constructively criticizing others, the CLIL learners can learn to apply criteria for good speech and employ tactful social skills. In doing so, they can increase and improve their own speaking skills.

The CLIL learners can also learn speaking and social skills by suggesting possible improvements to one another’s practice speeches. Positive experiences in speaking can lead to greater skills and confidence in speaking in front of larger groups.

As it is written in the Common European Framework of Reference for Languages (2001) “Acts of communication with one or more interlocutors are generally undertaken by a language user in pursuance of his or her needs in a given situation. In the personal domain, the intention may be to entertain a visitor by exchanging information on families, friends, likes and dislikes, to compare experiences and attitudes, etc. In the public domain, it will

usually be to transact business, say to buy clothes of good quality at a reasonable price. In the occupational domain, it may be to understand new regulations and their implications for a client. In the educational domain it may be to contribute to a roleplay or a seminar, or write a paper on a specialised topic for a conference or for publication, etc” (Council of Europe, 2001: 53).

All in all, the CLIL learners who are both content and language learners should be provided with the opportunity to speak during the CLIL lessons due to the fact that it will not only lead to “linguistic fluency and accuracy” (Coonan, 2001: 45) but also to personal, public, occupational and educational development.

3.2. The development of writing skills

Taking into consideration all the language skills (reading, writing, speaking and listening), writing is probably the most controversial (Marsh & Marsland, 1999b: 80). In spoken language learners seem to tolerate more – a wide range of vocabulary, dialect words, different kind of pronunciation, pauses, repetitions etc. in written language, they seem to be more critical. As Byrne (1988: 17) notices, this can be linked with the fact that writing is seen as a more formal variety of communication than speaking. Even with the rapid information flow nowadays, “writing is relied on to be a clear statement of intention or point of view” (Byrne, 1988: 17).

What is more, as Saville-Troike (1984: 217) notices, writing is a language competence which can definitely develop academic competence. The ability to write in a foreign language is necessary to become successful both during the academic and professional life. Taking into consideration the development of writing skills, Wysocka (1989: 8-34) points out that the most important is the ability to select information as well as the ability to plan and organize our writing, which is connected with a special way of thinking on the part of the writer.

Writing plays a very important role in CLIL. The aim of the CLIL methodology has to be connected with developing writing skills in a foreign language. Developing writing skills during CLIL classes can bring a lot of advantages: firstly, it may help learners with content

learning, secondly, it develops not only writing skills but also other language skills, thirdly, it can be motivating and finally, it will bring benefits in future life.

However, there are some drawbacks emphasized. As indirect consequences of the “focus on form” in writing in the context of CLIL, there is a danger that subject teachers can think of writing in simple terms – as “spelling and grammar” which is the responsibility of the language teacher. What is more, the standard of the subject teacher’s own language skills in writing might not be good enough to teach writing (Marsh & Marsland, 1999b: 81). However, the ability to write well in a foreign language is very important in CLIL and each CLIL teacher should pay attention to it no matter whether he/she is a language teacher or a content teacher – content and language skills should be integrated.

Krashen (1984: 41-78) points out that writing abilities can be acquired to a certain level through reading, but practice is essential for developing the skill level. In the CLIL classroom certain strategies which enhance the students’ readiness to write should be introduced. **Productive tasks** used on top of reading comprehension, such as responding to the author of the reading passage. These writing tasks are guided in terms of situational context and content. They can be perfectly used in a CLIL classroom. The CLIL learners are provided with many authentic articles on current matters. They can use such texts as inspiration for stating their own opinions. Working with such articles have a lot of advantages, namely the CLIL learners apart from being inspired are provided with new vocabulary, language register and structure. According to the Common European Framework of Reference for Languages (2001), each language learner and therefore a CLIL learner should be able to produce creative texts or articles in which he / she can express his own views (Council of Europe, 2001: 61).

The next two activities which exploit some reading input from the CLIL learners are **parallel writing** and **summary**. According to Carson and Leki (1997: 49), writing which is based on reading stimulates the development of language skills and cognitive processes. The CLIL learners have to read the information first, “digest” it and then write their own text. Due to this complex process, the CLIL learners are able to concentrate more on the text and analyse it deeply in terms of content, vocabulary and structure. These activities can help the CLIL learners to deal with difficult content input.

Taking notes, writing plans for oral compositions are the strategies which help the CLIL learner with the numerous operations involving writing. The CLIL learners have to deal with a lot of content knowledge. In many cases they learn two or three subjects in a foreign language and are provided with a huge amount of new vocabulary. Taking notes or jotting down ideas which they get during the CLIL lessons can facilitate learning. Note-taking can be also a very useful academic strategy (Reichelt, 2001: 586). Students are usually required to take notes during the lectures and seminars while being at University.

To sum up, the benefits which come from the above mentioned writing strategies help the CLIL learner to deal with the content. It should be born in mind that the CLIL learner is exposed to the content in a foreign language which means that apart from the content knowledge he has to deal with new vocabulary and structures. This process is highly demanding. The writing strategies described may help the CLIL learner to “digest” both content and language knowledge. What is more, they also have a positive impact on the development of writing skills which may be needed in the CLIL learner’s future life.

3.3. The development of listening comprehension skills

It is often stated in textbooks on methods of teaching English as a foreign language that listening is an important form of communication. “Listening comprehension is an integral part of verbal communication, it is influenced by the situational context, the relationship between the interlocutors, the sender and the addressee, and their mutual perceptions of each other as well as their goals in the communicative event” (Dakowska, 2005: 217).

The development of listening skills is often cited as an outcome of CLIL. The CLIL learner is exposed to the language more than the regular English language learner. As a result, he/she picks up plenty of lexical materials which he/she is able to comprehend and take advantage of while formulating opinions, criticizing or responding.

As it has already been mentioned, in the CLIL classroom language and content should be integrated which also means that certain language skills should be practiced (Marsh & Marsland, 1999b: 79). Nothing particular has been written about the way listening skills should be developed in a CLIL classroom. There is a general view among CLIL teachers that since CLIL learners are constantly exposed to a foreign language, no particular

attention is paid to the development of listening comprehension skills (Marsh, Zajac, Gozdawa-Gołębiewska, Czura, Gapińska, Majewska, Papaja, Roda, Urbaniak, & Wróblewska, 2008: 29).

In my opinion, listening comprehension skills are important in the CLIL classroom as their development may facilitate both content and language learning. Ur (1996: 51-73) suggests the following guidelines for listening activities which can be very useful in the CLIL classroom and can be followed by shorter or longer responses:

Performing instructions. Typical teacher-learner interaction when the teacher performs his organizing function. These instructions may be more elaborate in a CLIL classroom due to the fact that the CLIL learners deal both with content and language at the same time. There may be a need on the part of the teacher to repeat certain instructions more than once.

Ticking off items in the list. Learners must comprehend the listening passage with specific clues in order to tick off respective items in their materials. For the CLIL learners this activity may be particularly important as it helps them to pay attention to content as well as to particular language items associated with the concepts e.g. it may be very useful while consolidating the knowledge of particular thematic concepts (such activity was observed during one of the biology lessons observed – the learners were asked to tick items belonging to circulatory system on the basis of the interview they were asked to listen to).

True/false judgment. Learners are asked to demonstrate their comprehension by judging the sentences provided as either true or false according to the content of the passage. This activity can be also very useful in a CLIL classroom as it activates both content and language knowledge. In order to deal with such activity, the CLIL learners should have certain vocabulary knowledge connected with a particular theme. This activity was observed during CLIL geography lessons and was often used after a certain part of material had been covered (e.g. the CLIL learners were asked to listen to the authentic interview with a scientist about the effects of global warming and indicate which sentences were true and false. The CLIL learners had already learnt a lot about global warming effects during their previous lessons).

Cloze. Learners listen to a passage and fill in the blank spaces in the written version of the same text provided for them. This activity can be also very useful in a CLIL classroom as it makes the CLIL learners pay special attention to vocabulary items and what is more,

facilitates vocabulary learning. Being exposed to an enormous number of vocabulary items, the CLIL learners should be provided with many cloze exercises.

Answering comprehension questions. Comprehension questions may be given orally or in the written form. The reason why this type of activity should be used in a CLIL classroom is connected with the future life of the CLIL learners. Many of these learners will be studying or working abroad. They will have to take part in classes at Universities or in some presentations when working and they will be expected to answer questions on the basis of what they will have heard. The reason for introducing comprehension questions into the CLIL lessons is very pragmatic but also very important.

Dictation. It is relevant for listening comprehension problems. The most important feature of this activity is that “the auditory input for processing is converted into its graphemic form” (Dakowska, 2005: 222). In a CLIL classroom dictation may have only one aim, namely to help the CLIL learners memorize vocabulary.

In a CLIL classroom as in any language classroom, the text should be authentic or close to informal discourse. It should be taken into account that the CLIL learners are also language learners whose aim is not only to be able to speak about particular geographical or biological concepts but also to use their language in every day life, that’s why authenticity of teaching materials is so crucial. Secondly, visual information can be very helpful. The CLIL learners have to process difficult concepts in a foreign language and if some of the concepts are presented visually it can help the CLIL learners to memorize them faster. Thirdly, the CLIL learners should be asked to comprehend as much as possible from a single hearing and also be asked to respond immediately to the message. The reason is that in a future life the CLIL learners may find themselves in a situation when a message will not be repeated and they will be required to provide an answer as soon as possible either at the University or in their professional life. Finally, the tasks should be meaningful and a purpose for listening comprehension should be provided. The CLIL learners as well as the ordinary language learners need to deal with tasks which they can associate with their own life and also see the purpose of these tasks in order to be more motivated e.g. the CLIL learners may be encouraged to listen to an interview outside the classroom (broadcast on BBC) with a purpose of analysing this interview during the CLIL lesson and preparing a

summary of the main points in groups. The CLIL learners may be informed about the possibility of receiving additional marks.

According to the Common European Framework of Reference for Languages (2001) “in aural reception (listening) activities, the language user as listener receives and processes a spoken input produced by one or more speakers. Listening activities include: listening to public announcements (information, instructions, warnings, etc.); listening to media (radio, TV, recordings, cinema); listening as a member of a live audience (theatre, public meetings, public lectures, entertainment, etc.); listening to overheard conversations, etc. In each case the user may be listening: for gist, specific information, detailed understanding or implications” (Council of Europe, 2001: 65). Bearing in mind the fact that a CLIL learner is also a language learner, the assumptions provided in the Common European Framework of Reference for Languages should be also taken into consideration when planning a CLIL lesson. The CLIL learners should be provided with all the activities mentioned above with special attention paid to content and also should be taught how to listen for gist, specific information or detailed understanding.

3.4. The development of reading comprehension skills

According to Hillocks (1987: 71) reading texts connected with a particular brand of knowledge provides the learner with a lot of information. Anderson and Pearson (1984: 255) claim that gaining new content knowledge through reading thematically connected texts activates cognitive structures which help in developing reading comprehension skills. In a CLIL classroom reading is extremely important because it activates the CLIL learners’ world and language knowledge and helps them to remember new content information. What is more, the content of the reading tasks is more significant and therefore more involving and motivating to the CLIL learners.

The types of activities involving reading, which can be used in a CLIL classroom are similar to the traditional language classroom. However, in a CLIL classroom content is specifically paid attention to and also integrated with a language.

Extensive reading “serves as communicative experience providing language input in the written form” (Dakowska, 2005: 206). It is a significant source of cultural and factual

knowledge and incidental vocabulary acquisition. In a CLIL classroom the CLIL teacher should encourage the CLIL learners to do extensive reading at home, process the information and prepare some presentations or as an outcome of their reading.

Intensive reading is rather used in a classroom because it is connected with a more in-depth study and analysis of a relatively limited amount of text (Dakowska, 2005: 206). Intensive reading can be very useful to the CLIL learners due to the fact that comprehension processes become more active as language and content learning become more intensive.

According to the Common European Framework of Reference for Languages (2001), “in visual reception (reading) activities the user as reader receives and processes as input written texts produced by one or more writers. Examples of reading activities include: reading for general orientation; reading for information, e.g. using reference works; reading and following instructions; reading for pleasure. The language user may read: for gist, specific information, detailed understanding or further implications, etc.” (Council of Europe, 2001: 68). All the activities concerning reading enumerated in the Common European Framework of Reference for Languages should be also used in a CLIL classroom for the same reason pointed out in the previous section (part I, chapter II, 1.2.3.). The CLIL learner is also a language learner who should be provided with all the possibilities to develop his / her reading comprehension skills.

While introducing reading comprehension activities into the CLIL classroom, it should be remembered that reading comprehension is goal-oriented and may be defined as searching for meaning and sense. In the CLIL classroom, this goal is not only to develop reading comprehension skills or search for meaning of particular words but also to expand content knowledge. Secondly, reading comprehension is the act of comprehension. Comprehension is a highly active constructive process, and it is here that the key to language learning as well as content learning lie. Finally, the process of reading comprehension is dynamic and strategic. In other words, the best idea is to introduce techniques and activities which will not be boring for the learners and which will require the use of different reading strategies. In the CLIL classroom the following reading techniques which are considered to be dynamic and strategic are particularly valued namely, selective reading, detailed reading, preparatory reading and extracting information from a text.

To sum up, reading comprehension is supposed to provide the CLIL learner with an opportunity to decode and comprehend the text as precisely and deeply as necessary to store the material for the use in further communicative activities. What is important for the CLIL learner is to be able to concentrate on the content and the language of the text.

3.5. The development of vocabulary

According to Harley (1996) “vocabulary knowledge is multi-faceted” (Harley, 1996: 3). Due to this complexity, classroom teachers must take a more comprehensive approach to vocabulary development in order for learners to reach a higher quality and quantity of L2 output (Swain, 1996: 529-548; Sanaoui, 1996: 179-199). Coady (1993: 10) emphasizes the importance of vocabulary building as an integral part of reading, viewing it as a strategic skill that is necessary to be included in reading instruction.

There should be a distinction made between general vocabulary and specialised vocabulary used when talking about particular branch of knowledge. General vocabulary is used in a CLIL classroom but it is hardly ever taught. In a CLIL classroom the CLIL learners are taught specialised vocabulary which is needed in speaking, writing, listening or reading tasks. However, as Wolff (2005: 17) notices during a CLIL lesson, a CLIL teacher should first introduce general vocabulary connected with particular field of study and then more specialised vocabulary.

It should be also remembered that a lot of language vocabulary learning occurs incidentally while the learner is engaged in reading. In the CLIL classroom, the CLIL learner is exposed to many specialised texts and articles which not only provide him/her with knowledge of particular concepts but also with specialised vocabulary. In comparison to the regular language learner, the CLIL learner is exposed to huge amount of new vocabulary which he/she has to learn by guessing (Marsh & Marsland, 1999b: 79). This type of learning is called “incidental” learning. Huckin and Coady (1999: 181-93) discuss certain advantages of incidental learning:

- a). it is contextualized, giving the learner a richer sense of word’s use and meaning;
- b). it is pedagogically efficient in that it enables two activities: vocabulary acquisition and reading;

c). it is more individualized and learner-based;

Another seemingly obvious duality of vocabulary knowledge is the receptive versus productive capacity of each language learner. **Receptive vocabulary** refers to the words and expressions learners can understand when reading or hearing them (Belisle, 2000: 2). **Productive vocabulary** refers to the words and expressions that the learners can use correctly when producing oral or written language (Belisle, 2000: 2). Both capacities need to be developed to communicate effectively. In the CLIL classroom a lot of specialised vocabulary may be of a receptive nature. In other words, the CLIL learners may be able to understand particular words or expressions by simply guessing the meaning from the context but they may not be able to use them correctly. This process may occur due to the amount of vocabulary the CLIL learners have to learn.

Gass (1988: 198-217) provides the following framework for language acquisition to the realm of vocabulary development. The framework specifies the stages of vocabulary acquisition from first exposure to output:

- **Perceived input** is when students are made to “notice” the vocabulary and then connect it to past learning;
- **Comprehended input** is similar to Krashen’s “comprehensible input” but goes a step further in assuring that the student has understood it;
- **Intake** is when the student uses the vocabulary in various situations;
- **Integration** is the internalization of the new vocabulary;
- **Output** is the use of the lexical items in the learner’s production;

This hierarchical framework clearly delineates the middle processes needed to move learners from the receptive stage to the productive stage (Ben-Peretz, M., Giladi, M., Dor, B.Z. & Strahovsky, R., 1990: 182). It is obvious that repeated exposure and manipulation of newly acquired vocabulary helps all the learners to memorize it.

In the CLIL classroom special attention should be paid to vocabulary learning due to the amount of specialised vocabulary which has to be in constant usage.

Swain and Carroll (1987: 190-263) developed a descriptive classification of vocabulary related instructional activities which can be also used in the CLIL classroom.

Planned / Unplanned. Planned instruction involves deciding what lexical knowledge will be taught. What are the content-obligatory lexical items to be taught? Each CLIL teacher

should plan which vocabulary items he/she needs to provide the CLIL learners with in order to make them understand subject specific concepts. A very good idea is to provide the CLIL learners in advance with a list of the most important words which they may need during particular lesson. This method would definitely make the CLIL learners feel more comfortable.

Unplanned instruction naturally arises from learner need and interest. All language teachers not only the CLIL ones should be prepared for it.

Building on prior knowledge in L1 and L2. The CLIL teachers need to plan how to recycle previously studied vocabulary to teach new items and reuse words in a variety of contexts (integration of content and language). Peer think-aloud discussions are very useful as they help the learners explain and justify their vocabulary knowledge (Morrison, 1996: 41-75).

Focus on meaning / Focus on formal features of words. In the CLIL classroom attention should be paid both to the meaning of particular words as well as to their features. As a result, the CLIL learners should be provided with many exercises which would enable them to practice and memorize content words.

As Marsh points out, “the benefits of learning a huge amount of content vocabulary are not immediately obvious but they can be seen over a period of time, and one critical factor may not be the actual number of hours to which any learner is exposed to CLIL, but the continuity of exposure” (Marsh & Marsland, 1999b: 78). In other words, the outcome of CLIL as far as vocabulary is concerned can be seen only after a certain period of time. What is important is not the number of hours but the period of time during which the learner is exposed to CLIL. The longer he/she acquires content and language knowledge through CLIL the better results he/she will get.

3.6. The development of grammar

The Common European Framework of Reference for Languages defines grammar as “a set of principles governing the assembly of elements into meaningful labelled and bracketed strings (sentences)” (Council of Europe, 2001: 112-13). Grammatical competence is then

the ability “to understand and express meaning by producing and recognising well-formed sentences in accordance with these principles” (Council of Europe, 2001: 112-13).

There is a widespread agreement reported by both learners and language teachers that although CLIL may have a positive impact on some aspects of target language learning, mastering the theoretical aspects of the structure of the language is often not one of these (Marsh & Marsland, 1999b: 80). Swain argues (in Marsh & Marsland, 1999: 80) that the knowledge concerning grammar of CLIL learners is “weaker”. Weaker does not imply that they fail to function pragmatically but that the language usage may be faulty and particularly poor in certain circumstances.

One thing is obvious, “CLIL teachers should become sensitive to the language and structural issues” (Marsh & Marsland, 1999b: 80). The mere exposure to a language will not necessarily result in mastery of the structures and form of the language. “In a language classroom traditionally grammar teaching has been pursued on the basis of the presentation, practice, and production approach (PPP)”³ (Kieweg, 1996: 4-5). At first the new grammatical feature is presented to the learners via semi-authentic materials that feature particular grammatical phenomenon. By way of a deductive or an inductive approach, the grammatical feature is analyzed and rules are formulated which are supposed to help the learners practise the new language structure. In the CLIL classroom there is no time to introduce such an approach. What is needed is an “integrated approach” (Marsh & Marsland, 1999b: 80). In the CLIL classroom an attention should be given to content and the target language. It should be pointed out that the CLIL learners apart from attending CLIL lessons also attend English lessons during which grammatical structures are introduced. As a result, the role of a CLIL teacher should be to cooperate with an English teacher in order to know which grammar aspects the CLIL learners have just got familiar with and prepare additional exercises using the content of the CLIL lesson. As a result, the CLIL learners would have more possibilities to practise grammatical structures and consolidate their content knowledge. The best idea would be if the grammar activities prepared by the CLIL teacher were of communicative nature. The activities which are designed to make learners speak and listen to each other, that is, to use the language to communicate information or ideas, are very important (Short, 1993: 629-635). When

³ The translation from German into English was done by the author of the PhD thesis.

participating in these, learners are expected to incorporate the smaller bits of language intensively practised previously into the whole of their language repertoire. With these activities focus is on fluency and on fluent use of the language as well as on the content.

Marsh (1999b) claims that the experience of CLIL does impact on language and that this may be positive or negative depending on how the interrelationship between content and language functions. “Integration is prerequisite if CLIL is to achieve the best possible outcomes” (Marsh & Marsland, 1999b: 82). It cannot be done without grammar. Grammar is not simply a set of rules, it is more profitably thought of as a shared set of assumptions about language which make effective communication possible. Therefore, grammar belongs to the language and is a part of Content and Language Integrated Learning (CLIL).

3.7. The development of pronunciation

Pronunciation is perceived as the “cinderella” of language teaching due to its complexity, lack of teachers with formal training in pronunciation among non-native teachers and the split in opinion about the teaching of pronunciation. What should be paid attention to is that in the process of communication, pronunciation plays a crucial role, since successful communication cannot take place without correct pronunciation. Pronunciation is hardly ever paid attention to in the CLIL classroom. If attention is paid to pronunciation, it is only done by means of error correction. There are two reasons behind this: firstly, the CLIL teachers do not feel competent enough to teach pronunciation as they are mostly content teachers and secondly, there is not enough time during the CLIL lessons to be spent on teaching pronunciation. At this point, it should be also stated that not much research has been done on CLIL and pronunciation. Willis and Paterson (2008) conducted research on the importance of pronunciation in a CLIL classroom. The research was carried out in a primary school during CLIL music lessons. According to Willis and Paterson (2008: 7-10) paying attention to pronunciation helped the learners to learn and memorise word and phrases, develop familiarity with the sounds, rhythms and stress of English, experiment and use the qualities of sounds effectively as well as recognise the structure of stories and poems.

In my opinion, some elements of pronunciation should be paid special attention to during the CLIL lessons as they may improve the quality of communication and understanding e.g. consonants clusters at the beginning and in the middle of words, the contrast between long and short vowels, nuclear (or tonic) stress i.e. the stress on the most important word (or syllable) in a group of words and finally proper pronunciation of consonants. These elements can be paid special attention to while introducing some content or language aspects. They do not require a lot of effort and preparation on the part of the CLIL teacher but may be very helpful to CLIL learners.

English is no longer spoken only by its native speakers in the UK, North America, Australia and New Zealand, and by those who learn English in order to communicate with native speakers. It is also spoken among non-native speakers within countries like India, the Philippines and Singapore and internationally among non- native speakers from a wide range of countries/first languages throughout the world. As a result, the CLIL learners need to be exposed to different varieties of English and made aware of the differences in pronunciation in order to avoid future misunderstanding.

3.8. The use of L1 (code-switching)

The possible impact of CLIL on the mother tongue development of learners is an issue which should be discussed. Unfortunately, there is little research on first language development in CLIL. Research on immersion suggests that in case of younger pupils, first language development does not suffer but it may slow down a little during the early years (Giauque & Ely, 1990: 180). At primary level both the mother tongue and target language are often used interchangeably, especially when new concepts are introduced. Marsh also points out that “a basic premise in many schools is that teaching in the target language should not be at the expense of development of the first language” (Marsh & Marsland, 1999b: 82). The term CLIL may create an image that all instruction in a given course should take place in the target language. A key development issue relates to how the use of different languages can be manipulated within the classroom. In fact, the CLIL teachers should pay attention to first language development adapting their methods of teaching. If the CLIL teachers are not paying attention to the needs of their learners concerning the use

of the first language then problems may arise. Wong-Fillmore (1991: 323-346) points out to problems which arise when the same content is taught in one language and then immediately translated into another. The CLIL learners may not be fully involved in the whole learning process, they would rather focus on one language at the expense of the other. Wong-Fillmore (1991: 323-346) also says that using the target language and the first language for different functions is the best idea.

Swain & Lapkin (1982: 37) talk about research on immersion in North America. They argue that “CLIL can increase the child’s meta-knowledge of language and communication” (Swain & Lapkin, 1982: 37). In other words, by using an additional language as a tool, the child is able to notice how the first language functions in human communication.

A lot of CLIL teachers observe that if a given language is used as a tool, the learners become more aware of its communicative function.

Baetens Beardsmore and Kohls (1988: 240-260) point out that much discussion on this subject starts from the problems, namely the negative impact on the mother tongue. In fact, there are a lot of positive outcomes. Marsh (Marsh & Marsland, 1999b: 83) describes a study which was based on interviews with parents. This study revealed that the CLIL learners had become more interested in the structures of the first language. This was seen as a result of the learners having had the opportunity to actively compare it to the target language. According to Wolff (2005: 18) CLIL lessons should not be monolingual. The use of L1 during the CLIL lessons may help CLIL learners in widening their content knowledge. Iluk (2000: 62) points out that there is no rational explanation why the mother tongue should not be used during language classes. Skinner (1985: 383) recommends using the mother tongue during the language classes because it helps in connecting thoughts and words. The use of only L2 during the classes may create a certain kind of barrier which would have a negative impact on cognitive development.

The successful implementation of CLIL involves a range of professionals, namely, the subject teacher, target language teachers, first language teacher and in some cases the teacher of additional foreign languages. As Marsh and Marsland (Marsh & Marsland, 1999b: 51) point out, all these professionals should synchronise their work in which the

content, the first language and target language development are the most important issues. By definition, CLIL is about promoting plurilingualism.

The discussion about the use of L1 during the CLIL classes leads to a very important term, namely *code-switching*.

According to Hoffman (1991) “*code-switching* involves the alternate use of two languages or linguistic varieties within the same utterance or during the same conversation” (Hoffmann, 1991: 110). A more descriptive definition of code-switching is provided by Nilep (2006), who defines code-switching as “the practice of selecting or altering linguistic elements so as to contextualize talk in interaction. This contextualization may relate to local discourse practices, such as turn selection or various forms of bracketing, or it may make relevant information beyond the current exchange, including knowledge of society and diverse identities” (Nilep, 2006: 4). One of the main functions of code switching is to teach the learners the foreign language in question, and since their proficiency in this language is incomplete, the teacher feels it necessary to use the first language in order to make his or her learners understand certain concepts.

Several explanations for code-switching in the second language classroom may be relevant to the CLIL classroom (Flyman-Mattsson & Burenhult, 1999: 59-72):

- a). *Linguistic insecurity*, e.g. the difficulty teachers/learners experience in relating new concepts (Merritt et al., 1992: 112-113);
- b). *Topic switch*, i.e. when the teacher/learner switches code according to the topic;
- c). *Affective functions*, e.g. spontaneous expression of emotions and emotional understanding in discourse with students;
- d). *Socialising functions*, i.e. when teachers turn to the students’ first language to signal friendship and solidarity (Merritt et al., 1992: 112-113);
- e). *Repetitive functions*, i.e. when teachers convey the same message in both languages for clarity;

The *linguistic insecurity* code switching is very often observable in the CLIL classroom both between the CLIL learners and the CLIL teachers due to the lack of confidence in explaining new concepts.

The *topic switch* can be observed when some grammar instructions are given to the CLIL learners or when particularly difficult topics are discussed by the CLIL learners. A probable

explanation for this is the fact that the proficiency of the CLIL learners is not developed enough to include terms necessary in grammar instruction. Most teachers believe that the first language is a necessary means of explaining rules and structures of the foreign language (Marsh et al, 2008).

The *affective switch* can be observed both in a language classroom and in a CLIL classroom.

“A common reason for the use of this kind of code switching is that it is easier both for the teachers and the learners to express feelings in their mother tongue” (Eldridge, 1996: 308). With this in mind, it is not surprising that the teacher’s or learners mother tongue is used for affective reasons also in the classroom.

The *socializing switch* is closely related to the affective switch and can be both observed in a language classroom and in a CLIL classroom. It is often used when the teacher or the learner wants to signal friendship or solidarity. In a CLIL classroom it is often used in order to create positive attitude towards certain tasks which may seem difficult.

The *repetitive switch* is more often observed in a CLIL classroom than in a language classroom due to the difficulty of tasks as well as concepts discussed. One of the main reasons for teacher code switching to the L1 of the learners is to make the learners understand the utterances. In most cases code switching is used as a repetition of the previously uttered sentences. The repetition in L1 can be either partial or full and it is often expanded with further information.

One of the big problems concerning switching is that the reasons for this phenomena are clear but it still cannot be explained why a particular switch-point is chosen. Gumperz and Hernandez-Chavez (1975: 155) observed that this switch changes sometimes in the middle of a sentence and it is not only connected with particular words. This observation led to another phenomena called *code-mixing*. According to Grumperz and Hernandez-Chavez (1975) “*code-mixing* is the embedding of various linguistic units such as affixes (bound morphemes), words (unbound morphemes), phrases and clauses from a co-operative activity where the participants, in order to infer what is intended, must reconcile what they hear with what they understand”(Grumperz and Hernandez-Chavez (1975: 155). Unlike borrowing, which is generally limited to lexical units “code-mixing transfers elements of all linguistic levels and units ranging from a lexical item to a sentence, so that it is not always

easy to distinguish code-mixing from code-switching” (Hamers & Blanc, 1989: 152). Like in every language classroom, code-mixing is also present in the CLIL classroom. It is a natural and purposeful phenomena which facilitates both communication and learning.

To sum up, in the CLIL classroom, teachers appear to try and use the L2 as often as possible. However, teaching a course as CLIL does not mean that a teacher should use the target language only. The L2 should not become a linguistic burden for the learner. If the situation demands that a switch from the L2 to the L1 is required, then it should be done. According to Marsh & Marsland (1999b), if learners are forced to use the L2 only, especially in cases in which they need to use their mother tongue, problems may occur. In fact, CLIL offers choice, two languages may be used and as a result the CLIL classroom may be natural and positive. The extent to which L2 and L1 are used depends on the aims and CLIL approach adopted. “It is useful to consider the L1/L2 ratio of 75%/25% as a minimum starting point for CLIL. This is very low in terms of L2 usage, but it allows for teachers to see CLIL as means of enriching rather than constraining the learning context” (Marsh & Marsland, 1999b: 51). In other words, the CLIL teachers need to gradually reduce the use of L1 during the CLIL lessons but should not abandon it completely as it may be a very useful tool.

4. Content aspects in CLIL

A key question which often occurs when talking about content in CLIL is: “Will the students manage to learn the content sufficiently well when taught through the L2?”. In fact, this question is not very easy to answer due to the lack of research. Marsh (Marsh & Marsland, 1999b: 72) points to a research which concerns examples of immersion. Findings suggest that “even though in the early stages of immersion the learning of content may temporarily slow down, in the long run content mastery is equivalent to that of mother tongue instruction” (Swain & Lapkin, 1982: 90). As Marsh (Marsh & Marsland, 1999b: 72) points out at lower and upper secondary levels, CLIL is considered not to have a negative impact on learning outcomes. A research project which has been carried out reports that nearly 40% of learners felt that the use of the target language did not have a negative impact on content learning, 50% suggested that learning was more difficult and 10% did

not think about this issue. However, there is always a thought that the CLIL learners could achieve more if they had learnt through the L1. Due to this uncertainty, more enquiry is necessary with respect to this issue. Marsland (1999) says that it would be worth considering if there are specific types of learners who might not perform well in the CLIL classroom with respect to their content or language knowledge

One interesting observation which should be mentioned here is autonomy. In a CLIL classroom teachers cannot rely on single sources. In other words, the teacher and the learners have to collect materials from a range of sources e.g. newspapers, magazines, Internet, TV programmes etc. This involvement on the part of the teacher is definitely considered to be very positive. It can be easily said that in CLIL “content learning does not suffer but rather becomes more versatile” (Marsh & Marsland, 1999b: 73). A lot of teachers report that they must cope with slower speed and greater simplification of teaching in order for CLIL to be successful. On the one hand, it may be good for the CLIL learners as they will be able to understand everything. On the other hand, there is a risk that not a lot of content is being taught in comparison to regular subject classes.

Learner selection for CLIL programmes is found to be problematic. As Marsh (Marsh & Marsland, 1999b: 53) reports, future CLIL learners attend the CLIL programmes on a voluntary basis. In other words, the learners decide on their own whether they want to take part in the CLIL classes or not. However, the term ‘voluntary’ is not the appropriate one as many learners who decide to take part in CLIL programmes are under parental or peer group pressure. This may have a negative influence on content learning. A learner who is more interested in the language rather than the subject area may quickly lose motivation in CLIL and end up disrupting those learners who are motivated. There should be a balance of interests on the part of the learner.

4.1. Subjects in CLIL

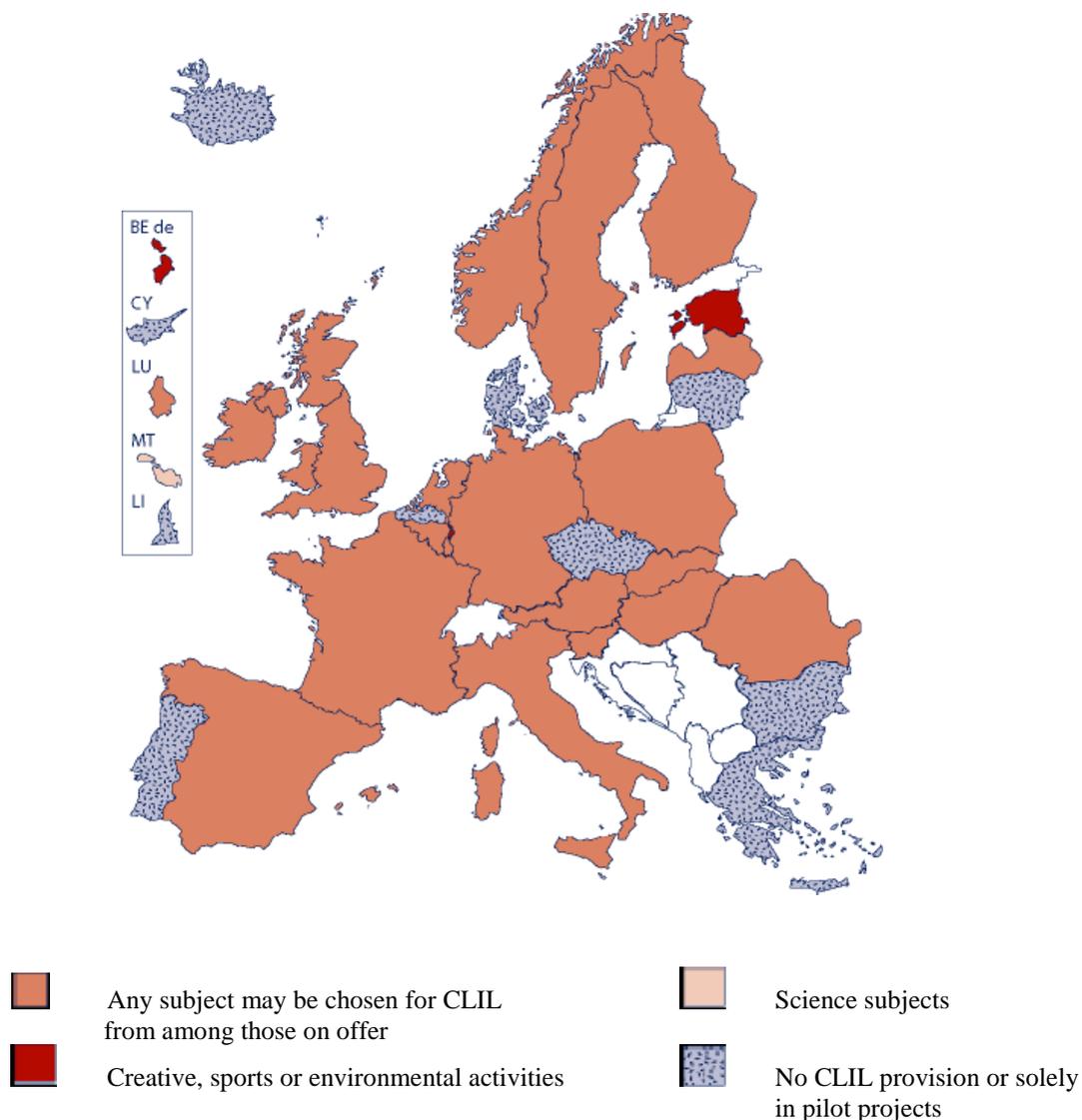
Across Europe many different subjects are being offered in CLIL. This is due to the availability of particular teachers who are willing and have qualifications to teach a subject through the target language. Marsh & Marsland (Marsh & Marsland, 1999b: 75) enumerate

the following subjects which appear frequently in CLIL: environmental studies, mathematics, art, biology, geography, history, chemistry, psychology and religious studies. Mathematics is found to raise diverse opinions on suitability. At primary level it can be an extremely popular CLIL subject. However, the conceptual nature of mathematics, the argument that it is itself a form of language, is often voiced as the reason for it not being a desirable subject. Bezemer (2003) claims that “the most important factor complicating the understanding of mathematical reasoning has to do with a particular feature of the teacher’s language of instruction” (Bezemer, 2003: 7). The level at which mathematics is being taught will also have an influence on its suitability for CLIL. There is a view that mathematics is a difficult subject for CLIL because “the concepts are even difficult to understand in the first language” (Marsh & Marsland, 1999b: 76).

Geography appears to be particularly favoured as a CLIL subject. One reason for this has been said “to be the global dimension of the topics” (Marsh & Marsland, 1999b: 75). Another is the fact that it involves a focus on concrete ‘here and now’ issues. Biology is also a subject which attracts the CLIL learners. It is often the extent to which subject matter can be taught through “learning by doing” which is widely reported to be significant and attractive. In case of biology or geography the CLIL learners may experiment with certain things e.g. some animals or rocks. The CLIL teacher can also use a lot of visual aids e.g. TV programmes, DVD, video recordings or an Internet which make the lesson more attractive. In case of mathematics, chemistry or physics, it is quite difficult. On the other hand, the extent to which a CLIL learner finds particular subject easy or difficult is often linked with the target language skills. Crandall and Tucker (1990: 187-200) argue that the more demanding the cognition required, the higher the level of target skills expected. This is also true in case of CLIL.

What is obvious is that recommendations on the suitability of subjects for CLIL are clearly required on the basis of initial experience. It should be also remembered that there are a few differences between primary and secondary education as regards the subjects taught in the CLIL target language. According to the data provided by Eurydice (2006: 25), in primary education, creative, sports or environmental subjects are taught through CLIL whereas in secondary education, science and social subjects are taught through CLIL. The following figures have been provided by Eurydice:

Figure 2. Subjects in the CLIL curriculum in mainstream school provision in primary education.

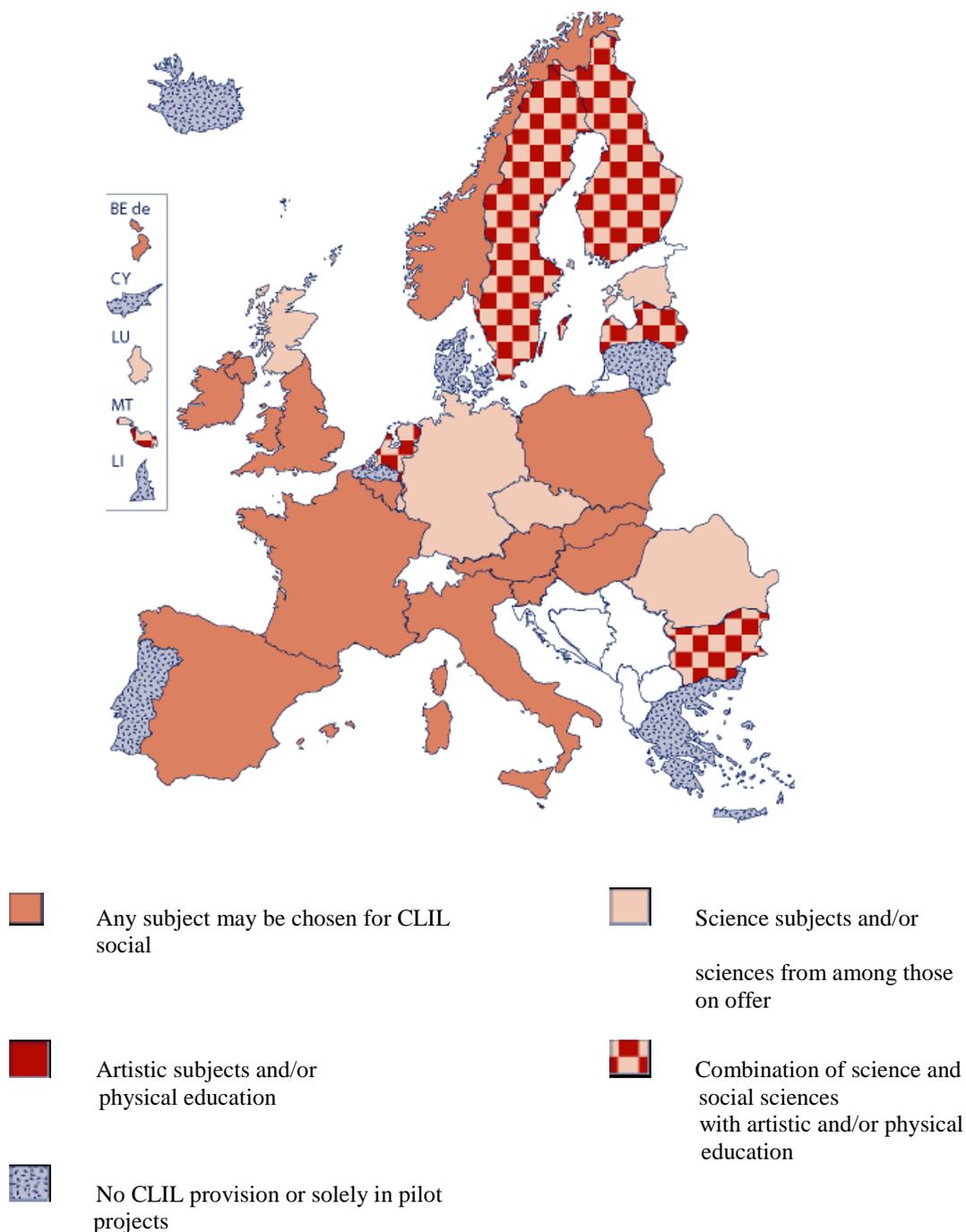


(source: European Commission, 2006: 25)

As it can be noticed from the figure provided above, in most cases any subject may be offered for CLIL in primary education. In Belgium the situation varies between the schools. Generally speaking, all subjects can be offered through CLIL apart from ethics and religion. In Germany, Spain or Netherlands the choice of subjects also varies from one

school or region to the next. In Poland, Hungary, Slovakia or Romania all subjects may be used for CLIL except the languages themselves e.g. Polish, Hungarian, Slovak etc. as well as the history and geography of these countries. In Estonia, mainly creative subjects, sports and environmental activities are offered for CLIL. In Malta, where all schools offer bilingual education (in English and Maltese) from primary level onwards, teaching in the target language (English) focuses mainly on the science subjects. Countries such as Greece, Portugal, Cyprus, Czech Republic offer CLIL through pilot projects.

Figure 3. Subjects in the CLIL curriculum in mainstream school provision in general secondary education.



(source: European Commission, 2006: 26)

As it can be noticed from the figure provided above, in most countries all subjects can be chosen for CLIL in secondary education. In Belgium all subjects are possible except for religion and ethics. However, quite a lot of CLIL provision exists only in pilot projects. In Poland, Norway, France, Spain and Italy all subjects are possible. In the case of Poland the Polish language as well as the history and geography of Poland cannot be provided through CLIL. In Germany, Romania, Estonia, Scotland mainly science subjects or social subjects are chosen for CLIL. In Bulgaria, Lithuania, Finland and Sweden combinations of science and social sciences with artistic and physical education can be chosen for CLIL depending on the region. In countries such as Portugal, Greece, Cyprus or Lichtenstein there is no CLIL provision in secondary education or it exists only through pilot projects.

5. CLIL learning environment aspects

Learners may express some degree of surprise that they can cope with a CLIL course. At the beginning, some learners refuse to speak in the L2 because they are not used to the new situation, namely being asked to speak in a foreign language about a subject. According to Arabski (1989: 12), a lot of learners while being asked to speak a foreign language in a new situation are afraid of making mistakes. The significance of a foreign threshold, and what it means for the learners to reach such a threshold is important to consider. What is also interesting is that “where teachers are sensitive to the difficulties facing some students in starting to use the foreign language, good results in terms of activating L2 usage may be found” (Marsh & Marsland, 1999b: 42).

Many CLIL learners report that learning in the L2 is more demanding. The reason for this may be due to the learners having “to listen very carefully all the time so as to keep up with the class” (Baetens Beardsmore, 1997: 16). In addition, it is important to consider how many CLIL lessons are provided and in what time–span so as to ensure that learners are not too tired by learning in the L2. As Marsh and Marsland (Marsh & Marsland, 1999b: 43) point out, the CLIL lessons should be held during those periods of the day when the learners and teachers feel most energetic and focused on the task.

5.1. Classroom interaction

Relationships between learners and teachers are more formal and remote in some educational sectors than others. Crandall and Tucker (1990: 187-200) claim that such a social distance is often due to course subject matter, the atmosphere at school and the attitude of individual teachers towards learners. In CLIL, the teacher may recognize that by teaching in a L2 he/she may be in a slightly disadvantageous position. This may be due to reduced personality syndrome or to the demand of being a good teacher. The notion of reduced personality refers to “a condition in which a person feels constrained when communicating in a language other than the mother tongue” (Appel & Muysken, 1988: 46). What is more, in some schools, teachers report that they feel more dull or boring when teaching in the L2 because they “can’t be themselves” (Marsh & Marsland, 1999b: 34). Additionally, they avoid being humorous because of L2 constraints and as a result they are perceived by the learners as very strict and serious people. In fact, CLIL can be seen as a positive action. Fruhauf, Coyle and Christ (1996) claim that CLIL is a positive action as it brings the learners together and helps to prepare them for more intensive team-work skills and cooperation later in their courses. In the CLIL context the teachers also need to show and communicate with the learners in a greater range of ways in order to support their learning. It can be said that CLIL facilitates movement towards learners adopting a more adult-adult relationship with the teacher who becomes a professional facilitator. In some schools where CLIL has been introduced, little shift in the learner-teacher relationship can be noticed. The teachers rely on lecture methods and they do not try to be in close relationship with their learners. “If the CLIL context remains a classic adult-learner environment, in which the adult is the one who knows and the one who provides, with the learners in the role of passive recipients, then there are various variables which can upset the learning climate” (Marsh & Marsland, 1999b: 35). In fact, shifting the style towards *shared experience* or *adult-adult* help to cope with certain problems which may appear in the CLIL classroom.

Interaction in the classroom is not random. The matter of who speaks and when is often governed by certain regulations. According to Hall and Walsh (2002) “classroom

interaction takes on an especially significant role in that it is both the medium through which learning is realized and an object of pedagogical attention” (Hall & Walsh, 2002: 186-203). Through interaction either with a teacher or another learner, the learners create mutual understanding of their roles and relationships (Faerch & Kasper, 1983: 34). In other words, relationship and interaction is closely related. Interaction between the teacher and the learners as well as the learners themselves is very crucial in the CLIL classroom as in any classroom.

Van Lier (1988: 94-120) established an interaction framework which is to be adopted by the researcher in the empirical part of the thesis. Van Lier (1988: 94-120) distinguishes four basic types of classroom interaction:

- a). the teacher has no control over the topic and the activity;
- b). the teacher controls the topic but not the activity;
- c). the teacher controls the topic and the activity;
- d). the teacher controls the activity but not the topic;

In a further development of this framework, van Lier (1991: 48-64) adds another dimension, namely the function that the language serves. He distinguishes three types of function:

- a). *ideational* (telling people facts or experiences);
- b). *interpersonal* (working on relationships with people);
- c). *textual* (signaling connections and boundaries, clarifying, summarizing and revising);

The above mentioned types of interaction can be also observed in the CLIL classroom. However, one important issue should be brought in here, which may have a huge impact on classroom interaction, namely, learner autonomy. In a typical language classroom, it is the teacher who is in the centre and therefore it is mainly teacher-learner interaction. In the CLIL classroom, the learner should be in the centre so the interaction shifts from teacher-learner to learner-teacher and learner-learner. In the autonomous CLIL classroom the starting point is not the textbook but the learners. The CLIL teacher recognizes that each member of the class has a history, interests, and emotional as well as educational and communicative needs. The teacher also recognizes that learning is not a simple matter of the unidirectional transmission of knowledge, skills, and expertise. On the contrary, “it is a

process, where anything can be learnt in terms of what is already known” (Dam, 2000: 38-55). Learner autonomy comes into play as learners begin to accept responsibility for their own learning (Fitzgerald, Morrall & Morrison, 1996: 61), and this is what happens in the CLIL classroom. The CLIL learner becomes responsible for his own learning but within the limits imposed by what he/she already knows. It is worth a reminder that the autonomous approach insists that language is learnt partly "from the inside out," as learners attempt to express their own meanings for their own learning purposes. “In the autonomous approach, learning is anchored in the achieved identity of the individual learner and the interactive processes by which learners collaboratively construct their shared learning space” (Dam, 2000: 38-55). The autonomous approach discussed above is also a part of a methodological approach which is going to be presented in the next chapter.

5.2. Methodological approach

As societies are constantly transforming and new communities and identities emerge teachers are required to adjust their instructional practices to the reality of multilingualism in their classrooms. “Teachers must be seen as central stakeholders in the education process and this implies viewing their practical knowledge and notions as a broad pool of resources they will employ in the classroom” (Dooly, 2008: 15). Blanton (1992) claims that “a whole language approach – text-based and student-centred – is a viable alternative to various models” (Blanton, 1992: 285). For many years methodological aspects in the case of CLIL were neglected. The CLIL classroom looked like a traditional teacher-centred language or content subject classroom but the content of the content subject replaced the traditional content of the language classroom (Marsh, 2001: 32). The situation has changed in recent years and a specific CLIL methodology is in the state of development. Reading and reading skills are regarded as very important in the CLIL classroom – learners work with documents and other sources in order to acquire knowledge in the content subject. According to Marsh & Marsland (1999b: 41), a specific CLIL methodology has to take into account the promotion of reading skills as they often decide on the students’ success or failure. Wolff (2005) claims that “the focus on processing strategies in the CLIL classroom is characteristic of a new methodological approach which is both language and content

based” (Wolff, 2005: 10). In fact, learners read texts in order to acquire knowledge in the content subject.

As long as productive skills are concerned, in the CLIL classroom writing skills are considered to be very significant (Wolff, 2005: 10). Learners are asked to compose reports, write down definitions, compile results of observations etc. “Content subject language competence is to a large extent text competence so writing skills cannot be neglected in a CLIL methodology”⁴ (Portmann-Tselikas, 2002: 13-43).

However, the most important thing is the integration of content and language in the CLIL classroom. Marsh, Marsland and Stenberg (2001) point out to the content of the content subject which “is in the centre of the learning-teaching process” (Marsh, Marsland and Stenberg, 2001: 28). Wolff (2005) adds that “in order to deal with the content in the foreign language learners have to acquire both knowledge and skills which are necessary to manipulate this content”. (Wolff, 2005: 10). Whereas Crystal (2007) claims that “the relationship between content and language requires a comprehensive frame of reference in which the theories, methods and findings of various professional domains dealing with language are interrelated” (Crystal, 2007: 31). In other words, ideas from foreign language teaching need to be linked to the content teaching.

When introducing CLIL, teachers believed that learners should be provided with LSP or ESP terminology in a foreign language. Nowadays, the attitude has changed. In CLIL one should begin by providing more general content-subject oriented terminology and should then slowly move towards more and more specific vocabulary (Krechel & Wolff, 1995: 95-112).

The next aspect which should be emphasized here while talking about the CLIL methodology is linked to discourse skills. According to Thürmann (1999: 75-96), discourse skills in a CLIL classroom should be analysed as consisting of two sets:

- general functional set i.e. speech acts such as *identify, classify, define, describe, explain, conclude, argue* etc.
- more specific sets which differ according to content subjects or groups of subjects e.g. *making inductions, stating laws, describing states and processes, working with graphs, diagrams, tables* etc.

⁴ The translation from German into English was done by the author of the PhD thesis

The discourse skills belonging to the general functional set should be paid attention to during all CLIL content lessons as the ability to define, describe or classify certain concepts may be needed during geography, biology, mathematics or other content subjects.

As far as the discourse skills belonging to the specific set are concerned, it is advisable to pay attention to particular skills in reference to the CLIL content subjects e.g. working with graphs or diagrams can be practised during mathematics, the ability to describe states or processes can be focused on during geography or chemistry etc. The aim of this division is to classify discourse skills and make them useful in the CLIL classroom.

Taking into consideration the language-oriented methodological aspect, in comparison to the traditional language classroom where the foreign language is used as often as possible in a CLIL classroom, it is also useful to work with first language materials. Wolff argues that “methodologically, the CLIL classroom should not be characterized by monolingualism but by functional bilingualism” (Wolff, 2005: 11). What is meant by *functional bilingualism* is the use of the mother tongue and mother tongue materials when necessary e.g. using Polish when discussing the history of Poland. This approach is quite new and very different from the traditional approach to language teaching where the use of a foreign language is obligatory.

The last but not least of aspects linked to methodology in the CLIL classroom are co-operative and experiential learning.

Co-operative learning is also very important in the CLIL classroom. According to Marsh (1999b), “co-operative learning refers to means by which learners and teachers alike facilitate learning through methods in which people actively help each other in the learning process. The focus is to develop social, academic and communication skills as an integral part of the subject learning process” (Marsh & Marsland, 1999b: 39). It is not always easy to engage learners in certain types of co-operative method because some of them will be reluctant to use the L2 with their classmates. As has been pointed out by Genesee (1987: 26), the CLIL teacher should use different kinds of non-threatening co-operative methods especially at the start of the course to help learners build up enough self-confidence to actively speak in the L2. What is more, the learners should be aware of the reasons why they study content in a foreign language. Finally, when the group activity involves more

than five or six people, then some of them may adopt “passive communication roles” (Marsh & Marsland, 1999b: 40).

Experiential learning also plays an important role in the learning process in CLIL. Learning by doing is very popular in subjects such as physics, biology or chemistry. Some CLIL teachers argue that by definition, learning through a foreign language is a form of experiential learning for learners (Hauptman, Wesche & Ready, 1988: 437). The opportunity offered in some of the CLIL contexts to intensively use the L2 with learners from schools in other countries is another form of experiential learning opportunity. All in all, one of the most significant outcomes of the CLIL experience is gaining more self-confidence in using the L2.

To sum up, the following core methodological aspects as provided by Mehisto, Marsh & Frigols (2008: 29) should be paid attention to in the CLIL classroom:

Multiple focus

- supporting language learning in content classes
- supporting content learning in language classes
- integrating several subjects
- organizing learning through cross-curricular themes and projects
- supporting reflection on the learning process

Safe and enriching learning environment

- using routine activities and discourse
- displaying language and content throughout the classroom
- building learner confidence to experiment with language and content
- using classroom learning centres
- guiding access to authentic learning materials and environments
- increasing learner language awareness

Authenticity

- letting the learners ask for the language help they need
- maximizing the accommodation of learners interests

- making a regular connection between learning and learners' lives
- connecting with other speakers of the CLIL language
- using current materials from the media and other sources

Active learning

- learners communicating more than the teachers
- learners helping set content, language and learning skills outcomes
- learners evaluating progress in achieving learning outcomes
- favouring peer co-operative work
- negotiating the meaning of language and content with learners
- teachers acting as facilitators

Scaffolding

- building on learner's existing knowledge, skills, attitudes, interests and experience
- repackaging information in user-friendly ways
- responding to different learning styles
- fostering creative and critical thinking
- challenging learners to take another step forward and not just coast in comfort

Co-operation

- planning courses/lessons/themes in co-operation with CLIL and non-CLIL teachers
- involving parents in learning about CLIL and how to support learners
- involving the local community, authorities and employers

The above mentioned core methodological aspects, which are learner-centred aspects, support the holistic development of learners. Multiple focus helps them in concentrating simultaneously both on content and language. Safe and enriching environments help in building up self-confidence and getting rid of inhibitions which might be connected with a new learning environment. Authenticity of learning material as well as authenticity of tasks used in a CLIL classroom is extremely important. It helps the learners to apply the

knowledge gained in a CLIL classroom to everyday life situations. According to Little, Devitt & Singleton (1994) “authentic texts have far greater potential as they have been written for a communicative purpose and as such they are more interesting than texts which have been invented to illustrate the usage of some feature of the target language” (Little, Devitt & Singleton, 1994: 24). In the case of active learning, the learners must have a feeling that they are active and independent participants in a CLIL classroom (Krueger & Ryan, 1993: 96). Active participation increases motivation and what is more, makes lessons more interesting. The role of a CLIL teacher is to stimulate the learning process. It can be also done by responding to different learning styles, building on learner’s existing knowledge as well as by fostering creative and critical thinking. The CLIL learners should have a feeling that they are in the centre of the lesson. Finally, co-operation with other CLIL and non-CLIL teachers, parents and the local authorities may facilitate the CLIL teachers’ work. It should be borne in mind that the main aim of the above mentioned methodological aspects is to help the learners become independent learners who will have sufficient content and language knowledge. What is more, these aspects are supposed to guide the learners towards becoming motivated learners who will look for opportunities to become successful not only in education but also in communication with people coming from other cultural backgrounds.

5.3. Learner’s evaluation

“Evaluation can be defined as a systematic collection and analysis of all relevant information necessary to promote the improvement of a curriculum, and assess its effectiveness and efficiency, as well as participants’ attitudes within the context of particular institution” (Brown, 1989: 222). Taking into consideration CLIL, one very crucial issue should be pointed out here, relating to the notion of separating content and language mastery, which is problematic. The teacher has to evaluate both foreign language and the content of the field discipline. This means that “assessment must be structured in such a way that there remain no doubts as to whether missing elements, or errors are linguistic-oriented or content-related” (Serragiotto, 2007: 271). Experienced CLIL teachers report that “language mistakes do not affect the assessment of content” (Marsh &

Marsland, 1999b: 75). Language mistakes such as grammar or pronunciation mistakes can be ignored in assessment. However, one biology teacher reports that in scientific subjects even a minor linguistic mistake e.g. replacing one preposition with another can have an effect on content learning (Marsh & Marsland, 1999b: 76). When a linguistic mistake has an effect on content learning it may be very difficult for the teacher to make a distinction between a language and content mistake. According to Marsh & Marsland (1999b: 77), teachers who are linguistically better and who show interest in the linguistic matters of CLIL are often those who raise issues relating to assessment.

Other problems which are often discussed when talking about evaluation of content learning are the lack of precision in dealing with some issues, restrictions on formulating argumentation and the inability to use specialized vocabulary in proper contexts. All these issues may have an impact on assessment.

If CLIL is to be considered as an integrated language and content- based learning method then an integrated evaluation of language and content is needed. According to Wolff (1997: 51-64) it is important to have an adaptable testing format which would consist of linguistic and content elements. A possible solution is an assessment rubric in which content and language are shown separately (Wolff, 1997: 51-64). In addition, the testing format should respect the characteristics of the discipline.

Short (1993: 627-656) provides a model in which language aspects are separated from content aspects in the assessment phase:

- *Problem solving*: learners show skills in problem solving (e.g. classifying, dividing, drawing diagrams etc...)
- *Content knowledge*: learners must demonstrate abilities regarding content or subject matter (e.g. identifying the elements of a cell, describing the planets etc...)
- *Conceptual elaboration*: learners show an understanding or knowledge of concepts regarding the content under question and where and when to apply this knowledge (e.g. representing information in graph form etc...)
- *Language use*: learners are tested on their ability to use ESP (e.g. using technical vocabulary etc...)
- *Communication skills*: learners must give information on work they have completed (e.g. explaining ideas, sharing and supporting opinions etc...)

- *Group work*: learners display communicative and social skills and are able to complete group-oriented tasks (e.g. working in groups, explaining concepts etc...)
- *Attitude and behaviour*: learners' attitude towards the subject is also an object of testing (e.g. feeling at ease, displaying confidence etc...)

This model can be used in the CLIL classroom as a checklist. A certain rubric could be created in which the above mentioned categories could be placed.

As far as the construction of written tests is concerned, all CLIL teachers when creating a test should remember its main features. Ellis (1984: 67) points out that all tests should be:

- a). *Practical* – the economical aspects of testing should be taken into consideration.
- b). *Objective* – it should call for independence on the part of the tester.
- c). *Valid* – the test should measure what it is supposed to measure.
- d). *Reliable* – it is connected with the dependence on the results of the test.

However, in CLIL, tests should reflect the activities presented during the class lessons which means that in some cases language and content should be separated and in others integrated.

Additionally, self-assessment and portfolios could be also used in the CLIL classroom (Barbero, Damascelli & Vottoz, 2008: 4). They both reflect true activities carried out by the individual. The interest is on the educational processes rather than the outcome of these processes. In the case of CLIL, it would be useful to think of a portfolio which would not only reflect on linguistic abilities but also on special discipline skills. An attempt to create such a portfolio has already been made in Italy (Serragiotto, 2007: 279). This portfolio refers to different levels based on standards shown in the Common European Framework of Reference for Languages and also provides subject-specific describers.

All in all, evaluation in the CLIL classroom should be treated differently from evaluation in a language classroom. In the CLIL classroom, it is crucial to establish assessment tools which would be used in a subject-specific CLIL classroom. These tools would help in evaluating both content and language separately.

5.4. Teaching materials

Materials are always considered to be a problem for many CLIL teachers. A lot of effort must be put into the development and acquisition of materials on the part of the teacher. What is more, “CLIL teachers should not expect to be able to teach the same amount of content when using the L2 as when using the L1” (Marsh & Marsland, 1999b: 55). In other words, the amount of content introduced in the classroom should be considered to be lower than when the L1 is used as the medium of instruction. In fact, teaching through L2 makes the quality of teaching and learning higher because CLIL teachers have more time than the regular subject teachers to concentrate on essential areas. Adamson (1993) points to the fact that focusing on content in a foreign language also stimulates development of language skills and sub-skills such as reading, writing and grammar. However, during the planning process, “CLIL teachers should carefully scrutinize available materials. Texts from publications should be selected with great care, as L2 readability, requirements, or socio-cultural orientation, can hinder learning motivation and outcomes. Teachers, should identify and contact counterparts in the country or abroad to locate key L2 materials. Materials made by the teachers themselves should be of a very high L2 standard” (Marsh & Marsland, 1999b: 56). However, one observation has been made recently, namely the lack of co-operation between CLIL teachers which may result in the fact that many teachers spend a lot of time on creating the same teaching materials. It would be much easier for CLIL teachers to help each other in creating suitable materials. Yet, the adoption of materials from other countries creates a number of different problems. In fact, it is very difficult to teach the curriculum of one nation by using materials designed for another. Education is never “neutral”. The use of so called “imported” materials may be very confusing but a combination of such materials may be advantageous in providing different perspectives towards the content matter. Marsh (Marsh & Marsland, 1999b: 44) claims that through cooperation between CLIL teachers from different countries, the amount of time invested in materials production may diminish and as a result the quality of teaching may increase.

It should be also emphasized that access to the Internet is a key factor in helping teachers find suitable materials. In addition, CLIL teachers should remember about learning

objectives of the subject area which need to be clearly specified (Darn, 2006: 8), and what is more, they should take into account the fact that CLIL learners need to be provided with more subject specific vocabulary. As a result, learning this vocabulary will require an extra effort on the part of the learner, but it can be facilitated by the provision of additional exercises and elaborative rehearsal.

5.5. Classroom setting

The CLIL classroom does not differ much from the language or subject classroom. However, both content and language aspects should be integrated. As a result, in the CLIL classroom, there should be some elements from the content classroom and the language classroom (e.g. subject-specific maps, grids and also dictionaries, language files etc.). Ideally, each CLIL classroom should be provided with a TV set, a DVD and video player, a CD player, and OHP and a white or blackboard. It is very important to arrange the desks in such a way that it facilitates group or pair work (e.g. desks could be arranged in a circle). What is more, the learners should have enough space to move and to hang their project works on the wall. It would make them feel more comfortably and more motivated to work.

6. Attitudinal aspects and motivation

There is much discussion about the global spread of English as a medium of education. There have been major achievements over the last twenty years in how to teach English as a second/foreign language. Some approaches to subject teaching have developed radically, others less so. This is also the case with how teachers teach, how learners learn and what their attitude towards teaching and learning is. Motivation is extremely important in bilingual education and what is more, it is strongly related to attitude. If the learners are highly motivated their attitude towards bilingual education will be positive. One of the major pedagogic issues is how to keep students motivated and challenged by their learning. In the following chapters attitude and motivation of learners and teachers will be discussed with reference to the CLIL classroom.

6.1. Attitudinal aspects (learners and teachers)

Attitude can be defined as a set of beliefs developed in a due course of time in a given sociocultural setting. In fact a positive attitude facilitates learning. If the learner is reluctant to learn or he/she does not have a positive attitude, he/she does not produce any result. Language learning is effected by the attitude and motivation. Motivated and demotivated learners have different perceptions of their class, teacher and curriculum. Their perceptions are responsible for their attitudes. An individual's perception of the class, the teacher, peer group, syllabus and his/her awareness for future needs effect his/her attitude to language learning.

Attitude towards bilingual education and motivation are very important affective variables to consider in the CLIL classroom. Grosjean (1999) claims that in most cases learners who are able to speak a foreign language fluently “appreciate being able to communicate with people from different linguistic and cultural backgrounds, others feel they have different perspective on life” (Grosjean, 1999: 287). Gardner (1985: 34) emphasizes attitude towards learning situation. In the context of a language classroom or a CLIL classroom the learning situation could include variables such as the teacher, the textbook, classroom activities, classmates and so forth. The learner's attitudes toward these variables will influence the learner's core motivation as well as the learner's orientation. Positive attitudes toward the learning situation will likely produce greater enjoyment in the study of the language, desire to learn the language, and effort expended in learning the language. There are a few reasons why positive attitude towards CLIL is so important. Firstly, CLIL itself is a very demanding approach due to its dual aspects. It is content and language which should be focused on and as a result of that learners should develop a positive attitude towards the language and the content subject. A problem may occur when a learner has a positive attitude towards the language and a negative one towards the content subject or vice versa. Secondly, CLIL demands more involvement on the part of the learner and also the teacher. The learners need more time to “digest” the content in a foreign language and the teachers need more time to prepare the materials. In order to work with a content in a foreign language both the learners and the teachers need to have a positive attitude towards CLIL. Thirdly, CLIL provides the learners with more possibilities for the future. By knowing the

language very well and possessing the content specific knowledge in a foreign language the learners have better chances providing their attitude remains positive. Finally, the learners have access to many materials which are written in a foreign language. One of the most important factors which may have an impact on the learners' attitude towards CLIL is the teacher. The learners want a teacher who can motivate them to speak more and more in the classroom and teach them how to use language outside the classroom. The CLIL learners do not only want to know subject-specific language, they also want to know everyday language. Additionally, they want their teacher to be good at English and capable of correcting their mistakes without hurting their ego or without accusing them of inferior knowledge of English. They want their teacher to create an informal environment in the class where they can learn with fun. The CLIL teacher should remember about his/her role as a facilitator, rather than a controller. He/she should accept learners' mistakes in the language as a necessary part of the language learning. He/she should help and motivate students to use more and more language in their daily life. Learners learning outcomes are influenced by the interpretation of teachers' interpersonal behaviour. If the learners believe that the teacher is associated with them and their learning outcome, the teacher empathizes with them, understands their problems, they react positively and this factor contributes to their motivation level in the CLIL classroom. If the above conditions are fulfilled in the CLIL classroom, the learners are likely to have a positive attitude towards CLIL.

6.2. Motivation (learners and teachers)

Motivation is another important affective variable to consider in the CLIL classroom. Motivation, refers to the driving force in any situation. In the socio-educational model, motivation to learn the second language or a subject in the L2 is viewed as requiring three elements. First, the motivated individual expends effort to learn the language. That is, there is a persistent and consistent attempt to learn the material by doing homework, by seeking out opportunities to learn more, by doing extra work, etc. Second, the motivated individual wants to achieve the goal. Such an individual will express the desire to succeed, and will strive to achieve success. Third, the motivated individual will enjoy the task of learning the

language. Such an individual will say that it is fun, a challenge, and enjoyable, even though at times enthusiasm may be less than at other times (Gardner, 1995: 23). Motivation is also examined in terms of the intrinsic and extrinsic motives of the learner. Gardner refers to this as the learner's orientation. He calls them integrative and instrumental.

Integrative orientation refers to a learner's desire to learn more about the cultural community of the target language or to assimilate to some degree in the target community. Integrative orientation refers to a desire to increase the affiliation with the target community.

Instrumental orientation refers to learners' desires to learn the language in order to accomplish some non-interpersonal purpose such as to pass an exam or to advance a career. These orientations are part of the learner's motivation at the goal level and affect the learner's core motivation. In other words, those who learn for their own self-perceived needs and goals are intrinsically motivated and those who pursue a goal only to receive an external reward from someone else are extrinsically motivated (Brown, 2007: 168). Probably the majority of CLIL learners is intrinsically motivated. They already have a very good command of L2 and they are often motivated by dreams of being able to speak the language like a native-speaker. At the beginning of the CLIL course they are very excited about learning subjects in the foreign language but they are unaware of the demands that will be placed on them. "Many of the teachers made the observation that although the learners are initially very enthusiastic about learning subjects in a foreign language, their enthusiasm wanes before the end of the first year" (Gardner, 2002: 161). Some of the teachers felt that this could be due to the difficulty of certain subjects being taught in a foreign language, others felt that it could be due to the fact that some of the learners were put into the CLIL classroom because of the peer or parental pressure. When students are studying subjects in a foreign language, they have a number of duties and responsibilities. First and foremost, they must pass the course. In addition, however, they must acquire the content of the subject (biology, geography, history etc), the language content (vocabulary, grammar and the like); they must acquire language skills (oral production, aural comprehension); they must develop some degree of automaticity and fluency with their handling of the content in L2; and ultimately, they must develop some degree of willingness to use the language outside of the classroom. This is no small set of

requirements. Thus, it is proposed that teachers can help the content and language learning process by motivating their learners. Dörnyei (2001: 512-523) presents a set of four principles that he considers important in this concept of motivation. They are:

- Creating the basic motivational conditions
- Generating student motivation
- Maintaining and protecting motivation
- Encouraging positive self-evaluation

In my opinion, the CLIL learners should be provided with the basis motivational conditions from the very beginning of their bilingual education. They should be clearly aware what benefits they can get from the CLIL classroom e.g. second language development, better possibilities in the future etc. Apart from that, their motivation should be generated and protected which can be done by the CLIL teachers by designing interesting materials, awarding the CLIL learners and creating a positive learning environment. The CLIL teachers should also encourage positive self-evaluation by providing the CLIL learners with Language Portfolios. On the basis of the Language Portfolio, the CLIL learners will be able to see how much progress they have made and what is more they will feel responsible for their learning. Additionally, teachers, curriculum planners, materials writers and teacher educators need to work together to find the right content and tasks which provide suitable levels of motivation and challenge together with appropriate forms of scaffolding or support to allow such challenges to be met (Brewster, 1999: 83-95). CLIL supports the holistic development of learners who may become motivated, capable, bilingual and independent learners.

III. Recent research on CLIL

In the last part of the thesis, it is very important to discuss the recent empirical research on CLIL. Fruhauf (1996: 177) and Wolff (2005: 20) point to the fact that there is not enough empirical research on CLIL but the situation is changing due to the popularity of CLIL, especially in Europe. According to Dalton and Nikula (2006: 4) one of the factors which has an influence on the popularity of CLIL is its adaptability. CLIL can be easily adapted to local conditions. What is more, the European Commission and the Council of Europe started recommending CLIL by setting up *CLIL Consortium* or organizing special trainings. Additionally, a lot of articles and books on CLIL have been published in which advice on how to approach CLIL can be found.

The range of research concerning CLIL is various depending on the country. According to Fruhauf (1996: 180) the topics of the research on CLIL taking place in Europe are the following:

- The influence of bilingual education on the development of L1;
- The influence of bilingual education on the content subject;
- Effective methods of bilingual teaching;

Even though, Wolff (2005) claims that “research on CLIL is unfortunately still in its infancy” (2005: 20), looking at the first research results published in Germany recently, there are five fields of interest concerning CLIL:

- The acquisition of linguistic competence in a CLIL classroom;
- The acquisition of content subject competence in a CLIL classroom;
- The acquisition of intercultural competence in a CLIL classroom;
- Content subject methodology in a CLIL context;
- The evaluation of CLIL by teachers and learners;

Stohler (2006: 41) points out that for the last 15 years there has been a lot of research on the linguistic outcome of CLIL and its positive impact on second language development (Wode, 1994; Johnson, Swain & Long, 1997; Kroschewski, Scheünemann & Wolff, 1998;

Serra, 1999; Stern & Eriksson, 1999; Burmeister, Piske & Rohde, 2002). Most of this research took place in Scandinavia or Germany.

Maljers et al. (2007: 77) discuss the research carried out in Finland. According to the outcomes of the research, CLIL does not have a negative impact on the development of L1 (Elomaa, 2000; Merisuo-Storm, 2002). What is more, the data also revealed that CLIL has a positive impact on the development of a second language no matter what age the learners are, in which language they speak and at which level of their education they are (Järvinen, 1999; Laitinen, 2001; Rauto, 2003; Haataja, 2005).

Maljers et al. (2007: 135) point to research which was carried out in Holland among learners in a secondary school who participated in a CLIL programme for a period of 5 years. These learners reached a higher level of second language competence than learners from a traditional language classroom and what is more, their knowledge of L1 (Dutch language) did not deteriorate. Additionally, no negative impact of CLIL on content subjects such as geography and history taught through English was noticed.

In Sweden, as discussed by Dentler (2007: 170), another research concerning second language competence was carried out among learners of a secondary school who had content subjects in English. According to the outcome of the research, the participants of the CLIL programme were slightly better as far as second language competence is concerned than learners from traditional language classroom. No negative impact of CLIL on content subjects was noticed but in the case of the influence on the mother tongue, the outcome of two research works revealed some negative impact of CLIL on the Swedish language.

Another research carried out in Germany by Wode (1998) shows that bilingual learners have much more lexical knowledge than traditional second language learners and therefore bilingual education has a positive impact on lexical competence (Wode, 1998: 700).

In Spain, Jimenez Catalan et al. (2006) carried out a research concerning the development of productive vocabulary. The research was carried out among learners of English as a foreign language and learners who participated in the CLIL programme. The aim of the studies was to find out whether CLIL had an impact on the amount of productive vocabulary acquired by the learners. According to the results of the research which was carried out on the basis of 4 different types of tasks (gap-filling exercise, reading

comprehension, composition and a test on vocabulary) it turned out that the CLIL learners were only slightly better as far as productive vocabulary is concerned than the learners from a typical language classroom.

Będkowska-Obląk points to the results of research carried out by Wode (1994-1998), Nold & Grimming (1999) and Bredenbröker (2002) concerning the impact of bilingual education on the development of grammatical competence. Będkowska-Obląk (2002) carried out her own research which showed that bilingual learners who learnt subjects through German reached a much higher level of grammatical competence than learners from a traditional language classroom (Będkowska-Obląk, 2002: 142). The results of her research correlate with the results of the research carried out by Wode (1994-1998), Nold & Grimming (1999) and Bredenbröker (2002).

Hellekjær (2004: 147-161) carried out research concerning the development of reading comprehension skills. The researcher used IELTS (Academic reading) in order to check the development of reading comprehension skills among the learners of a secondary school (the final grade) who learnt English as a foreign language at the advanced level. The same test was administered among the learners who followed the CLIL programme in English. The results reveal that CLIL learners were more successful in passing the test than learners from the traditional language classroom. The CLIL learners received a higher score (78%) than the learners from the traditional language classroom (58%). On the basis of the results, Hellekjær (2004: 156) drew a conclusion that CLIL not only has a positive impact on the development of reading comprehension skills but it also prepares the learners to study in a foreign language.

Llinares and Whittaker (2006: 28-32) carried out research concerning the development of writing skills. The research was carried out in Spain and the participants were learners from a secondary school who followed the CLIL programme. They learnt geography and history in English. The learners were asked to take part in a discussion on a given topic and then write a composition about it. The analysis of the data shows the learners were using the most common words which could be found in their subject course-books. Additionally, they had no problem with coherence and cohesion but some problems with modality and the ability to build longer sentences.

Stohler (2006: 41) discusses an empirical research carried out in Switzerland. The aim of the research was to find out the level of content knowledge of the learners who were taking part in content lessons in their mother tongue and those learners who had their classes in a foreign language (German or French). All the lessons, in the mother tongue and in the foreign language were recorded, transcribed and analysed. Additionally, a lot of interviews were carried out with the learners taking part in the experiment which lasted 2 years. The result of the research was that there was no difference as far as the level of content knowledge was concerned between the learners who learnt content subjects in their mother tongue and those who learnt content subject in the foreign language. Stohler (2006: 44) claims that on the basis of the above mentioned results CLIL has no impact (either positive or negative) on the level of the content knowledge.

Loranc-Paszylk (2008: 150-222) carried out research concerning the effectiveness of CLIL in terms of linguistic achievement with a special attention being paid to the development of productive skills and academic language skills. The research was conducted at the Academy of Technology and Humanities in Bielsko-Biała (Poland). The participants of the research were second year undergraduate students of International Relations. One group was the experimental group (CLIL) studying social studies in English and the other one was the control group which was learning English as a foreign language. The instruments used to measure students' academic reading and academic writing skills were the standard tests from respective sections of Cambridge ESOL exam, IELTS. The development of grammatical competence was evaluated through the results of the *Use of English* test of the Certificate of Advanced English. The testing was carried out in two sessions: at the beginning and at the end of the course. The results of the project suggest that incorporating systematic writing practice into the CLIL formula may enhance the effectiveness of this innovative approach. The students who attended CLIL classes for 2 semesters achieved significantly better results than the students were learning English as a foreign language (Loranc-Paszylk, 2008: 297).

It becomes more and more obvious that CLIL is a very promising approach to bilingual as well as plurilingual education in the European context. Although the term is recent, it is used to describe forms of dual-focused learning which have been in existence for many

decades in certain parts of Europe, and beyond. “It covers some twenty or more educational approaches which share common methodologies” (Marsh, 2006: 32). CLIL can be realised using very different models. Each is determined by the context of the school or university environment, the subjects taught, and the learners involved. It enables development of an integrated educational approach which actively involves the learner in using and developing the language of learning; the language for learning; and language through learning (Coyle, 2002: 27-28). From a content perspective it has been referred to as education through construction, rather than instruction, and from the language view, using languages to learn and learning to use languages (Wolff, 2002: 48).

Having become acquainted with the educational development in the last century as well as with the political, economical and social changes I have to admit that CLIL is a very promising approach to bilingual as well as plurilingual education in the European context. Many European countries joined the EU, borders between the countries disappeared, people move to different European countries and the ability to speak ‘only’ a foreign language is not enough. In order to become successful at work, to communicate with other nations and to be accepted by other nationalities while living in a foreign country, it is important to have knowledge in a particular foreign language. Our ultimate goal should be a language-competent society in which all individuals should have an opportunity to develop an ability to understand, speak, read and write a second language (Padilla, 1990: 23). Even though, there are many varieties of CLIL depending on the country, the aim of this approach is the same: integration of content and language. Due to the fact that Poland became a member of the EU and a country with many opportunities I have decided to carry out research on CLIL. I strongly believe that its adoption may provide the Polish educational system with many beneficial effects.

IV. Recapitulation

The beneficial effects of a generalized adoption of CLIL in schools can be seen at four levels: the learners, the teacher, the school and the society at large (Coonan, 1998: 109-123).

The CLIL learners:

- CLIL learners benefit from the greater number of contact hours with the foreign language;
- CLIL learners benefit from the better quality of their learning;
- Their learning is of a better quality on account of the deeper processing (cf. Wolff in Marsh, Marsland and Nikula, 1997: 60).
- CLIL learners are involved, to use distinction made by Cummins (cf. Chamot & O'Malley, 1987: 227-247), in academically and cognitively demanding activities;
- CLIL learners get a preparation for working life. "This is due to the fact that teaching and learning in a CLIL classroom is comparable to real-life work" (Wolff, 2007b: 22).
- CLIL learners are well prepared for the existence of their future profession. "It is due to the content, which learners and teachers deal with in a CLIL classroom" (Wolff, 2007b: 22).

The CLIL teachers

- CLIL teachers learn to develop and to use methodological approaches adapted to the specific CLIL learning context;
- CLIL teachers become more aware of the language features and non-language features;
- CLIL teachers become more responsible for language learning and development (Coonan, 1998: 110);
- CLIL teachers learn to understand the importance of content in the language processing;

- CLIL teachers are seen as a supporter and promoter of a European and international school ethos (Wolff, 2006: 23)
- CLIL teachers learn how to cooperate with other teachers and schools;

The CLIL school

- CLIL schools are seen as modern schools (Dafouz & Guerrini, 2004: 6);
- CLIL schools are seen as schools in which the integration of subjects is linked with the integration of teachers;
- CLIL schools are seen as schools which have close relations with local, national and international commerce and industries;

The society

- Society benefits from having professional and language wise employees;
- Future employees are also culturally well educated and as a result they are able to move easily within the European Union and the rest of the world (Coonan, 1998: 112);

In practice CLIL is implemented in a variety of ways. It makes use of various forms of instruction. One of the variables is the age of learners. In some countries CLIL starts already in kindergartens. Usually it takes the form of short game-like activities performed in a foreign language (“language showers”) for which a certain time in the daily schedule is set aside. According to Komorowska (2008: 251) an “early start” for the first and second foreign languages is extremely important. “Motivation is easier to raise at a younger age as most teaching methods are based on play and what is more, it helps the children develop transversal competences – generic skills” (Komorowska, 2008: 251). Those skills acquired in an “early start” may help learners in understanding content in a foreign language in their future CLIL education. In primary and lower secondary school, CLIL is used in topics, projects and integrated subjects while in secondary schools CLIL usually means the teaching of several selected subjects in a foreign language.

In the first part of my thesis I tried to look at the theoretical background concerning CLIL. I presented the concept of Content and Language Integrated Learning (CLIL) and tried to place it in the European context. As the empirical study was carried out in a Polish Secondary School, I also tried to present CLIL in the Polish context. In the next part of my thesis I concentrated on the important aspects of Content and Language Integrated Learning (CLIL) such as language, content, learning environment and attitude and motivation. It should be pointed out that the structure of this chapter goes in tandem with the structure of the empirical part. On the basis of these issues, categories of data analysis were established. The last section of the theoretical part is devoted to the recent research on CLIL and some benefits which may be brought by CLIL.

In the next part of my thesis I am going to look at CLIL in practice. As it has already been mentioned in this part of the thesis, CLIL is an innovative approach which is becoming more popular not only in Europe but also in the whole world. Not enough research has been carried out on CLIL in practice and there is still a need to investigate it from different angles e.g. from the language, content or methodological point of view. What is more, the approach is of great interest in the current educational discussions and it can be adapted to all school types: primary, secondary and tertiary. Additionally, it can be introduced while teaching various subjects such as mathematics, biology, geography, information technology etc. Bearing in mind all the benefits that CLIL may bring to the educational system as well as the need of carrying out more research in the field of second language acquisition I have decided to investigate CLIL according to language aspects, content aspects, learning environment aspects and attitudinal aspects and motivation. The aim was to concentrate on changes with reference to the above mentioned categories, which were taking place throughout the whole school year. As it has not been possible to record the learners I have decided to adopt various ways of data collection and data analysis which are to be presented in the next part of the thesis.

PART II
A QUALITATIVE STUDY ON CLIL

V. The empirical study

The previous chapters had a clearly theoretical focus and sought to show the theoretical aspects of Content and Language Integrated Learning (CLIL). An attempt was made to highlight the importance of integrating language and content and to show the key issues of implementing CLIL in secondary education. The main purpose of this part, on the other hand, is to present, discuss and evaluate the findings of a qualitative study aimed at investigating the changes in language education in a CLIL classroom which are related to the language development of the learners, to the processing of content, to the learning environment and to the learners' and teachers' attitude and motivation.

1. Research questions

Despite the variation, a good deal of commonalities can be detected on the level of rationales that are given for the implementation of CLIL. An important pro-CLIL argument, for instance, is that “it creates conditions for naturalistic language learning, thereby contrasting CLIL with the more strongly instructional focus of classical foreign and language education” (Snow, 1989: 201-217). CLIL is thus seen as an opportunity for importing an element of “learning the language in the street into formal education” (Dalton-Puffer and Smit, 2007b: 8). An underlying belief in this connection seems to be that “it is not the learning of second / foreign languages per se which is difficult, but learning them in classrooms” (van Lier, 1988: 3).

Taking everything into account, consistent with the purpose, the main research question is:

What changes in language education have taken place during one school year in a classroom in which three content subjects are taught in English?

The analysis of these changes will allow the researcher to evaluate CLIL in Polish secondary education on a small scale. In order to analyse these changes a detailed description of a number of features which are present in content and language classrooms and therefore in CLIL classrooms will be provided. These features, which will be introduced in more detail later, are related to the language development of the learners, to the processing of content, to the learning environment and to the learners' and teachers' attitude and motivation. Therefore, additional research sub-questions can be provided:

- What changes concerning second language development have taken place during one school year in a CLIL classroom?
- What changes concerning the use of L1 by learners and teachers have taken place during one school year in a CLIL classroom?
- What changes concerning the processing of content have taken place during one school year in a CLIL classroom?
- What changes concerning the learning environment have taken place during one school year in a CLIL classroom?
- What changes concerning learners' and teachers' attitude and motivation have taken place during one school year in a CLIL classroom?

The above additional research sub-questions are to be a useful tool in data presentation and analysis.

2. Study aims

One of the main objectives of the study reported in the following pages is to describe and analyse the changes in language education which occur in the Content and Language Integrated Learning (CLIL) classroom in secondary education throughout one school year. The considerations on Content and Language Integrated Learning presented in the first part of my theses have served as a basis for qualitative evaluation of Content and Language Integrated Learning in secondary education.

Since the concept of Content and Language Integrated Learning is a highly complex phenomenon it is not possible to deal with all its aspects at once. Therefore the study was

confined to changes described and analysed in terms of language development of the learners, the processing of content, the learning environment and the learners' and teachers' attitude and motivation. The purpose of the study is to focus not only on the changes in language education which take place in the CLIL classroom but also on some problems which occur in the CLIL classroom. The study, however, is not only intended to evaluate the changes in language education which occur in the CLIL classroom. It also aims to raise the CLIL teachers' awareness of certain changes in language education which occur in the CLIL classroom, and consequently, to help them understand the process of Content and Language Integrated Learning. Additionally, this awareness may help the teachers take appropriate decisions with regard to special teaching methods in the CLIL classroom. It should be remembered from the very outset, however, that the project to be reported in the following pages is of a descriptive-exploratory nature and its goal is "to analyze the data as they are rather than to compare them to other data to see how similar they are" (van Lier, 1988: 2). Therefore, neither its findings nor conclusions are necessarily generalizable to other contexts and should only be viewed as tentative recommendations that can be taken into account when devising classroom practices and making educational policy choices.

The researcher has decided to concentrate on a qualitative inquiry while conducting the study on Content and Language Integrated Learning and there are a few reasons. Firstly, the concept of CLIL, as mentioned in the theoretical part, is concerned with content and second language acquisition within the classroom in which it is not easy to apply the controls necessary for the experimental study. Secondly, there has been a growing concern in second language research about interactive or distorting effects of the research setting on the kind of language data collection (Tarone, 1982). Experimental settings, which are controlled and artificial, often elicit data different from those produced in natural settings. The researcher wanted to provide a reliable data collected in natural settings. Thirdly, the researcher wanted to describe and understand the changes in language education which occur in the Content and Language Integrated classroom and what is more, to identify a set of variables. Finally, having conducted the pilot studies, which are also to be presented in the following pages, the qualitative study provided the researcher with an opportunity to collect the data through direct encounters with individuals through interviews and

observations and leads the researcher to develop concepts and theories that will help other researchers understand Content and Language Integrated Learning.

3. Scheme of the study

In this part of the thesis the research scheme of the study on Content and Language Integrated Learning (CLIL) in secondary education will be presented. It is based on analysing data gathered through classroom observation, questionnaires, interviews with the teachers and tests' analyses. The main aim of the study is to investigate the changes concerning second language development, the processing of content, the learning environment and the learners' and teachers' attitude and motivation, which occurred in a CLIL classroom throughout the whole school year.

In order to gather data for the analysis, a number of CLIL learners and CLIL teachers were examined. The participants of the study are to be described in detail in part II, chapter V, 3.2.1. & 3.2.2. The researcher decided to apply various instruments of data collection described in part II, chapters V, 3.3., 3.3.1.-3.3.4., which will help to investigate the changes in language education which occur in a CLIL classroom. Observations sheets (Part II, chapter V, 3.3.1.) were used in order to write down all the necessary information noticed during the CLIL lessons. Questionnaires (Part II, chapter V, 3.3.2.) were distributed among the CLIL learners and the CLIL teachers. The main aim of the questionnaires was to gather information concerning attitude towards bilingual education and motivation, which are very difficult to observe. In order to support the data gathered through observation, additional questionnaires concerning the use of L1 and second language development were used. An additional instrument of data collection was used, namely an interview with the CLIL teachers (Part II, chapter V, 3.3.3.). The aim of the interview was to gather additional information which would support the data gathered through observation. The researcher wanted to interview the CLIL learners as well but unfortunately, most of them did not agree to be interviewed. The analyses of the tests (Part II, chapter V, 3.3.4.) written by the CLIL learners throughout the whole school year allowed the researcher to determine the changes in language development, the use of L1 and content processing.

After having received all the data gathered through observations, questionnaires, the interview and tests' analyses it became possible to evaluate the data according to the categories of data analysis established by the researcher (Part II, chapter V, 3.4.).

3.1. Description of the pilot studies

In the following pages, two pilot studies conducted in Poland and in Germany will be presented (Part II, chapter V, 3.1.1.-3.1.2.). The first pilot study took place in Secondary School no. 1 in Kraków. The researcher decided to conduct the pilot study in this school due to the fact that the headmaster as well as the teachers responsible for bilingual education were the only ones who agreed to take part in the research. Before, the researcher had visited another 5 secondary schools with bilingual classes and none of them agreed to take part in the research. The second pilot study took place in Germany (Matare-Gymnasium in Meerbusch, near Essen) due to the kindness of Professor Dieter Wolff who invited the researcher to Essen and made it possible to carry out additional pilot studies in the school mentioned above. Due to the pilot studies conducted in Germany, the researcher was able to distinguish the differences between bilingual education in Poland and in Germany.

The pilot study conducted in Poland lasted six months (January 2006 – June 2006) and it took place in the same school where the main study was conducted (Secondary School no. 1 in Kraków). Two bilingual classes were observed: 1G – students at the age of 16-17, class 2G – students at the age of 17-18 and four teachers who teach subjects through English. The researcher was not allowed to observe class 3G due to the preparations of the final examination (Matura). The researcher observed geography, biology, mathematics and physics taught through English and participated in 6 teaching hours (45 min) per week. The aim of the pilot study was to investigate different aspects of the CLIL classroom and to find out what kind of categories could be established on the basis of the observations.

The studies carried out in Germany lasted only one week. The studies were conducted in Matare-Gymnasium in Meerbusch. Three bilingual classes were observed: learners at the age of 13-14, learners at the age of 15-16 and learners at the age of 16-17 and three teachers, who teach subjects through English. Three subjects taught through English were

observed: history, geography and social sciences, and the researcher participated in 4 teaching hours (45 min) per day. The aim of the study was to have a closer look at the CLIL classroom in Germany where CLIL is very well developed and to compare it to the CLIL classroom in Poland where CLIL is a novelty. On the basis of the results from the pilot studies presented below, the main study was conducted.

3.1.1. The pilot study in Poland

In this part of the study some findings concerning the CLIL classroom will be presented. It should be borne in mind that the data presented below comes from the pilot study and some categories enumerated in Part II, chapter V, 3.4. may not be covered due to the fact that they were established after the pilot study. It should be also added that the Common European Framework was not used in the pilot studies. The only sources of data collection were observations and interviews with the teachers.

Language aspects

While observing the CLIL classroom, language aspects in terms of second language development and the use of L1 in the CLIL classroom were investigated. The aim of this investigation was to find out how second language skills can be developed and in what situations L1 is used in the CLIL classroom.

a). Second language development

While observing different subjects being taught in English, the researcher observed that some language skills and sub-skills were paid more attention to during mathematics or geography and some were paid more attention to during biology.

In the CLIL classroom, which the researcher observed, hardly any attention was given to **speaking skills**. Most of the lessons observed were teacher-centred lessons and it was the teacher who was mainly talking during the lesson. However, some exceptions can be

enumerated: during biology lessons, the learners were asked to prepare presentations on certain topics, e.g. “The nervous system, the spinal cord or cloning etc.” During those presentations, the learners could present their speaking abilities. Additionally, the biology teacher often asked the learners some questions concerning the topic discussed, e.g. “Could you describe the cell-mediated immunity? or Could you describe how the first peptide bond is formed? etc.” so the learners were able to integrate their language skills by using the language of description with the content (describing the subject-related issue). During geography lessons, the learners had more opportunities to take part in some speaking activities such as pair work, group work or discussions. They were also asked to prepare a presentation on “Healthy Lifestyle”. The learners were often put into pairs or groups and were asked to discuss certain topics, e.g. “Glaciers – the positive and negative effects or the greatest volcano eruptions in the history of mankind etc.” During scientific subjects such as mathematics or physics taught through English hardly any speaking activities were noticed. The learners were only given a possibility to speak English when being asked a question in English, e.g. “Could you explain the term velocity?” or “explain the task, please.”

Taking into consideration the CLIL learners speaking abilities, the researcher noticed that throughout the period of observations, the learners were more eager to speak and probably developed their speaking abilities but due to additional activities that they were taking part in within the school, (e.g. preparing some shows or plays etc.) and outside the school, (e.g. meeting foreigners etc.) There was also a significant difference between the learners from the 1st class and 2nd class. The learners from the 2nd class were more open and self-confident while speaking in a foreign language.

As far as **writing skills** are concerned, the researcher was not given an opportunity to investigate the writing skills of the CLIL learners. What was noticed from the observations was that the CLIL learners were given some written assignments mostly in biology and geography, e.g. they were asked to write a report or a summary. Additionally, they were all given written tests which the researcher thought would be interesting to analyse as far as the development of writing skills and error correction is concerned. No writing assignments were given by the mathematics and physics teachers. The CLIL learners mainly dealt with numbers.

As far as **listening skills** are concerned, all the CLIL learners were exposed to a variety of English during all lessons. Most of the CLIL teachers were giving instructions in English, e.g. “Draw a volcano in your notebooks”, (geography), “Draw a picture of a protein” (biology), “Write down the mirror equation” (physics), “Open your book on page...” (mathematics). In the CLIL classroom like in any classroom, instructions are an integral part of classroom reality and they involve attention on the part of the learner. Another activity which is closely related to listening is connected with comprehension questions. Their essential character and levels of cognitive difficulty are not different from questions for reading comprehension. Comprehension questions were asked by all CLIL teachers and the CLIL learners were asked to answer them, e.g. “Looking at this picture, what can you say about this volcano?” (geography), “After reading the article in what way is the urine formed?” (biology), “What is the distance of A from the line BC in the altitude of the triangle?” (mathematics), “On the basis of the article that you have just read explain what *Doppler shifting* is” (physics). Apart from that, all the CLIL teachers use dictation which may be considered a traditional if not an old-fashioned method of “training” listening, e.g. “Put down in your notebooks, the Richter Scale is used to measure the magnitude of an earthquake etc.” (geography), “Write down, the excretory system deals with elimination of the unwanted liquids etc.” (biology), “The domains, range, arguments and values are...” (mathematics), “Write down the definition of lenses, so lenses are ...” (physics). Feature films and other recorded programmes which proved to be a valuable material for listening comprehension were also often used by some of the CLIL teachers: a film on volcanoes (geography) or a film on RNA and DNA (biology). It should be pointed out that feature films and other recorded programmes were only used by the geography and biology CLIL teachers. The above mentioned activities aimed at developing listening skills were used in all CLIL classes observed.

Taking into consideration the development of **reading skills**, silent reading was mostly present in the CLIL classroom. All the CLIL teachers except the mathematics teacher used this activity. The CLIL learners were given a subject-related text and they were asked to read it in silence bearing in mind the comprehension questions. Additionally, most of the

teachers used the reading techniques which are often used in a language classroom i.e. skimming and scanning. It should be also pointed out that the CLIL learners were more often exposed to extensive reading (i.e. reading books, stories, novels or essays) which was related to the content subject. It is also important to mention that there were not many different reading activities used by the CLIL teachers. The CLIL teachers limited themselves to open-ended comprehension questions which required some language output on the part of the CLIL learners.

Looking at **grammar** in the CLIL classroom, it should be made clear that the subject teacher did not pay much attention to it probably due to the lack of time. The CLIL learner often made mistakes as far as the use of articles and the use of tenses is concerned. The geography teacher who is also a language teacher made some references to the proper use of English, e.g. “Let’s revise the different use of the English article” (here the teacher spent a few minutes explaining the use of definite and indefinite articles). The switch into the explanation of English grammar was only noticed when the CLIL learners were constantly making mistakes, e.g. in the use of articles, pronouns or tenses. Additionally, the geography CLIL teacher as well as other subject CLIL teachers paid attention to grammatical errors made by the CLIL learners and corrected them, e.g. “While describing a picture you should use Present Continuous Tense, remind us, please, what this tense looks like” (here, one of the learners tells the whole class how Present Continuous should be formed) (geography), “All proteins consist *of* not *in*” (biology), “You should say these subsets, not this subsets – plural form” (mathematics), “Much frequency not many frequencies” (physics).

As mentioned in the previous part of this study, **lexical development** is very important in Content and Language Integrated Learning and all the CLIL teachers were aware of it. The CLIL teachers did not use special methods as far as introducing new vocabulary is concerned but they used different exercises such as gap-filling, word-formation or matching in order to “integrate” the vocabulary item into the existing scope of English words used by the CLIL learners. While introducing new vocabulary, the geography CLIL teacher provided the CLIL learners with lists of vocabulary translated into Polish and asked them to memorize it for the coming lesson so they would understand what the teacher was talking

about. The biology CLIL teacher was introducing new vocabulary in context by giving the learners a clear explanation of a new word in English and in Polish. The mathematics CLIL teacher was also introducing new vocabulary in English with a direct translation into Polish. The physics CLIL teacher provided the CLIL learners with lists of vocabulary which were explained in English. On the basis of the observations, it can be stated that the CLIL learners had lots of problems with memorizing such a huge amount of vocabulary provided. Fortunately, they were given an opportunity to put it into practice. Additionally, the CLIL learners as all language learners made lexical errors which the subject CLIL teachers often corrected. The most visible errors were related to the confusion of certain words, e.g. *tides* (przyływy) used instead of *currents* (prądy morskie) (geography), *insoluble* (rozpuszczalne) used instead of *solid* (stałe) (biology), *circle* (koło) used instead of *set* (zbiór) (mathematics), *velocity* (szybkość) instead of *frequency* (częstotliwość) (physics). Most of the CLIL teachers corrected the errors by providing the CLIL learner with the correct word. Only the geography CLIL teacher asked the learners to correct the errors themselves.

On the basis of the observations made by the researcher, it can be stated that **pronunciation** is neglected in the CLIL classroom. There were no exercises concerning pronunciation provided and the only attention paid to pronunciation on the part of the CLIL teacher was when a CLIL learner made a mistake which disturbed the flow of communication or understanding, e.g. *rain gauge* [dżauż] instead of [geidz] (geography), *organelles* [ordzanel] instead of [organel] (biology), *variability* [variabylyty] instead of [veriebiti] (mathematics), *sulphuric* [sulfurik] instead of [salfjurik] (physics).

The language activities which could be observed in the CLIL classroom do not differ from the ones present in a language classroom. However, the scope of these activities was limited due to the double focus of the CLIL lessons, namely, both content and language had to be taken into consideration. A closer look at the skills and sub-skills development in a CLIL classroom throughout a longer period of time and a deeper analysis of the factors influencing the skills and sub-skills development will be presented in the main study.

b). The use of L1 (code-switching)

While observing the bilingual classes, the researcher noticed a constant use of L1 on the part of the learners as well as on the part of the teachers. Polish was generally employed for a variety of functions. The learners used Polish during the lessons when a new topic was introduced (it could be classified as a topic switch), e.g. “Co to są *ruchy oscylacyjne*? Nie rozumiem” (translation: “What are *oscillation movements*? I don’t understand”)⁵ (geography), “Jakie są komponenty RNA? Nie *dostaję tego* po angielsku” (translation: “What are the components of RNA?” literal translation from English - “I don’t get it in English”) (biology), “Jak to jest z tymi falami?, jeszcze raz” (translation: “How is it with these waves?, once again”) (physics), “Niech Pani wytłumaczy to równanie po polsku, please” (translation: “Explain it in Polish, please”) (mathematics). At the same time, the learners used Polish when asking for an explanation of certain terms (linguistic switch), e.g. “Czy *urine* to jest *mocz*?” (biology), “Czy *soil* to *gleba*?” (geography), “*Triangle* to *stożek* czy *trójkąt*?” (mathematics), “*Frequency* to *częstotliwość*?”. Additionally, the learners used Polish when asking for particular information about their test or homework. The information was provided in English but they often kept asking questions in Polish (clarity switch), e.g. “Kiedy mamy test?” (translation: “When do we have the test?”), “32 pkt to jaka ocena?” (translation: “What kind of grade do we get for 32 points?”), “Czy z gleb będziemy mieli kartkówkę?” (translation: “Are we going to have a test concerning the soil?”). Apart from that, the learners were also using Polish in spontaneous reactions (affective switch), e.g. “Super, dostałam piątkę z biologii!” (translation: “I got five in biology!”), “Nie chcę być pytana” (translation: “I don’t want to be asked”).

The teachers under observation usually used the Polish language while introducing the new topic (topic switch), e.g. “Napiszcie sobie nowy temat – komórka” (translation: “Write down a new topic – the cell”) (biology). In addition to that, they often gave a short lecture in English and then they translated it into Polish. All of them used Polish when introducing new terms (linguistic switch), e.g. “*Velocity* to *prędkość*” (physics), “*tremor* to *drganie*” (geography), “*Cortex* to *blona*” (biology), “*Equation* to *równanie*” (mathematics) etc. Apart from that, they often used Polish when being asked for an explanation (topic switch),

⁵ The translation from Polish into English in Part II, chapter V, 3.1.1. was done by the author of the PhD thesis

e.g. “*Drganie* to pewnego rodzaju ruch który ma miejsce podczas wstępnej fazy trzęsienia ziemi” (translation: “Oscillation is a kind of movement which takes place during the initial earthquake phase” (geography). The teachers often prompted questions in English and asked the learners to answer them in English. However, if the learners had had some problems they would have given clues in Polish (topic switch), e.g. “Could you give me an example of the Doppler’s effect, no efekt Dopplera, to było na poprzedniej lekcji?” (translation: “..., come on, the Doppler’s effect, we discussed it during our previous lesson” (physics), “How much urine do you think we produce? Ile moczu produkujemy dziennie, jak myślisz?” (biology), “Come to the blackboard and draw a volcano, no wulkan narysuj” (translation: “..., come on, draw a volcano”) (geography), “Come to the blackboard, draw the triangle and explain the solution, OK, zapomnij o angielskim, wszyscy mają to zrozumieć” (translation: “..., OK, forget about English, everybody should understand it”) (mathematics). Apart from that, the teachers also used Polish while giving instructions. They used English first and then repeated the same message in Polish (clarity switch), e.g. “Open your books on page 23”, Polish: “Otwórzcie książki na stronie 23” (mathematics), “Analyse the map on page 51” Polish: “Zanalizujcie mapkę na stronie 51” (geography). While trying to control the class the teachers used Polish only (affective switch), e.g. “Pracujcie w grupach i bądźcie cicho” (translation: “Work in groups and be quiet”) (biology), “Z czego jesteście tak zadowoleni? Daj Wam Bozia zdrowie” (translation: “Why are you so happy? Let the virgin Mary give you health”) (mathematics), “Wy to jesteście zorganizowani, chyba omdleję” (translation: “Well, you seem to be well-organised, I will faint”) (physics).

The learners themselves often used Polish when working in groups or pairs. The topic of their conversation was hardly ever subject-related (socializing switch), e.g. “Wiesz, cały czas zastanawiam się gdzie zorganizować moje urodziny, masz jakiś pomysł?” (translation: “Well, I’m still thinking where to organize my birthday, do you have any idea?”) (geography – a conversation between two girls who were supposed to work on the main characteristics of a volcano eruption), “Nie wiem co mam zabrać do tego Londynu, jakie ubrania zabierasz” (translation: “I don’t know what to take to London, what clothes are you taking?”) (biology – a conversation between two girls who are supposed to watch a film about the RNA).

As it has been mentioned above, the use of L1 (code-switching) in all bilingual classrooms is present and probably cannot be avoided. An investigation of the changes in the use of L1 within a certain period of time will be presented later on in this part of the study (the main study).

Content aspects

As has already been mentioned when discussing “content aspects” before the researcher found it very difficult to provide any data concerning the content. At that stage of the study, the researcher observed the way the CLIL learners dealt with the content acquired through a foreign language and also distributed a questionnaire (Appendix: part 9) among the CLIL learners asking them whether they liked learning particular subjects or not and why. Unfortunately, the researcher was not allowed to use the CLIL learners’ grades. The questionnaires were distributed by the researcher in two classes – 1G and 2G and collected the same day.

On the basis of the observations and the questionnaires, it can be said that physics and mathematics seemed to cause a lot of problems in a foreign language. The researcher observed that the CLIL learners seemed to have difficulties with understanding certain concepts in English and as a result they often switched into Polish.

While being asked which particular subject the CLIL learners did not like studying in English (Appendix: part 9) the answer was physics - **32** CLIL learners out of **33** from the 1st grade and **all** of the CLIL learners from 2nd grade declared they had problems with this subject. In the case of mathematics, **18** CLIL learners out of **33** from the 1st grade and **13** CLIL learners out of **22** from 2nd grade admitted having problems with mathematics. When asked for the reasons, the CLIL learners provided similar answers in both classes. The reasons provided by the CLIL learners are the following: “The lessons are not interesting at all”, “the lessons are difficult”, “We have to learn so many new words”, “the vocabulary is difficult, I don’t understand physics in Polish and how am I supposed to understand it in English”, “I can’t concentrate, the mathematics teacher is too talkative”, “There is no point learning physics in English, what for?”, “I don’t use this vocabulary outside the classroom,

I'm not going to talk with my American friends about different types of sets", "It's so hard that I have to switch into Polish and the teacher also does it", "The atmosphere is so tense, the subject [physics] is difficult and the teacher is so strict", "While learning mathematics in English, I'm really under stress". As it can be seen from the comments provided by the CLIL learners, there are a few factors not only the difficulty of the subject itself which make the subject difficult.

Geography and biology appeared to be particularly favoured as CLIL subjects. One suggested reason for this is the global dimension of the topics. While observing the geography and biology lessons taught in English, the researcher noticed that the CLIL learners were more willing to actively participate in the lessons. They were taking part in discussions, preparing projects and what is more, they hardly ever switched into Polish. When being asked which subjects they liked studying in English **19** CLIL learners from the 1st grade answered geography and biology, **9** answered biology only, **3** answered geography only and **2** answered none of them. In 2nd grade, **5** CLIL learners answered that they liked both biology and geography, **14** answered that they liked geography only and **3** CLIL learners answered that they didn't like any of the subjects mentioned. When being asked for the reasons the following answers were given concerning both geography and biology: "The atmosphere is much better – the geography teacher always smiles", "The teacher is humorous", "The teacher pays attention to the language mistakes and really cares about our English" [geography], "We can take part in different projects" [biology and geography], "I'm not bored during the lessons and I'm trying to be active", "I'm more concentrated, I don't think about stupid things", "The lessons are more interesting – e.g. we watch some films in English" [geography], "I have a feeling that I learn faster in a foreign language", "The teachers are younger and they teach better" [biology and geography], "I'm more motivated by the teacher, she is so nice and she knows how to make me learn", "Geography is better and that's it"

To sum up, the content aspects in CLIL are of great importance and it is worth investigating them. In the main study more data concerning the content aspects will be presented.

Learning environment aspects

While conducting the pilot study the researcher established the category - learning environment which consisted of the following sub-categories: interaction in the CLIL classroom, the teacher's methodological approach, evaluation, teaching materials used and the classroom setting.

a). Classroom interaction

While investigating interaction, the researcher decided to adopt van Lier's (1988: 94-120; 1991: 48-64) framework which has already been discussed in part I, chapter II, 5.1.

Type 1 which occurs when the teacher controls neither topic nor activity could not be observed very often. Single examples in all subjects were observed, e.g.

Geography:

L: "Pani profesor, co robimy z tym Halloween?" [translation: "Mrs Professor, what are we going to do with Halloween?"]

L: „Tomek napisał scenariusz, mamy super pomysł” [translation: "Tomek has written a script, we have a superb idea"]

T: "Teraz mamy geografię, porozmawiamy później" [translation: "No, we have geography, we will talk later on"]

L: "Pani profesor, bardzo prosimy" [translation: Mrs Professor, please]

(here, the teacher only smiled and the learners started discussing the script for Halloween).

Biology:

The teacher introduced the topic "Nervous System" and started talking about some diseases. The learners seemed to like the topic very much and started discussing different diseases that they heard about, e.g.

L: "Pani profesor, na czym polega katatonia? Czy ta choroba jest związana z układem nerwowym?" [translation: Mrs Professor, what is catatonia? Is it connected with the nervous system?"]

T: "Tak, polega to na tym, że na chwilę tracimy przytomność" [translation: "Yes, we lose our consciousness for a short time"]

L: “A ja ostatnio widziałam wypadek i chłopaka wzięli, żeby pobrać mu narządy” [translation: “Well, I have seen an accident recently. A boy has been taken to the hospital in order to have his organs taken”]

(then a discussion starts connected with transplantation of particular organs, the teacher lost control over the discussion).

Mathematics:

L: “A my widzieliśmy Pania wczoraj w kinie” [translation: „We saw you in the cinema yesterday”]

T: “Naprawdę? Wy się macie uczyć, a nie chodzić do kina” [translation: “Really? You are supposed to study instead of going to the cinema”]

L: “Byliśmy na *Szklanej pułapce 4* z Bruce Willisem i wie Pani co...” [translation: “We saw *Die Hard 4* with Bruce Willis and you know...”]

(the learners started talking about the film).

Physics:

The teacher introduced the topic “The lenses” and asked them to work in groups and identify certain lenses.

L: “Wiesz, widziałam fajne szkła kontaktowe” [translation: “You know, I have seen really nice contact lenses”]

L: “Gdzie?” [translation: “Where?”]

L: “Na necie” [translation: “On the Internet”]

L: “Były różne kolory. Myślę, że na jakąś imprezę sobie zapodam, ale nie wiem jeszcze jaki kolor” [translation: “There were different colours. I think that I will buy some for a party but I don’t know which ones”]

(the conversation continued for nearly 15 minutes, the teacher did not pay attention to it).

According to van Lier’s (1991: 48-64) framework, the functions of the above presented interactions could be classified as interpersonal. All of them were not directly connected with the lesson but served to develop interpersonal relationships between the CLIL teachers and the CLIL learners. It should also be pointed out that all the conversations were in Polish which may indicate the fact that both the teachers and the learners feel much more

natural when using Polish in a conversation which is not directly related to the subject matter discussed during the lesson.

Type 2, when the teacher controls the topic but not the activity could be observed during all lessons, e.g. when giving instructions: “Open your books on page 52 and look at the picture” (geography), “Look at the board” (biology), “Think about the distance between the point A and line BC” (mathematics) “Take the handout and read the short text” (physics).

The function of the above described interactions could be described as textual according to van Lier’s (1991: 94-120) framework.

Type 3 which involves teacher control of both topic and activity, (e.g. eliciting answers or discussing certain issues) could be also observed during all lessons, e.g. “Could you look at the pictures in your book and compare them. What are the differences between the two volcanoes showed on the pictures?” (geography), “OK, Ania, it’s your turn to describe the cell” “As you can all see the cell is made out of jelly which serves as a cytoplasm” (the learners’ description of a cell – project work) (biology), “Come to the blackboard and draw a triangle, please” (mathematics), “What are the types of electromagnetic spectrum, Tomek, answer please” (physics).

The function of the such interactions would be also textual and additionally ideational which is connected with providing the learners with some facts which was often done through the teaching materials provided by the teacher.

The last type of interaction, namely controlling the activity by the teacher but not the topic could be observed during all lessons, especially when the CLIL learners were working in pairs or in groups, e.g.

Geography:

T : “As a revision, discuss the negative forces. Do it in pairs, please”

T: “OK, what do you think are the factors?”

L: “Well, I remember that there are the forces which are inside and outside the Earth”

L: “Lodowce” [translation: “Glaciers”]

L: “No tak” [translation: “Yes, I agree”]

T: “You two, English, please”

Biology:

T: “In groups, discuss the non-specific and specific defence of cell-mediated and humoral response, you have 3 minutes”

L: “OK, let’s do it quickly!”

L: “Do you remember anything?”

L: “Ja nic nie pamiętam. Otwórzmy zeszyt pod stołem, chyba nie patrzy” [translation: “Let’s open the notebook under the table, I hope she’s not looking at us”]

L: “A jak tam było wczoraj?” [translation: “What about yesterday?”]

L: “Chłopcy, pracujmy, zaraz Nas zapyta” [translation: “Come on boys, let’s work, she will ask us in a minute”]

Mathematics:

T: “OK, exercises 34 page 27, you have 2 minutes to do it. It’s easy”

T: “Nie chce mi się tego robić, pewnie mnie nie zapyta, mam ocenę” [translation: “I don’t feel like doing it. I have a grade so I won’t be asked”]

T: “Nie przeczytałem lektury na polski, poczytam streszczenie” [translation: “I haven’t read a book for Polish, I will read the summary”]

Physics:

T: “In pairs, discuss the Doppler’s effect”

L: “Wiesz, wczoraj kupiłam sobie nowy kostium kąpielowy” [translation: “You know, yesterday I bought a new swimming costume”]

L: “Super! Jaki?” [translation: “Superb! Which?”]

L: “Dobra, potem Ci powiem, bo idzie...” [translation: “OK, I will tell you later because he is coming...”]

The above mentioned interactions could be also classified as textual and also interpersonal.

The examples of different types of interaction which have been provided by the researcher are a very interesting issue to be further investigated especially as far as the changes in these interactions are concerned.

b). The teacher's methodological approach

Most of the CLIL teachers observed still used the teacher-centred approach. Many of them used to give a lecture on particular topic expecting the CLIL learners to take some notes. The lectures were usually given in English and then translated into Polish. Only few teachers adopted the Communicative Method of teaching Content and Language where all the four language skills would be treated equally. Within the Communicative Method which is learner-based, the researcher noticed the following activities which were adapted into the CLIL lesson:

Reading:

- *skimming and scanning*, e.g. "Read the text quickly and tell me which lowlands are enumerated" (skimming) "Now read the text once again and answer the questions given on the next page" (scanning) (geography);

Listening:

- *note taking*, e.g. "Today we are going to talk about different types of mirrors. Please, make some notes because it's not written in your book. There are different types of mirrors: convex and concave etc." (physics);

- *following instructions*, e.g. "Give me the names of the geological forms, please" (geography);

- *TV broadcast*, e.g. a film about the construction of RNA (biology);

- *dictation*, e.g. "Write down the following formulas" (mathematics);

Speaking:

- *discussion*, e.g. "The advantages and disadvantages of electromagnetic waves" (physics);

- *projects*, e.g. the learners were asked to make their own cell and present it in class (biology);

- *pair work*, e.g. "In pairs, discuss the quality of light" (physics);

- *group work*, e.g. "In groups, try to join two strings of DNA" (biology);

Writing:

- *composition*, e.g. "Describe the results of volcano eruption" (geography);

In spite of the different techniques described above, it should be pointed out that all the CLIL teachers referred to the CLIL learners for the purpose of: explaining concepts, repeating complex statements, summarising ideas, posing questions, making examples, making hypothesis, formulating new questions, correcting errors, presenting problems, explaining problems, discussing problems, solving problems and discussing solutions.

As can be seen the methods and techniques used in the CLIL classroom are very similar to the methods and techniques used in a regular language classroom with one exception: in the CLIL classroom Content and Language has to be integrated and thus, the teacher also has to pay attention to the content.

c). Learner's evaluation

Contrary to what might be believed, all the CLIL teachers used similar techniques to evaluate CLIL learners. The main evaluation technique was a written test. As far as geography and biology are concerned, the factual knowledge was tested in Polish while English was used to test the knowledge of key terms and content terminology. The tasks in English were usually closed-ended, e.g. multiple choice, fill-in-the-gaps, translation or cloze tests. In case of correction, what was the most important was the content and the spelling of the English words. Grammatical mistakes were corrected but they did not influence the grade. In the case of mathematics and physics, the tests were given in Polish and they consisted of various formulas to be solved. Both CLIL teachers were aware of the fact that these subjects were very difficult for the CLIL learners and English was treated as something additional. The CLIL learners were given the grades for the content knowledge not for the content and language.

Oral evaluation predominantly consisted of some questions which the CLIL learners were asked. The questions concerned the material previously covered. The CLIL learners were usually asked to come to the board or to sit opposite the CLIL teacher and answer the questions. In geography and biology, the CLIL learners were usually asked questions in English and in case they could not answer the CLIL teacher would repeat the question in Polish and ask the CLIL learner to answer it in Polish. The CLIL learner was always

informed that by answering the questions in Polish he/she would get a lower grade. In the case of mathematics and physics, the CLIL learners were asked to present some formulas on the board, find a solution and explain everything to other CLIL learners. The language used was not taken into consideration. The most important was the content.

One more form of evaluation which should be mentioned here is the project work in English. The project work was only used in geography and biology. The CLIL learners were divided into pairs or groups and were asked to prepare a project on a particular topic (e.g. different types of cells and their functions <biology>, different plutonic and seismic activities <geography> etc.). All the projects were prepared and presented in English and the CLIL learners were given additional grades. The CLIL learners were not asked to prepare any projects in mathematics or physics. Other non-conventional methods of evaluation such as portfolio, diary or conferences were not used.

In the main study, the researcher looked at these methods of evaluation more closely within one school year.

d). Teaching materials

As has already been mentioned in the previous part of this thesis, the CLIL teachers lack materials and as a result they have to rely on different sources.

All the CLIL teachers, relied on the Polish course books which they often used during the lessons. Additionally, all the CLIL learners were provided with some handouts where certain facts concerning particular topics of the lesson were written in English. All the materials written in English were adapted to the lesson. Apart from that, some of the CLIL teachers, e.g. the geography teacher and mathematics teacher, provided the CLIL learners with some vocabulary lists. The vocabulary lists were given to the CLIL learners in advance so they had some time to memorise the words and prepare themselves for the lesson. Most of the CLIL teachers used visual aids, e.g. OHP, video or DVD documentaries which helped the CLIL learners understand particular concepts. The only thing that the CLIL teachers did not use during the lessons was the Internet which was due to the lack of Internet access in the classrooms. All the teachers used the blackboard in order to write down some important information.

In the main study, the researcher investigated the use of the teaching materials according to the different stages of the lesson throughout the whole school year.

e). Classroom setting

All the classrooms observed by the researcher were very similar. The only thing that differed was the realia in the classroom, e.g. different maps of the continents or the world in the geography classroom, objects of some animals in the biology classroom, tables of logarithms in the mathematical classroom, astronomical globe in the physics classroom etc. All the classrooms were quite big – they were designed for about 35 learners not more. The desks were arranged in rows and the teachers did not have access to all students. The teacher's desk was put opposite to the learners' desks so everybody could see the teacher. The blackboard was situated behind the teacher's desk. Additionally, in the geography classroom there was a TV and a video situated next to the teacher's desk and in the biology classroom there was an OHP next to the teacher's desk. On the walls, there were some pictures, maps or diagrams which were subject-related. As mentioned above, there were also some subject-related realia which were usually situated in the back or in the front of the classroom.

Further investigation concerning the classroom setting was done in respect to the changes in the classroom setting throughout the school year. The findings are to be presented later on in this part of the thesis.

Attitudinal aspects and motivation

It should be clearly stated that at this stage of the studies the researcher did not conduct any questionnaires concerning the CLIL learners' and the CLIL teachers' attitude towards CLIL as well as the CLIL learners' motivation. The researcher noticed that these issues could be very interesting to investigate in the main studies. The data concerning attitudinal aspects and motivation was investigated during the main study and the data as well as its interpretation will be presented later on in this part of the thesis.

The aim of this chapter was to present the data concerning the pilot study. Brief evaluation of certain aspects concerning CLIL was presented. It should be pointed out that the pilot study served as an “inspiration” for the future evaluation of Content and Language Integrated Learning. In the next chapter some more data concerning additional studies which were carried out in the CLIL classroom in Germany will be presented.

3.1.2. The pilot study in Germany

In the following part of the study additional findings concerning the CLIL classroom will be presented. It should be borne in mind that the data presented below comes from the pilot study conducted in Germany which lasted a week. The findings will be presented according to the categories discussed in chapter 3.1.3 in this part of the study. Similar to the analysis of the pilot study conducted in Poland, some categories enumerated above may not be covered due to the fact that they were established after the pilot study. The Common European Framework was also not used in this pilot study. The only sources of data collection were observations and interviews with the teachers.

Language aspects

Similarly to the pilot study conducted in Poland this category has been divided into two sub-categories i.e. second language development and the use of L1 in the CLIL classroom.

a). Second language development

Predictably, some language skills were paid more attention to during history or social studies and some were paid more attention to during geography. It all depended on the topic of the lesson.

Contrary to the CLIL lessons observed in Poland, the teachers paid a lot of attention to the development of **speaking skills**. The lessons were learner-oriented which means that “the learner was the central figure in the process of language learning” (Richards and Rodgers,

1986: 103). The teacher acted as a communicative partner. The CLIL learners were given a lot of possibilities to speak English, e.g. “What can you see in the picture, could you describe it, please?” (geography), “Why did the war begin?” (history), “OK, work in groups, one group is for introducing new currency and the other one is against introducing new currency. Work on your arguments, I want to have a heated discussion here” (social studies). Additionally, the CLIL teachers paid attention to the language which can be used while describing pictures or while taking part in discussions by reminding them certain expressions, e.g. “This picture shows... or in the left hand corner... etc” (language of describing pictures) (geography), “I can imagine..., in my opinion... etc.” (language of expressing one’s opinion) (history), “Firstly, secondly... on the one hand... on the other hand etc.” (language of discussion) (social studies). The researcher was also informed that the CLIL learners were very eager to take part in some subject-related projects where they were asked to collect some data on a particular topic, e.g. “The greatest deserts in the world” (geography), “The reasons for the July 1914 crisis” (history), “Why do we pay taxes? The tax system in Germany” (social studies) etc. Apart from that, the CLIL learners were really eager to take part in the discussions – they were not afraid of speaking in a foreign language and what is even more important, they were not afraid of expressing their own opinions on subject-related topics. It should be pointed out that contrary to the Polish CLIL learners, the German CLIL learners while working in groups or pairs used English only.

Unfortunately, the researcher was not given an opportunity to investigate the **written skills** of the CLIL learners in Germany but she was informed that the CLIL learners were often given some written assignments in all subjects taught in English. They were often asked to write a summary of an article given, compose an argument or a report. All the written assignments were content-related, e.g. “Observing the changes in weather for a period of 2 weeks, write a report” (geography), “The outbreak of the 1st World War – who is to blame? Write an article giving both sides of the argument” (history), “Read the article about *peer pressure* and write a short summary – 60-80 words” (social studies). Similar to the Polish CLIL learners, the German CLIL learners were also given written tests throughout the school year. The researcher was not given an opportunity to investigate the tests but she

was informed that the tests were given regularly after having covered a certain amount of material. The tests differed: some consisted of open-ended questions and some consisted of closed-ended questions. At the end of the school year, the CLIL learners were given written tests in each subject taught in English. They were tested on the knowledge gained throughout the whole school year.

The German CLIL learners similar to the Polish CLIL learners were given an opportunity to develop their **listening skills**. They were given an everyday discourse rather than simplified or edited one. The CLIL teachers asked them a lot of questions which they were supposed to answer, e.g. “What is a colony?” (history), “What is the difference between the weather and the climate?” (geography), “What is the population of Europe?” (social studies). Apart from that, the CLIL learners were given instructions in English which were typical teacher-learner interaction, e.g. “Read the three texts given, please and then analyse the opinions of the different authors concerning the outbreak of the 1st World War” (history), “Open your books on page 12 and read about different factors influencing the weather” (geography), “Could you buy any kind of newspaper please which is written in English, of course, and bring it to the class next time” (social studies).

It is also important to mention that all the CLIL teachers tried to contextualize tasks and introduce them as meaningful schemata. The CLIL teachers also used recorded programmes or feature films which were very valuable for listening comprehension, e.g. a short programme about the way coins are produced in Great Britain (history) or a feature film about factors influencing weather (geography). The researcher did not experience any visual aids used during social studies but the researcher was informed that the CLIL learners were asked to record some interesting programmes and bring them into the class. Integrating Content and Language through visual aids activates both content learning and language learning.

Note-taking was also used in the German CLIL classroom but not as often as in the Polish CLIL classroom. In the German CLIL classroom the CLIL teacher did not ask the CLIL learners to make some notes they just did it when they considered something important to write down. The German CLIL teachers did not use dictation at all which does not mean that the German CLIL learners had less possibilities to develop their listening skills. They

were given different possibilities, e.g. listening to their peer talking instead of listening to the teacher giving a lecture.

The CLIL learners in Germany were also given a lot of opportunities to develop their **reading skills**. During the lesson intensive reading was used i.e. the learners were provided with shorter passages which helped the CLIL learners to practice reading strategies, learn vocabulary and discourse types as well as get acquainted with the subject-related content. Similar to the Polish CLIL classroom both strategies, namely skimming and scanning were used by the CLIL teachers in Germany. Skimming was used for general orientation usually stimulated by the teacher's questions which were always linked with the content, e.g. "What is the general idea of the text *From resistance to open rebellion*?" (history), "The title of the text is *The sand*, so what do you associate the sand with?" (geography), "What is an innovation according to the first paragraph?" (social studies). Scanning involved searching rapidly through a text to find specific information, e.g. "What is the year 1764 associated with?" (history), "What seasons of the year are given in the text?" (geography), "What questions are given in the student questionnaire?" (social studies). In addition, it should be mentioned that the CLIL learners in Germany were also exposed to extensive reading which usually took place outside the classroom. On the basis of the information provided by the CLIL teachers, the CLIL learners were asked to read self-selected but subject-related book, story or essay and prepare a short presentation. All the activities used in the CLIL class were aimed at developing reading skills and integrating them with the content.

The CLIL learners observed had an excellent command of English language and therefore there was hardly any reference to **grammar** made by the CLIL teachers except for the history teacher who was very sensitive about the use of proper English. The only grammatical area of difficulty which the researcher noticed was the use of Indirect Speech and the use of 3rd Conditional. The CLIL learners often forgot about making the changes in the tense, e.g. "The British said that they have their own point of view concerning the 1st World War"; the correct version is: "the British said they *had* etc..." (history), (while the describing a picture): "Martin said that he doesn't like the second picture because it is not

colourful”; the correct version is: “Martin said that he *didn't* like the second picture because it *was* not colourful” (geography), “The author described the use of mobile phones and he says that they are very harmful”, the correct version is “The author described the use of mobile phones and he said that they were very harmful” (social studies). Additionally, they confused the 3rd conditional with the 2nd one which was only visible during history classes when they were asked to finish conditional sentences given by the teacher, e.g. “If Germany had not invaded Belgium, Britain.....”, “The Germans would have won if.....”, “If Britain had agreed to sign alliance with Germany then it.....” Generally, the CLIL teachers hardly ever corrected any grammatical mistakes because there were hardly any. If a grammatical mistake occurred the CLIL teacher usually corrected it by repeating the correct answer and asking the CLIL learner to repeat it himself/herself.

While observing the lessons in the German school it was clearly seen that both the CLIL teachers and the CLIL learners were aware of the importance of **vocabulary** in the CLIL classroom. While introducing the new topic, the learners were always provided with new words which were explained in English and also translated into German. Additionally, in order to facilitate vocabulary learning, the CLIL learners were provided with different exercises on vocabulary, e.g. they were asked to identify typical and recurrent words and expressions (geography), they were asked to work on some definitions both in English and in German (history), they were asked to set a context to a particular word and invent a story with this word (social studies) etc. Similar to the Polish CLIL teachers, the German CLIL teachers used a lot of gap-filling, word-formation or matching exercises which were always subject and topic related so that content and language was integrated. The researcher noticed only a few lexical errors made by the CLIL learners which were probably caused due to the interference of the 1st language, e.g. “wetter” instead of “weather” (geography), “glückspiel” instead of “gamble” (history), “bitte” instead of “please”. The CLIL teachers while noticing the lexical error asked the CLIL learners to translate the word into English / correct it or asked somebody else to do it.

As far as **pronunciation** is concerned, on the basis of the observation made, the CLIL teachers did not pay attention to it, however, while being asked about the importance of

pronunciation, they all said that they referred to it only if a mistake had been made by a learner. It should be mentioned that the CLIL learners' pronunciation was really excellent and at that time there was no need to make any reference to it because no mistakes were made. The only characteristic feature probably of most of the language learners, not only the CLIL learners was the strong "r" in words such as "pardon", "right", "questionnaire", "history", "war", "air" etc... which was caused by the influence of the 1st language.

Having briefly described the basic development of second language skills and sub-skills of the German CLIL learners, it should be borne in mind that the study lasted only a week and its aim was to observe Content and Language Integrated Learning in the classroom where it is well-developed. As far as the development of these skills is concerned, it can be noticed that the German CLIL learners have a great opportunity to develop their language skills in the CLIL classroom and it would be interesting to observe the German CLIL learner throughout a longer period of time. Comparing the Polish CLIL learners to the German CLIL learners, it should be stated that their second language skills and sub-skills developed in a very similar way. The only visible difference would be seen as far as the development of speaking skills is concerned. The German CLIL learners are definitely more willing to take part in discussions, role-plays, debates etc. than the Polish CLIL learners.

b). The use of L1 (code-switching)

While observing the bilingual classes in Germany, the researcher hardly ever noticed any use of L1 on the part of the learners as well as on the part of the teachers. The CLIL learners used German during the lessons when asking for an explanation of certain terms (linguistic switch) e.g. "Was bedeutet *trench*?" (history), "Was ist *Eisglätte*? (geography), "Does *society* mean, *Gesellschaft*?" (social studies). Additionally, the learners were also using German in spontaneous reactions (affective switch), e.g. "Wunderbar! Das ist sehr leicht, jetzt Ich verstehe alles" (translation: "Great! This is easy, now I understand it")⁶ (history), "Das ist unglaublich" (translation: "This is unbelievable") (history) etc. It should

⁶ The translation from German into English in Part II, chapter V, 3.1.2. was done by the author of the PhD thesis

be also mentioned that the CLIL learners overused the German “Ja” which in English means “Yes”.

The German CLIL teachers observed also hardly ever used German during the lessons. From time to time they used German when introducing new terms (linguistic switch), e.g. “*Resistance* means *Widerstand*” (history), “*hail* is *Hagel* in German” (geography), “*Besitz* means *property*” (social studies) etc. Apart from that, they sometimes used German when being asked for an explanation (topic switch), e.g. “Im Juli 1914 hatten alle Mächte Ziele allgemeiner und besonderer Art, aber keiner last sich feststellen, das sie an sich entschlossen war, um eines dieser Ziele willen einen grösen Krieg zu beginner” (translation: “In 1914 all powerful countries had two kinds of aims: general ones and particular ones. It is hard to say whether which aims were more important when starting the big war“ (history), “Die Vielfalt der Ausflugsziele garantiert einen erlebnisreichen Aufenthalt” (translation: “Various trip aims will guarantee many impressions” (geography). Similar to the Polish CLIL teachers the German CLIL teachers often prompted questions in English and asked the learners to answer them in English. However, if the learners had had some problems they would have given clues in German (topic switch), e.g. “What kind of threat was used? You don’t understand what threat is. In German it is *Drohung*” (history), “What is the weather like?” (the teacher repeats the learners’ words) “Yes, it is raining, there are lots of clouds und sag mal es ist kalt und ungemütlich in English” (translation: ... say it in English that it is cold and unpleasant”) (geography). It should be mentioned here that there were not many situations when the CLIL teacher was giving clues in German. Most of the CLIL teachers were giving clues in English. Contrary to the Polish CLIL teachers the German CLIL teachers did not use German while giving instructions concerning the lesson but they often used German when trying to control the class (affective switch), e.g. “Sei still!”, “Ruhe” (translation: “Be quiet!”), “Seid still, passt jetzt auf, wir haben heute einen Gast, ihr sollt euch gut verhalten” (“Stop talking, pay attention now, we have a guest so try to behave yourselves”).

The German CLIL learners sometimes used German when working in groups or pairs. Unlike the Polish CLIL learners, the German CLIL learners talked about subject-related matters (topic switch), e.g. (while working in pairs and discussing fighting in the trenches; “Das Trommelfeuer hat aufgehört, dafür liegt hinter uns schweres Sperrfuer. Der Angriff ist

da.” (translation: “Destroying fire finished, the barrage was still there so attack had already started”) (history), (while discussing the weather: “Im Frühling das Wetter ist gemischt aber im Herbst ist es stürmisch oder Gegenteil?”) (translation: “In spring, the weather is mixed but autumn it is stormy, isn’t it? or the other way round?”) (geography), (while working in groups and discussing the ways of finding a new job: ”So, wenn man eine fest Stelle, geht man zum Arbeitsamt oder er schaut in die Zeitung”) (translation: “If you are unemployed you should go to the Employment Office or look for a job in the newspaper”) (social studies).

Summarizing, the use of L1 (code-switching) was not as often present in the German CLIL classroom as in the Polish CLIL classroom. On the whole, the German CLIL learners seemed to have a better command of English and gave the impression of being more confident while using it. The CLIL German teachers also tried to avoid switching into German but in certain situations, e.g. when the content was very difficult they had to switch into German. When comparing the use of L1 in the Polish CLIL classroom with the use of L1 in the German CLIL classroom it can be said that the Polish CLIL learners as well as the Polish CLIL teachers use their mother tongue more often especially while trying to explain new concepts or new vocabulary (topic switch and linguistic switch).

Content aspects

Similar to the Polish pilot studies, the researcher found it very difficult to provide any data concerning the content, especially since the pilot study conducted in Germany lasted only one week. In such a situation, the researcher decided to distribute a questionnaire (Appendix: part 9) among the CLIL learners asking them whether they liked learning particular subjects or not and why. The same questionnaire was distributed among the Polish CLIL learners. The researcher was also not allowed to use the CLIL learners’ grades. The questionnaires were distributed by the researcher in two classes – grade 8 (16-17 years old) and grade 6 (14-15 years old). It should be also mentioned that the German CLIL learners had only three subjects in English: history, geography and social studies.

On the basis of the observations and the questionnaires, it seemed that no subjects taught in English caused any problems. From time to time the CLIL learners had some problems

with understanding more difficult concepts but these problems were quickly solved by the CLIL teacher who tried to explain everything very clearly.

While being asked which particular subject the CLIL learners did not like studying in English the answer was **none** - **30** CLIL learners from 8th grade and **27** CLIL learners from 6th grade said they liked all the subjects taught in English. Only **5** CLIL learners (**2** from grade 8 and **3** from grade 6) admitted having some problems with the subjects taught in English which does not mean that they did not like them. They all admitted having problems with understanding some difficult concepts, e.g. “I have a lot of problems with new vocabulary, we have to study a lot, sometimes I’m really tired”, “I like history but I can’t remember all the dates and events especially in English”, “Sometimes I don’t understand history, English makes it even more difficult, but on the other hand, I think that it’s interesting”, “Geography is fine, but I can’t remember all those names in English, I get confused”, “I find it difficult to study subjects in English but I like it. I know that I will have a better future”.

All the subjects taught in English (history, geography and social studies) were liked by the German CLIL learners. On being asked why they liked studying these subjects in a foreign language, the answers were the following: “History is really interesting and learning it in English gives me even more pleasure”, “I like the history teacher – he is a wonderful teacher, he is fair and he can explain everything really well. It’s a pity, he is retiring soon”, “The geography teacher takes us for various trips and she is always speaking English, no matter where we are”, “I think that social studies are similar to the English lesson where you discuss certain social problems and try to find out a solution”, “We can take part in different projects and become a real team” [history and geography], “The lessons are really interesting and the teachers must put a lot of effort into preparing them. It’s not easy to teach history or geography in English”, “I’m more concentrated because I have to, which is good for my brain”, “During history, geography or social studies we often watch some films and then discuss certain concepts. I’m never bored and I’m a really demanding student”, “I definitely learn faster in a foreign language”, “The teachers really motivate us by preparing great lessons”, “The subjects are easy to learn even in English, they are down to earth. I can’t imagine learning sciences in English”.

Summing up, the German CLIL learners have a very positive attitude to the subjects which are of a global dimension such as geography or history. The same can be said in regard to the Polish CLIL learners who have also a very positive attitude to subjects of global dimension. The German CLIL learners did not have any experience concerning sciences being learnt in a foreign language so their attitude is not known to the researcher apart from one respondent who cannot imagine learning sciences in English.

Learning environment aspects

As already mentioned, the learning environment consists of the following sub-categories: interaction in the CLIL classroom, the teacher's methodological approach, evaluation, teaching materials used and the classroom setting. All the data concerning learning the environment gathered through the studies conducted in the German CLIL classroom is to be presented.

a). Classroom interaction

As in the pilot study conducted in Poland, the researcher also decided to adopt van Lier's (1988: 94-120; 1991: 48-64) interaction framework discussed in Part I, chapter II, 5.1.

Type 1 which occurs when the teacher controls neither topic nor activity was not noticed in any of the lessons observed. The reason may be connected with the researcher's presence. All the CLIL teachers as well as the CLIL learners were aware that they were being observed. They had also been previously informed about the researcher's visit so they had some time to plan the lesson carefully.

Type 2, when the teacher controls the topic but not the activity could be observed during all lessons. This type is often connected with giving instructions, e.g. "Please, take your handouts that I gave you last week and look at the picture" (history), "Look at the weather" (geography), "Look at the clothes that you are wearing today" (social studies). According to van Lier's (1991: 48-64) framework the above mentioned interaction can be described as textual.

Type 3 was the one which dominated all the lessons observed. As has been mentioned before, it involves teacher control of both topic and activity (e.g. eliciting answers or discussing certain issues) The following examples were noticed: “So, what can you see? I want everybody to participate in the lesson” (history), “Martin, I want you to come to the blackboard and draw a cloud, sun, rain, snow, lightning and hail. You do the same in your notebooks” (geography), “Come here, please, so everybody can see you and I’m going to ask one person to describe what you are wearing” (social studies).

The function of the above interactions would be both textual and ideational. All the CLIL learners were provided with some teaching materials which were to stimulate the learners’ output.

The last type of interaction which is connected with controlling the activity by the teacher but not the topic could be observed only once, during the social studies lesson. The CLIL learners were put into groups of 4 and they were asked to discuss the role of the USA in the world. The discussions started but suddenly one group began talking about the role of women in politics (the discussion began when one of the female CLIL learners mentioned the American president and his Secretary of State – Condolisa Rice). During the discussion most of the CLIL learners were using English but some of them switched into German, e.g. “Ich glaube das die Frauen arbeiten sogar besser im Team als Manner” [translation: “I think that women are better team workers than men”], “Ja, aber Manner haben mehr Erfahrung” [translation: “OK, but men have more experience”], “Mann macht Politik – alles in Ordnung, Frau macht Politik – Familie kaputt” [translation: “Men ‘do’ politics – everything is OK, women ‘do’ politics – family does not exist”] etc... At certain point the teacher did not control the discussion but finally they were told to discuss the role of the USA in the world and not the role of the women in politics. This interaction can be definitely classified as interpersonal. During other CLIL lessons the last type of interaction was not observed.

Comparing the types of interaction present in the Polish CLIL classroom to the types of interaction present in the German CLIL classroom, it can be said that the German CLIL teachers are more in control of both the topics and the activities. However, it should be taken into consideration that the pilot study conducted in Germany lasted only a week while in Poland 6 months so certain types of interaction could have been avoided during a

week but not during 6 months. Different types of interaction in the German CLIL classroom require more investigation within a longer period of time.

b). The teacher's methodological approach

Unlike the Polish CLIL teachers, all the German CLIL teachers observed adopted the learner-centred approach which means that the learner is the central figure in the process of learning and the teacher's role is subordinated to this idea (Richards and Rodgers, 1986: 92). Most of the teachers adopted the Communicative Method of teaching Content and Language where all the four language skills would be treated equally. All the CLIL teachers observed used a lot of communicative activities which helped create a context which supported learning through developing personal relationships between the learners and the teachers. What is more, most of the activities involved a great deal of improvisation and invention on the part of the CLIL learners which facilitated content and language learning. The following activities were observed during the CLIL lessons in Germany:

Reading:

- *skimming and scanning*, e.g. "Read the title and the first paragraph of the text given and tell me what it is about?" (skimming) "Now read the whole text and concentrate on the opinions concerning the outbreak of the 1st World War provided by different people" (scanning) (history);

Additionally, it should be mentioned that all the CLIL German teachers who dealt with reading comprehension activities paid attention to three different stages of reading comprehension which was not recorded during the pilot study conducted in Poland. The three stages of reading comprehension observed were the following:

- *the pre-reading stage*, e.g. "What do you think the reasons for the outbreak of the 1st World War were?" (history), "What is the weather like today, could you describe it to me?" (geography);

- *the reading stage*, e.g. "Answer questions 1-8 by choosing from the four authors from different countries" (multiple matching activity), (history), "Four questions 1-6, you must choose which of the paragraphs A-F below fit into the numbered gaps in the article" (gapped text), (geography);

- *the follow-up activities*, e.g. “So, which author do you think was right?” (discussion), (history), “Could you describe your favourite season of the year, please” (description-writing), (geography);

Listening:

- *following instructions*, e.g. “There is a picture of a fighting line, could you describe it to me, please?” (history), “Come to the map and show us the most important capitals in Europe” (geography), “Here you have lots of colourful pictures of the famous stars, could you tell me what they are wearing” (social studies),

- *TV broadcast*, e.g. a film about the weather changes (geography);

Additionally, the German CLIL learners were asked to answer *comprehension questions* asked by the teachers or they listened to some *anecdotes* or *stories* provided by the teachers.

Speaking:

- *discussion*, e.g. “I will put you into two groups, one supports the British point of view and the other group supports the German point of view, you are supposed to take part in a heated discussion” (history); - *projects*, e.g. the learners were asked to prepare a project on different styles of fashion throughout the ages, groups of 4 learners were formed and each group was supposed to concentrate on a certain period of time (social studies);

- *pair work*, e.g. “In pairs, describe what your partner is wearing today” (social studies);

- *group work*, e.g. “Is Germany to blame for the outbreak of the 1st World War?, discuss in groups” (history);

- *interview*, e.g. “Imagine that your partner is a famous Hollywood star, ask him/her some questions concerning the clothes he/she is wearing” (social studies);

Writing:

- *composition*, e.g. “Who is to blame for the outbreak of the 1st World War? Write an outline of arguments” (history);

- *summary writing*, e.g. “Write a summary of the text concerning the military forces used during the 1st World War” (history);

- *sentence writing*, e.g. “Write three conditional sentences about the weather and climate in Europe” (geography);

Comparing the methods of teaching content and language in the CLIL classroom in Poland to the CLIL classroom in Germany, it should be pointed out that the activities used in the German classroom are more communicative – there is nearly no teacher talk during the lesson and the learner, as has been mentioned above, is the most important. What was also very interesting was that the CLIL learners were hardly ever taking any notes during the lessons because all the information which they needed was provided in their course books or in the additional materials given by the teachers. The German CLIL learners seemed to be fully concentrated on what was going on in the classroom and therefore they were so willing to take part in all teaching and learning activities.

To summarise, the researcher observed six types of tasks: listing, ordering and sorting, comparing, problem solving, sharing personal experiences and creative tasks which are typical of the Task-Based Approach (Richards and Rodgers 2001: 234) with one significant difference: while using these tasks all the teachers bore in mind content and language integration.

c). Learner's evaluation

All the German CLIL teachers observed used similar techniques when evaluating the CLIL learners. The data presented below was collected on the basis of the interview with the CLIL German teachers due to the length (one week) of the pilot study conducted in Germany. The main evaluation technique was a written test. The German CLIL learners were given written tests a few times in one semester. Unlike in the Polish CLIL classroom the factual knowledge was always tested in English with special attention paid to the key terms and content terminology. The tasks were very similar to the tasks given to the CLIL learners in Poland and consisted of closed-ended exercises such as multiple choice tasks, fill-in-the-gaps tasks or cloze tests. Additionally, the CLIL learners were given an open-ended task where they were asked to express their opinion concerning particular problem. All the teachers avoided giving translation tasks during the tests which was very popular in case of the Polish CLIL teachers. In case of correction, all aspects were taken into consideration: the content and the spelling of the English words and also grammatical mistakes which influenced the grade.

Oral evaluation predominantly consisted of assessing the CLIL learners' ability to discuss certain issues and to actively participate in classroom discussions. Unlike the Polish CLIL learners, the German CLIL learners were never asked to come to the board, sit opposite the teacher and answer the questions. They were evaluated on the basis of open discussion and everybody was allowed to express his/her own opinion. All the discussions were in English so apart from the content the CLIL teacher could also evaluate the CLIL learners' language. Additionally another form of evaluation which was often used in the German CLIL classroom was the project work in English. Similar to the Polish CLIL learners, the German CLIL learners were divided into pairs or groups and were asked to prepare a project on a particular topic (e.g. different fashion across the ages <social studies> etc.). All the projects were prepared and presented in English and the CLIL learners were given grades for presenting them.

Another method of evaluation which was not used in the Polish CLIL classroom was the portfolio. The CLIL learners noted down their own progress as far as content and language is concerned. In spite of that, they were also encouraged to write how they felt about a particular subject and how they felt about their progress. At the end of the semester, the CLIL teachers collected the notebooks where all the comments were written and analysed them.

As it can be noticed, the methods of evaluation in the German CLIL classroom differ from the ones used in the Polish CLIL classroom. The methods of evaluation used in the German CLIL classroom are more learner-centred and stress free which is connected with the European perception of stress free education.

d). Teaching materials

Unlike the Polish CLIL teachers, the German CLIL teachers did not have many problems with the teaching materials. All the CLIL learners had their own history and geography files written in English which could be compared to proper course books. The files were divided into units and all the necessary information was there so the teachers referred to it. The German CLIL learners did not have any files or a course book on social studies written in English so the teacher used his own materials. In spite of that, all the German

CLIL learners were provided with additional handouts so the lessons were even more interesting. All the additional materials written in English were adapted to the lesson and the CLIL teachers admitted that they were doing it together. Unlike the Polish CLIL learners, the German CLIL learners were not provided with any vocabulary lists. All the German CLIL teachers used visual aids, e.g. OHP, video or DVD documentaries and the internet which helped the CLIL learners understand particular concepts and made the lesson more interesting. All the teachers used blackboard in order to write down some important information.

While comparing the teaching materials in the Polish CLIL classroom with the teaching materials in the German CLIL classroom, it can be clearly noticed that the Polish CLIL teachers lacked a lot of teaching materials. What is more, the German CLIL teachers were very eager to use visual aids during the lesson whereas the Polish CLIL teachers did not use them very often and usually treated them as a special kind of “prize” for the CLIL learners.

e). Classroom setting

All the classrooms observed were quite big and nicely decorated. There were a lot of maps, tables or pictures on the walls which made the classrooms look very colourful. There was enough room for up to 40 learners. The desks were arranged in a circle and the teachers’ desks were a part of this circle. This desk arrangement was very useful for communication. The CLIL learners could communicate easily with each other and also with the teachers who being a part of the circle could maintain control over the work area. The blackboard was situated behind the teachers’ desks so all the learners could see it easily. Unlike in the Polish CLIL classrooms, all the German CLIL classrooms were equipped with a TV, DVD, CD player and OHP which were often used by the CLIL teacher. Additionally, there was a special computer room which could be used during the lesson.

Taking into consideration the classroom setting, the main difference between the Polish CLIL classroom and the German CLIL classroom concerns the arrangement of desks and the equipment available. On the basis of the observations, it can be said that the German CLIL classroom is much more modern than the Polish CLIL classroom.

Attitudinal aspects and motivation

At this stage of the studies the researcher did not conduct any questionnaires concerning the CLIL learners' and the CLIL teachers' attitude towards CLIL as well as the CLIL learners' motivation. However, on the basis of the interview with the German CLIL teachers it can be said that the German CLIL learners were highly motivated and their attitude towards learning subjects in English was very positive. The German CLIL teachers also stated that they enjoyed working with the CLIL learners who were more diligent, hard-working and open to new ideas.

3.1.3. The outcomes of the pilot studies

The research findings based on the pilot studies conducted in the Polish CLIL classroom and the German CLIL classroom indicate that there is some difference between Content and Language Integrated Learning in Poland and in Germany even though the study conducted in German CLIL classroom lasted only one week while in the Polish CLIL classroom 6 months. Generally speaking, it can be said that the German CLIL classroom differs from the Polish CLIL classroom. The German CLIL teachers pay more attention to developing productive skills while the Polish CLIL teachers pay more attention to developing receptive skills, the Polish CLIL teachers and learners overuse the Polish language, the German CLIL teacher is more often in control of the activities and his/her approach is learner-centred. The availability of the teaching materials also differ – the German CLIL teachers have their own subject-files which can be used by the CLIL learners in the classroom and outside whereas the Polish CLIL teachers have to prepare their own materials using different sources. Additionally, the German CLIL teachers may use visual aids more often than the Polish CLIL teachers – the equipment is available in all classrooms. It should be also mentioned that there are some similarities between the Polish CLIL classroom and the German CLIL classroom. Both the teachers in Poland and in Germany use various methods of teaching in order to integrate content and language. They also put a lot of effort into preparing the CLIL lessons they enjoy working with learners who are hard-working and highly motivated. However, it should be pointed out that the

aim of the pilot study was not to compare the findings but to find the areas worth investigating so that is why the researcher will not go into deeper analysis of the similarities and differences between the two CLIL classrooms described above.

During the observations both in Poland and in Germany, the researcher noticed that the classroom is a “living entity” and a lot of changes take place within a shorter or longer period of time. The researcher also found a need to investigate a bilingual classroom due to the fact that the bilingual stream is still neglected in Poland while in Germany it is extremely important. On the basis of these two pilot studies the researcher decided to observe and evaluate the changes which take place during one school year in a classroom in which content subjects are taught in English. The researcher decided to concentrate on the language aspects taking into consideration the development of the second language as well as the use of L1 in the CLIL classroom, content aspects, environmental aspects, attitudinal aspects and motivation. While conducting the pilot studies, the researcher took into consideration only the language, content and environmental aspects but during the observations it became clear that attitude and motivation cannot be neglected as they play a very important role in the CLIL classroom. As a result, the researcher decided to include attitudinal aspects and motivation in the main studies.

The aim of the above chapters (3.1.1. and 3.1.2.) was to present the findings of the pilot studies conducted both in the Polish CLIL classroom and in the German CLIL classroom. It is the objective of the following chapter to present the outcomes of the main studies conducted in the Polish CLIL classroom for a period of one school year which will subsequently serve as a basis for further analysis and for proposing a tentative model of integrating content and language within the context of Polish secondary school.

3.2. The main study

The subjects in the study were learners who studied in a bilingual classroom as well as their teachers from a secondary school. The study being of a descriptive-exploratory nature, there were no specific criteria on the basis of which the schools were selected. The only factors that were taken into account were the presence of a bilingual class in the school as well as the willingness on the part of the schools and the teachers to participate in the

project. Surprisingly, it is the latter factor that turned out to be the most problematic as Polish Secondary Schools where bilingual classes are present refused to allow the researcher to observe the lessons, which made the whole data collection process extremely difficult. Finally, one school, the Secondary School nr 1 in Kraków, allowed the researcher to observe the lessons and collect the data through the period of 3 semesters (one semester – the pilot study, two semesters – the main study). Unfortunately, there was no permission given as far as recording the lessons is concerned so the researcher has to use other instruments and methods of data collection. At the very beginning, the researcher wanted to observe all the bilingual classes but it turned out to be impossible due to the final examination (“Matura”). The headmaster did not want the learners from the last grade to be disturbed by the presence of the researcher. As a result, the researcher decided to concentrate on one bilingual class only which turned out to be the 1st grade. The learners came from different schools where they had a different number of English hours per week. Furthermore, a lot of them had never learnt a subject through a foreign language so the changes which occurred as far as the language development, the processing of content, the learning environment and the attitudes and motivation are worth paying attention to. It is also important to mention that the teachers had nothing against being observed and their role in the bilingual secondary education, which is very significant, cannot be neglected. Having made the above comments on the factors which determined the choice of the school as well as the choice of the class where the data for the project were gathered, it is now time to take a closer look at the school as well as at the subjects that supplied these data.

3.2.1. Learner participants

The study was carried out in the first bilingual class of the Secondary School no. 1 in Kraków. A total number of 33 learners participated in the lessons observed for the purpose of this study and all of them filled out and returned questionnaires that were later used to complement that data gleaned from observations. All the participants were at the advanced level and most of them started learning English when they were 5-7 years old. One learner was born in an English-speaking country (the USA) and another was born in France (the learner has got a French-speaking parent). There was also one more learner who was born

in Great Britain and finished Primary School there but unfortunately after the first semester that person decided to leave the school. It is worth mentioning that the learners graduated from different Lower Secondary Schools, and in order to get into a bilingual class, they had to pass a written and spoken test in English. The written test consisted of reading comprehension, listening comprehension, writing and the use of English (grammar and vocabulary). The aim of the written test was to check the learners' language abilities and skills. The spoken part consisted of two parts: picture description and discussion on a certain topic, e.g. environment, advertising, healthy life style etc. The aim of the spoken part was to check the learners' speaking abilities as well as the language predispositions. Unfortunately, the criteria of evaluation were not available to the researcher due to the fact that the school considered them "top secret" and did not want to have them published. As already mentioned, the first bilingual class comprised of 33 learners (25 girls and 8 boys). The class was divided into two groups and each group had 6 hours (45 min.) of English per week. The hours were divided into certain skills, e.g. one hour – writing, one hour reading comprehension etc. It is worth mentioning the fact that one hour per week was devoted to Anglo-Saxon culture and history. As far as the subjects taught through English are concerned, the class was divided into two groups only in case of biology. The class had 2 hours of biology per week (one hour in groups and one hour as a whole class), 3 hours of mathematics and 3 hours of geography. All participants of the study learned English as the second language. Their level of English was very good and they used an advanced course book which prepared them for the CAE exam. None of the participants attended additional English lessons outside the school but all of them stated that they were regularly exposed to English through satellite television, English books and magazines, contact with foreigners in Poland and abroad as well as English songs.

3.2.2. Teacher participants

Three Polish teachers of the bilingual subjects in the previously mentioned Secondary School participated in the study by allowing the researcher to observe their lessons and consenting to fill out questionnaires concerning their classroom practices. They were teachers of geography, biology and mathematics. Their teaching experience differed as well

as their educational background. All of them were fully qualified teachers with university degrees in a particular subject and teaching experience at the secondary school level varying from 3 years to 10 years. Only one teacher was a fully qualified teacher with an additional university degree in English. The other two teachers completed some courses in English and passed additional exams allowing them to teach a subject through English.

3.3. Instruments of data collection

Four different instruments of data collection were used for the purposes of this study with a eye to getting multiple perspectives of the phenomena under investigation and thus examining them in a comprehensive and objective manner. They included:

- a). observation of regularly scheduled lessons;
- b). questionnaires distributed among both the learners and the teachers;
- c). the interview with the teachers;
- d). the analysis of tests written by the learners;

The choice of the instruments as well as their relatively unobtrusive application were intended to minimize intervention in classroom proceedings and capture certain processes as they naturally occurred in the classroom. The researcher strongly believes that only a qualitative study which is “synthetic or holistic and requires little or no manipulation of the research environment” (Seliger and Shohamy, 1989: 119) can focus on a thorough description of the investigated phenomena in comparison to the quantitative study where “manipulation and control become important measures of both internal and external validity” (Seliger and Shohamy, 1989: 118). The five instruments as well as data collection procedures utilized for the purpose of this project are discussed below.

3.3.1. Observation sheets

“Observation is more than a mechanical process to be gone through; it is a commitment to apply the full range of our perceptual and analytic skills as intensely and extensively as we are able, in the pursuit of understanding” (Wolcott, 1994: 156). The researcher decided to

use observation because she wanted to observe and analyse the changes in language education which occur in the CLIL classroom throughout the school year. The researcher was not allowed to record the lessons which is why she decided to observe the lessons and invent an observation instrument (observation sheet) that would help her to record either very narrowly defined data such as a specific language act or a particular language form, or more general kinds of language learning activity such as group work or pair work. Two separate observation sheets were prepared (one for the learners and one for the teacher) (Appendix: part 1). The learners' observation sheet was divided into the following parts: the stage of the lesson, the development of target language abilities (speaking, writing, listening and reading), the development of grammar, pronunciation and vocabulary, the use of L1, content management, language difficulties, problems and my own comments (Appendix: part 1). The teacher's observation sheet was divided into the following parts: the stage of the lesson, the methods of teaching and the changes in methodological approach, the interaction between the teacher and the learner, the use of L1, error correction, evaluation of content, teaching materials used, problems and my own comments (Appendix: part 1). Each observation sheet had additional information such as the subject taught, the number of learners present, the teacher, the date and the classroom setting. The researcher was present during all lessons taught in English, which enabled her to observe the ongoing interaction and make some notes on some of its most interesting aspects. In fact, direct observation proved to be very useful in augmenting the data concerning teacher-learner interaction, learner-teacher interaction, learner-learner interaction, the use of L1 by the learners and by the teachers, the methods of teaching used by the teachers, the teaching materials used and the classroom setting. The data concerning the development of language target abilities, the development of grammar and vocabulary, content management, evaluation of content, language difficulties and error correction, attitudes and motivation had to be supported by additional questionnaires, interviews and the analysis of the written work of the learners due to the fact that some aspects which the researcher decided to analyse were very difficult to observe, e.g. the development of the written abilities of the learners or the attitudes towards CLIL.

At all times the researcher attempted to keep a low profile and spared no effort to make the observation process as unobtrusive as possible by taking a seat at the back of the classroom

and avoiding any activities that might draw the students' attention. In addition to that, the purpose of the observation was explained to the learners at the beginning of the observation period and they were assured that no data collected in the course of the study would be made available to their teacher or the school authorities, and they were asked not to alter their behaviour in any way. The author is fully aware that despite all these precautions not all the effects of what is known as the "observer's paradox" (Richards, 2003: 108) could be eliminated. At the beginning of the observation period some learners were suspicious of the researcher's true intentions and their performance was not very natural. However, later on, the learners got used to the presence of the researcher and did not pay attention to her.

3.3.2. Questionnaires

In order to further validate the data as well as to gain another perspective on certain aspects present in the CLIL classroom, questionnaires were distributed among the teachers and the learners. The researcher hoped that this method of data collection would provide the researcher with information about phenomena that might not be directly observable in the classroom. Additionally, the researcher hoped to elicit the respondents' beliefs and preferences concerning classroom proceedings. The researcher is aware that some of the responses may not be reliable due to the fact that some participants still thought that their answers might be shown to their teachers but still the questionnaires administered for the purpose of this study proved to be invaluable and supplied the researcher with a large amount of useful information. The full copies of the learner and teacher questionnaires are available in Appendix: parts 2 – 9.

a). Questionnaires for the learners

There were four questionnaires administered to the learners throughout the school year. One of them was administered in different periods throughout the school year (at the beginning of the school year, after the 1st semester and after the 2nd semester) (Appendix: part 2). The other three questionnaires were administered after the whole school year.

a). A questionnaire concerning attitude towards bilingual education (administered three times during the school year)

One open-ended question was included in the questionnaire, namely: *What do you think about learning subjects in a foreign language? Please, express your opinion in three to five sentences paying attention to the advantages and disadvantages of learning subjects in a foreign language.* (Appendix: part 2). The aim of this questionnaire was to find out the learners' attitude towards learning subjects in a foreign language as well as to find out whether this attitude has changed throughout the whole school year. The questionnaire was administered in Polish because the researcher believed that the learners would be more honest when answering the question in Polish.

b). A questionnaire concerning the use of L1 during the CLIL classes (administered at the end of the school year)

The questionnaire consisted of highly specific questions with a limited set of answers concerning the use of L1 in the classroom where subjects are taught in a foreign language (Appendix: part 3). The aim of this questionnaire was to find out what the learners' attitude towards using Polish in the classroom where subjects are taught in a foreign language is and whether it has changed throughout the school year. This questionnaire was administered in English and it consisted of close-ended questions. The researcher decided to administer the above mentioned questionnaires due to the fact that it was very difficult to observe the learners' attitude.

c). A questionnaire concerning motivation (administered at the end of the school year)

The questionnaire consisted of both highly specific questions with a limited set of answers and a few open-ended questions (Appendix: part 4). The aim of this questionnaire was to find out what the motivating factors are in case of learning subjects in a foreign language and what kind of motivation (intrinsic vs. extrinsic) plays a more important role. The learners' motivating factors could not be observed during the lessons so that is why the researcher decided to administer the above mentioned questionnaire. The questionnaire was administered in Polish.

d). A questionnaire concerning second language development (administered at the end of the school year)

The questionnaire mainly consisted of open-ended questions concerning the second language development of the learners (Appendix: part 5). The aim of this questionnaire was to find out what the learners' think about their second language development throughout the whole school year and to compare it with the data based on the observations and test analysis concerning the second language development in the CLIL classroom. The last questionnaire was also distributed in Polish due to the fact that it mainly consisted of open-ended questions and the researcher did not want to limit the respondents by asking them to write the answers in English.

All questionnaires were administered by the researcher with great help from the teachers who allowed the researcher to distribute the questionnaires, fill them in and collect them during the lesson. 31 out of 34 learners filled in and returned to the researcher the questionnaire concerning the attitude of the learners towards learning subjects in a foreign language at the beginning of the school year (September 2006). 29 out of 34 learners filled in and returned to the researcher the same questionnaire after the 1st semester (January 2007). 32 out of 33 learners filled in and returned to the researcher the same questionnaire at the end of the school year (June 2007). The questionnaire concerning the use of L1 in the CLIL classroom was filled in by 32 out of 33 learners. The Questionnaires concerning the language development and motivation were filled in and returned to the researcher by 30 learners.

b). Questionnaires for the teachers

There were three questionnaires administered to the teachers and they were all distributed at the end of the school year.

a). A questionnaire concerning attitude towards bilingual education

The questionnaire consisted of one open-ended question, namely: *What do you think about teaching subjects in a foreign language? Please, express your opinion in three to five*

sentences paying attention to the advantages and disadvantages of teaching subjects in a foreign language (Appendix: part 6). The aim of this questionnaire was to find out the teachers' opinion about teaching subjects in a foreign language. The questionnaire was distributed in Polish due to the fact that the researcher did not want to create a language barrier and wanted the teachers to express their opinions freely.

b). A questionnaire concerning the use of L1 during the CLIL classes

The questionnaire consisted of highly specific close-ended questions with a limited set of answers concerning the use of L1 during the lessons (Appendix: part 7). The aim of this questionnaire was to find out what the teachers think about using L1 during the lessons generally taught in English and in which teaching situations L1 is necessary. This questionnaire was distributed in English. Descriptive answers were not required on the part of the respondents.

c). A questionnaire concerning motivation

The questionnaire consisted of two open-ended questions, namely: *What are the motivating factors as far as teaching in a bilingual classroom is concerned* and *what are the de-motivating factors?* (Appendix: part 8). The aim of the questionnaire was to find out what the motivating and de-motivating factors for the teachers in bilingual teaching are. The questionnaire was also distributed in Polish due to the same reasons mentioned above.

The questionnaires were distributed by the researcher and the teachers were given a few days to fill them in. Three teachers filled in the questionnaires: a geography teacher, biology teacher and a maths teacher. All questionnaires were returned to the researcher.

3.3.3. Interview with the teachers

A popular way of capturing the essence of the qualitative interview is to describe it in terms of everyday interaction, as “conversation with a purpose” (Burgess, 1984b: 102) or “professional conversation” (Kvale, 1996: 5). The researcher interviewed three teachers in order to gather additional information concerning teaching subjects in a bilingual

classroom. The teachers were interviewed at school, after their teaching hours and the interview lasted about half an hour. The teachers were willing to answer all the questions that the researcher asked. At the same time the researcher was making some notes. The questions were the following:

- Is there a recognized need to create more bilingual classes in the school ?
- Over the year, what proportion of English language (texts, teacher talk, student-to-student – holistic appraisal) is used in a bilingual lesson?
- Are you actively doing in-service professional development or likewise?
- Are the bilingual classes more oriented towards European and international orientation than Polish-medium within the school?
- How is the content affected by the use of the foreign language?
- Are you a different teacher in English than in Polish?
- What professional needs do you have when teaching through English (if any)?

3.3.4. Tests' analysis

The area of research concerned the changes in language education which have taken place during one school year in a classroom in which three content subjects are taught in English. In order to find out these changes the researcher apart from observing the participants, decided to analyse the learners' written work. For the purpose of this study, the researcher was allowed to collect all the tests conducted in the 1st grade in bilingual geography, biology and maths during one school year. While analysing the tests the researcher investigated the changes concerning the writing skills which involved the grammatical and lexical ability as well as stylistic and organizational skills. Additionally, by analysing the tests, the researcher was able to investigate the changes which occur in the use of L1 and the types of errors that the learners make. There were four tests conducted in geography: two tests in the first semester (astronomy with geology and cartography) and two tests in the second semester (internal and external factors). There were also four tests conducted in biology: two in the first semester (the chemistry of living things and the cell) and two in the second semester (metabolism and the types of tissues, skeletal and digestive systems). There were seven tests conducted in maths: three in the first semester (logical sentences,

sets – basic properties, the n-th power) and four tests in the second semester (algorithm, basic properties of functions, identities of functions).

The fifteen tests in three different subjects together with the researcher's field notes based on the observations, the questionnaires, and the interview served as a basis for further analysis.

3.4. Categories of data analysis

As already mentioned in Chapter 3 of this part of the study, in order to analyse the changes in language education which occurred in the CLIL classroom, the researcher had to concentrate on certain categories related to the language development of the learners, to the processing of content, to the learning environment and to the learners' and teachers' attitude and motivation. In the following chapters all the categories will be presented and discussed. There are four main categories: language aspects, content aspects, learning environment, attitudinal aspects and motivation. These four main categories were divided into sub-categories. Additionally, the researcher collected some general information which consisted of the information concerning the date of the lesson, the time of the day, the subject being taught, the topic of the lesson and the number of learners present. General information on the class is important because the main question of the study, as mentioned previously, concerns the changes in language education which occur in the CLIL classroom and as a result the information collected helped the researcher to organize the data according to the time and the lesson being taught. The other information included here helped the researcher to analyse the data e.g. the topic of the lesson or the number of the learners could influence the learners' output. The researcher collected the data through observation.

3.4.1. Language aspects

This category was divided into two sub-categories: Second language development and the use of L1 in the CLIL classroom. While analysing the changes which occurred in the CLIL classroom, language whether it is the second language or the use of the first is an extremely

important category. It should be pointed out once again that CLIL means Content and **Language** Integrated Learning.

a). Second language development

This sub-category was also divided into two other smaller sub-categories, namely: skills development, grammatical and lexical development, pronunciation. The researcher decided to divide these sub-categories because they fall into different groups. When analysing speaking, writing, listening and reading we are talking about analysing particular language abilities. These four abilities fit into two dimensions: receptive and productive skills, oracy and literacy (Baker, 2006: 7). Additionally, “there are skills within skills” (Baker, 2006: 7), traditionally listed as: pronunciation, extent of vocabulary, correctness of grammar, the ability to convey exact meanings in different situations and variations in style. To put it simply, grammar, vocabulary or pronunciation can be analysed within these above mentioned language abilities.

Taking into consideration Common Framework of Reference for Languages (2001) the researcher decided to analyse the CLIL learners’ language abilities. The CLIL learners’ speaking abilities were analysed according to the following sub-categories: sustained monologue (i.e. the ability to describe experience), sustained dialogue (i.e. the ability to take part in discussions), public announcements and addressing audiences (i.e. the ability to talk to a larger group of people, e.g. the class) (Council of Europe, 2001: 58). As far as speaking abilities are concerned, the data was collected through observations.

The CLIL learners’ writing abilities were analysed according to the following sub-categories: creative writing (i.e. the ability to write clear, detailed, well-structured and developed descriptions and imaginative texts in an assured, personal, natural style appropriate to the reader in mind), reports and essays (i.e. the ability to produce clear, smoothly flowing, complex reports, articles or essays which present a case, or give critical appreciation of proposals or literary works) (Council of Europe, 2001: 61). The data concerning writing skills was collected through the analysis of the learners’ written work (tests).

The CLIL learners' listening abilities were analysed according to the following sub-categories: understanding interaction between native speakers, listening as a member of a live audience (e.g. lectures given by the teacher), listening to announcements and instructions (information, instructions, warnings etc.), listening to audio media and recordings (Council of Europe, 2001: 66). The data was also collected through observation. The CLIL learners' reading abilities were analysed according to the following subcategories: reading for orientation (i.e. the ability to scan quickly through long and complex texts, locating relevant details), reading for information and argument (i.e. the ability to understand in detail a wide range of lengthy and complex texts), reading instructions (Council of Europe, 2001: 69). The data was collected through the analysis of the written work of the CLIL learners.

The changes concerning the above mentioned skills (speaking, writing, listening and reading) which occurred in the CLIL classroom throughout the school year will be mainly analysed on the basis of the researcher's observations and the written work of the CLIL learners. However, additional analysis concerning the development of particular skills will be provided on the basis of the questionnaire (Appendix: part 5) carried out among the CLIL learners at the end of the school year.

While analysing the changes occurring in grammar, vocabulary and pronunciation, the researcher also decided to take into consideration the scale provided in the Common Framework of Reference for Languages (2001) paying special attention to the errors the CLIL learners made. As far as grammar is concerned only one sub-category was distinguished: grammar accuracy (i.e. maintaining consistent grammatical control of language) (Council of Europe, 2001: 114). Within this subcategory, the researcher concentrated on syntactic errors made by the CLIL learners. When analysing vocabulary, the researcher took into consideration the following sub-categories: general linguistic range (i.e. the ability to select an appropriate formulation from a broad range of language to express him/herself clearly), vocabulary range (i.e. a command of a broad lexical repertoire), vocabulary control (i.e. correct and appropriate use of vocabulary) (Council of Europe, 2001: 112) and within these sub-categories the researcher concentrated on the lexical errors made by the CLIL learners. While analysing pronunciation, the researcher took into consideration the sub-category called phonological control (i.e. the ability to

speak clearly and naturally with proper pronunciation) (Council of Europe, 2001: 117) and additionally paid attention to the phonological errors made by the CLIL learners.

The data concerning grammar and vocabulary was collected through observation and the written tests of the learners whereas the data concerning pronunciation was collected through observation only.

b). The use of L1 (code-switching)

Code-switching was examined through observations which serve as a basis for a detailed analysis of the patterns of code-switching between English and Polish exhibited by the three teachers and the learners in the CLIL classroom. The reason why the researcher decided to establish a separate category concerning the use of L1 (code-switching) was that a quick glance at the CLIL classroom interaction revealed extensive use of code-switching in the teachers' interaction with their learners, learners' interaction with their teachers as well as in the learners' interaction with other learners. Several instances of code-switching were identified: linguistic switch (explanation of difficult vocabulary), topic switch (explaining complex ideas), affective switch (emotional, spontaneous reactions), socialising switch (reactions signaling friendship), clarity switch (repetition of the same message). During the observations the researcher investigated the changes which took place in code-switching as far as the teachers' interaction with their learners, learners' interaction with their teachers and the learners' interaction with other learners are considered.

3.4.2. Content aspects

The next category concerns the content aspects in the CLIL classroom. This category was the most problematic one as there have not been any tools established as far as the evaluation of content is concerned. As a result, the researcher decided to present the data concerning content in a quantitative way by investigating the CLIL learners' marks which they received throughout the year in the following bilingual subjects: geography, biology and mathematics. Then the researcher decided to analyse the marks and look at the changes in the content knowledge within one bilingual subject and between the bilingual subjects

paying careful attention to different factors which could influence the CLIL learners' performance in a particular bilingual subject. All the data concerning the CLIL learners' performance in particular subjects was collected from the class register which was kept throughout the whole school year as well as from the researcher's observations and the interviews with the teacher. It should be pointed out that the marks given to the CLIL learners may not have been objective due to the fact that the CLIL learners were evaluated by one subject CLIL teacher, however, each CLIL teacher evaluated the CLIL learners' work according to the established criteria (Appendix: part 10). In addition to it, some data was collected from the questionnaires (Appendix: part 5). The CLIL learners were asked to give their opinion on particular subjects taught through English. The researcher wanted find out which bilingual subjects the CLIL learners considered to be difficult or easy and why. It seemed obvious that presenting quantitatively the marks of the CLIL learners without simultaneously investigating the CLIL learners opinions on particular subjects as well as the factors which could have an impact on their subsequent production might provide us with a very distorted picture of the content aspects in Content and Language Integrated Learning. Consequently, the researcher decided to present and analyse the data using additional tools of data collection such as questionnaires.

3.4.3. Learning environment aspects

As far as the learning environment is concerned, the researcher established a few sub-categories: interaction, the teacher's methodological approach, evaluation, materials used and the classroom setting. In the following part all the sub-categories concerning learning environment will be presented in more detail.

a). Classroom interaction

Interaction presupposes personal involvement and the taking of initiative in some way. On the basis of the observations the researcher decided to analyse the interaction between the teacher and the learners, the learners and the teacher and between the learners themselves in terms of the different ways in which they participate. Due to the broad frameworks which

have been developed through many studies of interaction in the language classroom, the researcher decided to concentrate only on some of them. The researcher decided to adopt van Lier's (1988: 94-120) framework in which he distinguishes four basic types of classroom interaction, according to whether the teacher controls the topic (i.e. what is talked about), and the activity (i.e. the way the topic is talked about). According to van Lier (1988: 94-120) type 1 occurs when the teacher controls neither topic nor activity (e.g. small talk). In type 2 the teacher controls the topic but not the activity (e.g. giving instructions). Type 3 involves teacher control of both topic and activity (e.g. eliciting answers) and in type 4 the teacher controls the activity but not the topic (e.g. small group work). In a further development of this framework, van Lier (1991: 48-64) adds another dimension, namely the function that the language serves. He distinguishes three types of function: ideational (telling people facts or experiences), interpersonal (working on relationships with people) and textual (signaling connections and boundaries, clarifying, summarizing and revising) (van Lier, 1991: 155-170). Adopting the above mentioned types of interaction described by van Lier (1988 & 1991), the researcher decided to analyse the changes in interaction which occurred in particular in geography, biology and mathematics CLIL classrooms throughout the whole school year.

b). The teacher's methodological approach

The next category is concerned with the teacher's methodological approach. On the basis of the observations and the interview with the teachers, the researcher described and analysed qualitatively the changes in methods of teaching used by particular teachers during the subject lessons taught in English. The researcher did not classify these methods into different sub-categories but described and analysed them according to the subjects observed (i.e. geography, biology and mathematics). The researcher believed that presenting the data concerning the methods of teaching according to the subjects observed would be more logical and clear.

c). Learner's evaluation

Evaluation, together with its overall effectiveness in providing the learners with some feedback on the part of the teacher was investigated qualitatively. The analysis was based on the researcher's observations. It focused, among other things, on describing the different methods of evaluating the learners in the CLIL classroom throughout the school year as well as on the effectiveness of the methods used. As in the previous sub-category, the researcher investigated the methods of evaluating the learners within the content subjects being taught in English.

d). Teaching materials

This category was investigated in terms of the materials used during the CLIL lessons such as course books, texts, handouts, vocabulary lists, visual aids, multimedia and realia. The researcher observed each lesson and noted down what kind of materials were used, at what stage of the lesson and what was their purpose. Teaching materials are extremely important as they have impact on many aspects such as learning, motivation and interaction. In a CLIL classroom where the CLIL learners are expected to learn difficult subject concepts in a foreign language attractiveness and variety of the teaching materials becomes even more crucial.

e). Classroom setting

Classroom setting which can be linked to the term proxemics is also an important category as far as the learning environment is concerned. Due to the fact that classroom setting can have an influence on the quality of teaching and learning in the CLIL classroom, the researcher decided to examine it carefully. All the data concerning the classroom setting (the size of the classroom, the arrangement of furniture, subject-related objects as well as the equipment) was based on the researcher's observations.

3.4.4. Attitudinal aspects and motivation

Last but not least is the category concerning attitudinal aspects and motivation investigated on the basis of questionnaires distributed among the CLIL learners and the CLIL teachers. This category was divided into two separate sub-categories: attitudinal aspects and motivation, respectively and in the following part these two sub-categories will be discussed in more detail:

a). Attitudinal aspects

Based on questionnaires distributed among the CLIL learners and the CLIL teachers, the researcher tried to analyse and discuss the changes in attitude towards CLIL and towards the use of L1 in the CLIL classroom. The reason why the researcher decided to investigate the attitudinal aspects is that they may have an extremely important positive or negative impact on the process of learning or teaching in the CLIL classroom where integrating content and language requires more effort on the part of the learners and the teachers. As far as attitude towards CLIL is concerned three questionnaires were distributed among the learners and the teachers throughout the school year: at the beginning of September, in January (after the first semester) and at the end of June (after the second semester) (Appendix: parts 2 & 6). The aim of the questionnaires was to find out the learners' and the teachers' attitude towards CLIL.

Additionally, another questionnaire was distributed comprising close-ended questions concerning the attitude towards using Polish in the CLIL classroom (Appendix: parts 3 & 7). This questionnaire was conducted at the beginning of the school year (September) and at the end of the school year (June). The aim of this questionnaire as discussed previously was to find out the learners and the teachers attitude towards using Polish in the CLIL classroom and whether it had changed throughout the school year.

b). Motivation

Motivation is importantly related to the previously mentioned sub-category as it also strongly correlates with measures of achievement.

It is an affective variable in the sense that it is defined in terms of feelings and attitudes and that is why it is very difficult to observe. Bearing in mind the importance of motivation in learning and teaching a second language as well as any kind of subject, the researcher decided to conduct a questionnaire among the CLIL learners. The questionnaires were distributed at the end of the school year (June) and their aim was to find out what the motivating factors were in case of learning and teaching subjects in a foreign language and what kind of motivation (intrinsic vs. extrinsic) played a more important role (Appendix: parts 4 & 8). Additionally, the researcher tried to find out whether any changes as far as motivation of the CLIL learners is concerned took place throughout the school year. The questions were both open-ended and close-ended as described in the previous chapter of this part of the study.

In order to provide a clear evaluation of Content and Language Integrated Learning, most of the phenomena mentioned above were analysed separately for chosen bilingual content lessons (geography, biology and mathematics). Only content aspects and attitudinal aspects together with motivation were analysed in a different way (holistically) due to the methods of data collection and analysis adapted by the researcher. Later, however, the results for some of the categories were combined to obtain a more comprehensive picture of the variables under investigation and, thus, to facilitate the overall evaluation of the Content and Language Integrated Learning in secondary education. It should also be made clear that since not all of the categories and sub-categories were equally relevant to the particular lessons, some of them were ignored in the corresponding analysis. Another important comment is that data collected through observations and tests' analysis was supported by questionnaires and an interview with the CLIL teachers.

In the next few chapters of this empirical part, a qualitative analysis of the data will be provided.

4. Course of the study

The research was conducted in a period of one school year (from September 2006 to June 2007). The researcher took part in 14 bilingual lessons per week (geography, biology and mathematics). Only one bilingual class was observed – the 1st grade. During the lessons observed the researcher used observation sheets (Appendix: part 1) and noted down all the necessary information according to the categories established by the researcher.

In September 2006, January 2007 and June 2007 the researcher distributed questionnaires concerning attitude towards bilingual education. The questionnaires were distributed during one lesson and the CLIL learners were asked to fill them in during the lesson. The CLIL teachers were also asked to fill in the questionnaires concerning their attitude towards bilingual education.

Additionally, the researcher was allowed to collect the CLIL learners' tests which they wrote within the whole school year. There were four tests conducted in geography, four tests conducted in biology and seven tests conducted in maths.

In June 2007, the researcher conducted additional questionnaires: a questionnaire concerning the use of L1 during the CLIL lessons (Appendix: parts 3 & 7), a questionnaire concerning motivation (Appendix: parts 4 & 8), a questionnaire concerning second language development (Appendix: part 5). Questionnaires concerning the use of L1 and motivation were distributed between the CLIL learners and the CLIL teachers while the questionnaire concerning second language development was only distributed among the CLIL learners. The CLIL learners were asked to fill in the questionnaires during the CLIL lessons.

At the end of the study, the researcher conducted an interview with the CLIL teachers (Part II, chapter V, 3.3.3.). The CLIL teachers were interviewed separately and each interview lasted about 15 minutes.

Having collected all the data the researcher started analysing it according to the categories established and described in Part II, chapter V, 3.4.

VI. Data presentation

1. Scheme of data presentation

The previous chapters together with their sub-chapters sought to present the scheme of the study together with research questions, study aims and a description of the pilot studies with their indications to the main study. Additionally, participants of the main study, instruments of data collection and categories of data analysis were described in detail.

The main purpose of the following chapter is to present the data aimed at investigating the changes in language education which took place during the CLIL lessons throughout the whole school year. Such a focus seems to be fully warranted in view of the fact that bilingual education has become not only a possibility but a necessity in the 21st century especially in a country like Poland where the knowledge of languages in different contexts is very important due to the economic changes. There is no doubt that this access to bilingual education is an invaluable asset that enables the learners to use their second language in various contexts, and, as pointed out elsewhere, it can considerably contribute to enhancing learners' motivation.

Taking into consideration the changes in language education which took place throughout one school year, the researcher decided to present the data according to the "time-line" analysing three lessons (geography, biology and mathematics) each month from September 2006 to June 2007. As already mentioned, the researcher observed 14 lessons per week but due the huge amount of data it became impossible to analyse all of them. As a result, the researcher decided to analyse 18 lessons in total and treat them as sample lessons. The researcher did not use any categories while choosing the lessons – they were picked at random. All the data is to be presented every second month according to the categories described in Part II, chapter V, 3.4., namely:

- LANGUAGE ASPECTS
 - **second language development** (development of speaking skills, writing skills, listening skills, reading skills, grammar and pronunciation) – data collected from observations and a questionnaire distributed at the end of the school year;
 - **the use of L1** (how and when the mother tongue is used by the CLIL learners and by

- the CLIL teachers) - data collected from observations and two questionnaires distributed at the end of the school year;
- **CONTENT ASPECTS** (if the CLIL learners make progress in content learning) - data based on the marks and grades given by the CLIL teachers. Criteria of subjects' evaluation are provided in Appendix: part 10; Even though, the criteria of subjects' evaluation are provided, the researcher is aware of the subjective nature of the marks and grades given by the CLIL teachers and, therefore, some of the data concerning progress in content learning may be biased.
- **LEARNING ENVIRONMENT ASPECTS**
 - **classroom interaction** (how much interaction is there between CLIL learners and CLIL teachers as well as CLIL learners themselves and what kind of interaction it is) – data collected from observations;
 - **the teacher's methodological approach** (what teaching methods are used by the CLIL teachers) – data collected from observations and an interview with teachers;
 - **learner's evaluation** (how are the CLIL learners evaluated) – data collected from observations and tests written by the learners;
 - **teaching materials** (what teaching materials are used during the CLIL classes) – data collected from observations;
 - **classroom settings** (what are the classroom like) – data collected from observations;
- **ATTITUDINAL AND MOTIVATIONAL ASPECTS**
 - **attitudinal aspects** (CLIL learners' and CLIL teachers' attitude towards bilingual education) – data collected from questionnaires (Appendix: parts 2 & 6);
 - **motivational aspects** (how are the CLIL learners and the CLIL teachers motivated) – data collected from questionnaires (Appendix: parts 4 & 8);

Additionally, the data obtained from questionnaires concerning second language development and the use of L1 will be presented in separate chapters (Part II, chapters 8 & 9). The questionnaires are provided as Appendix: parts 3, 5 & 7. The reason behind presenting data from questionnaires in separate chapters is that the researcher wanted to make a clear division between data obtained from questionnaires at the end of the school

year and observations carried out throughout the whole year by the researcher herself. Finally, the data gathered during the interviews with the CLIL teachers will be provided in Part II, chapter 10 according to the questions being asked. The results as well as the interpretation of the findings will be presented further on in this part of the study. It is hoped that the findings of this study will make it possible to offer some recommendations concerning integrating content and language in a Polish secondary school.

2. Data presentation – September 2006 (1st Semester)

Sample lessons:

The following lessons were chosen to be presented and analysed:

Subject: geography

Date: 18.09.2006

Topic of the lesson: “Indirect sources of geographical information”

Number of learners: 33

Subject: biology

Date: 15.09.2006

Topic: “The chemistry of living things”

Number of learners: 15

Subject: mathematics

Date: 18.09.2006

Topic: “Laws for logical sentences”

Number of learner: 31

The number of learners is smaller in case of biology due to the fact that the class was divided into two groups.

2.1. Language aspects

In September, it could be easily noticed that the CLIL teachers were very careful as far as integrating content and language was concerned. They were aware of the fact that for some learners it was shocking to learn a subject through a foreign language so they often switched into Polish. The foreign language skills were not paid attention to as much as later on during the school year so their development was also slightly noticeable.

2.1.1. Second language development

Generally, most of the skills were paid attention to during the lessons mentioned above. During the geography lesson the CLIL learners had a possibility to develop their listening skills as well as speaking skills. The same can be said about biology but the situation was different in the case of mathematics where the CLIL learners did not have any possibilities to develop their speaking skills but instead they could develop to a certain extent their writing skills. Apart from that, the CLIL learners had the possibility to get acquainted with new vocabulary which was underlined by all the CLIL teachers. The situation was different in the case of grammar and pronunciation – no error correction was used and hardly ever any attention was paid to the development of grammar or pronunciation. A detailed analysis is presented below.

In the case of **speaking abilities** sustained monologue concerning the ability to describe one's experience was noticed only during the geography lesson when a few CLIL learners fluently sustained a straightforward description of the sources of geographical information that they were acquainted with, e.g. "When I want to get some information I use the Internet which I think is the most common source of information, well not only the geographical one", "I think that we can simply use maps. Our teacher from the primary school kept repeating that we can read everything from the map". In the case of biology or mathematics, the CLIL learners did not use any monologues. When being asked a question, they gave a very short answer, e.g.

(biology)

T: "How are we built?"

L: "Out of water"

T: "Anything else?"

L: "Carbohydrates?"

T: "Right, and?"

etc...

(mathematics)

T: "What are the laws for logical sentences?"

L: "Comutativeness"

T: "OK, what else?"

L: "Conjunctiveness"

T: "There are more of them, could you give us all of them?"

The CLIL learners did not have any possibility to take part in a discussion or to address the class directly because there were no tasks used which required those kinds of abilities. Moreover, the researcher's opinion is that the CLIL learners would not be willing to take part in a discussion or to address the class directly – most of them seemed to be scared of speaking which could be due to the situation in which they found themselves: new school, new teachers, new class and what is more, subjects to be learned in a foreign language. However, it should be mentioned that those CLIL learners who had enough courage to speak in a foreign language had a very good command of English producing clear and smoothly flowing well-structured speech.

During the above mentioned CLIL lessons observed in September, the CLIL learners were not given any **written assignments** so the researcher is not in a position to evaluate the writing abilities of the CLIL learners observed. However, most of the CLIL learners were making some notes during all the lessons i.e. geography, biology and mathematics. The reason why they were not given any written assignments or tests was that it was the beginning of the school year and certain parts of the material was to be analysed in order to provide the learners with some tests.

As far as **listening skills** are concerned, the CLIL learners were exposed to the teacher talking during all lessons. The only lesson where the CLIL learners were exposed to audio media was the geography lesson. The CLIL learners were watching a documentary on weather forecasting and additionally they were asked to do some tasks which were connected with understanding. The geography CLIL teacher provided the CLIL learners with some comprehension questions which they were supposed to answer on the basis of the video presentation, e.g. “How do we collect weather information?”, “What do we use a cartogram for?”, “What kind of thematic maps do we have?” etc. Using the Common Framework of Reference for Languages (Council of Europe, 2001: 66), it can be said that on the basis of the CLIL learners language output, they could understand the main ideas which were delivered in a standard dialect (e.g. British English) including the geographical field. However, most of the CLIL learners asked the CLIL teacher to play the video once again in order to be able to find answers to the questions. 5 out of 7 CLIL learners asked had problems with answering the more detailed questions. In the case of all subjects, the CLIL learners were asked to listen to instructions which were given by the CLIL teachers, e.g. “Watch the video and answer the first two questions, please” (geography), “Look at the board and try to analyse the drawing of molecules. What is the main difference between them?” (biology), “Open your books on page 7 and do exercise 3” (mathematics). Most of the CLIL learners could understand the instructions but they often asked for repetition, e.g. 11 instructions given – the CLIL teacher was asked 8 times for repetition (geography), 15 instructions given – the CLIL teacher was asked 7 times for repetition (biology), 18 instructions given – the CLIL teacher was asked 21 times for repetition (mathematics). Based on the data provided above, it can be said that the CLIL learners had some problems with understanding instructions and could only catch the main point which could be due to the fact that they were not used to being given instructions in a foreign language. All the CLIL learners were listening as a member of a live audience and they could follow the teachers’ talk even though the subject matter was not familiar. At that stage of the study, it can be said that the listening skills of the CLIL learners were rather good.

During all the CLIL lessons observed i.e. geography, biology and mathematics the CLIL learners were asked to read some texts. All the CLIL learners were asked to **read** shorter

texts during the lessons rather than the longer ones. They were also asked to read instructions. In general, the CLIL learners could read with a larger degree of independence, adapting style and speed of reading. From time to time they had some problems with vocabulary so they asked the teacher for explanations. In the case of geography and biology, the CLIL learners did not have significant problems but they had some problems with understanding mathematical definitions, e.g. being given the following definition: “Any pair of sets A, B which do not have elements in common we say disjoint. Thus, A and B are disjoint sets if and only if $A \cap B = \emptyset$ where \emptyset represents an empty set” they kept asking a lot of questions: “What is this *disjoint*, I don’t understand it”, “Does it mean that A & B must always belong to an empty set?” etc... The reason why the CLIL learners had problems with understanding certain mathematical formulas was that the language of mathematics is a difficult language in itself and learning mathematics in a foreign language makes it even more difficult.

As far as **grammar** is concerned, the only teacher who paid attention to grammar during the lesson analysed was the CLIL geography teacher. The most visible grammatical problem that the CLIL learners seemed to have was connected with countable and uncountable nouns. Some of the CLIL learners made basic mistakes such as: “*I have many advices*...*” instead of “I have some advice...”, “*Alps are*...*” instead of “The Alps are...”, “*Maths are* difficult*” instead of “Maths is difficult” etc. The CLIL geography teacher started correcting the CLIL learners by giving them the proper form but afterwards she decided to spend a few minutes (7 minutes) on explaining the basic rules using the examples from geography, e.g. “The Canary Islands are...”, “Knowledge about the Canary Islands is...”, “The Pacific Ocean is...”, “The Tatra mountains are...” etc. On the basis of the observations, the researcher noticed that the CLIL learners had some problems with the following grammatical concepts: the proper use of the Perfect Tenses, e.g. “*What happened with the heat energy?**” instead of “What has happened with the heat energy?” – observation based on some experiment (biology), or “*Why you have solved this formula like that?**” instead of “Why have you solved this formula like that?” (mathematics) etc.; the proper use of articles, e.g. “*Alps* are the biggest chain of mountains in Europe**”, it should be “The Alps are the biggest chain of mountains in Europe” (geography), “*The**

carbohydrates consist of...”, it should be “Carbohydrates consist of...” (biology) etc.; problems with relative clauses – the CLIL learners tended to use “which” instead of “who” or “where” like in the following examples: “My uncle *which** climbs the mountains says that the weather is really changeable in the Alps”, “The Bermuda Triangle is an area *which** many ships disappeared due to some weather changes (geography) etc. In most cases it was an intralingual transfer which was responsible for those sorts of errors. Summing up, at this stage of observation the CLIL learners showed a relatively high degree of grammatical control. Their mistakes did not lead to misunderstanding.

As far as the use of **vocabulary** is concerned, it can be said that at that stage of the study the CLIL learners had a good range of basic vocabulary but had a lot of problems with the content related vocabulary. In order to answer the teachers’ questions and to do the tasks they kept asking the teachers for content vocabulary usually using the following formulas: “What is *synchronizacja* in English?” (geography), “How do we say *rozpuszczalnik* in English?” (biology), “How can we say *przemienność* in English” (mathematics) etc. The researcher noticed that at that stage the CLIL learners while having problems with some words, did not try to explain the word but just asked for its equivalent in English. Another thing worth mentioning is that the geography CLIL teacher noticed that the CLIL learners had some problems with “make” and “take” and she provided them with some expressions putting them on the board, e.g. “to take an exam”, “to make a decision”, “to take a shower” etc. The expressions were basic and they were not content related. Additionally, the CLIL learners tended to make mistakes related to the use of pronouns, e.g. instead of “it” they often used “she” or “he” as in the following examples: “The cover is quite thick and *she** cannot be melted” (geography), “The starch is very important for our bones. *She** is also important for our brain” (biology) etc. Most of the mistakes are also of an interlingual nature because they come from the native language. The Polish gender is clearly shown in the language. All in all, lexical accuracy was rather high, though some confusion and incorrect word choice occurred without hindering communication.

While observing the CLIL learners during all the subjects mentioned, the researcher did not notice any problems as far as **pronunciation** is concerned. The CLIL learners’

pronunciation was clearly intelligible even though a foreign accent was sometimes evident and occasional mispronunciations occurred. Most of the CLIL learners had some problems with word stress, e.g. the word *cover* (geography) – most of the observed learners stressed the second syllable instead of the first; the word *economical* (geography) – the CLIL learners stressed the second syllable instead of the first; the word *molecule* (biology) – the stress was put on the first syllable instead of the third; the word *conjectiveness* (mathematics) – the stress was put on the first syllable instead of the second syllable. Additionally, the CLIL learners had some problems with the long vowels which they shortened, e.g. *forecast* (there should be long “o”- o: and the CLIL learners often used short “o”) (geography); *starch* (there should be long “a” – a: and the CLIL learners often used short “a” instead) (biology), *mutually* (there should be long “u” – u: and the CLIL learners tended to use short “u” instead) (mathematics) etc.

During the lessons observed the CLIL teachers did not pay attention to the pronunciation errors.

As can be noticed from the data provided above, the CLIL learners tended to be quite uncertain as far as integrating content and language is concerned. They had some problems with speaking, listening comprehension as well as grammar, vocabulary and pronunciation. At this stage of the study it should be born in mind that most of the CLIL learners observed experienced integration of content and language for the first time in their lives and thus they may feel uncertain. On the other had, it should be noticed that the CLIL learners did their best and they are likely to succeed in developing their language skills and sub-skills. The next data analysis concerns the use of L1 during the classes observed.

2.1.2. The use of L1 (code-switching)

On the basis of the observations, it can be said that various instances of code-switching were present during the lessons. In the case of the geography lesson, about 30% was in Polish. In the case of biology, it was about 50% of the lesson and in the case of mathematics it was about 80%. The percentage varies due to the difficulty of the subject

taught and the topic of the lesson. The following examples illustrate various instances of code-switching.

Linguistic switch:

“*Geographical coordinates to są współrzędne geograficzne*”

(teacher-learner code-switching, geography); “How do we say *rocznik statystyczny* in English?” [translation: *rocznik statystyczny – statistical yearbook*]⁷ (learner-teacher code-switching, geography); “*Starch to jak będzie po polsku?*” [translation: “How is *starch* in Polish?”] (learner-learner code-switching, biology);

Topic switch:

“*Carbohydrates* consist of sugars, starch and cellulose czyli, *węglowodany to cukry, skrobia i celuloza, tak przy okazji, to ile jecie słodczy*” [translation: “....., by the way how many sweets do you eat?”] (teacher-learner code-switching, biology); “Jakikolwiek zbiory A i B, które nie mają wspólnych elementów etc...” [translation: “Any pair of sets A, B which do not have elements in common etc...”] (teacher-learner code-switching, mathematics); “Panie profesorze, czy musi jutro być ta kartkówka?” [translation: “Do we have to write this short test tomorrow?”] (learner-teacher code-switching, mathematics);

Affective switch:

“Great, kartkówka jest za tydzień!” [translation: “Great, the test is next week”] (learner-learner code-switching, mathematics); “Dzisiaj oglądamy video, super!” [translation: “We are watching a video film today, superb!”] (learner-learner code-switching, geography); “Dlaczego dostałam tylko trójkę za zadanie domowe?” [translation: “Why did I get only satisfactory mark for my homework?”] (learner-teacher code-switching, mathematics);

Socialising switch:

“Moje Drogie dzieciątka” [translation: “My Dear children”] (teacher-learner code-switching, mathematics); “Może pójdzie Pani z Nami do kina?” [translation: “Would you like to go to the cinema with us?”] (leaner-teacher code-switching, biology);

⁷ The translation from Polish into English in Part II, charter VI, was done by the author of the PhD thesis

Clarity switch:

“*Symbolic pictures*, powtarzam raz jeszcze, to są mapy, plany, atlasy itd, proszę sobie zapisać” [translation: “*Symbolic pictures*, I’m going to repeat i once again, are maps, plans and atlases, please write it down”] (teacher-learner code-switching, geography); “Jakie są funkcje węglowodanów?... jakie są funkcje węglowodanów? Jestem pewna, że wiecie” [translation: “What are the functions of carbohydrates?... what are the functions of carbohydrates? I’m sure that you know it”] (teacher-learner code-switching, biology);

L1: “Wiesz, to jest czysta chemia” [translation: “You know, it’s just chemistry”];

L2: “Jak to, nie rozumiem” [translation: “How come? I don’t understand it”];

L1: “To jest tak jak w chemii, w naszym organizmie są kwasy i zasady” [translation: “It’s like in chemistry, there are acids and bases in our body”]; (learner-learner code-switching, biology);

From the examples given above, it can be seen that code-switching is present during all lessons. In most situations, CLIL teachers switched into Polish in order to explain some vocabulary or difficult concepts. As it has been mentioned in the theoretical part of the thesis (Part I, Chapter II, 3.2.), the presence of the mother tongue is not forbidden especially in situations when it helps the learners understand certain difficult concepts.

2.2. Content aspects

At that stage of the study, it is very difficult to present the data concerning the content aspects. Throughout the whole month the CLIL learners were under the “safety umbrella” which meant that they were not given any bad marks. From time to time some CLIL learners who were exceptionally active during the lesson were given a positive mark. On the basis of the observations, it can be said that the CLIL learners had some problems with understanding content in a foreign language. The CLIL learners tended to ask a lot of questions and also switch into their mother tongue. The most problematic was mathematics - the CLIL learners hardly ever provided any information concerning mathematics in English.

2.3. Learning environment aspects

Taking into consideration the learning environment, the researcher concentrated on the interaction between the CLIL teachers and the CLIL learners as well as between the CLIL learners themselves. Additionally, the CLIL teachers' methodological approach was observed together with the ways of evaluating the CLIL learners. Apart from that, the researcher paid attention to the materials used during the lessons as well as to the classroom setting.

All the details concerning the above mentioned sub-categories are to be presented in relation to the three lessons mentioned above.

2.3.1. Classroom interaction

Adopting van Lier's (1988: 94-120) framework the following types of interaction as well as types of function were noticed during the lessons mentioned above:

Type 1:

Biology:

L: "Pani professor, pójdzie Pani z Nami do kina?" [translation: "Would you like to go to the cinema with us"?];

T: "Mogę pójść, nie ma problemu. Na jaki film?" [translation: "Yes, I can go with you, no problem. What film do you want to see?"];

L: "Jeszcze nie wiemy" [translation: "We don't know, yet"]; (**interpersonal function**);

....

L: "I've heard we should drink a lot of water"

T: "Yes, you are right"

L: "And we should eat something sweet every day"

L: "Well, I suppose cakes are not very healthy, by the way what cakes do like most?" (**ideational function**);

As can be seen from the examples, the biology CLIL teacher lost control over the activity going on in the classroom as well as over the topic.

Type 2:

Biology:

“Could you please write down the topic of our new lesson: *The chemistry of living things*”
(**textual function**);

Mathematics:

“Put down the following definitions into your notebooks” (**textual function**);

Geography:

“Please, watch the video and make some notes according to the questions that I gave you”
(**textual function**);

In this type of interaction, the teacher controlled the topic but did not control the activity.

Type 3:

Mathematics:

“OK, to summarise, could you remind me what kind of laws for logical sentences you know?” (**textual function**);

“Proszę podejść do tablicy i podać mi przykład” [translation: “Come to the blackboard and give me an example”] (**textual function**);

Geography:

“How can we gather or collect weather information?” (**textual function**);

In the examples above the CLIL teachers controlled the activities as well as the topic.

Type 4:

Biology:

T: “Now, get into three groups and make a list of the different functions of water”

L: “Do we have to write it in points?”

T: “Well, yes, you should”

L: “Dobra, coś tam na pewno wymyślimy jak zapyta. Co zbieracie ze sobą na wycieczkę? [translation: “OK, we will definitely make something up when asked. What are you taking for the trip?”]

L: “Masz na myśli ubrania, albo co?” [translation: “Do you mean clothes or what?”] (**textual and interpersonal function**);

T: “Get into pairs and try to answer the following question: *what happens with the heat energy?*”

L1: “Nie chce mi się już dzisiaj siedzieć w szkole. Chyba się zwolnię z w-fu” [translation: “I don’t feel like staying at school today. I think that I will not go to physical education”]

L2: “Zostań, dzisiaj nie będziemy dużo ćwiczyć bo babka jest chora” [translation: “Come on, don’t go, we won’t exercise a lot because the teacher is ill”] (**textual and interpersonal function**);

As can be seen from the example above, the CLIL teacher controlled the activity to a certain extent but not the topic. The CLIL learners had a personal conversation while doing the task given by the CLIL teacher.

To summarise, there was quite a lot of interaction between the CLIL teacher and the CLIL learners as well as between the CLIL learners themselves. The type of interaction was mainly of a textual or interpersonal nature. As it can be noticed the CLIL learners tended to lose their concentration on the topic of the lesson which could be due to the fact that they had some problems with understanding.

2.3.2. The teacher’s methodological approach

Geography

The CLIL geography teacher used a communicative approach and a learner centred one. She started the lesson with a revision of the previous one. While revising the previous lesson the CLIL teacher prompted some questions, e.g. “What is a *thematic map*?”, “What is the difference between a *cartogram* and a *diagrammatic map*?” etc. The CLIL teacher provided the CLIL learners with an opportunity to speak in a foreign language about the topic which they should already know. After the short revision, the CLIL teacher

introduced the topic of the video and provided the CLIL learners with some questions which they were supposed to answer while watching the video presentation. All the questions were open-ended so the CLIL learners had a chance to build longer sentences in English. The CLIL teacher paused the video from time to time in order to ask some questions concerning the presentation. The CLIL teacher also used a technique which is called *freeze frame* (the teacher tried to create some expectations by freezing the frame on the screen). It could be noticed that the CLIL learners were all the time concentrated on the film and interested in it.

By introducing the video presentation in English which was related to the topic of the lesson, the CLIL teacher perfectly integrated content and language and what is more involved the CLIL learners into the lesson.

Biology

The lesson observed was rather teacher-centred as it was mainly the teacher who spoke during the lesson. The biology CLIL teacher introduced the topic of the lesson by asking one question: “How are we built?”. Most of the CLIL learners started answering the question using just single words such as *water, minerals, oxygen* etc. The biology CLIL teacher put everything on the board. After a short brainstorming, the biology CLIL teacher gave a lecture on “the chemistry of living things” which lasted about 20 min. The CLIL learners were exposed to English with some switches into Polish from time to time but in the meantime they were also asked to make some notes. The topic of the lesson was very interesting but the CLIL learners were not stimulated enough so some of them seemed to be bored. The only two communicative activities which the CLIL learners were asked to do were to work in pairs and in groups in order to answer some questions. Unfortunately, the activities went out of the CLIL teacher’s control because the CLIL learners started having personal conversations.

Generally speaking, the biology CLIL teacher combined content and language but the CLIL learners did not have enough opportunities to communicate and take an active part in the lesson.

Mathematics

The mathematics lesson observed was very similar to the biology lesson except for one thing: there was much more code-switching during the mathematics lesson on the part of the teacher as well as on the part of the learners. The lesson was a teacher-centred lesson where the CLIL mathematics teacher was giving a lecture on “logical identities”. The lecture lasted about 20 min and the CLIL learners were supposed to make some notes. From time to time they asked questions about particular vocabulary which was difficult for them. The CLIL mathematics teacher usually provided the CLIL learners with the Polish equivalent of the English word. The CLIL mathematics teacher was using a lot of translation. The practical part of the lesson where the CLIL learners were asked to apply certain logical laws into some mathematical formulas was in Polish.

Concluding, on the basis of the mathematics lesson observed, it can be said that there was not much content and language integration probably due to the difficulty of the topic discussed.

All in all, the only lesson where content and language was integrated and the learner-centred approach was used was the geography lesson. In case of the biology lesson some attempt to integrate content and language was made on the part of the CLIL biology teacher.

2.3.3. Learner’s evaluation

September was the month which was considered to be a “safety month” for the learners from the 1st grade which meant that they were not allowed to be given any bad mark. Both the CLIL geography teacher as well as the CLIL biology teacher were giving positive marks (5 or 4) only for the CLIL learners’ participation in the lessons. The mathematics CLIL teacher conducted a diagnostic test in Polish. The aim of the test was to check the CLIL learners’ knowledge on mathematics. The researcher did not get the CLIL learners’ marks as they were not taken into account at the end of the semester but were only used by the mathematics CLIL teacher.

2.3.4. Teaching materials

Geography:

During the geography lesson described above, the CLIL geography teacher used multimedia, namely a TV set and a video cassette. The CLIL learners watched a documentary on *Indirect sources of geographical information*. Additionally, the CLIL learners were provided with handouts where useful vocabulary was written both in English and in Polish. From time to time, the CLIL geography teacher used a blackboard in order to write some unknown words which occurred in the documentary.

Biology

The CLIL biology teacher, while explaining all the terms, used OHP where all the information was written down so the CLIL learners had no problems with making some notes. Additionally, the CLIL biology teacher was using a blackboard all the time writing down more information on it. No books were used.

Mathematics

While providing the CLIL learners with some theory concerning the lesson, the mathematics CLIL teacher gave the learners some handouts which were written in hand. In the practical part of the lesson where the CLIL learners were asked to do some mathematical formulas, they were using a Polish book which contained different mathematical tasks “Zbiór zadań z matematyki” (translation: “A set of mathematical tasks”). Additionally, a blackboard was used all the time by the CLIL teacher as well as by the CLIL learners.

Summarising, both the biology and mathematical CLIL teachers used rather conventional materials (handouts and books in Polish) which were most often used during all the lessons observed in September. It should also be mentioned that all the handouts were prepared by the CLIL teachers themselves and some attempt to integrate content and language was made on the part of the teachers. The only CLIL teacher who used additional materials also especially prepared for the lesson was the geography CLIL teacher. The geography CLIL

teacher prepared a documentary and some tasks based on it where both content and language were taken into consideration.

2.3.5. Classroom setting

Geography

The geography classroom was not very big. The desks were arranged in rows and there were only 33 chairs available. The CLIL teacher was seated facing the CLIL learners. The blackboard was situated behind the CLIL teacher's desk so that everybody could see it. Additionally, there were a TV set, a video and a DVD next to the CLIL teacher's desk. On the walls there were two maps: a map of Europe and a map of the world. As the geography classroom was also used as the English classroom, there were some photos of Great Britain and the USA on the walls. The classroom was bright and quiet and there was no noise coming from outside the classroom.

Biology

The biology classroom was also not very big. The desks were also arranged in rows but there were more chairs available. The CLIL teacher was facing the CLIL learners. The blackboard was also situated behind the CLIL teacher's desk. Additionally, there was an OHP next to the CLIL teacher's desk but there were no other multimedia in the biology classroom. Apart from that there were some mice in a aquarium and a lot of subject-related objects such as some bones and organs preserved in formalin. There were some pictures on the walls such as a picture of the skeleton, muscles and the digestive system. The classroom was also bright and quiet.

Mathematics

The classroom where the lesson of mathematics took place was very small and it was situated in the attic so it was not very bright. The desks were arranged in rows and there were 35 chairs available. The CLIL teacher was facing the CLIL learners and the blackboard was also situated behind his desk. There was no multimedia in the classroom.

As it was a Polish classroom there were no maths-related tables or diagrams on the walls. The classroom was rather quiet.

Generally speaking, all the classrooms were too small for such a large number of learners. The desks were not well arranged as the CLIL teachers did not have access to all CLIL learners especially when they were asked to work in groups or pairs. The only positive thing was that all the classrooms were quiet so the CLIL learners could learn in peace and most of them were bright which also facilitated learning.

2.4. Attitudinal aspects and motivation

The data concerning attitudinal aspects is to be presented below and the data concerning motivation is to be presented later in this part of the thesis.

2.4.1. Attitudinal aspects

At the beginning of September the researcher conducted a questionnaire (Appendix: part 2) to find out the CLIL learners' attitude towards CLIL. The CLIL learners were asked only one open-ended question, namely: *What do you think about learning subjects in a foreign language? Please, express your opinion in three to five sentences paying attention to the advantages and disadvantages of learning subjects in a foreign language.* The question was asked in Polish so there was no language barrier in providing honest answers. The questionnaire was distributed by the researcher during the lesson and the CLIL learners had a few minutes to answer the question. **31** CLIL learners provided an answer to the above mentioned question. On the basis of the answers it can be said that all the CLIL learners who filled in the questionnaire had a very positive attitude towards CLIL. **27** of them enumerated only advantages of learning subjects in a foreign language and only **4** of them provided both advantages and disadvantages. The advantages that the CLIL learners provided while answering the question were the following:

- “acquiring the ability to think in English”;
- “possibility to learn more vocabulary”;
- “no language barrier”;

- “better opportunities in the future – possibility to study and work abroad”;
- “possibility to learn more specialised vocabulary which would be impossible to learn while taking part in language courses”;
- “possibility to listen to real English every day”;
- “quick development of all language skills such as writing, speaking, listening and reading comprehension”;
- “possibility to take bilingual final secondary school examination – *Matura*”;
- “possibility to be at the proficient level of English when finishing the school”;
- “improvement and development of pronunciation”;
- “foreign exchanges and a lot of trips abroad”;
- “the lessons are more challenging and interesting”;
- “easier life in the future and a well-paid job”;
- “possibility to acquire knowledge in two languages”;

The disadvantages concerning bilingual were the following:

- “misunderstanding especially in mathematics”;
- “possibility of getting lost during the lesson”;
- “no course books available which is very problematic”;
- “learning in a foreign language is hard, it requires more thinking”;
- “a lot of material to be covered”;
- “more time spent on learning”;
- “very difficult vocabulary”;

As can be seen from the above given opinions, most of the CLIL learners had a very positive attitude towards learning subjects in a foreign language. Nearly all of them mentioned the possibility of studying and working abroad which may mean that they are instrumentally motivated. While analysing the CLIL learners’ answers it should be pointed out that at that stage of the study, most of the learners had just started their education in a foreign language. It will be very interesting to compare their answers with those given in the middle of the school year and at the end of the school year.

3. Data presentation – November 2006 (1st semester)

Sample lessons:

The following lessons were chosen to be presented and analysed:

Subject: geography

Date: 13.11.2006

Topic of the lesson: “Astronomy – basic terms”

Number of learners: 32

Subject: biology

Date: 21.10.2006

Topic: “The Cell”

Number of learners: 16

Subject: mathematics

Date: 16.11.2006

Topic: “Sets and subsets”

Number of learners: 31

The number of learners is smaller in case of biology due to the fact that the class was divided into two groups.

3.1. Language aspects

There were slight differences between the lessons observed in September, October and in November. Firstly, the CLIL learners seemed to be more confident as far as speaking in a foreign language was concerned. They were more willing to use a foreign language while talking about subject-related content. Secondly, the CLIL teachers also paid more attention to integrating content and language which was noticed through the follow-up tasks which were given to the CLIL learners. As far as the use of L1 during the lessons is concerned there was not any change noticed. Both the CLIL teachers and the CLIL learners used a lot

of Polish during the lessons. However, it should be mentioned that the methods of teaching did not differ much from those ones used in September – the CLIL teachers were still relying on lectures. Finally, the CLIL learners from the 1st grade were treated equally, which meant that “the safety period” was over and they were evaluated like other learners.

3.1.1. Second language development

As far as speaking skills are concerned the researcher noticed that the CLIL learners observed were more willing to speak because they were getting used to the idea of being exposed to English all the time. Most of the learners had a possibility to speak English during the follow-up activities which were given by the CLIL geography teacher and by the CLIL biology teacher. The CLIL learners had also the possibility to develop their listening and reading skills during these lessons. In the case of mathematics the situation has not changed much since September. Most of the lessons were in Polish and from time to time in English so it is difficult to talk about foreign language skills development. The CLIL learners had a possibility to broaden their vocabulary knowledge as far as geography, biology and mathematics were concerned. Hardly ever any attention was paid to grammar and pronunciation. A detailed analysis of the three lessons mentioned above is to be presented below.

In the case of **speaking skills**, it was noticed that apart from the sustained monologue the CLIL learners were also willing to take part in discussions as well as in activities in which they were asked to address the audience directly (e.g. presentations). During the CLIL geography lesson a few CLIL learners provided detailed accounts of their experiences concerning astronomy, astrology and horoscopes. These monologues led to an open discussion concerning the existence of different astronomical theories, e.g.

L1: “I’ve heard about a theory which says that our planet started its existence due to a huge star explosion”

L2: “Well, it may be true. It is also written in the Bible that there was an explosion. What about other planets? I’m wondering if any life exists there?”

L3: “Well, there are a lot of stories about it...” [the learners continue telling the stories];

During the CLIL biology lesson, the CLIL learners were provided with an opportunity to make a presentation in front of the whole class. The CLIL learners had been asked to prepare a model of a cell and give a short presentation. While giving a 10 minute presentation some of the CLIL learners seemed to be under stress losing the fluency but most of them gave a clear and well-structured presentation using a very good English. In the case of mathematics, no much spoken English was used apart from some questions asked by the CLIL mathematics teacher and short answers given by the CLIL learners, e.g.

T: “What kind of set is it?”

L: “Empty”

T: “OK. How would you call the other set?”

L: “Empty, too”

T: “Could you provide the properties of the empty sets shown on the board?”

Silence... [the teacher repeats the question in Polish]

On the basis of the above given data as well as on the regular observations carried out by the researcher, it can be said that there were some slight changes concerning the development of speaking skills: the CLIL learners were more willing to take part in discussions and seemed to have more courage to address the audience directly. Their speech was also more fluent and full of specialized vocabulary.

During all the CLIL lessons mentioned above, the CLIL learners were making notes. As the researcher did not have any access to the CLIL learners’ notebooks, it was very difficult to analyse the development of the **writing skills**. Fortunately, in November the CLIL learners were given tests in geography, biology and mathematics and on the basis of the deep analysis of the tests the researcher could provide some data concerning the CLIL learners’ writing skills. It should be mentioned that all the data provided is closely related to the language aspects not the content aspects which are to be discussed later in this part of the thesis (part II, chapter VI, 3.2.).

The first test which the CLIL learners were assigned was in geography and it covered cartography. Three questions were in English: the CLIL learners were asked to define certain words, answer some questions, e.g. *What should be taken under consideration while examining a flow?* and translate some words from Polish into English. The other three were

in Polish. The work of 33 CLIL learners was taken into consideration while providing the data. While analysing the answers to the first question where the CLIL learners were asked to provide the definitions of certain words it can be said that most of the learners did not have any problems with providing definitions in a foreign language. The most common mistakes which occurred were the ones connected with grammar and vocabulary, e.g. “*have** instead of *has*”, “hydrography – the *studies** of instead of the *study* of”, “map – representation *in** a flat surface instead of *on* flat surface”, “isotherm – a *draw **on the base map instead of a *line* on the base map”. In the case of the second question where the CLIL learners were asked to answer the questions, most of the CLIL learners tended to give short answers, e.g. *What should be taken under consideration while examining a flow?* “the temperature of water, plants and animals in the flow and on the coast” or “hydrological variation, human activity, geomorphology, biogeography” etc. or *What should be taken under consideration while making direct observations of a lake?* “the shape of a shoreline, organisms and plants in the water, temperature of the water” or “temperature, water, connections, plants and animals” etc. In the case of the third question where the CLIL learners were asked to translate certain words from Polish into English, the most common mistakes which occurred were connected with spelling, e.g. “*tiddes** instead of *tides*”, “*geographical** instead of *geographical*”, “*constans** instead of *constant*”, “*kartographical** instead of *cartographical*” etc. Analysing the third question, the researcher could also pay attention to the acquisition and development of vocabulary which at that point of the study was quite impressive. As far as cartography was concerned most of the CLIL learners were able to translate all the words from Polish into English.

The test given in biology consisted of five questions which were all given in English. The test covered the material concerning the chemistry of living things. 33 tests were analysed and the data is to be provided below. As has been done in the case of the test in geography, the content aspects are not to be taken into consideration in this chapter. Content aspects are to be discussed in part II, chapter VI, 3.2. Questions 1, 2 and 5 were open-ended questions where the CLIL learners were asked to provide answers. Question number 3 was of a “true” and “false” type where the CLIL learners were given a set of sentences. In task 4, the CLIL learners were asked to complete the sentences with proper words. While analysing the answers to open-ended questions, most of the CLIL learners tended to have

some problems with vocabulary. The answers were rather well-structured but a Polish word occurred from time to time, e.g. “Amino acids have huge *wpływ na** [influence on] shape, structure and function of protein”, “Proteins as the rest of the organic compounds are polymers – chains made of subunits, monomers. The *podstawowy** [basic] unit ...”, “In condensation reaction the molecule of water is *wypuszczona** [released]” etc. Additionally, certain problems connected with spelling were also noticed, e.g. “An amino group from one amino acid is *conected** [connected]”, “The basic units of lipids are a molecule of *glucose* [glycerol]”, “Amino acids form proteins by *creting** [creating] the peptide bonds...” In case of the task where the CLIL learners were supposed to complete the sentences with some words, the only problem which occurred was connected with some spelling mistakes. In the case of mathematics, it was very difficult to analyse the CLIL learners’ writing skills as well as the knowledge of specialized vocabulary due to the fact that the CLIL learners were asked to solve some mathematical formulas using the language of mathematics only. On the basis of the data provided above, it can be said that it was very difficult to analyse the CLIL learners’ writing skills due to the fact that they were usually asked to provide short answers. However, it can be said that most of the CLIL learners did not have many problems while providing the answers apart from the ones connected with lack of vocabulary or spelling difficulties.

During all the lessons mentioned above, the CLIL learners were exposed to the teacher talking which had an influence on the development of **listening skills**. Additionally, the CLIL learners were exposed to each other’s talk while working in pairs and groups. After the CLIL teachers’ lecture, the CLIL learners were asked some comprehension questions and using the Common Framework of Reference for Languages (Council of Europe, 2001: 66), it can be said that on the basis of the CLIL learners language output, they could understand the main ideas which were delivered in a standard dialect including the geographical and biological field. Unfortunately, a lot of problems occurred during mathematics. The CLIL learners had a lot of problems with understanding the CLIL teacher’s talk and they tended asking questions. The CLIL learners tended to have fewer problems while being asked to listen to instructions given by the CLIL teachers, e.g. “Give me the names of the Planets that you know” (geography), “Could you look at the board and

describe the cell” (biology), “Please, do the task from page 17 on your own” (mathematics). The CLIL learners asked for repetitions but not as often as they used to previously, e.g. 9 instructions given – the CLIL teacher was asked 5 times for repetition (geography), 13 instructions given – the CLIL teacher was asked 8 times for repetition (biology), 17 instructions given – the mathematics teacher was asked 15 times for repetition (mathematics). On the basis of the data provided above, it can be said that the CLIL learners had fewer problems understanding instructions than they had in September or October. All the CLIL learners were listening as a member of a live audience and they could follow the teachers’ talk even though the subject matter was not familiar. At that stage of the study, it can be said that the listening skills of the CLIL learners were slightly better than in September.

As far as **reading skills** are concerned, there were not any changes noticed on the part of the researcher. The CLIL learners were provided with shorter texts during the lesson and they were asked to answer some questions. Taking into consideration the Common Framework of Reference for Languages (Council of Europe, 2001: 69), it can be said that the CLIL learners could read with a larger degree of independence, adapting style and speed of reading. However, they still had some problems with new vocabulary so they tended to ask the teachers some questions. The CLIL learners were very familiar with the two main reading techniques, namely skimming and scanning. The most problematic was mathematics – the CLIL learners had a lot of problems with understanding the tasks that they were given by the CLIL teacher and they tended to ask a lot of comprehension questions, e.g. “What does it mean to specify the subsets? Could you translate it into Polish?” or “What does *manipulating sets* mean? What are we supposed to do here?” etc. In many cases the mathematics CLIL teacher translated the tasks into Polish.

As far as **grammar** is concerned, both the geography CLIL teacher as well as the biology CLIL teacher paid attention to grammar during the lessons analysed. The CLIL geography teacher stressed the importance of the Present Tenses while describing the Solar system. The only mistakes made by the CLIL learners noticed by the researcher were the ones connected with the use of tenses or some infinitive structures, e.g. “Asteroids *were** [are]

rocky debris which are mostly found orbiting in the asteroid belt and can measure several hundreds miles in diameter” or “Comets are believed *that they may* originated*... [to have originated]” etc. As it was noticed before, the CLIL geography teacher corrected the CLIL learners by giving them the proper answers. This time the CLIL geography teacher did not spend any time on explaining to the CLIL learners the rules probably assuming that they should already know them. During the biology lesson it was noticed that the CLIL learners still had some problems with relative clauses using constantly “who” instead of “which”, e.g. “Outer membrane *who** is composed of proteins” or “leucoplasts *who** are responsible for...” etc. The biology CLIL teacher decided to remind the CLIL learners of the rule concerning the use of *which* and *who* providing them with some examples. There were no grammatical mistakes noticed during the lesson of mathematics due to the fact that most of the lesson was in Polish. All in all, the CLIL learners showed a relatively high degree of grammatical control. Their mistakes did not lead to misunderstanding.

Having observed the CLIL learners and having analysed the range of **vocabulary** they possessed from their written tests it can be said that their knowledge of specialized vocabulary was much broader. While being asked to translate certain words from the geographical field most of the CLIL learners had no problems and they got maximum points. In the case of biology, the situation was a bit different. While being given a test, the CLIL learners were not asked to translate the words from Polish into English but they were asked to answer the questions using specialized vocabulary. It turned out that the CLIL learners had a lot of problems using the words in the context. They often used improper words or made some spelling mistakes, e.g. “... the molecule of water is *replaced** [instead of *released*]”, “*while** [instead of *during*] this kind of reaction...”, “Water has high heat *capability** [instead of *capacity*]” etc. In the case of mathematics it was quite difficult to notice whether the CLIL learners possessed a broader range of vocabulary as most of the lesson was in Polish and the test consisted of tasks which did not require any use of English language. Having analysed the above mentioned lessons, some of the CLIL learners still tended to ask questions concerning the content vocabulary, e.g. “What is *ruch obrotowy Ziemi* in English?” (geography), “Czy *nucleus* to jądro?” (biology), “How can we translate *manipulating sets* into Polish?” (mathematics). However, a lot of them while expressing

opinions or sharing some experience tended to use specialized vocabulary in the proper context. Taking into consideration the lessons observed in September and October together with the data gathered in November, it can be said that the CLIL learners have made a slight progress as far as content vocabulary is concerned.

Having analysed the data gathered during the lessons mentioned above the CLIL learners tended to have the same **pronunciation** problems they had in September or October. Most of the CLIL learners had some problems with word stress, e.g. the word *hemisphere* (geography) – most of the observed CLIL learners stressed the third syllable instead of the first one; the word *membrane* (biology) – most of the observed CLIL learners stressed the second syllable instead of the first one; the word *manipulating* (mathematics) – most of the CLIL learners stressed the first syllable instead of the second one. Additionally, the CLIL learners still tended to have some problems with the long and short vowels, e.g. *capricorn* (there should be long “o” – o: and the CLIL learners often used the short “o”) (geography), *gluten* (there should be long “u” – u: and the CLIL learners tended to use short “u”) (biology); All in all, there were no changes visible as far as pronunciation was concerned which could be due to the fact that the CLIL teachers did not pay attention to the pronunciation errors.

As can be noticed from the data provided above, the CLIL learners made some progress as far as speaking was concerned. They were more willing to take part in discussions combining their content with the language knowledge. Apart from that, it can be said that the CLIL learners have acquired more specialised vocabulary which could be noticed while analysing their written work. To sum up, a lot of the CLIL learners observed seemed to have overcome the content - language barrier which means that they stopped being afraid of speaking about difficult matters in a foreign language. Overcoming this barrier is crucial in Content and Language Integrated Learning.

3.1.2. The use of L1 (code-switching)

Based on the observations, it can be said that various instances of code-switching were present during the lessons. Comparing the lessons observed in September to the lessons observed in November nearly no changes were noticed as far as code-switching was concerned. In the case of the geography lesson, about 30% of the lesson was in Polish. In the case of biology, it was about 50% of the lesson and in the case of mathematics it was about 80%. The percentage varies due to the difficulty of the subject taught and the topic of the lesson. It is worth mentioning that the percentage of Polish used during the lessons observed in November was the same as the percentage of Polish used during the lessons observed in September. The following examples illustrate various instances of code-switching.

Linguistic switch:

“Does *Tropic of Cancer* mean *zwrotnik raka*?” (learner-teacher code-switching, geography);

“*Intervals to przedziały po polsku*” [translation: “*Intervals are intervals* in Polish] (teacher-learner code-switching, mathematics);

“*Plastids czyli plastydy, leucoplasts czyli leukoplasty, chromoplasts czyli chromoplasty, chloroplasts czyli chloroplasty*” (teacher-learner code-switching, biology);

Topic switch:

“As you can see in the picture, there is nucleus *czyli jądro*, outer membrane *czyli zewnętrzna błona*, inner membrane *czyli wewnętrzna błona*” (teacher-learner code-switching, biology);

“The set of all subsets of a given set x has got exactly 2^n elements *czyli dany zbiór n , elementarny ma 2^n swoich podzbiorów*” (teacher-learner code-switching, mathematics);

“Proszę Nam podać wszystkie nazwy planet po angielsku” [translation: “Could you please give us the names of the planets in English?”] (learner-teacher code-switching);

Affective switch:

“Super, będziemy pracować na mikroskopach” [translation: “Great, we are going to work with microscopes”] (learner-learner code-switching, biology);

“Ale masz fajny model komórki!” [translation: “What a nice model of the cell!”] (learner-learner code-switching, biology);

“Nie, nie zgadzam się z oceną” [translation: “I don’t agree with the mark”] (learner-teacher code-switching, mathematics);

Socialising switch:

“Może pójdziemy na pizzę po zajęciach?” [translation: “Maybe, we could have some pizza after the school?”] (learner-learner code-switching, mathematics);

“Wiesz, czekam już na weekend, a Ty? Jestem zmęczona całym tygodniem” [translation: “I’m waiting for the weekend and you? I’m really tired after the whole week”] (learner-learner code-switching, mathematics);

Clarity switch:

“Proszę zapisać nazwy, nie będę tego powtarzać po raz trzeci: the Equator, hemisphere, the Arctic Circle etc.” [translation: “Could you please write down the names, I’m not going to repeat them for the third time...] (teacher-learner code-switching, geography);

“A czy może Pani powtórzyć teorię komórki po polsku?” [translation: “Could you please repeat the theory of the cell in Polish?”] (learner-teacher code-switching, biology);

“Teraz chciałabym powtórzyć budowę komórki, ale po polsku” [translation: “Now, I would like to repeat the structure of the cell but in Polish”] (teacher-learner code-switching, biology);

Taking into consideration the data gathered during the lessons mentioned above it can be noticed that both the CLIL teachers and the CLIL learners switched into Polish in various situations. In most cases Polish was used to facilitate learning.

3.2. Content aspects

The only way to evaluate the content aspects at this stage of the study was to present the marks of the CLIL learners which were taken from their written tests mentioned above (part II, chapter VI, 3.1.1.). It should be born in mind that the marks presented below were given by the subject CLIL teachers and to a certain extent, they may be of a subjective nature. While evaluating the CLIL learners' content knowledge, the CLIL teachers did not pay attention to the language aspects. Even though the researcher analysed the written work of the CLIL learners from the linguistic point of view, she was not in the position to evaluate the content.

Geography:

33 CLIL learners took the test in cartography and the marks are the following:

Table 1. Marks received from the test in geography.

Excellent (6.0)	No learners
Very good (5.0)	7 learners
Plus good (4.5)	2 learners
Good (4.0)	10 learners
Plus satisfactory (3.5)	2 learners
Satisfactory (3.0)	6 learners
Pass (2.0)	2 learners
Fail (1.0)	4 learners

As it can be seen from the data provided above most of the learners received good, or very good marks which means that their content knowledge in a foreign language was quite good. Only 6 learners out of 33 received marks which were not very satisfactory.

Biology

33 CLIL learners took the test in chemistry of living things and the marks were the following:

Table 2. Marks received from the test in biology.

Excellent (6.0)	No learners
Very good (5.0)	5 learners
Plus good (4.5)	5 learners
Good (4.0)	4 learners
Plus satisfactory (3.5)	3 learners
Satisfactory (3.0)	6 learners
Pass (2.0)	4 learners
Fail (1.0)	6 learners

As can be seen from the data concerning biology the results were not as good as in the case of geography which may mean that at that stage there were a lot of CLIL learners who had some problems with learning biology in a foreign language as they did not receive good marks. However, about 50% of the CLIL learners received good marks.

Mathematics

30 CLIL learners took the test in logical sentences. However, it should be pointed out that even though some of the lessons were in English, the test was in Polish. The marks are the following:

Table 3. Marks received from the test in mathematics.

Excellent (6.0)	No learners
Very good (5.0)	6 learners
Plus good (4.5)	3 learners
Good (4.0)	6 learners
Plus satisfactory (3.5)	4 learners
Satisfactory (3.0)	6 learners
Pass (2.0)	None
Fail (1.0)	5 learners

From the data provided above it can be seen that most of the CLIL learners received positive marks which may be due to the fact that a lot of lessons on logical sentences were in Polish and what is more, the test was also administered in Polish.

To sum up, it may be concluded that at this stage of the study, the CLIL learners received the most satisfactory marks in geography which may mean that they mastered both language and content yet still some problems occurred in biology where the marks were not as good as in geography. In the case of mathematics, the marks should not be taken into consideration due to the fact that the test was administered in Polish.

3.3. Learning environment aspects

Having analysed all the data gathered during the above mentioned lessons it can be said that there was not much interaction between the CLIL learners themselves. It was mainly the CLIL teachers who were in the centre of the lessons. When mentioning the methodological approach, all the CLIL teachers observed used the teacher centred-approach. The lectures that they were delivering dominated the lessons. The materials used during the lessons consisted of the handouts and books which were usually in Polish. Evaluation was done on the basis of the tests, the results of which were presented in the previous chapter (part II, chapter VI, 3.2.). The classroom setting has not changed much so the researcher is not going to concentrate on it in this part of the study. All the details concerning interaction, methods of teaching and materials used are to be presented below.

3.3.1. Classroom interaction

Adopting van Lier's (1988: 94-120) framework the following types of interaction as well as types of function were noticed during the lessons mentioned above:

Type 1:

Mathematics:

L1: “Wiesz co dzisiaj, to chyba jest dzień telefonu komórkowego” [translation: “Well, I think that today is a mobile phone day”];

L2: “Dlaczego? Nie rozumiem.” [translation: “Dlaczego? I don’t get it”];

L3: “No wszystkim dzwonią telefony, a ten jeszcze się nie wścieka” [translation: “The mobile phones keep ringing and he (teacher) is not angry, that’s surprising”];

L1: “Myślę, że jest w dobrym *moodzie*” [translation: “I think that he (teacher) is in good mood”] (**interpersonal function**);

....

T: “Well, I will tell you an anecdote. Yesterday I was really surprised because there was mouse in my house and I have a cat. I was sure that the cat would eat the mouse but it didn’t. This morning I found them playing together”

L: “Oh, we don’t believe it”

T: “Well, you should. A cat can be compared to the maths teacher and mouse or rather mice to the pupils. Think about this anecdote and let’s get back to our sets” (**ideational and interpersonal function**);

As it can be seen from the examples, the mathematics CLIL teacher lost control over the activity going on in the classroom as well as over the topic but in the second example he regained control but the topic was not connected with the lesson.

Type 2:

Geography, Biology, Mathematics

All the CLIL teachers were giving lectures for about 20 minutes. They had control over the topic but not over the activities going on in the classroom. Some CLIL learners were making notes but others were playing some games or just whispering. The **function** was **textual**.

Other interactions were also noticed which fitted this type:

Geography:

“Could you write down the following terms and translate them into Polish at home” (**textual function**);

Biology:

“Look at the board please. What are the functions of lipids? Think about it for a while”
(**textual function**);

In this type of interaction, the teacher controlled the topic but did not control the activity.

Type 3:

Geography:

“What should be taken into consideration when discussing different astronomical theories?” (**textual function**);

“Could you define the term *universe*. What is it?” (**textual function**);

Biology:

“Ania, please answer my question: What is the difference between the animal and plant cell?” (**textual function**);

“What can you see through this microscope?” (**textual function**);

In the above given examples the CLIL teachers controlled the activities as well as the topic.

Type 4:

Biology:

T: “Please, make some notes. I’m not going to repeat it once again and I will ask you about it next time”

Some CLIL learners were making notes while the CLIL teacher was giving a lecture but some were coping the homework from another lesson. (**textual function**);

T: “Get into pairs and fill in this exercise using appropriate words from the lesson”

L1: “Magda, powiedz Nam co tam ma być. To jest trudne.” [translation: “Magda, tell us what we should write there. It’s difficult.”]

L2: “Magda Nam zaraz powie co tam ma być. Pomyślmy lepiej jak przygotować przedstawienie na Halloween.” [translation: “Magda will tell us what to write in there. Let’s think about the play for Halloween.”] (**textual and interpersonal function**);

As it can be seen from the above given example, the CLIL teacher controlled the activity to a certain extent but not the topic. The CLIL learners had a personal conversation while doing the task given by the CLIL teacher.

To summarise, there was less interaction between the CLIL learners and the CLIL teachers as well as between the CLIL learners themselves than in September or October. It was because all the CLIL teachers started their lessons from a lecture which lasted from 15 to 20 minutes. During the lecture there was an interaction between the CLIL teachers and the CLIL learners but it was rather passive on the part of the CLIL learners. The type of interaction which occurred during the lessons observed was mainly of a textual or interpersonal nature. It was noticeable that the CLIL learners tended to lose their concentration on the topic of the lesson which could be due to the fact that they got bored because of the lack of activity during the lectures given by the CLIL teachers.

3.3.2. The teacher's methodological approach

Geography

The CLIL geography teacher partly used a teacher-centred approach and partly a learner-centred approach. The teacher did not revise the previous lesson with the learners but started from a lecture on astronomy which was an introductory lecture. The lecture lasted 22 minutes and the CLIL learners were required to listen to the teacher and make some notes. Having finished the lecture the CLIL learners were asked to work in pairs and fill in the diagram which the CLIL teacher had prepared on separate handouts. The CLIL learners had a few minutes to work in pairs and communicate in English. Afterwards, the CLIL geography teacher checked the exercises together with the CLIL learners. As the next follow up exercise, the CLIL learners were asked to read some theories concerning the Universe and the CLIL geography teacher asked some comprehension questions. The exercises were both content and language focused. The last purely communicative stage of the lesson was a discussion concerning the different theories. The CLIL learners were given an opportunity to express their opinions freely.

Biology

Most of the lesson observed was mainly teacher-centred as the CLIL biology teacher gave a lecture on different kinds of cells. The lesson started with a revision – the CLIL learners

were supposed to work in pairs and fill in the table with expressions listed below (the exercise was both content and language focused). Then the CLIL biology teacher asked the CLIL learners to listen and make some notes. The lecture lasted about 20 minutes. The CLIL biology teacher used some OHP to illustrate the cells. After the lecture, the CLIL learners were put in groups, given microscopes and asked to observe different kinds of cells. Having completed this task they were asked to draw the cells and name different parts of the cells. For homework, they were asked to prepare a model of a cell and present it in the classroom. The CLIL biology teacher tried to integrate both content and language especially in the second part of the lesson.

Mathematics

The mathematics lesson observed was also mostly teacher-centred. The CLIL mathematics teacher started the lesson from a lecture on sets and subsets which lasted 15 minutes. The lecture was in English but the CLIL learners asked the teacher to translate it into Polish because they could hardly understand anything. The translation into Polish lasted about 10 minutes. The lesson of mathematics analysed in November did not differ much from the lesson of mathematics described in September. The practical part where the CLIL learners were asked to draw some sets and subsets as well as solve some formulas was in Polish. No content and language integration was visible during the lesson of mathematics discussed above.

Concluding, both the CLIL geography lesson and the CLIL biology lesson were very similar – they started with a lecture and then continued with some exercises where both content and language was stressed. The mathematics lesson was different because most of it was in Polish. All the teachers used a teacher-centred approach but in case of geography and biology the CLIL teachers “switched” the approach from teacher-centred to learner-centred which turned out to be very successful – the CLIL learners started being active and more interested in the lessons.

3.3.3. Learner's evaluation

During the CLIL lessons observed there was no evaluation done by the CLIL teachers. However, in November all the CLIL teachers administered some tests (the results of the tests were presented in part II, chapter VI, 3.2.). The test in geography was administered partly in English and partly in Polish. Two questions were descriptive and one question was connected with translating some subject-related words from Polish into English. While evaluating the answers which were given in English the CLIL geography teacher did not pay attention to language mistakes. To pass the test the CLIL learners had to get more than 60%. The test in biology was only in English and the questions were both open-ended and close-ended. While evaluating the answers the CLIL biology teacher also did not pay attention to language mistakes. The test in mathematics was in Polish so the evaluation technique is not under discussion.

It is also worth mentioning that the CLIL geography teacher introduced a system of pluses. Being active during the lesson meant receiving a plus. Five pluses meant a very good mark given by the CLIL teacher. The system of pluses introduced by the CLIL geography teacher was very motivating which was visible during the lessons.

3.3.4. Teaching materials

Geography:

During the CLIL geography lesson described above, the CLIL geography teacher used some handouts with vocabulary translated from Polish into English, some handouts with exercises concerning the topic *Astronomy* and also some handouts with reading comprehension texts on different astronomical theories. All the handouts were prepared by the CLIL geography teacher herself. Additionally, the CLIL geography teacher used a diagram of Planets which was in Polish. No books, multimedia or blackboards were used during the lesson.

Biology:

The CLIL biology teacher, while explaining all the terms, used OHP where all the information was written down so the CLIL learners had no problems with making some notes. Additionally, the CLIL biology teacher used a blackboard drawing the cells and writing all the unknown and difficult words down on it. Apart from that, the CLIL learners were given handouts with some exercises based on the previous lesson. The CLIL learners were also allowed to use microscopes where they could observe different types of cells. No books or any kind of multimedia were used.

Mathematics:

While giving the lecture, the CLIL mathematics teacher used the blackboard writing down some difficult words. In the practical part of the lesson where the CLIL learners were asked to draw some sets and subsets as well as to solve some tasks, they were using a Polish book which contained different mathematical tasks “Zbiór zadań z matematyki”.

All in all, the materials used during the lessons observed in November did not differ a lot from the materials used during the lessons observed in September. The only visible change that the researcher noticed was the fact that both the CLIL geography teacher and the CLIL biology teacher used more handouts with some exercises where both content and language was integrated, e.g. the chart with some planets (geography) or a picture of a cell with some parts which the CLIL learners were asked to name (biology) etc. In case of geography and biology, the researcher noticed more content and language integration as far as teaching materials were concerned.

3.3.5. Classroom setting

The only visible change in the geography classroom setting was a classroom-newsletter with some Halloween pictures. The classroom-newsletter was prepared by the CLIL learners themselves and it indicated that the CLIL learners paid attention to Anglo-Saxon culture. No other changes in any of the classrooms were noticed by the researcher.

3.4. Attitudinal aspects and motivation

The changes of the attitude towards CLIL which were investigated after the 1st Semester and the 2nd Semester as well as the motivating factors investigated after the 2nd Semester are to be presented later in this part of the thesis.

4. Data presentation – January 2007 (1st semester)

Sample lessons:

The following lessons were chosen to be presented and analysed:

Subject: geography

Date: 10.01.2007

Topic of the lesson: “The Earth”

Number of learners: 31

Subject: biology

Date: 22.01.2007

Topic: “The Cellular transport and introduction to mitosis”

Number of learners: 17

Subject: mathematics

Date: 19.01.2007

Topic: “Rationalization of the denominator of a fraction”

Number of learners: 32

The number of learners is smaller in case of biology due to the fact that the class was divided into two groups.

4.1. Language aspects

As far as the development of language skills and sub-skills is concerned the CLIL learners seemed to have made more progress in comprehension (they tended to ask fewer questions than in September). Additionally, they also acquired more subject-related vocabulary and made fewer grammatical mistakes. Taking into consideration the use of L1 during the lessons, the researcher noticed that both the CLIL teachers and the CLIL learners did not switch into Polish as often as they had in the previous months. The percentage of Polish usage decreased.

4.1.1. Second language development

Having observed and analysed the lessons mentioned above, it can be said that most of the CLIL learners felt confident while speaking in English. Their comprehension skills seemed to have improved as well. A very positive change which the researcher noticed was that some of the CLIL learners stopped being afraid of speaking about mathematics in English. It was even more surprising that when taken to the blackboard some of them started explaining the mathematical formulas in English. Apart from that, the CLIL learners turned out to be very skilful in translation (they were watching a film in Polish and were asked to answer questions in English). As far as writing is concerned there were still quite a lot of spelling mistakes noticed by the researcher while analysing the tests. It is also worth mentioning that some of the CLIL learners while taking their test in mathematics tried to give answers in English. There was a slight progress noticed in grammar but no progress in pronunciation – the CLIL learners tended to make the same mistakes.

During the CLIL geography lesson the CLIL learners had an opportunity to practice their **speaking skills**. On the basis of the film which they watched in Polish they were asked to answer the questions given by the CLIL geography teacher and provide the answers orally. The CLIL learners were willing to speak English and they could produce stretches of language with a fairly even tempo. From time to time they were hesitant when they had to use a new word or expression but it did not have any influence on the flow of speech. They

were also willing to take part in discussions and express their opinions concerning the existence of dinosaurs. The following conversation illustrates their willingness to discuss difficult matters:

L1: “Do you think that a meteor shower could have influence on the existence of dinosaurs?”

L2: “In my opinion, there must have been something bigger which destroyed them”

T: “Well, if I can take part in the discussion, there is a theory which says that it was a meteor shower or even more meteor showers”

L3: “Can we predict a meteor shower, Mrs professor?”

T: “Nowadays, of course we can but in the Past people did not know what it was”

etc...

During the CLIL biology lesson three CLIL learners were taken to the board and were asked some questions concerning the previous lessons. One CLIL learner had no problems with answering the questions fluently but the other two had a lot of problems with vocabulary so their speech was not very fluent. They could only provide the teacher with a simple description of some cellular processes, e.g.

L1: “Pairs of the chromosomes fail....uh... I don’t remember the word, can I say it in Polish?”

L2: “Can I write down the words I don’t know the right pronunciation”

In the next stage of the lesson where the CLIL learners were given some tasks which required speaking, only five CLIL learners were very active answering the CLIL biology teacher’s questions giving clear and detailed descriptions. The other CLIL learners were silent. The topic seemed to be difficult for them and they hardly ever spoke during the lesson.

In the case of mathematics, the situation considerably changed when comparing the lesson from November or September to the lesson in January. The CLIL learners taken to the blackboard to solve some mathematical formulas tried to provide answers in English which meant that some of them stopped being afraid of talking about mathematics in English, e.g. after having solved the formula: “Summarising, the product of two uneven numbers must be uneven” or “The conclusion is that the whole number can be divided by ten” etc.

All in all, there were not many changes concerning the speaking skills as far as geography and biology were concerned. The CLIL learners were still willing to take part in discussions and express their opinions. However, there was a considerable change noticed in case of mathematics. Some CLIL learners started using English during the lesson.

In December as well as in January the CLIL learners were given tests in geography, biology and mathematics and based on deep test analysis the following data concerning their **writing skills** is to be presented below. The data provided is closely related to the language aspects not the content aspects which are to be discussed later in this part of the thesis (part II, chapter VI, 4.2.).

The first test to be discussed was taken in geography and covered astronomy with some parts of geology. There were three questions in English out of six. Firstly, the CLIL learners were asked to name inner or outer planets then they were asked to write the definitions of some terms and in the third question they were asked to divide Mesozoic and Cenozoic into periods or divide Paleozoic into periods depending on the group the CLIL learners were in. The tests of 32 CLIL learners were analysed. The aim of the questions was to check the learners' vocabulary. The CLIL learners did not have any problems with the first and the second question but many of them had a lot of problems with the third questions where they were supposed to divide the eras into periods. They either confused the periods or made spelling mistakes, e.g. "*Cretacos** instead of *Cretaceous*", "*Triassic** instead of *Triassic*", "*Sylurian** instead of *Permian*", "*Karbonius** instead of *Carbonius*" etc.

The biology test consisted of 32 questions which were all given in English. In the first question, the CLIL learners were provided with the picture of a cell and they were asked to name different parts of the cell. In question number 2, they were asked to list the differences between the animal and the plant cell. In question number 3, they were asked to draw a nucleus, identify the parts and describe the functions. Questions 4-15 were multiple choice questions, 16-25 were *true/false* questions and questions 26-32 were statements which were to be completed by the correct term or phrase. The test covered the material concerning the structure of different kinds of cells. 34 tests were analysed. One more learner joined the CLIL class in December and that is why the number of the tests is different. The most

problematic were the first three questions and the statements where the CLIL learners were asked to provide some words or expressions. While analysing the tests written in January, the CLIL learners seemed to have fewer spelling problems than they had in November which may be due to the fact that they “crossed the language barrier” and got used to writing in English. The most common mistakes which appeared in the test were the following, e.g. “*membrance** instead of *membrane*”, “*nucleus** instead of *nucleolus*”, “*plastics** instead of *plastids*”, “*rybosomes** instead of *ribosomes*”, “*vacule** instead of *vacuole*”, “*organeles** instead of *organelles*” etc.

There were two tests administered in mathematics: one in December and one in January. The one administered in January consisted only of some mathematical formulas which the CLIL learners were asked to solve – no English was used. The test administered in December consisted of 4 tasks which were all written in English, e.g. *Using the diagrams check whether the following relations between sets represent set identities...* The test covered the material concerning sets and intervals. 33 tests were analysed. On the basis of the data, it can be said that about 40% of the CLIL learners provided the answers in English while about 60% of the CLIL learners provided the answers in Polish. Having analysed the answers provided in English, it was noticed that the CLIL learners were giving very short answers, e.g. “*The answer to the first task is the following...*”, “*The answer is...*”, “*The above relation represents identity*” etc. There were no spelling mistakes noticed in the answers because they were very short and did not require the use of sophisticated vocabulary.

On the basis of the data provided above, it can be said that the CLIL learners made fewer spelling mistakes in January than in November. However, it should be taken into consideration that the CLIL learners did not possess as much vocabulary in November as they did in January.

The CLIL learners were continuously exposed to English during the lessons mentioned above so they were able to develop their **listening skills**. Like in the previous months, the CLIL learners were engaged in the process of comprehension accompanied by a wide variety of contexts. During the CLIL geography lesson, they were exposed to the teacher’s talk as well as to the other learners’ talk while working in pairs and groups. A similar

situation took place during the CLIL biology lessons when they were exposed both to the teacher's talk and the learners' talk. During the lesson of mathematics the CLIL learners were also exposed to the teacher's talk to much greater extent than they were in the previous months. Using the Common Framework of Reference for Languages (Council of Europe, 2001: 66), it can be said that on the basis of the CLIL learners language output, they could understand extended speech on both concrete and abstract topics delivered in a standard dialect provided the topic was reasonably familiar. The CLIL learners still tended to ask some questions especially after the lectures or after having been given some instructions but the requests for repetition did not occur as often as they used to in September or November, e.g. 11 instructions given – the CLIL teacher was asked 5 times for repetition (geography), 17 instructions given – the CLIL teacher was asked 6 times for repetition (biology), 12 instructions given – the CLIL teacher was asked 14 times for repetition (mathematics). All in all, taking into consideration the CLIL learners' output – the ability to answer comprehension questions and take part in some communicative interaction with other CLIL learners as well as the lower number of requests for repetition, the listening skills of the CLIL learners have developed.

Taking into consideration the **reading skills** of the CLIL learners at that stage of the study it can be said that the CLIL learners could read with a large degree of independence, adapting various styles and speed of reading to different texts and purposes (Council of Europe, 2001: 69). However, during all the lessons mentioned above, the CLIL learners were only asked to read some instructions so it is very difficult to say whether their reading skills developed or not. They were also asked to read the information from the blackboard and copy everything into their notebooks. On the basis of the observations, the CLIL learners did not have many problems with understanding the instructions they had been asked to read apart from mathematics. The CLIL learners were given some tasks in English and they asked the CLIL mathematics teacher to translate it into Polish, e.g. "What does it mean that we are supposed to use the odd terms, how to interpret it?", "Could you translate the task into Polish because I'm confused", "What does it mean that we should raise the numbers to the power of 2?" etc. In

order to facilitate understanding, the CLIL mathematics teacher translated the tasks into Polish.

All in all, not many changes concerning the development of reading skills of the CLIL learners observed were noticed.

Both the CLIL biology teacher and CLIL mathematics teacher did not spend any time on correcting the **grammatical** errors made by the CLIL learners. The lessons were very intensive and there was no time to do it. The only person who spent some time on correcting the CLIL learners grammatical errors was the CLIL geography teacher. The error correction was rather quick and made after the CLIL learner had made an error. The CLIL geography teacher did not go into any details as far as grammar explanation was concerned. There was also no need to do it as the errors that the CLIL learners made were mainly related to the use of pronouns, e.g. “*she** instead of *he* or *it*” etc., the use of prepositions, e.g. “*for** instead of *on*” and the “s” ending in the third person singular. To summarise, the researcher noticed a slight progress as far as grammar was concerned – the CLIL learners still made errors in the use of pronouns or prepositions but they did not make many errors concerning the structures or the use of Tenses, which was quite visible in the previous months. They showed a high degree of grammatical control and their mistakes did not lead to misunderstanding.

In comparison to the previous months, the range of **vocabulary** that the CLIL learners possessed definitely increased. Having observed the CLIL learners it can be said that most of them used a lot of specialized vocabulary from the field of geography and biology. From time to time they had some problems with remembering a word but in such a situation they either tried to explain the word or just used a Polish word instead. Most of the CLIL learners had some problems with the words from the field of mathematics. They had problems with using them and also with remembering them. However, it is worth mentioning that some of the CLIL learners tried to use the words from the field of mathematics which could not be noticed in the previous months. Having analysed the CLIL learners’ written tests, it can be said that most of the learners did not have problems with remembering the words but with the spelling of the words or the use of the words in the

proper contexts, e.g. “*Triassic** instead of *Triassic*”, “*Plantods** [instead of *Planetoids*]”, “*Wenus** [instead of *Venus*]” (geography), “*vacule** [instead of *vacuole*]”, “*kromatin** [instead of *chromatin*]”, “*outermembrane** [instead of *outer membrane*]” (biology), “*relation within* sets* [instead of *relation between sets*]”, “*the solve* is...* [instead of *the solution is...*]” (mathematics) etc. All in all, some of the CLIL learners started using English words when talking about mathematics which was a very big change. The integration of content and language was visible during the mathematics lesson, especially in the case of vocabulary. As far as the correction of the use of proper vocabulary was concerned, all the CLIL teachers corrected the words immediately and provided the CLIL learners with the proper words. In the case of written tests, all the CLIL teachers did not correct the words but only underlined them indicating that there was a mistake.

Having analysed the data gathered during the lessons mentioned above, the **pronunciation** of the CLIL learners did not change a lot in comparison to the lessons observed in the previous months. Most of the CLIL learners tended to have some problems with word stress, e.g. the word *sedimentary rocks* (geography) – most of the observed CLIL learners stressed the first syllable instead of the third one; the word *chromosomes* (biology) – most of the observed CLIL learners stressed the second syllable instead of the first one; the word *commentary* (mathematics) – most of the CLIL learners stressed the third syllable instead of the first one. Additionally, the CLIL learners still tended to have some problems with the long and short vowels, e.g. *kangaroo* (there should be long “u” – u: and the CLIL learners often used the short “u”) (geography), *diffusion* (there should be long “u” – u: and the CLIL learners tended to use short “u”) (biology); Some of the CLIL learners seemed to have some problems with the use of proper vowels. Some of them used “e” instead of “a”. However, it was very difficult for the researcher to go into detailed analysis as far as pronunciation was concerned due to the fact that the researcher did not feel competent enough. As a result, the researcher concentrated only on the most visible pronunciation errors. Concluding, as far as pronunciation is concerned, the CLIL learners did not make visible progress in comparison to their pronunciation analysed in the previous months.

As it can be noticed from the data provided above, the CLIL learners made some progress in the field of mathematics. Some of the CLIL learners were willing to integrate content and language by talking or writing about mathematical formulas in English. In the previous months, the CLIL learners seemed to avoid English during the mathematics lessons. After a period of more than two months, they seemed to have overcome the content - language barrier in case of mathematics, which is a change worth emphasising.

4.1.2. The use of L1 (code-switching)

Comparing the lessons observed in September and November to the lessons observed in January there were some changes noticed as far as code-switching was concerned. The percentage of the use of Polish decreased. In the case of the above mentioned geography lesson, about 20% of the lesson was in Polish. In the case of biology, it was about 40% of the lesson and in the case of mathematics it was about 70%. As can be seen, the percentage of the use of Polish during the lessons observed decreased by about 10%. Nearly all types of code-switching were noticed during the lessons observed apart from the affective switch:

Linguistic switch:

“You can see the numbers *squared*, a *squared* oznacza *podniesiony do kwadratu*” [translation: “... and *squared* means *raised to the power of...*”] (teacher-learner code-switching, mathematics);

“*Crossing over* czyli *exchange*, *wymiana* w chromosomach” [translation: “*Crossing over* in other words *exchange* in chromosomes”] (teacher-learner code-switching, biology);

“The *plates* are *tarcze* po polsku” [translation: “The *plates* are *plates* in Polish] (teacher-learner code-switching, geography);

Topic switch:

“Zapadlisko, to pewnego rodzaju obniżony teren, np. Kraków jest położony w zapadlisku, dlatego tak też widać zanieczyszczenie” [translation: A Forsaken place is a kind of area which is a bit lowered, e.g. Kraków is situated in a forsaken place that is why we can see so much pollution in the air”] (teacher-learner code-switching, geography);

“Sól kamienna powstała w Mezozoiku, w Jurze i Triasie, powstała ona w wyniku transgresji morskiej” [translation: “Rock salt came into existence in Mesozoic in Trias and Jura due to the sea transgression”] (learner-teacher code-switching, geography) – data gathered from the **test**;

“Wyżyna Lubelska jest zbudowana z węgla kamiennego. W czasie karbonu istniały tam bujne lasy, w momencie zniszczenia zostały pokryte pokładami piasku” [translation: “The Lubelska Upland is built out of coal. During the Cambrian period there was a dense forrest which was destroyed and covered by sand”] (learner-teacher code-switching, geography) – data gathered from the **test**;

Affective switch:

No affective switch was noticed during the lessons mentioned above.

Socialising switch:

“Co robimy po zajęciach? Może pójdziemy do Galerii Kazimierz?” [translation: “What are we doing after the classes? Maybe we could go to the Kazimierz Gallery?”] (learner-learner code-switching, mathematics);

“Pani profesor, czy my możemy wybrać kolory plasteliny, prosimy?” [translation: “Professor, can we choose the colours of plasticine, please”] (learner-teacher code-switching, biology) – the teacher need plasticine to illustrate different stages of mitosis;

“Pani profesor, czy możemy mieć zawsze takie zajęcia, moglibyśmy też coś wycinać i przyklejać” [translation: “Professor, could we always have such classes? We could cut things out and use the glue”] (learner-teacher code-switching, biology);

Clarity switch:

“Czy może Pani raz jeszcze powtórzyć definicje dyfuzji?” [translation: “Could you please repeat the definition of diffusion once again?”] (learner-teacher code-switching, biology);

“Większość osób zgłosiła mi, że miała problem z tym zadaniem w domu więc zrobimy go raz jeszcze” [translation: “Most of the people told me that they had problems with this task at home so let’s do it once again”] (teacher-learner code-switching, mathematics);

“Cells must undergo division in order to maintain the workable ratio... czyli teraz po polsku: komórka musi być podzielona, żeby utrzymać prawidłowy...” (teacher-learner code-switching, biology);

As it can be noticed from the data provided above, both the CLIL teachers as well as the CLIL learners switched into Polish during the lessons observed. The purpose of code-switching did not change – in most cases both the CLIL teachers and the CLIL learners switched into Polish in order to facilitate learning.

4.2. Content aspects

As already mentioned the only way to evaluate the content aspects at this stage of the study was to present the marks of the CLIL learners which were taken from their written tests mentioned above (part II, chapter VI, 4.1.1.). As previously, the marks may be subjective to a certain extent because they were given by only one subject teacher. The researcher was not in the position to evaluate the content.

Geography:

33 CLIL learners took the test in astronomy and geology and the marks were the following:

Table 4. Marks received from the test in geography.

Excellent (6.0)	No learners
Very good (5.0)	2 learners
Plus good (4.5)	5 learners
Good (4.0)	9 learners
Plus satisfactory (3.5)	6 learners
Satisfactory (3.0)	4 learners
Pass (2.0)	2 learners
Fail (1.0)	5 learners

As can be seen from the data provided above most of the learners received good marks. However, comparing the marks to the previous month, it can be seen that they are worse. There were fewer very good marks and more unsatisfactory marks which may mean that the topics: astronomy and geology were too difficult for the CLIL learners. Nobody received an excellent mark. On the whole, it should be born in mind that the test was in English and in Polish and after a deep analysis the CLIL learners had more problems with the Polish part of the test which was more difficult because it required some mathematical skills – the CLIL learners were given some astronomical tasks to solve.

Biology

34 CLIL learners took the test concerning the structure and transport of the cell. The marks were the following:

Table 5. Marks received from the test in biology.

Excellent (6.0)	No learners
Very good (5.0)	5 learners
Plus good (4.5)	1 learner
Good (4.0)	15 learners
Plus satisfactory (3.5)	2 learners
Satisfactory (3.0)	10 learners
Pass (2.0)	1 learner
Fail (1.0)	No learners

As can be seen from the data concerning biology, the results were very good. Most of the CLIL learners received very good, plus good or good marks. It should be also noticed that there was nobody who would have failed the test and only one person who just passed the test. It should be also pointed out that the whole test was in English and on the basis of the data provided, it can be said that the CLIL learners made significant progress.

Mathematics

33 CLIL learners took the test concerning the basic properties of sets (test administered in December).

This time the test was in English and the marks were the following:

Table 6. Marks received from the test in mathematics.

Excellent (6.0)	No learners
Very good (5.0)	1 learner
Plus good (4.5)	2 learners
Good (4.0)	7 learners
Plus satisfactory (3.5)	8 learners
Satisfactory (3.0)	3 learners
Pass (2.0)	9 learners
Fail (1.0)	3 learners

As can be seen from the data provided above the results are not as good as they were in October which may be due to the fact that the test was administered in English. Most of the CLIL learners only passed the test or received plus satisfactory marks. There was only one very good mark and two plus good marks. Nobody received an excellent mark.

The following test was administered in January but it only consisted of some mathematical formulas which were to be solved by the CLIL learners. There was no English used. 27 CLIL learners took the test concerning the n-th power:

Table 7. Marks received from the test in mathematics.

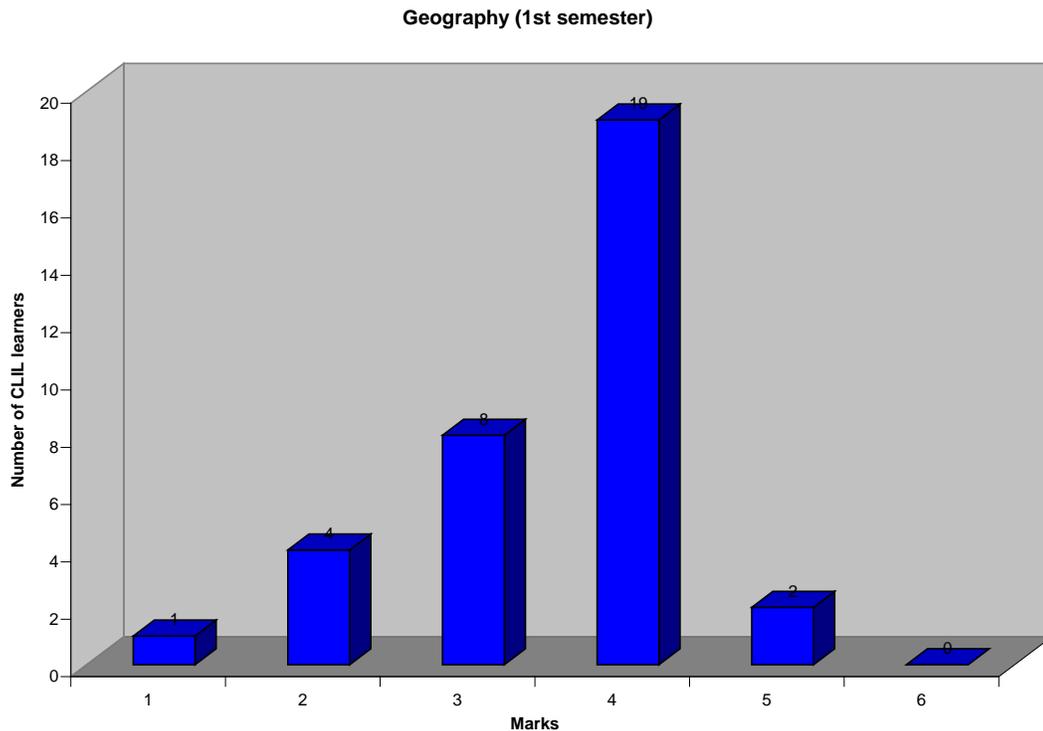
Excellent (6.0)	No learners
Very good (5.0)	7 learners
Plus good (4.5)	3 learners
Good (4.0)	3 learners
Plus satisfactory (3.5)	4 learners
Satisfactory (3.0)	3 learners
Pass (2.0)	7 learners
Fail (1.0)	none

As can be seen from the data provided, the CLIL learners received better marks when they were not asked to use English in their tests.

To sum up, it may be concluded that at this stage of the study, the CLIL learners received the best marks in biology. Comparing the marks received in January to those in November it may be concluded that the CLIL learners did not make a lot of progress as far as content of all CLIL subjects was concerned. The following results are provided on the basis of the marks given by the CLIL teachers in each CLIL subject at the end of the 1st Semester. While giving the marks at the end of the semester, the CLIL teachers took into consideration not only the written tests but also the oral performance and participation in the lessons throughout the whole semester. In order to stress the importance of the marks and illustrate them clearly, all the data is to be displayed through graphs and then described in detail.

The following graph illustrates the marks that the CLIL learners received at the end of the 1st semester in geography:

Graph 1. Marks received at the end of the 1st semester in geography.

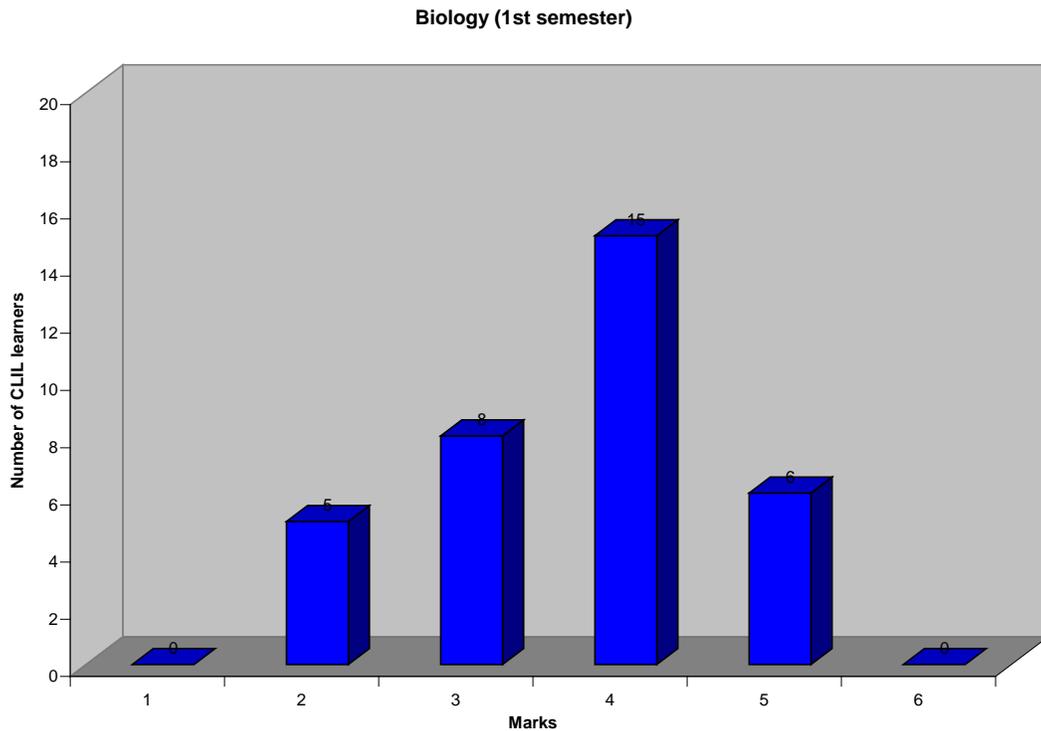


As can be seen from the data provided in the graph **1** CLIL learner received the lowest mark which is fail (1.0). **4** CLIL learners received pass (2.0) and **8** CLIL learners received a satisfactory mark (3.0). The biggest number of the CLIL learners – **19** received a good mark (4.0) and only **2** CLIL learners received a very good mark (5.0). **No** excellent marks (6.0) were received at the end of the 1st semester.

On the basis of the marks it can be seen that most of the CLIL learners received a good mark at the end of the 1st semester which is a good result. Only **1** CLIL learner failed and **4** received a pass. Taking into consideration the results at the end of the 1st semester received in geography, it can be said that the CLIL learners were successful and did not seem to have many problems with learning geography in English.

The following graph illustrates the marks that the CLIL learners received at the end of the 1st semester in biology:

Graph 2. Marks received at the end of the 1st semester in biology.

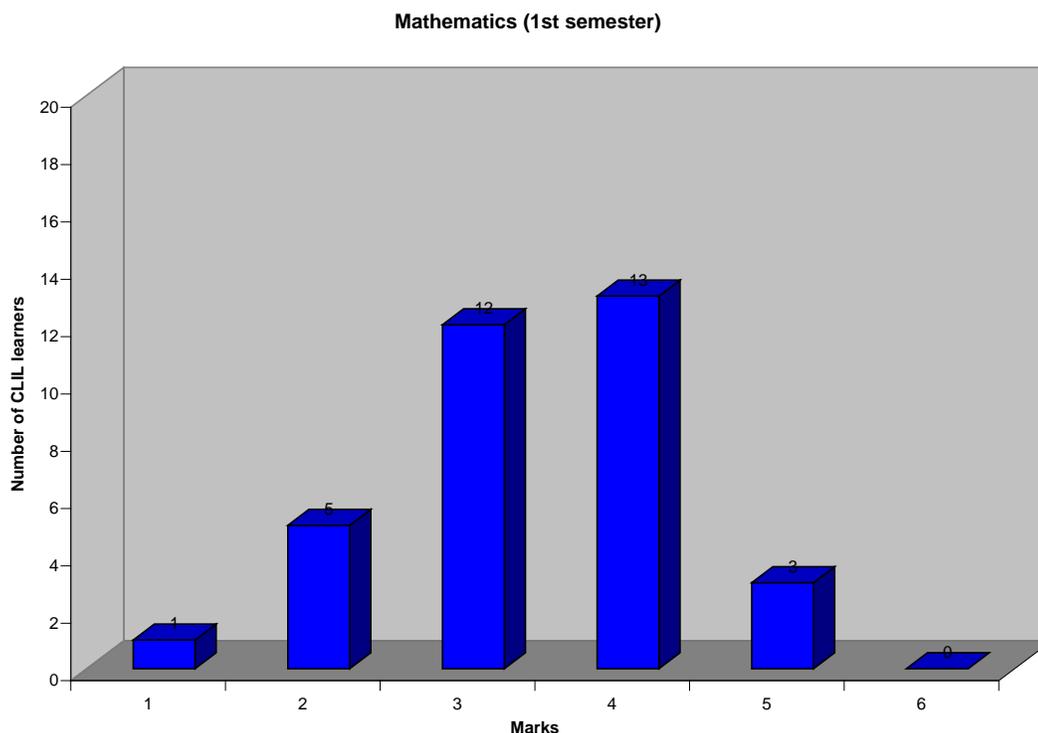


As can be seen from the data provided in the graph **no** CLIL learners received the lowest mark which is fail (1.0). **5** CLIL learners received pass (2.0), **8** CLIL learners received a satisfactory mark (3.0) and the biggest number of CLIL learners – **15** received a good mark (4.0). **6** CLIL learners received a very good mark (5.0). **No** excellent marks were received at the end of the 1st semester.

On the basis of the marks received in biology by the CLIL learners at the end of the 1st semester it can be said that the marks were also good in comparison to the marks received in geography. Most of the CLIL learners received a good mark which means that they were also successful in biology. Only **5** CLIL learners received a pass and **nobody** failed which is a good result taking into consideration the whole class.

The following graph illustrates the marks that the CLIL learners received at the end of the 1st semester in mathematics:

Graph 3. Marks received at the end of the 1st semester in mathematics.



As can be seen from the data provided in the graph **1** CLIL learner received the lowest mark which is fail (1.0). **5** CLIL learners received pass (2.0), **12** CLIL learners received a satisfactory mark (3.0) and the highest number - **13** CLIL learners received good mark (4.0.). Only **3** CLIL learners received a very good mark (5.0). **No** excellent marks were received at the end of the 1st semester.

Having taken into consideration the marks received by the CLIL learners in mathematics at the end of the 1st semester, it can be said that most of the CLIL learners received a good or a satisfactory mark. Analyzing the marks received in mathematics, one thing should be taken into account, namely, most of the CLIL mathematics lessons were in Polish and therefore the marks received at the end of the 1st semester in mathematics should not be compared with marks received in other subjects taught through English.

4.3. Learning environment aspects

There were not many changes observed concerning the learning environment. There was still not much interaction between the CLIL learners themselves. The teacher was in the centre of the lesson. The methodological approach of all CLIL teachers did not change a lot apart from the mathematics teacher who used more English during the lesson than he used to before. The materials used during the lessons consisted of handouts, books and also some additional materials such as some cell models (biology) or maps (geography). Evaluation was done on the basis of the tests the results of which were presented in the previous chapter (part II, chapter VI, 4.2.) as well as on the basis of the CLIL learners' answers. The classroom setting has not changed at all so the researcher is not going to concentrate on it in this part of the study. All the details concerning interaction, methods of teaching and materials used are to be presented below.

4.3.1. Classroom interaction

Adopting van Lier's (1988: 94-120) framework the following types of interaction as well as types of function were noticed during the lessons mentioned above:

Type 1:

Geography:

L1: "Pani profesor, czy zjawiska związane z meteorytami można przewidzieć?"
[translation: "Can we predict the phenomena concerning meteors?"];

T: "We are talking about the Earth plates now, not meteors"

L1: "Please, can you tell us, it's much more interesting"

L2: "Pani profesor, proszę Nam powiedzieć" [translation: "Tell us professor, please"]
(ideational function);

Biology

L1: "Wiesz, co ciekawa jestem jak to jest z tymi genami?" [translation: "You know what, I'm curious about the genes"];

L2: “No jest od ojca a drugi od matki” [translation: “One is from a father and the other from a mother”];

L1: “To chyba oczywiste” [translation: “Well, it’s probably obvious”]; “Jesteś bardziej podobna do mamy czy do taty?” [translation: “Do you look like your father or your mother?”];

L2: “Wyglądam jak moja mama albo charakter mam taty” [translation: “I look like my mother but I have my father’s character] etc... (**interpersonal function**);

As it can be seen from the first example, the CLIL geography teacher was involved in the activity but lost control over it. In case of the second example, the teacher was not involved in the conversation at all. The interaction took place between two CLIL learners.

Type 2:

Mathematics

T: “Zapiszcie sobie następujące liczby... the task is evaluate and also include some commentary in your solution” [translation: “Write down the following numbers...] (**textual function**);

Geography

T: “Zaznaczcie na mapie występowanie węgla kamiennego w Polsce” [translation: “Mark on the map the points where the coal occurs in Poland”] (**textual function**);

Biology

T: “You have been given a picture of two cells, please, list the differences between the cells” (**textual function**);

In the above mentioned type of interaction, the CLIL teachers controlled the topic but not the activity. The CLIL learners were given some “orders” and it was up to them whether they fulfilled them or not.

It is also worth mentioning that all the CLIL teachers spent some time on giving short lectures (max.10 min) during which they had control over the topic but not over the activities going on in the classroom.

Type 3:

All CLIL teachers spent about 10 minutes of their lesson asking CLIL learners questions concerning the previous lessons. The CLIL learners were asked to come to the blackboard or sit near the CLIL teacher's desk. While eliciting answers from the CLIL learners the CLIL teacher controlled both the topic and the activity, e.g.

Mathematics:

“What is an intermediate solution? Could you explain it to me in your own words?”

(textual function);

“Could you solve this task and give us two solutions? How can the numbers be factorized?”

(textual function);

Biology:

“OK, so lets' revise the structure of the cell. Could you tell me what the animal cell looks like?” **(textual function);**

“Why is there unequal division of cytoplasm. You can use the picture if you want to”

(textual function);

Geography:

“What influences the Earth? Could you give me some examples?” **(textual function);**

Type 4:

Biology:

T: “OK, Could you open your notebooks and draw different stages of mitosis” **(textual function);**

There were a few CLIL learners who did not draw anything in their notebooks. The following conversation was heard by the researcher:

L1: “Po co mamy to rysować w zeszytach?” [translation: “What do we need to draw it for in our notebooks?”]

L2: “Masz rację, przecież mamy taki sam rysunek w książce, strata czasu” [translation: “You are right, there is the same drawing in our coursebooks so it's a waste of time”]

L1: “Nawet gdybyśmy nie mieli tego w książkach, to na pewno będzie w internecie” [translation: “Even if we didn't have it in our books we could get it from the Internet”];

Mathematics

T: “OK, you are supposed to work on two sets. The best would be if you could work together” (**textual function**);

A conversation between two CLIL learners:

L1: “Nudne to, dobra zrobmy to szybko” [translation: “It’s boring, let’s do it quickly”]

L2 : “Wiesz, że dzisiaj leci mecz. Nie wydaje mi się żeby Nasi wygrali” [translation: “Do you know that there is a match today. I don’t think that our team is going to win”]

L1: “Nie byłbym taki pewien. Ostatnio mają szczęście” [translation: “I wouldn’t be that sure. They’ve been lucky recently”]

L2: “Będziesz oglądał dzisiaj?” [translation: “Are you going to watch it tonight?”]

L1: “No jasne!” [translation: “Sure!”]

L2: “To umówmy się u mnie” [translation: “Let’s meet at my place”]

L1: “OK, ale teraz już róbmy to zadanie” [translation: “OK, but let’s do the task now”] (**interpersonal function**);

As can be seen from the above given examples, the CLIL teacher controlled the activity but not the topic. The CLIL learners had a personal conversation while doing the tasks given by the CLIL teacher.

Comparing the interaction observed during the lessons in January to the interaction observed during the lessons in the previous months, it can be said that there was more interaction between the CLIL teachers and the CLIL learners and vice versa in November which was probably due to the fact that the CLIL teachers did not give long lectures but rather provided the CLIL learners with some interactive exercises. The type of interaction which occurred during the lessons observed was mainly of a textual or interpersonal nature.

4.3.2. The teacher’s methodological approach

Geography

In comparison to the previously analysed CLIL geography lessons, the CLIL geography teacher mostly used a learner-centred approach. The CLIL geography teacher introduced the lesson by asking some questions concerning meteors. Then the CLIL geography teacher told the CLIL learners a story about a meteor which had hit the planet Earth. The story

telling lasted about 5 minutes. Afterwards, the CLIL learners were given some questions in English and they were asked to watch a documentary about the planet Earth. It is worth mentioning that the documentary was in Polish. During the film the CLIL geography teacher pressed the “pause” (“freeze frame” method) and asked the CLIL learners to answer the questions as well as to predict what was going to happen next. After the documentary, the CLIL learners were asked to get into five groups. The CLIL geography teacher distributed maps with different Earth periods and the CLIL learners were asked to name different events which occurred in particular periods. The group which finished first was given “pluses” (five pluses meant a very good mark). As can be seen, the CLIL geography teacher used various methods which required the CLIL learners to integrate content and language simultaneously. What is more, the activities were of a communicative nature.

Biology

The CLIL biology lesson observed in January did not differ a lot from the lesson observed in the previous months. Most of the lesson observed was teacher-centred. The CLIL biology teacher gave short lecture on mitosis (10 min). While explaining certain stages of mitosis the CLIL biology teacher used OHP where all the stages were illustrated. The key words were translated by the CLIL biology teacher and put on the board. In order to revise different stages of mitosis and meiosis the CLIL learners were put into four groups and they were given different colours of plasticine. Their task was to illustrate the stages of mitosis and meiosis using different colours. At the end of the lesson the CLIL biology teacher asked one CLIL learner from each group to describe the stages of mitosis and meiosis. Apart from integrating content and language, the CLIL biology teacher used some realia to help the CLIL learners remember very difficult information.

Mathematics

The whole CLIL mathematics lesson was of a practical nature. It focused on fractions and the aim of the lesson was to practise as much as possible. Comparing the CLIL mathematics lesson analysed in January to the ones analysed in the previous months, there was one significant difference: the CLIL teacher as well as the CLIL learners used more

English during the lesson. Particular CLIL learners were asked to come to the blackboard and solve the task which was given in English by the teacher. Additionally, the CLIL mathematics teacher kept asking questions in English but while answering most of the CLIL learners switched into Polish. The CLIL mathematics teacher also gave a short lecture both in English and in Polish reminding the CLIL learners the rules concerning the denominator of a fraction. All in all, during the lesson of mathematics observed, it can be said that some attempt of integrating content and language was made on the part of the CLIL mathematics teacher.

In conclusion, both the CLIL geography teacher and the CLIL biology teacher used various methods of teaching in order to integrate content and language still paying more attention to content. During the CLIL mathematics lesson the CLIL mathematics teacher made an attempt to integrate content and language using only one method, namely asking the CLIL learners to solve some mathematical formulas. All the teachers used both teacher-centred approach and learner-centred approach. All the activities where the CLIL learner was in the centre made the CLIL learners more willing to participate in the lessons.

4.3.3. Learner's evaluation

During the CLIL lessons mentioned above all the CLIL teachers used "oral evaluation". In case of geography and biology three CLIL learners were asked to come to the blackboard or sit in front of the teacher and answer some questions concerning the previous lessons. The CLIL geography teacher asked five questions and the CLIL biology teacher asked six questions. All the questions were asked in English but the CLIL learners had a choice – they could either answer in English or in Polish. In case of answering a question in Polish they got a lower mark. Most of the CLIL learners asked were well prepared except for one CLIL learner who was not able to answer any questions asked by the CLIL biology teacher. The criteria concerning oral evaluation used by both CLIL teachers were very similar: the most important was content knowledge. In case of mathematics, the oral evaluation looked different. The CLIL mathematics teacher was evaluating the CLIL learners during the whole lesson. Particular CLIL learners were given some mathematical tasks and they were

asked to solve them on the blackboard explaining everything in English and in Polish. The language was not important and the CLIL mathematics teacher did not pay attention to it. The most important was content knowledge. All the CLIL teachers administered tests in January (the results of the tests were discussed in part II, chapter VI, 4.2.). Like previously, the test in geography was partly administered in English and partly in Polish. Most of the questions were descriptive and one question was connected with translating some subject-related words from Polish into English. While evaluating the answers which were given in English the CLIL geography teacher did not pay attention to language mistakes. In order to pass the test the CLIL learners had to get more than 60%. The test in biology was only in English and the questions were both open-ended and close-ended. While evaluating the answers the CLIL biology teacher also did not pay attention to language mistakes. Two tests were given in mathematics one in English and one in Polish. While evaluating the test in English the CLIL mathematics teacher did not pay attention to language mistakes. The geography CLIL teacher was still following the system of pluses. During the lesson discussed above five CLIL learners received a plus.

4.3.4. Teaching materials

Geography:

During the CLIL geography lesson described above, the CLIL geography teacher used multimedia. The CLIL learners were asked to watch a documentary which had been recorded from the Polish TV. The documentary was about the beginning of the planet Earth. The film was in Polish but the tasks which were distributed on some handouts were in English. All the tasks were prepared by the CLIL geography teacher. Additionally, the CLIL geography teacher was using the blackboard where she put all the new vocabulary and also drew some rock cross sections. Apart from that, Polish geography course books were used for some references.

Biology:

As far as teaching materials are concerned, the CLIL biology lesson was very similar to the one discussed in November. The CLIL biology teacher, while explaining all the terms, used

OHP where all the information was written down so the CLIL learners had no problems with making some notes. Additionally, the CLIL biology teacher was using a blackboard drawing all the processes of mitosis and meiosis. Additionally, the CLIL learners were given some course books which were written in English and were used in the American High School. The CLIL learners were asked to work on tasks in the above mentioned book. No multimedia was used during the lesson.

Mathematics:

The whole lesson was based on practice. The CLIL learners were given some formulas which they had to solve. There were no English materials used. The CLIL mathematics teacher as well as the CLIL learners were using a Polish book which contained different mathematical tasks “Zbiór zadań z matematyki” (translation: “A set of mathematical tasks”).

To summarise, all the materials used during the lessons observed in January did not differ much from the materials used during previously discussed lessons. The only new materials were a documentary in Polish (geography) and American course books (biology). It can be said that both the CLIL geography teacher as well as the CLIL biology teacher by providing the CLIL learners with different materials which were mostly in English tried to integrate both content and language. In case of mathematics, there was no content and language integration as far as the teaching materials were concerned.

4.3.5. Classroom setting

As it was after Christmas the classroom-newsletter contained some Christmas pictures and wishes in the geography classroom. Additionally, a wooden shelf was made where the TV, video and DVD were put. No other changes in any of the classrooms were noticed by the researcher.

4.4. Attitudinal aspects and motivation

The data concerning attitudinal aspects is to be presented below and the data concerning motivation is to be presented later in this part of the thesis.

4.4.1. Attitudinal aspects

After the 1st semester, the researcher decided to conduct the same questionnaire as she did in September (Appendix: part 2). The aim of the questionnaire was to find out the changes in the CLIL learners' attitude towards CLIL. The questions which the CLIL learners were asked was the same, namely: *What do you think about learning subjects in a foreign language? Please, express your opinion in three to five sentences paying attention to the advantages and disadvantages of learning subjects in a foreign language.* The question was asked in Polish so there was no language barrier in providing honest answers. The questionnaire was distributed by the researcher during the lesson and the CLIL learners had a few minutes to answer the question. **30** CLIL learners provided the answer to the above mentioned question. On the basis of the answers given in the questionnaire it can be said that all the CLIL learners who were asked to provide an answer still had a very positive attitude towards CLIL. **21** of them enumerated only advantages of learning subjects in a foreign language, **8** of them provided both advantages and disadvantages and **1** of them provided only disadvantages. After having learnt the subjects in a foreign language for a period of one semester, it can be said that on the basis of the answers provided by the CLIL learners most of the advantages and disadvantages mentioned were the same among the CLIL learners but different from the ones mentioned in September. There were fewer advantages and disadvantages and they were connected with the present knowledge rather than with future opportunities. The advantages that the CLIL learners provided while answering the question were the following:

- "possibility to learn more vocabulary";
- "possibility to get to know the language from the practical point of view";
- "possibility to study and work abroad";

- “possibility to learn more specialised vocabulary which would be impossible to learn in everyday life”;
- “possibility to listen to real English every day”;
- “personal development and the ability to think in two languages”;
- “helps to take part in different kind of discussions”;
- “no problems with speaking or reading in English”;
- “helps to gain more self-confidence”;
- “a natural way of acquiring a foreign language”;
- “great experience”;
- “more opportunities to win Secondary School competition in English – *English Olympics*”;

The following disadvantages were mentioned:

- “the school programme is too difficult – learning in both languages is required”;
- “difficulty with following the lesson if most of the material is in English”;
- “problems with pronunciation”;
- “more studying at home and less free time”;
- “the teachers are not native speakers”;
- “language mistakes made by the teacher who are not language teachers”;
- “misunderstanding of the lessons”;
- “the final examination *Matura* in Polish”;
- “difficulties with learning the material in English, especially mathematics”;
- “studying in a foreign language is time-consuming”;
- “lots of studying by heart”;
- “no course books in English”;
- “course books in Polish, tests in English”;

As can be seen from those opinions, a lot of the CLIL learners had a positive attitude towards learning subjects in a foreign language. Nearly all of them mentioned the usefulness of learning new vocabulary, the ability to think and communicate in English. Comparing the advantages mentioned in January to the advantages mentioned in

September, most of the CLIL learners mentioned the advantages that were visible at that time. The instrumental motivation changed into integrative motivation. The CLIL learners seemed to have more mature attitude towards learning subjects in a foreign language. The CLIL learners also noticed some disadvantages concerning learning subjects in a foreign language. The disadvantages which were most often enumerated were connected with the difficulties of learning subjects in a foreign language as well as with understanding some concepts. Having more experience of learning subjects in a foreign language, the CLIL learners could honestly express their positive and negative opinions. More opinions concerning the change in attitude of the CLIL learners towards learning subjects in a foreign language are to be presented at the end of the 2nd semester.

5. Data presentation – February 2007 (2nd Semester)

Sample lessons:

The following lessons were chosen to be presented and analysed:

Subject: geography

Date: 16.02.2007

Topic of the lesson: “Glaciers”

Number of learners: 25

Subject: biology

Date: 27.02.2007

Topic: “Appendicula skeletal system”

Number of learners: 16

Subject: mathematics

Date: 19.02.2007

Topic: “Critical values of the function”

Number of learners: 28

The number of learners is smaller in case of biology due to the fact that the class was divided into two groups.

5.1. Language aspects

Having analysed the development of language skills and sub-skills at the beginning of the 2nd semester, it can be said that the CLIL learners improved all their skills, namely speaking, writing, listening and reading. As far as the sub-skills are concerned, the CLIL learners acquired more knowledge concerning vocabulary and grammar. In the case of pronunciation only slight progress has been made. The progress made is probably not only the result of the CLIL lessons but also the English lessons which the CLIL learners had throughout the whole semester. Taking into consideration the use of L1 during the lessons, the researcher noticed that the percentage of Polish used decreased, both on the part of the CLIL teachers and the CLIL learners.

5.1.1. Second language development

Having observed and analysed the lessons mentioned above as well as other lessons, it can be said that most of the CLIL learners have made progress in all skills. As far as speaking skills are concerned, the CLIL learners were more willing to take part in group and pair activities which involved speaking. The researcher also noticed that the CLIL learners were more willing to speak in front of others. What is more, their speech was fluent.

In the case of writing, the CLIL learners seemed to make fewer grammatical and spelling mistakes, however, on the basis of the test analysis, their writing skills did not improve much. The CLIL learners tended to forget about the paragraphs or linking devices. In case of listening and reading comprehension, it could be easily noticed that every day exposure to the foreign language influenced their understanding skills. The CLIL learners asked fewer questions concerning comprehension and they had nearly no problems while dealing with listening or reading comprehension questions.

The CLIL learners also acquired a lot of new subject-related vocabulary which was the result of the CLIL lessons and they also made fewer grammatical and pronunciation mistakes.

On the basis of the observations, it can be said that the CLIL learners made a visible progress as far as speaking was concerned. Taking into consideration the criteria concerning speaking provided in the Common European Framework of Reference for Languages (Council of Europe, 2001: 58) the CLIL learners observed could give clear, systematically developed descriptions and presentations, with appropriate highlighting of significant points, and relevant supporting detail. Additionally, they could also give a clear, prepared presentation, giving reasons in support for or against a particular point of view and giving the advantages and disadvantages of various options.

Having observed the above mentioned lessons as well as many others it was noticeable that the CLIL learners had an opportunity to develop and practice their **speaking skills** during all CLIL lessons. During the CLIL geography lesson, the CLIL learners were able to practice descriptive language. The CLIL geography teacher provided the CLIL learners with a set of pictures illustrating glaciers in different parts of the world. The CLIL learners were asked to describe the pictures using suitable vocabulary which was repeated at the beginning of the lesson. The CLIL learners were willing to describe the pictures and they hardly ever made any mistakes. The most common mistake which occurred was “on the picture” instead of “in the picture”. The following description illustrates the CLIL learners fluency:

“The picture shows a huge mountain which is probably a glacier as the top of it is covered in snow. In the background, I can see a few other mountains which may suggest it could be a chain of mountains. In the second picture, I can also see a glacier but it’s different because there are some people skiing. In the middle of the picture, there is a group of children who seem to be smiling and having a lot of fun etc...”

Apart from the picture description, the CLIL learners were asked a lot of additional open-ended questions which they answered without any hesitation. While answering the questions prompted by the CLIL geography teacher, they had no problems with expressing their preferences, opinions, advantages and disadvantages or speculating. The most

common expressions used were: “I think I would...”; “I wouldn’t mind...”; “I think...”; “Personally, I...”; “One advantage about...”; “I get the impression...”;

During the CLIL biology lesson, the CLIL learners had also an opportunity to practice their speaking skills. The CLIL biology teacher introduced the lesson by asking some open-ended questions concerning the skeleton. Each CLIL learner while answering the question was asked to come up to the skeleton and show particular bones while describing them. A lot of CLIL learners were willing to answer the questions and they seemed to have a lot of fun while coming up to the skeleton. Some of the CLIL learners had problems with vocabulary – most of the words were of Latin origin and they were difficult to remember. When the CLIL learners made some mistakes while pronouncing the words they often corrected themselves by using the following expressions, e.g. “What I meant was...”; “Sorry, I meant to say...”; “I mean...” etc. Most of the CLIL learners were very active during the whole lesson.

It can be said that the CLIL lesson of mathematics had not changed much from the one described in January. The topic of the lesson was quite difficult at the beginning “Critical values of functions” and the CLIL learners tended to ask a lot of questions, e.g. “When we are squaring a number, why is it not negative?”; “I don’t understand what a domain is, could you explain it once again?”; “If and only if... is it correct?” etc... What is worth mentioning is that a lot of CLIL learners asked questions in English which may mean that they started thinking in English. While being taken to the blackboard to solve some mathematical formulas the CLIL learners also tried to provide answers in English. The positive change concerning the development of speaking skills in mathematics is that a lot of CLIL learners started thinking in English and also speaking about mathematics in English.

All in all, taking into consideration all the lessons observed in February it can be said that all CLIL teachers paid attention to the development of speaking skills and all CLIL learners had an opportunity to develop their skills.

In February the CLIL learners were given tests in geography, biology and mathematics and on the basis of the deep analysis of the tests the following data concerning their **writing skills** is presented below. The data provided is closely related to the language aspects not

the content aspects which are to be presented later in this part of the thesis (part II, chapter VI, 5.2.).

The first test to be discussed was taken in geography and it covered the internal factors. There were two groups and each group received six questions which were all in English (the previous tests were always both in English and in Polish). Firstly, the CLIL learners were asked to characterise atmosphere (gr. I) or magnetosphere (gr. II). Then they were asked to define certain geographical concepts such as convectional currents or energy flow etc. The third question concerned rocks. Both groups were asked to characterise particular types of rocks. The fourth questions consisted of one questions which the CLIL learners were asked to answer and also provide one example on their own. The fifth question required a detailed description of a certain process and in the last one they were asked to translate certain terms from Polish into English. The tests of 33 CLIL learners were analysed. As far as content was concerned, the aim of the questions was to check the CLIL learners' knowledge and as far as language was concerned, the aim was to check the CLIL learners' vocabulary and the ability to define particular geographical concepts, characterise and describe. Most of the CLIL learners did not have any problems with translation but they tended to have some problems with characterising and describing. On the basis of the tests, it can be said that the CLIL learners had problems with distinguishing the most characteristic features. They seemed to put down all the information they possessed which was not what they were asked to do. Apart from that, a lot of the CLIL learners while providing the description switched into Polish, e.g. "Magnetosphere is one of the spheres of atmosphere. W magnetosferze temperatura powietrza wynosi ok. – 60 C i jest stała" [translation: "... In the magnetosphere, the temperature is about – 60 celcius and it's stable"]. Having analysed all the answers, it can be said that most of the CLIL learners while providing the long answers did not care about the language, e.g. a lot of them forgot about the existence of articles or linking words such as "however, although, as a result, apart from that etc". From time to time some spelling mistakes occurred in the answers to the first five questions. In the case of the sixth question where the CLIL learners were asked to translate the words from Polish into English special attention was paid to the spelling mistakes both on the part of the CLIL learners and the CLIL teacher.

The biology test consisted of 6 questions which were all given in English. The test was also divided into two groups A and B. In the first question, the CLIL learners were provided with some descriptions of tissues and they were asked to read the descriptions and give the full name of the tissue described as well as to classify them into the one of the 4 types of tissues. In question number two, the CLIL learners were provided with some pictures of muscle tissues (group A) or blood cells (group B) and on the basis of the pictures they were asked to fill in the table which was divided into certain categories, e.g. shape of the muscle, location of nucleus etc. In question number 3 they were asked to describe the differences and similarities between monocytes and neutrophils or between cardiac muscle and skeletal muscle. Additionally, they were asked to make pictures of the cell or muscles mentioned. In question number 4, they were asked to fill in the gaps. In question number 5, the CLIL learners were asked to explain why the mechanism of muscle contraction is called “sliding theory” (both groups were given the same task). In the last question, the CLIL learners were asked to match each of the pictures provided with the appropriate organs. The test covered the material concerning types of tissues and muscles. 33 tests were analysed. The CLIL learners did not have any problems with the first two questions and also with question number 6 where they were asked to match the pictures. The most problematic were questions three, four and five where the CLIL learners were asked to provide the differences and similarities, fill in the gaps and explain one term. Similar to the geography tests, the CLIL learners had problems with providing clear answers. They seemed to be writing down whatever they knew. As far as language is concerned, the CLIL learners also tended to skip articles and linking words providing very simple answers which sometimes were not linked together. Some of the CLIL learners had problems with spelling i.e. “*organeles** instead of *organelles*”; “*tisue** instead of *tissue*”; “*apropriate** instead of *appropriate*” etc. Looking back at the tests in biology analysed previously, it can be said that the CLIL learners still have problems with spelling which may be due to the amount and difficulty of vocabulary they have to remember.

There was one test administered in mathematics. The test covered the material concerning algorithms. The test consisted of algorithms which the CLIL learners were asked to solve. All the algorithms were provided from the Polish book “Zbiór zadań z matematyki” [translation: “A set of tasks in mathematics”] and the task given by the CLIL teacher in

English was “Solve the algorithms and provide the answers”. 32 tests were analysed. On the basis of the data, it can be said that about 30% of the CLIL learners provided the answers in English while about 70% of the CLIL learners provided the answers in Polish. As can be noticed the percentage of the answers provided in English is lower than in January which may be due to the difficulty of the branch of mathematics – algorithms are considered to be very difficult. All the answers provided by the CLIL learners were very short as in the tests analysed in January. Some of the CLIL learners provided the answers in English and switched into Polish when they did not know a certain word in English. No particular spelling mistakes were noticed in the answers. The CLIL mathematics teacher did not pay attention whether the answers were in English or in Polish.

Taking into consideration the Common European Framework of Reference for Languages (Council of Europe, 2001: 61), it can be said that at that stage of the CLIL learners education they could write clear and detailed texts on variety of subjects, synthesising and evaluating information but they still had problems with distinguishing appropriate information and adopting suitable style. Comparing their written answers in February with the ones provided in January there were not many changes probably due to the short period of time which passed between these two analyses. However, comparing their written answers with the ones provided in November, it can be clearly noticed that the “language barrier” has been crossed in written English.

Having observed the CLIL learners during the lessons mentioned above, it can be said that they were regularly and consistently exposed to spoken English either by listening to the teachers, other CLIL learners or to the recorded material. All the CLIL learners had an ability to develop their **listening comprehension skills**. As in the previous months, the CLIL learners were engaged in the process of comprehension in a wide variety of contexts. The CLIL learners had a lot of opportunities to practice and develop their listening skills by working in pairs or groups. During the CLIL geography lesson, the CLIL learners were exposed to the teacher’s talk as well as to the other learners’ talk. The CLIL geography teacher gave a short lecture during which the CLIL learners were asked to make some notes. Additionally, the CLIL learners were asked to describe the pictures and also work in pairs in order to distinguish the differences between the pictures. All those activities

required listening comprehension skills on the part of the CLIL learners. During the biology lesson, the CLIL learners were asked to come to the skeleton and answer the CLIL biology teacher's questions which also required listening comprehension skills. During the lesson of mathematics the CLIL learners were not as much exposed to English as in case of other CLIL lessons – both the CLIL mathematics teacher and the CLIL learners often switched into Polish. Comparing the CLIL lessons observed in the previous months to the ones observed in February, it can be said that the CLIL learners' listening comprehension skills have improved. The CLIL learners still tended to ask some questions, especially after the lectures or after having been given some instructions but the requests for repetition did not occur as often as they used to in the previous months, e.g. 15 instructions given – the CLIL teacher was asked 6 times for repetition (geography), 13 instructions given – the CLIL teacher was asked 7 times for repetition (biology), 23 instructions given – the CLIL teacher was asked 9 times for repetition (mathematics). All in all, taking into consideration the Common European Framework of Reference for Languages (Council of Europe, 2001: 66) it can be said that at this stage of the bilingual education, the CLIL learners could understand the main ideas of prepositionally and linguistically complex speech on both concrete and abstract topics delivered in a standard dialect. They could also follow extended speech and complex lines of argument provided the topic was reasonably familiar. What is more, they could also easily follow complex interactions between third parties in group discussion and debate, even on abstract, complex unfamiliar topics.

It is very difficult to say whether at that stage of the study any visible changes concerning the **reading comprehension skills** occurred. In January, the CLIL learners showed an ability to deal with the written texts independently and the researcher could suppose that this ability did not change. As in the previous months, the CLIL learners were only asked to read some instructions as well as the information put on the board during the CLIL lessons so it was still very difficult to judge their reading comprehension skills. However, by analysing the tests mentioned above and their responses to certain questions, it can be said that hardly any CLIL learner misunderstood a question or instruction given which may suggest high comprehension level. During the above mentioned lessons the CLIL learners were only exposed to short reading comprehension tasks. In case of geography, the CLIL

learners were asked to read some short extracts describing different kinds of glaciers and then they were asked to match the descriptions with the names of the glaciers. The only problem that the CLIL learners had was with some unknown vocabulary. Apart from that, the CLIL learners were asked to copy some information from the blackboard. In the case of biology, the situation was very similar. The CLIL learners were also given a short extract about the skeleton and they were asked to pick up the words which are connected with the upper-part of the skeleton. No problems concerning reading comprehension occurred. In the case of mathematics, the situation was different – the CLIL learners still had a lot of problems with understanding some tasks in English and as a result they asked the CLIL teacher to translate them, e.g. “What is domain in Polish? I don’t understand the whole task, could you translate it into Polish, please?”; “Proszę przetłumaczyć” [translation: “Could you translate it?”]; “Pani profesorze, zadania z gwiazdką są za trudne” [translation: “Professor, the tasks with a ‘star’ are too difficult”];

To summarise, all the CLIL learners were provided with an opportunity to decode and comprehend the text during all the lessons mentioned above. Unfortunately, some of the CLIL learners still had problems with some mathematical tasks which may have been due to the difficulty of the subject. On the basis of the lessons observed and the tests analysed, it can be said that at that stage of the study the CLIL learners did not have many problems with geographical or biological texts but still had a lot of problems with understanding mathematical tasks.

During the above mentioned lessons hardly any CLIL teacher paid attention to **grammar**. While talking the CLIL learners mainly made mistakes concerning the articles. They tended to use “*the*” instead of “*a*” or the other way round. The CLIL teachers did not pay attention to it at all. During the CLIL geography lesson, the CLIL learners were asked to describe some pictures. Most of the CLIL learners made mistakes concerning the use of prepositions, e.g. “*on** the picture *is*” instead of “*in* the picture *there is*”; “*in** the left” instead of “*on* the left”; “the picture *is showing**” instead of “*the picture shows*” etc... The CLIL geography teacher seemed to be surprised that the CLIL learners had problems with basic terms so she spent about 7 minutes on putting all the most useful expressions

concerning picture description on the blackboard. The CLIL biology teacher and the CLIL mathematics teacher did not pay attention to any errors the CLIL learners made even though some of them were very obvious, e.g. incorrect use of pronouns, e.g. “*she*” instead of “*it*” or incorrect use of prepositions.

All in all, having compared the lessons observed in January with the lessons observed in February, it can be said that there were not many changes concerning the errors made. The CLIL learners still tended to have problems with the use of pronouns, prepositions and articles.

The knowledge of specialized **vocabulary** has been widening all the time. Having observed the lessons mentioned above and also having analysed the tests, it can be said that the CLIL learners mastered a wide range of vocabulary covering various fields of geography, biology and mathematics. Some of the CLIL learners still tended to have some problems with remembering the words but they all knew what to do when they could not remember a particular word – most of them substituted the word with a different word, explained it in their own words or just translated into Polish. The most problematic subject as far as vocabulary is concerned was still mathematics – there were not many changes noticed in case of the use of vocabulary. The CLIL learners still tended to have some problems with understanding mathematics and that is why they often switched into Polish. In comparison to the tests analysed in the previous months, it can be said that the CLIL learners still had some problems with the spelling of words or the use of words in proper contexts, e.g. “*sedimentary rocks** [instead of *sedimentary rocks*]”, “*the procces of** [instead of *the process of*]”, “*convective currents** [instead of *convectioanal currents*]” (geography); “*the cell appear** [instead of *the cell appears*]”, “*fibbres** [instead of *fibres*]”, “*on the semi-fluid matrix we see** [instead of *in the semi-fluid matrix we can see*]” (biology); “*symetry** [instead of *symmetry*]”, “*comentary** [instead of *commentary*]”, “*mischanged curve** [instead of *unchanged curve*]” (mathematics); All in all, in comparison to the previous tests analysed fewer CLIL learners made spelling mistakes. All the CLIL teachers corrected the CLIL learners’ mistakes made while talking but none of the CLIL teachers corrected the mistakes made in the written English.

From time to time the CLIL learners used a Polish substitution of an English word, which was not treated as a mistake.

Having analysed the data gathered during the lessons mentioned above, no changes as far as the **pronunciation** of the CLIL learners were noticed. The most visible problems which occurred were linked to the word stress, e.g. the word *nucleus* (biology) was often stressed on the second syllable instead of the first one; the word *symmetry* (mathematics) was also often stressed on the second syllable instead of the first one; the word *accumulation* (geography) was often stressed on the first syllable instead of the fourth syllable. As it has been mentioned previously, the CLIL learners still tended to have some problems with long and short vowels, e.g. *Greenland* (there should be a long “i” – i: and the CLIL learners often used the short “i”) (geography), *pubis* (there should be a long “u” – u: and the CLIL learners tended to use a short “u”) (biology); *value* (there should be a long “u” – u: and the CLIL learners tended to use a short “u”) (mathematics); As has already been mentioned, it was very difficult for the researcher to go into detailed analysis of pronunciation. As in the previous cases, the researcher concentrated only on the most visible pronunciation errors. All in all, the CLIL learners tended to make the same errors in pronunciation as they made in the previous months.

In conclusion, it can be said that some changes can be noticed as far as the second language development is considered. Most of the CLIL learners were more willing to integrate content and language which was visible during all lessons. Most of the CLIL learners did not have any problems talking or writing about geographical, biological or mathematical phenomena in a foreign language. What is more, most of the CLIL learners avoided switching into Polish which is going to be discussed in the next part of this chapter. In order to avoid using Polish, the CLIL learners used various techniques such as substitution, elimination or description. The CLIL teachers also tried to concentrate on the use of the English language in the classroom.

5.1.2. The use of L1 (code-switching)

Taking into consideration the lessons observed in February, the percentage of Polish use was rather stable. In the case of the geography lesson, about 20% of the lesson was in Polish. In the case of biology, it was about 40% and in the case of mathematics it was about 70%. As it can be seen, the percentage of the use of Polish during the lessons observed did not decrease. All types of code-switching were noticed during the lessons mentioned above:

Linguistic switch:

“This argument – 0 must be a domain czyli musi być po polsku *domena*” [translation: “... so in Polish it is *domain – the main number*”] (teacher-learner code-switching, mathematics);

“*Hip bones* czyli *kości biodrowe, ischia* czyli *kość kulszowa, pubis bones* czyli *kości łonowe*. Obręcz barkowa łączy się z kręgosłupem tylko dzięki mięśniom” [translation: “... The pectoral girdle is joined with the spine by means of the muscles”] (teacher-learner code-switching, biology);

“Pani Profesor, I have a question, is *sternum* the same as a *breast bone* czyli *mostek* po polsku? [translation: “Professon, I have a question, is *sternum* the same as a *breast bone*, namely a *breast bone* in Polish?”] (learner-teacher code-switching, biology);

Topic switch:

“Mamy następujące liczby: a właściwie, to funkcję. Please, find a critical value of the function czyli wartość krytyczna, może też to być liczba zero” [translation: We have the following numbers....., well, in fact it's a function. Please, find a critical value of the function which can be 0"] (teacher-learner code-switching, mathematics);

“When we go to the mountains we can see different types of valleys. Popatrzcie na tablicę (the teacher is drawing different kinds of valleys on the board), tutaj mamy dolinę w kształcie V – v-shape, a tam mamy dolinę w kształcie U – u-shape” [translation: “..... Look at the blackboard, here we have a v-shape valley and there we have a u-shape valley”] (teacher-learner code-switching, geography);

“Pani professor, czy *nivation* to przemieszczanie się śniegu? [translation: ‘Professor, is *nivation* an activity of snow?’] (learner-teacher code-switching, geography);

“The process of collision. As we all know, *plyty tektoniczne są w ciągłym ruchu ze względu na prądy atmosferyczne. Kolizja ma miejsce w momencie kiedy płyty tektoniczne zderzą się. Na ich granicy tworzą się góry*” [translation: ‘The process of collision. As we all know, the tectonic plates are in constant movement because of the conventional currents in the atmosphere. The collision takes place when two continental plates collide – gradually the mountains are formed on their border’] (learner code-switching, geography) – data gathered from a **test**;

Affective switch:

“O nie, co to ma być, kolejny sprawdzian?” [translation: ‘Oh, no! What is it? Another test?’] (learner-learner code-switching, geography);

“Super, dzisiaj mój szczęśliwy numer, nie będę pytana” [translation: ‘Superb! Today is my lucky number, I won’t be asked’] (learner-learner code-switching, geography);

“No nie! Co za przykład, nigdy go nie rozwiążę!” [translation: ‘Oh, no! What a formula! I will never find the solution!’] (learner-teacher code-switching, mathematics);

Socialising switch:

“Pani profesor, czy musimy analizować te skały dzisiaj. Mamy tyle sprawdzianów. Poooglądajmy jakiś film geograficzny.” [translation: ‘Professor, do we have to analyse these rocks today. We have so many tests. Let’s watch a geographical documentary’] (learner-teacher code-switching, geography);

“A czy może Nam Pani opowiedzieć o swojej wyprawie do USA?” [translation: ‘Could you tell us about your trip to the USA, please’] (learner-teacher code-switching, geography);

“Jak myślisz, czy zorganizujemy jakieś Walentynki w szkole” [translation: ‘What do you think, shall we organize any Saint Valentine’s Day at school?’] (learner-learner code-switching, mathematics);

Clarity switch:

‘Jeszcze raz proszę mi przypomnieć jak dzieli się szkielet?’ [translation: ‘Could you please remind me, once again, how we divide the skeleton?'] (teacher-learner code-switching, biology);

“Czy może Pani powtórzyć typy kości?” [translation: ‘Could you repeat the types of bones, please?'] (learner-teacher code-switching, biology);

“Panie profesorze, dlaczego ta domena musi różnić się od zera. Czy może Pan powtórzyć definicję” [translation: ‘Why is this domain different from zero? Can you repeat the definition, please?'] (learner-teacher code-switching, mathematics);

As can be noticed from the data provided above, both the CLIL teachers as well as the CLIL learners switched into Polish during the lessons observed. What is interesting is that most of the code switching was noticeable during the geography lessons which were considered to be mostly English guided lessons. The frequent use of the Polish language during the geography lessons can be linked to the difficulty of the topics discussed (glaciers, tectonic plates, collision etc.). The purpose of code-switching in case of all subjects observed did not change – in most cases both the CLIL teachers and the CLIL learners switched into Polish in order to facilitate learning.

5.2. Content aspects

As it has already been mentioned the only way to evaluate the content aspects at this stage of the study was to present the marks of the CLIL learners which were taken from their written tests mentioned above (part II, chapter VI, 5.1.1.). The following data concerning the content aspects is to be presented below:

Geography:

33 CLIL learners took the test in internal factors and the marks were the following:

Table 8. Marks received from the test in geography.

Excellent (6.0)	No learners
Very good (5.0)	3 learners
Plus good (4.5)	3 learners
Good (4.0)	9 learners
Plus satisfactory (3.5)	No learners
Satisfactory (3.0)	8 learners
Pass (2.0)	9 learners
Fail (1.0)	1 learner

As can be seen from the data provided above most of the CLIL learners did not receive as good marks as before. Nobody received an excellent mark and there were fewer very good marks and plus good marks. Unfortunately, most of the CLIL learners only passed the test and there was even one learner who did not pass it. One of the reasons why the marks were worse is that the material was very difficult. What is more, due to the winter holidays the CLIL learners had a break from English which could also have had an influence. The whole test was in English – only the last task required the use of both languages (the CLIL learners were asked to translate words from Polish into English).

Biology

33 CLIL learners took the test concerning metabolism. The marks were the following:

Table 9. Marks received from the test in biology.

Excellent (6.0)	No learners
Very good (5.0)	12 learners
Plus good (4.5)	1 learner
Good (4.0)	6 learners
Plus satisfactory (3.5)	No learners
Satisfactory (3.0)	7 learners
Pass (2.0)	1 learner
Fail (1.0)	6 learners

As can be seen from the data concerning biology the results were quite good. Most of the CLIL learners received very good, good or satisfactory marks. Nobody received an excellent mark. 12 CLIL learners received very good marks but unfortunately there plenty of them (6 CLIL learners) who failed the test. The whole test was in English and the only reason why 6 CLIL learners did not pass the test was that they had not prepared themselves fairly enough.

Mathematics

32 CLIL learners took the test concerning algorithm. The test was both in English and in Polish. The marks were the following:

Table 10. Marks received from the test in mathematics.

Excellent (6.0)	No learners
Very good (5.0)	2 learners
Plus good (4.5)	7 learners
Good (4.0)	8 learners
Plus satisfactory (3.5)	2 learners
Satisfactory (3.0)	4 learners
Pass (2.0)	9 learners
Fail (1.0)	No learners

As can be seen from the data provided above the results are much better than the ones in December or January. All the CLIL learners passed the test and what is more a lot of them received positive marks – 7 CLIL learners received plus good marks and 8 CLIL learners received good marks. Nobody received an excellent mark. The reason why all the CLIL learners passed the test could be that it was administered both in English and in Polish.

To sum up, it may be concluded that at this stage of the study, the CLIL learners received the best marks in biology. Comparing the marks received in February to the marks received in the previous month, it may be concluded that the CLIL learners made progress as far as content of all CLIL subjects was concerned. In the previous months the CLIL learners received very good and good marks in geography and this month the marks were not satisfying which is worth paying attention to later on. The reason why it happened as mentioned before may be connected with the difficulty of the material covered as well as with the winter break. On the other hand, the CLIL learners being sure of their geographical knowledge could have rested on their laurels. Further data concerning content will be presented later on in this part of the thesis.

5.3. Learning environment aspects

There were not many changes observed concerning the learning environment. There was still not much interaction between the CLIL learners themselves. The teacher was in the centre of the lesson. The methodological approach of all CLIL teachers did not change a lot apart from the mathematics teacher who used more English during the lesson than he used before. The materials used during the lessons consisted of handouts, books and also some additional materials such as some cell models (biology) or maps (geography). Evaluation was done on the basis of the tests the results of which were presented in the previous chapter (part II, chapter VI, 5.2.) as well as on the basis of the CLIL learners' answers. The classroom setting has not changed at all so the researcher is not going to concentrate on it in this part of the study. All the details concerning interaction, methods of teaching and materials used are to be presented below.

5.3.1. Classroom interaction

Bearing in mind van Lier's (1988: 94-120) framework the following types of interaction as well as types of function were noticed during the lessons mentioned above:

Type 1:

Geography:

T: "Today, I would like to finish the topic of glaciers"

L1: „Pani profesor, ja jestem nieprzygotowana do lekcji” [translation: “I’m not prepared for the lesson, professor”];

T: „Dobrze, ale może już zacznijmy lekcję bo mamy mało czasu” [translation: “OK, but maybe let’s start the lesson because we are running out of time”];

L1: „Pani profesor, jeszcze jedno pytania, ile razy można być nieprzygotowanym do lekcji?” [translation: “How many times can I be unprepared for the lesson, professor?”];

T: „Mówiłam na początku roku szkolnego” [translation: “I told you at the beginning of the school year”] (**ideational function**);

Mathematics

L1: „Nie rozumiem tych funkcji, a już po angielsku, to koszmar” [translation: “I don’t understand these functions, in English, they are a nightmare”];

L2: „A ja chodzę na korepetycje, jestem bardzo zadowolona” [translation: “I’m taking private classes and I’m really satisfied”];

L1: „A możesz się zapytać czy ja też mogłabym?” [translation: “Can you ask your private teacher if I also could?”];

L2: „Nie ma problemu” [translation: “No problem”] (**ideational and interpersonal function**);

Biology

L1: „Wiesz co, ten temat, nie jest trudny, pożyczysz mi zeszytu, a ja zrobię sobie zadanie z matmy?” [translation: “You know, this topic is not very difficult, will you lend me your note-book? I will do the maths homework”]

L2: „OK, ale uważaj żeby Cię na złapała” [translation: “OK, but be careful so you won’t get caught”] (**interpersonal function**);

In the first example given above, the CLIL geography teacher was involved in the activity but lost control over it. In the next two examples, the CLIL teachers were not involved in the activities and did not have any control over them because the conversations took place between the CLIL learners.

Type 2:

Biology

T: “So, write down: what are the components of pectoral girdle? (**textual function**);

Mathematics

T: “Please, be quiet because the subject definitely requires your attention, you won’t understand anything” (**interpersonal function**);

Geography

T: “OK, a short summary: denudation is a process which took place during the glacier period...” (**textual function**);

In the above mentioned type of interaction, the CLIL teachers controlled the topic but not the activity. The CLIL learners were given some “orders” and it was up to them whether they wanted to fulfill them or not.

As in the previous cases, all the teachers spent about 10-15 min on giving a lecture concerning the topic of the lesson during which they had control over the topic but not over the activities going on in the classroom.

Type 3:

Biology

T: “As you can see you have been given an exercise and you are supposed to fill in the gaps. Let’s do it together, one by one, starting from Ania” (**textual function**);

Mathematics

T: “So, this is the price at the beginning and this is the fixed rate, can you please dictate what I should write now, anybody” (**textual function**);

Geography:

T: “Karolina, can you please, characterise the atmosphere?”

L1: “Yes, I will try. So, atmosphere is divided into smaller spheres and...”

T: “Sorry for interrupting, but could you please come to the blackboard and draw different spheres”

L1: “Yes, of course” (the learner comes to the blackboard and draws different spheres)
(textual function);

As can be seen from the examples above, both the topic as well as the activity is controlled by all the CLIL teachers.

Type 4:

Geography

T: “Please, open your notebooks and write down the following words: *here the CLIL teacher dictates a set of words* and then translate them into English using the dictionary”
(textual function);

Most of the CLIL learners were doing the exercise but they were talking about something completely different, e.g.

L1: “Wiesz co, bardzo się stresuję kartkówką z matematyki” [translation: “You know, I’m really under stress when I start thinking about the short test in maths”]

L2: “Wiesz, ja też i czuję, że tego nie zdam” [translation: “You know, me too and I have a feeling that I won’t pass it”]; **(textual and interpersonal function);**

Mathematics

T: “So this is the following example... can you do it in your notebooks, please”

L1: “Ten przykład jest już zrobiony w książce” [translation: “This example is already done in our book”]

T: “Nieważne, trzeba sprawdzić czy jest dobrze zrobiony” [translation: “We have to check if it’s correctly done”];

The CLIL learners are doing the example in their notebook but most of the CLIL learners are talking about something completely different and the CLIL mathematics teacher has to ask them to be quiet. **(textual and interpersonal function);**

Biology

T: “Please, draw a skeleton in your notebooks and name all its parts”

L1: “Ciężko ten szkielet narysować, ale spróbujmy, myślałaś, żeby zdawać biologię na maturze?” [translation: “It’s difficult to draw the skeleton but let’s try. Have you thought about taking biology at your *matura* exam?”]

L2: “Jeszcze nad tym nie myślałam, ale chyba tak” [translation: “I haven’t been thinking about it, but I suppose *yes*”]

L1: “Ja chyba nie dam rady z tym słownictwem” [translation: “I think, I won’t manage with all that vocabulary”]

L2: “Dasz radę, trzeba będzie się pouczyć” [translation: “You will manage, we will just have to study”] (**textual and interpersonal function**);

As can be seen from the above given examples, the CLIL teachers controlled the activity but not the topic. The CLIL learners had a personal conversation while doing the tasks given by the CLIL teacher.

As can be seen from the examples given above, there was a lot of interaction going on between the CLIL learners as well as between the CLIL teachers and the CLIL learners. Generally speaking, it can be said that there was more interaction going on between the CLIL learners and the CLIL teachers than in the previous months which maybe due to the fact that the CLIL learners are more acquainted with the CLIL teachers and are probably less shy. The types of interaction which occurred during the lessons observed were those ones which were most often observed in the previous months, mainly textual and interpersonal, only from time to time an ideational one.

5.3.2. The teacher’s methodological approach

Geography

The CLIL geography teacher mainly used a learner-centred approach as in the previously described cases. The CLIL geography teacher started the lesson by showing the CLIL learners some pictures of glaciers and asked the CLIL learners to describe the pictures

using expressions such as *in the background*, *in the foreground*, *on the left* etc. Then the CLIL geography teacher gave a lecture on different types of glaciers which lasted about 10 min. The CLIL learners were asked to make some notes. Afterwards, the CLIL learners were given some handouts with a short text on the National Park in California (Yosemite) and another handout with some words which they are supposed to find in the text and explain their meaning both in English and in Polish. This activity lasted about ten minutes. In the meantime, some of the CLIL learners were “taken to the board” and asked some questions from the previous lessons. They were allowed to answer both in Polish or in English. Afterwards, the CLIL geography teacher checked the CLIL learners’ answers and asked them some additional comprehension questions concerning the text on the National Park in California. The CLIL learners were willing to answer the questions. As can be seen, most of the activities were of communicative nature as in the previous months.

Biology

The CLIL biology lesson observed in February also did not differ a lot from the lessons observed in the previous months. The lesson was both teacher-centred and learner-centred. The CLIL biology teacher gave a short lecture on the skeletal system (15 min). While describing the skeleton, the CLIL biology teacher used the real skeleton so the CLIL learners could see and even touch all the bones. In the same time the CLIL learners were given a copy with a skeleton on it and while listening to the lecture they were asked to name particular parts and write down the terms in English. Apart from the English words, the CLIL biology teacher provided the learners with their Polish equivalents. Afterwards, the CLIL learners were put into three groups. Each group was given a set of words connected with the skeleton and American biology course books. Using the course books, each group was asked to describe the functions of the parts of the skeleton. The CLIL learners had about 15 minutes to do the task. Then they were asked to present the functions of particular parts of the skeleton to the whole class. As can be seen, the CLIL biology teacher used some realia to facilitate learning as well as some communicative activities to activate difficult vocabulary.

Mathematics

The whole CLIL mathematics lesson was of a practical nature. It focused on critical values of the function and the aim of the lesson was to practise as much as possible. Comparing the CLIL mathematics lesson analysed in February to the ones analysed in the previous months, there was still one significant difference: the CLIL mathematics teacher as well as the CLIL learners used more English during the lesson. English was mainly used when the CLIL mathematics teacher was giving the task to be solved – most of the tasks were in English. While being “taken to the board” to solve the tasks, most of the CLIL learners tried give to the explanation in English but a lot of them gave up due to the difficulty of the tasks. The CLIL mathematics teacher also gave a short lecture both in English and in Polish reminding the CLIL learners the rules concerning the critical values of the function. All in all, during the lesson of mathematics observed it can be said that some attempt of integrating content and language was made both on the part of the CLIL mathematics teacher and also on the part of the CLIL learners.

In conclusion, both the CLIL geography teacher and the CLIL biology teacher used some communicative methods of teaching such as group work or reading comprehension in order to integrate content and language. During the CLIL mathematics lesson the CLIL mathematics teacher made an attempt to integrate content and language using only one method, namely asking the CLIL learners to solve some mathematical formulas. All the teachers used both teacher-centred approach and learner-centred approach. All the activities where the CLIL learner was in the centre made the CLIL learners more willing to participate in the lessons. No particular changes concerning the methods of teaching have been noticed since the end of the 1st semester.

5.3.3. Learner’s evaluation

During the CLIL lessons mentioned above only the CLIL geography teacher used “oral evaluation”. CLIL learners were asked to come to the blackboard or sit in front of the teacher and answer some questions concerning the previous lessons. The CLIL geography teacher asked five questions as during the previously observed lessons. All the questions

were asked in English but the CLIL learners had a choice – they could either answer in English or in Polish. When answering a question in Polish they got a lower mark. Most of the CLIL learners asked were well prepared and the lowest mark given was 3.0. The criteria concerning oral evaluation were the same as in the previous months, namely, the most important was content knowledge and the language was not very important. All the CLIL teachers administered tests in February (the results of the tests were discussed in part II, chapter VI, 5.2). As previously, the test in geography was partly administered in English and partly in Polish. Most of the questions were descriptive and one question was connected with translating some subject-related words from Polish into English. While evaluating the answers which were given in English the CLIL geography teacher did not pay attention to the language mistakes. In order to pass the test the CLIL learners had to get more than 60%. The test in biology was only in English and the questions were both open-ended and close-ended. While evaluating the answers the CLIL biology teacher also did not pay attention to the language mistakes. The test given in mathematics was in English and the CLIL learners were asked to solve some formulas. They could provide the answers either in English or in Polish. While evaluating the test in English the CLIL mathematics teacher did not pay attention to the language mistakes. The geography CLIL teacher was still following the system of pluses. During the lesson discussed above two CLIL learners received a plus.

5.3.4. Teaching materials

Geography:

During the CLIL geography lesson described above, the CLIL geography teacher used some pictures with the glaciers which the CLIL learners were asked to describe. Additionally, the CLIL geography teacher used two maps: the world map and the continental map. The CLIL geography teacher was also using the blackboard where she put all the new vocabulary. Apart from that, the CLIL geography teacher prepared a reading comprehension text which was distributed on separate sheets of paper. Each CLIL learner had his/her own copy of the text. No multimedia was used during the lesson.

Biology:

As far as teaching materials are concerned, the CLIL biology teacher while explaining all the terms, used the blackboard where she put all the new words. Apart from that, the CLIL biology teacher was using some realia, namely a skeleton. While providing the CLIL learners with some vocabulary concerning the bones, she also showed them. At the same time, the CLIL learners were given a copy with a skeleton drawn so they could put down all the new words and indicating particular bones. Additionally, the CLIL learners were distributed some course books which were written in English and were used in the American High School. The CLIL learners were asked to work on some tasks which were given in the above mentioned book. No multimedia was used during the lesson.

Mathematics:

The whole lesson was based on practice. The CLIL learners were given some formulas which they had to solve. All the tasks were written by the CLIL mathematics teacher on separate pieces of paper. Each CLIL learner had his own copy. Additionally, as observed during the previous lessons, the CLIL mathematics teacher as well as the CLIL learners were using a Polish book which contained different mathematical tasks “Zbiór zadań z matematyki” [translation: “A set of mathematical tasks”];

To summarise, all the materials used during the lessons observed were very similar to the ones used during the previously observed lessons. It can be said that all the CLIL teachers by providing the CLIL learners with different materials which were mostly in English tried to integrate both content and language. What is worth emphasising is the fact that the CLIL mathematics teacher also provided the CLIL learners with materials in English especially prepared for this particular lesson (all the materials were written by the CLIL mathematics teacher in hand).

5.3.5. Classroom setting

As it was February the classroom-newsletter contained some St. Valentines’ pictures in all the classrooms. Additionally, a skeleton was brought into the biology classroom due to the

purpose of the lesson. No other changes in any of the classrooms were noticed by the researcher.

5.4. Attitudinal aspects and motivation

Further changes of the attitude towards CLIL which were investigated after the 2nd Semester as well as the motivating factors are to be presented later in this part of the thesis.

6. Data presentation – April 2007 (2nd Semester)

Sample lessons:

The following lessons were chosen to be presented and analysed:

Subject: geography

Date: 13.04.2007

Topic of the lesson: “The climate”

Number of learners: 26

Subject: biology

Date: 17.04.2007

Topic: “The excretory system”

Number of learners: 23

Subject: mathematics

Date: 18.04.2007

Topic: “Trig identities for simplified calculations”

Number of learners: 23

6.1. Language aspects

Having analysed the development of language skills and sub-skills as in April, it can be said that the CLIL learners improved all their skills, namely speaking, writing, listening and

reading. The improvement may not be very visible when comparing the data analysed in February with the data analysed in April but it can definitely be noticed when comparing the present data with the one from September or November. As far as the sub-skills are concerned, the CLIL learners acquired more knowledge concerning vocabulary and grammar. The improvement concerning vocabulary is due to the subject lesson in English where vocabulary is emphasised. The improvement concerning grammar is rather due to the English lessons which the CLIL learners had (6hrs per week). In case of pronunciation only slight progress has been made due to the fact that both the CLIL teachers as well as the CLIL learners did not pay much attention to it. In case of the main skill such as speaking, writing, reading or listening, the greatest amount of progress could be seen in case of speaking and reading. The CLIL learners definitely crossed their language barrier and they had hardly any problems with expressing their opinions in English. In case of reading comprehension, the CLIL learners also made a lot of progress due to the fact that they were provided with many texts written in English which were full of new and specialised vocabulary. Taking into consideration the use of L1 during the lessons, the researcher noticed that the percentage of Polish used decreased both on the part of the CLIL teachers and the CLIL learners.

6.1.1. Second language development

Having observed and analysed the lessons mentioned above as well as other lessons, it can be said that most of the CLIL learners have made progress in all skills. As far as speaking skills are concerned, the CLIL learners were more willing to answer questions concerning particular subject issues and take part in other speaking activities. It is also worth mentioning that the CLIL learners' speech had become more fluent.

In the case of writing, the CLIL learners seemed to make fewer grammatical and spelling mistakes. On the basis of the test analysis, their writing skills have slightly improved. However, it should be pointed out that the CLIL learners still tended to forget about the paragraphs or linking devices. In the case of listening and reading comprehension, it could be easily noticed that every day exposure to the foreign language influenced their

understanding skills as has been mentioned in the introductory part to this paragraph (Part II, chapter VI, 6.1.).

The CLIL learners acquired a lot of new subject-related vocabulary which was the result of the CLIL lessons and they also made some progress in grammar (they started using more sophisticated grammatical structures such as conditionals, indirect speech or passive voice). In the case of pronunciation, as mentioned above, the CLIL learners have made a slight progress.

Based on the observations, it can be said that the CLIL learners made visible progress as far as speaking was concerned. Taking into consideration the criteria concerning speaking provided in the Common European Framework of References for Languages (Council of Europe, 2001: 58), the CLIL learners observed could give clear, systematically developed descriptions and presentations, with appropriate highlighting of significant points, and relevant supporting detail. Additionally, they could also give a clear, prepared presentation, giving reasons in support for or against a particular point of view and giving the advantages and disadvantages of various options.

During the lessons observed, the CLIL learners had an opportunity to develop and practice their **speaking skills**. In the CLIL geography lesson, the CLIL learners worked in groups discussing particular problems. The CLIL geography teacher provided the CLIL learners with a discussion topic concerning the changes in our climate. The CLIL learners were asked to work in groups and discuss different reasons of the changes in climate. The CLIL geography teacher was monitoring the CLIL learners' discussion and also was providing them with some vocabulary. The following conversation illustrates the CLIL learners' abilities to discuss the topic:

L1: "In my opinion the changes of our climate are caused by the pollution in atmosphere"

L2: "Yes, you are right. Air is contaminated mainly by exhaust gases emitted directly into the atmosphere"

L3: "I do agree, from year to year man increasingly contributes to the *greenhouse effect* by additional emission of sulphur, carbon dioxide from burning coal, natural gases and other products"

Apart from the above mentioned groups' discussion, the CLIL learners were asked to present the outcome of their discussions and they did not have any particular problems while expressing their opinions. They often used phrases such as: "In our opinion..."; "I think I would..."; "I wouldn't mind..."; "We agreed that..."; "I think..."; "Personally, I..."; "One advantage about..."; "I get the impression..."; "Our conclusion is..." etc.

During the CLIL biology lesson, the CLIL learners also had an opportunity to practice their speaking skills. The CLIL biology teacher put the CLIL learners into groups and asked them to discuss the functions of excretory system. The CLIL learners were very willing to discuss the functions and they showed a huge knowledge of specialized vocabulary. The following conversation was overheard by the researcher:

L1: "OK, so let's write down all the functions because otherwise we will forget everything"

L2: "OK, I can write everything down"

L1: "So, it maintains the homeostasis by removing the waste and toxic substances"

L3: "It helps in regulating water in the blood"

L1: "It is responsible for the outcome of water"

Similar to the CLIL geography lesson, the CLIL learners were asked to present their outcomes to the whole class. They also used the expressions which were provided above.

It can be said that the CLIL lesson of mathematics has not changed much. The topic of the lesson was quite difficult and the CLIL mathematics teacher introduced the whole theory in Polish. The CLIL mathematics teacher switched into English while providing the CLIL learners with examples. He made them think in English and also answer his questions in English. What is worth mentioning is that while being taken to the blackboard to solve some mathematical formulas the CLIL learners tried to provide answers in English. While solving the formulas in pairs the CLIL learners only used Polish

On the whole, taking into consideration all the lessons observed in April it can be said that all CLIL teachers paid attention to the development of speaking skills and all CLIL learners had an opportunity to develop their speaking skills, especially during geography and biology.

In April the CLIL learners were given tests in geography, biology and mathematics and on the basis of the deep analysis of the tests the following data concerning their **writing skills**

is to be presented below. The data provided is closely related to the language aspects not the content aspects which are to be discussed later in this part of the thesis (part II, chapter VI, 6.2.).

The first test to be discussed was taken in geography and covered the external factors. There were two groups and each group received 11 questions which were given in Polish. The CLIL learners were asked to answer the questions in English. For answering in Polish the mark was lower. Firstly, the CLIL learners were asked to divide the Polish lowlands into geographical regions (gr. I) or Polish highlands into geographical regions (gr. II). Then they were asked to define salt weathering (gr. I) or isolation weathering. The third question concerned the accumulative activity of a glacier. The CLIL learners were asked to provide three examples. The fourth question consisted of some words such as *nunatak*, *palsa*, *erosion base* etc. and the CLIL learners were asked to explain them. Each group was given a different set of words. The fifth question: *describe the upper part of the river* (gr. I) or *describe the conditions of forming the mountain glacier* (gr. II). The sixth question: *explain the term backward erosion* (gr. I) or *characterise the middle part of the river* (gr. II). The seventh question: *how is an estuary formed?* (gr. I) or *how is a deflation surface formed?* (gr. II). The eighth question was concerned with the formation of *barchans* (gr. I) and *clayey* (gr. II). The next question was connected with forming particular coastlines, namely *the channel coastline* (gr. I) and *the sandbar coastline* (gr. II). The tenth question concerned the process of carving in certain cycles and finally the CLIL learners were asked to translate certain words from Polish into English. The tests of 33 CLIL learners were analysed. As far as content was concerned, the aim of the questions was to check the CLIL learners' knowledge and as far as language was concerned, the aim was to check the CLIL learners' vocabulary and the ability to define particular geographical concepts, characterise and describe. Taking into consideration the questions provided above, it can be noticed that most of them were of the descriptive nature which required not only the knowledge of particular words on the part of the CLIL learners but also some ability to define the concepts using proper descriptive language. What was even more difficult for the CLIL learners was that all the questions were provided in Polish so they had to switch into English immediately and find the proper words on their own. Even though the CLIL learners could answer the questions in Polish, they all tried to do it in English which could

mean that they were either ambitious having in mind the possibility of getting a better mark or they had problems with providing the answers in Polish due to the fact that they had been studying all those concepts in English. Most of the CLIL learners did not have any problems with translation but they still tended to have some problems with characterising and describing. As was noticed in February, they still seemed to put down all the information they possessed which was not what they were asked to do. Additionally, some of the CLIL learners while answering the question switched into Polish from time to time which could have been due to the lack of some vocabulary, e.g. “Erozja wsteczna, to działalność of the river which causes cofanie się progów rzecznych” [translation: “Backward erosion is an activity of the river which causes the backward movement of the river threshold”].

Having analysed all the answers, as noted previously, it can be said that most of the CLIL learners while providing the long answers did not care much about the language. When they did not know a word in English they provided a Polish equivalent. Additionally, they also made some spelling mistakes such as: “*valey** instead of *valley*”, “*uper** instead of *upper*” or “*acumulation** instead of *accumulation*” etc. While translating the words from Polish into English (question 11) all the CLIL learners were very careful about spelling probably bearing in mind that they were given points for proper spelling.

The biology test consisted of 25 questions which were all given in English. The test was also divided into two groups A and B. Firstly, the CLIL learners were asked to list the functions of the skin (gr. A) and the skeletal system (gr. B). Secondly, both groups were asked to draw the structure of the long bone. The third question consisted of a picture of a skeleton and both groups were asked to indicate the ball, the socket joints and the hinge joints. The they were asked to indicate the bones that are the element of axial skeletal system (gr. A) and appendicular skeletal system (gr. B). The fifth question was: *write down the corresponding bones from the upper limb to the following bones of the hind limb* (here a list of words was given) (gr. A) or *describe the structure of the rib cage* (gr. B). In the sixth question the CLIL learners were provided with a picture of a skin and they were asked to identify the layers and the structures of the skin. Questions 7-10 gave the CLIL learners a set of sentences with one word missing and they were asked to complete the sentences. The sentences were the same for both groups. Questions 11- 15 were false/true sentences. Both

groups were given the same set of sentences. Questions 16-19 were multiple choice questions where the CLIL learners were asked to choose the proper answer. They were also given the same set of sentences. Questions 20-22 consisted of some pictures where certain organs were drawn and the CLIL learners were asked to name these organs and describe their function. Both groups were given the same pictures. In question 23 the CLIL learners were asked to list different kinds of enzymes: enzymes secreted by the walls of the small intestine (gr. A) or enzymes secreted by pancreas (gr. B). Question 24 consisted of a diagram which the CLIL learners were asked to fill in and in question 25 the CLIL learners were asked to choose the proper description of HDL (high density lipoprotein) (gr. A) or LDL (low density lipoprotein) (gr. B). The test covered the material concerning types of the skeletal system and the structure of the skin. 33 tests were analysed. The CLIL learners did not have a lot of problems with the test even though it seemed to be very difficult due to the number of various questions. The most problematic were questions four, five, seven, eight, nine and ten where the CLIL learners were asked to indicate certain bones, write down the corresponding bones and also fill in the gaps with one word. There were no descriptive answers so the only thing that the researcher could analyse as far as language was concerned was spelling of particular words and the knowledge of the words. The most common mistakes which occurred in the test were: “*vesels** instead of *vessels*”, “*hipodermis** instead of *hypodermis*”, “*vertebre** instead of *vertebrae*”, “*clavile** instead of *clavicle*” etc. All in all, bearing in mind the CLIL learners’ test performance in the beginning of the school year, their knowledge of biology in a foreign knowledge was quite impressive.

There was one test administered in mathematics. The test covered the basic properties of functions and consisted of a set of mathematical formulas which the CLIL learners were asked to solve. All the functions were provided from the Polish book “Zbiór zadań z matematyki” [translation: “A set of tasks in mathematics”] and the task given by the CLIL teacher in English was “Do the tasks concerning the functions and provide the answers”. 30 tests were analysed. On the basis of the data, it can be said that about 40% of the CLIL learners provided the answers in English and 60% of the CLIL learners provided the answers in Polish. As can be noticed the percentage of the answers provided in English was higher than the one provided in February which may be due to the fact that basic functions

are not as difficult as algorithms. As noticed when analysing the tests from February, all the answers provided by the CLIL learners were also very short. Some of the CLIL learners provided the answers in English and switched into Polish when they did not know a certain word in English which was also noticed in the previous months. No particular spelling mistakes were noticed in the answers. The CLIL mathematics teacher did not pay attention to whether the answers were in English or in Polish which could be de-motivating for the CLIL learners.

Taking into consideration the Common European Framework of Reference for Languages (Council of Europe, 2001: 61), it can be said that at that stage of the CLIL learners education they could write clear, well-structured expositions of complex subjects, underlining the relevant salient issues. They could also expand and support points of view at some length with subsidiary points, reasons and relevant examples. However, in most cases, they still had some problems with distinguishing relevant information and making some spelling mistakes, especially when being under stress (i.e. when writing tests). Comparing their written answers in April with the ones provided in the previous months the only significant difference was that their written English seemed to be more fluent.

Having observed the CLIL learners during the lessons mentioned above, it can be said that they were regularly and consistently exposed to spoken English either by listening to the teachers, other CLIL learners or to recorded material. All the CLIL learners had an ability to develop their **listening comprehension skills**. As in the previous months, the CLIL learners were engaged in the process of comprehension accompanied by a wide variety of contexts. The CLIL learners had a lot of opportunities to practice and develop their listening skills by working in pairs or groups. During the CLIL geography lesson, the CLIL learners were exposed to the teacher's talk and to the other learners' talk.

During the biology lesson, the CLIL learners were provided with a short lecture on the excretory system and made some notes which also required good listening comprehension skills on the part of the CLIL learners. Apart from that, the CLIL learners were asked to work in groups and work on a list of functions of the excretory system. While communicating in groups they also had to listen to each other. During the lesson of mathematics the CLIL learners were not as much exposed to English as in the case of other

CLIL lessons – both the CLIL mathematics teacher and the CLIL learners often switched into Polish. Comparing the CLIL lessons observed in the previous months to the ones observed in April, it can be said that the CLIL learners’ listening comprehension skills have improved. Probably, their progress has not been that visible and also could not be measured by any listening comprehension tests but what was noticed was that they tended to ask fewer comprehension questions using the following formulas: “Could you repeat, please”, “Once again, please”, “What did you say?” etc... In case of geography 16 instructions were given – the CLIL teacher was asked 6 times for repetition. In case of biology 11 instructions were given – the CLIL teacher was asked 5 times for repetition. In case of mathematics 21 instructions were given – the CLIL teacher was asked 8 times for repetition. All in all, taking into consideration the Common European Framework of Reference for Languages (Council of Europe, 2001: 66) it can be said that at this stage of the bilingual education, the CLIL learners could understand the main ideas of propositionally and linguistically complex speech on both concrete and abstract topics delivered in a standard dialect. They could also follow extended speech and complex lines of argument provided the topic was reasonably familiar.

What is more, they could also easily follow complex interactions between third parties in group discussion and debate, even on abstract, complex unfamiliar topics. As noticed, the CLIL learners listening comprehension skills were very similar to the ones described in February.

As previously, it is very difficult to say whether at that stage of the study any visible changes concerning the **reading comprehension skills** occurred. During the lessons observed in April, the CLIL learners showed an ability to deal with the written texts independently and the researcher could suppose that this ability did not change. As in the previous months, the CLIL learners were asked to read some instructions, the information put on the board during the CLIL lessons and also some short text on particular topics which were distributed by the CLIL teachers. By analysing the tests mentioned above and the CLIL learners responses to certain questions, it can be said that hardly any CLIL learner misunderstood a question or instruction given which may suggest high comprehension level. During the CLIL geography lesson, the CLIL learners were asked to read some short

extracts concerning descriptions of particular climates and they were asked to match the descriptions with the climate (the CLIL learners were familiar with this kind of exercise). The only problem that the CLIL learners had was with some unknown vocabulary. Apart from that, the CLIL learners were also asked to copy some information from the blackboard. In the case of biology, the CLIL learners were also given books and they were asked to read the chapter concerning the excretory system. Then the CLIL biology teacher provided them with some open-ended comprehension questions which they were asked to read. The CLIL learners did not have any problems while answering the questions. In the case of mathematics, the situation was different – the CLIL learners still had problems with understanding the formulas in English and as a result they asked the CLIL teacher to translate them. The CLIL mathematics teacher dictated all the formulas in Polish.

To summarise, all the CLIL learners were provided with an opportunity to decode and comprehend the text during all the lessons mentioned above. Unfortunately, a lot of the CLIL learners still had problems with some mathematical tasks which may have been due to the difficulty of the subject (“Trig identities for simplified calculations”). The whole lesson was based on different kinds of statements used in trigonometry which for some CLIL learners were even difficult in Polish. On the basis of the lessons observed and the tests analysed, it can be said that at that stage of the study the CLIL learners did not have many problems with geographical or biological texts but still had a lot of problems with understanding mathematical formulas in English. Taking into consideration the Common European Framework for Reference of Languages (Council of Europe, 2001: 69) it can be said that at this stage the CLIL learners could read straightforward factual texts on subjects related to their field and interest with a satisfactory level of comprehension except for mathematics.

As in the previous months, during the above mentioned lessons hardly any CLIL teacher paid attention to **grammar**. While talking the CLIL learners mainly made mistakes concerning the articles which has not changed much since February. They tended to use “*the*” instead of “*a*” or the other way round. The CLIL teachers did not pay attention to it at all. During the CLIL geography lesson, the CLIL learners were asked to describe and compare some pictures where different landscapes illustrating various climate were shown.

While describing the pictures only some CLIL learners had problems with the expression “*in** the picture” using “*on* the picture” instead. In this case they seem to have made a significant progress. While comparing the pictures the CLIL learners did not have any problems with comparatives or superlatives. During the CLIL biology lesson, the CLIL learners had some problems while reporting what other students had said, e.g. “Group A said that the removing of waste and toxic substances *are** (instead of *were*) one of the most important functions of the excretory system”. This mistake occurred a few times but the CLIL biology teacher did not correct it. During CLIL mathematics lesson no grammar mistakes were noticed as the main language which was used during the lesson was Polish. The teacher did not try to convince the CLIL learners to speak English as the most important was content, not language.

All in all, having compared the lessons observed in February with the lessons observed in April, the only visible change concerning the grammar was the use of prepositions. The CLIL learners made fewer mistakes. The CLIL learners still tended to have problems with the use of articles.

The knowledge of specialized **vocabulary** has been widening all the time. Having observed the lessons mentioned above and having analysed the test, it can be said that the CLIL learners mastered a wide range of vocabulary covering various fields of geography, biology and mathematics. All the CLIL learners seemed to have mastered the knowledge of using particular words in different contexts. If forgetting a word, they all tried to substitute the word with a similar word or simply explain it in their own words. The most problematic subject as far as vocabulary is concerned was still mathematics – there were not many changes noticed in case of the use of vocabulary, however it should be mentioned that the CLIL learners started feeling more confident while talking about mathematics in English. In comparison to the tests analysed in the previous months, it can be said that the CLIL learners still had some problems with the spelling of the words, e.g. “*acumulation** [instead of *accumulation*]”, “*the river chanel** [instead of *the river channel*]”, “*defation hollow** [instead of *deflation hollow*]” (geography); “*sponge bone** [instead of *spongy bone*]”, “*palanges** [instead of *phalanges*]”, “*red bone marow** [instead of *red bone marrow*]” (biology); “*amount of the liqud** [instead of *amount of the liquid*]”, “*comentary** [instead of

commentary]", "*price at the begining** [instead of *price at the beginning*]" (mathematics); All in all, in comparison to the previous tests analysed fewer CLIL learners made spelling mistakes. All the CLIL teachers corrected the CLIL learners' vocabulary mistakes made while talking but none of the CLIL teachers corrected the mistakes made in the written English. From time to time the CLIL learners used a Polish substitution of an English word, which was not treated as a mistake.

Having analysed the data gathered during the lessons mentioned above only slight changes as far as the **pronunciation** of the CLIL learners were noticed. The most visible problems which occurred in the previous months were linked to the word stress. During the lessons observed in April the CLIL learners seemed to pay more attention to the word stress and as a result of that made fewer mistakes. The only problem with the word stress was noticed with the following words: *contraction* (biology) – most of the CLIL learners stressed the first syllable instead of the second one, *temperature* (geography) – a lot of the CLIL learners stressed the third syllable instead of the first one; *identities* (mathematics) – a lot of the CLIL learners stressed the first syllable instead of the second one. In case of the short and long vowels, the CLIL learners still tended to make mistakes, e.g. *relaxation* (there should be a long "i" – i: in "re" but the CLIL learners tended to use a short "i") (biology); *force* (there should be a long "o" – o: in "fo" but the CLIL learners tended to use a short "o") (geography); *value* (there should be a long "u" – u: and the CLIL learners tended to use a short "u") (mathematics); Additionally, the CLIL learners tended to have problems with the "schwa" sound. They used to substitute it with short "e" or "a" like in the following words: *circular* (biology), *weather* (geography) or *function* (mathematics). Like all Polish foreign language learners, the CLIL learners still tended to have problems with the proper pronunciation of the sound "th". All in all, as it has already been mentioned, it was very difficult for the researcher to go into detailed analysis in case of pronunciation due to the fact that the researcher does not specialise in it. As in the previous cases, the researcher concentrated only on the most visible pronunciation errors. Having analysed all the data, it can be said that the CLIL learners still tended to make the same errors in pronunciation but a significant change was noticed in case of word stress.

In conclusion, it can be said that more changes can be noticed as far as the second language development is considered than in the previous months. The changes were positive which means that the CLIL learners made some progress as far as foreign language acquisition is concerned. Most of the CLIL learners were more willing to integrate content and language which was visible during all lessons. Most of the CLIL learners did not have any problems talking or writing about geographical, biological or mathematical phenomena in a foreign language. It was also noticed that they were thinking in English – their speech was more fluent and there were fewer hesitations. The CLIL teachers also tried to concentrate on the use of the English language in the classroom but did not concentrate on teaching this language. Content seemed to be more important.

6.1.2. The use of L1 (code-switching)

Taking into consideration the lessons observed April, it can be said that the percentage of the use of Polish slightly decreased in comparison to February. In the case of the above mentioned geography lesson, about 15% of the lesson was in Polish. In the case of biology, it was about 30% of the lesson and in the case of mathematics it was still about 70%. All types of code-switching were noticed during the lessons mentioned above:

Linguistic switch:

“We need to understand some *factors* czyli *czynniki po polsku* which have influence on our climate” (teacher-learner code-switching, geography);

“*Trigonometry functions* in Polish *funkcje trygonometryczne*” (teacher-learner code-switching, mathematics);

“How to translate *quadrant function* into Polish?” (learner-teacher code-switching, mathematics);

Topic switch:

“In what ways is this homeostasis maintained? Inaczej, jak organizm rozpoznaje czy coś jest toksyną czy nie? [translation: “... in other words, how does our organism recognize if something is a toxin or not?”] (teacher-learner code-switching, biology);

“W przypadku klimatu ważna jest powierzchnia dlatego że od tego zależy sposób wchłaniania ciepła” [translation: “In case of climate the surface is important because it is connected with the way heat is absorbed”] (teacher-learner code-switching, geography);

“Rombus is a quadrangle czyli romb jest czworokątem” (learner-teacher code-switching, mathematics);

“Jeśli kąt jest ujemny to wykorzystujemy parzystość” [translation: “If the angle is negative then we use the even parity”] (teacher – learner code-switching, mathematics);

“Lagoon is a kind of bay *utworzone przez fale morza*” [translation: “It’s a kind of bay created by the tides of the sea] – data gathered from the learner’s **test** (geography);

“Fuction of the skin: protection *przeciwko promieniowaniu UV*, protection against drying, protection *przeciwko inwazji mikroorganizmów*” [translation: “... protection against UV radiation,... protection against invading microorganisms”] – data gathered from the learner’s **test** (biology);

Affective switch:

“Dlaczego znowu sprawdzian, Pani profesor, dopiero co mieliśmy?” [translation: “Why another test, professor, we’ve just had one”] (learner-teacher code-switching, biology);

“Oj Narvik! Ja byłem w Narviku dwa lata temu” [translation: “Oh, Narvik, I was in Narvik two years ago”] – the teacher was talking about Narvik (learner-teacher code-switching, geography);

“Nie, dla mnie ten przykład jest za trudny!” [translation: ‘Oh, no! For me this example is too difficult] – a learner while being taken to the board; (learner-teacher code-switching, mathematics);

Socialising switch:

“Panie profesorze, może porozmawialibyśmy o Świątach Wielkanocnych? [translation: “Professor, let’s talk about Easter, please] (learner-teacher code-switching, mathematics);

“Wiesz co, ja to poważnie zastanawiam się czy oddałabym swoją nerkę? [translation:

“Well, you know I’m wondering if I gave my kidney away?”]

“Dlaczego? Myślę, że to dobry pomysł” [translation: “Why, I think that it’s a good idea”] (learner-learner code-switching, biology);

“Pani profesor, co będzie z Naszą wycieczką? Mamy już kwiecień, może wybierzemy się gdzieś w maju?” [translation: “What about our trip? It’s already April, shall we go somewhere in May?”]

“W maju niestety są matury, ale możemy gdzieś się wybrać w czerwcu. Pomyślcie gdzie chcielibyście pojechać” [translation: “We have final secondary school examinations – matura in May but we can go somewhere in June. Think about the place that you would like to go”] (learner-teacher code-switching, geography);

Clarity switch:

‘So, making the use of this diagram, you can calculate it czyli raz jeszcze wyjaśniam, używając tego wykresu możecie dokonać kalkulacji” [translation: “... so I’m explaining it to you once again...] (teacher-learner code-switching, mathematics);

“Czy może Pan raz jeszcze powtórzyć te twierdzenia, najlepiej po polsku bo po angielsku, to dla Nas czarna magia?” [translation: “Could you repeat these theorems once again in Polish because in English it’s like *black magic* to us”] (learner-teacher code-switching, mathematics);

“Przepraszam, ale co oznacza, że mamy zaokrąglić w tym przypadku?” [translation: “Excuse me, what does it mean that we are supposed to round the number in this case?”] (learner-teacher code-switching, mathematics);

As can be noticed from the data provided above, both the CLIL teachers as well as the CLIL learners switched into Polish during the lessons observed. As was mentioned previously, the frequent use of the Polish language during the CLIL lessons can be linked to the difficulty of the topics discussed. The purpose of code-switching in the case of all subjects observed did not change – in most cases both the CLIL teachers and the CLIL learners switched into Polish in order to facilitate learning.

6.2. Content aspects

The following data concerning the content aspects presented below comes from the written tests. As it has already been mentioned it was the only way to evaluate the content aspects at this stage of the study:

Geography:

33 CLIL learners took the test in external factors and the marks were the following:

Table 11. Marks received from the test in geography.

Excellent (6.0)	No learners
Very good (5.0)	1 learner
Plus good (4.5)	1 learner
Good (4.0)	13 learners
Plus satisfactory (3.5)	1 learner
Satisfactory (3.0)	5 learners
Pass (2.0)	10 learners
Fail (1.0)	2 learners

As can be seen from the data provided above most of the CLIL learners did not receive as good marks as before. Nobody received an excellent mark. There was only one very good mark, one plus good mark but quite a lot of good marks. Unfortunately, most of the CLIL learners only passed the test and there were even two learners who did not pass it. Having analysed the marks, it can be said that the CLIL learners' marks got worse which may have been due to the difficulty of the test itself. The test was partly in English and in Polish. Most of the questions were in Polish and it was up to the CLIL learners whether they wanted to answer them in English or in Polish. When answering the questions in Polish the mark was lower.

Biology

33 CLIL learners took the test concerning skeletal system, skin and digestive system. The marks were the following:

Table 12. Marks received from the test in biology.

Excellent (6.0)	No learners
Very good (5.0)	10 learners
Plus good (4.5)	6 learners
Good (4.0)	4 learners
Plus satisfactory (3.5)	3 learners
Satisfactory (3.0)	5 learners
Pass (2.0)	5 learners
Fail (1.0)	No learners

As can be seen from the data concerning biology the results were much better than in the previous months. Most of the CLIL learners received very good, plus good or good marks. Nobody received an excellent mark. Only 5 CLIL learners received satisfactory marks, 5 only passed the test and nobody failed the test. The whole test was in English which means that the CLIL learners not only mastered knowledge concerning the skeletal system, skin and digestive system but also vocabulary connected with these topics.

Mathematics

32 CLIL learners took the test concerning basic properties of functions. The test was both in English and in Polish. The marks were the following:

Table 13. Marks received from the test in mathematics.

Excellent (6.0)	No learners
Very good (5.0)	1 learner
Plus good (4.5)	5 learners
Good (4.0)	8 learners
Plus satisfactory (3.5)	3 learners
Satisfactory (3.0)	6 learners
Pass (2.0)	7 learners
Fail (1.0)	2 learners

32 CLIL learners took the test concerning functions. The test was in Polish only. The marks were the following:

Table 14. Marks received from the test in mathematics.

Excellent (6.0)	No learners
Very good (5.0)	3 learners
Plus good (4.5)	3 learners
Good (4.0)	6 learners
Plus satisfactory (3.5)	2 learners
Satisfactory (3.0)	5 learners
Pass (2.0)	11 learners
Fail (1.0)	2 learners

As can be seen from the data provided above the results were slightly better than the ones in the previous months. Most of the CLIL learners passed the tests receiving rather positive marks – 5 CLIL learners received plus good marks and 8 CLIL learners received good marks in the first test. The second test was in Polish – 6 CLIL learners received good marks and 11 CLIL learners only passed the test. Nobody received an excellent mark. The results received from the second test which was in Polish were worse than the ones received from the test in English. The reason why the results were worse in case of the

second test can be linked with the fact the second test was purely practical and the first one was mostly theoretical. Theory can be learnt by heart while practice cannot.

To sum up, it may be concluded that at this stage of the study, the CLIL learners received the best marks in biology even though the material covered was not very easy. In the previous months, the CLIL learners received better marks from the test in geography which may be due to the difficulty of issues discussed. On the other hand, as has already been mentioned, the CLIL learners being sure of their geographical knowledge could have rested on their laurels. In case of mathematics, it can be said that the CLIL learners received satisfactory marks in the first test which was both in English and in Polish. The second test should not be discussed as it was only in Polish.

6.3. Learning environment aspects

In comparison to the previous months, there were some changes observed concerning the learning environment. There was more interaction between the CLIL learners themselves and also more interaction between the CLIL learners and the CLIL teachers even though the CLIL lessons were mostly teacher-oriented. The methodological approach of all CLIL teachers slightly changed – the CLIL teachers tried to use more learner-oriented activities such as pair work or group work. The materials used during the lessons consisted of handouts, books and also some additional materials such as diagrams (biology) or maps (geography). Evaluation was done on the basis of the tests the results of which were presented in the previous chapter (part II, chapter VI, 6.2.) as well as on the basis of the CLIL learners' answers. The classroom setting has slightly changed. All the details concerning interaction, methods of teaching, materials used, evaluation and classroom setting are to be presented below.

6.3.1. Classroom interaction

Bearing in mind van Lier's (1988: 94-120) framework the following types of interaction as well as types of function were noticed during the lessons mentioned above:

Type 1:

Geography:

L1: „Pani profesor, ja byłem w Skandynawii i odwiedziłem Narvik. Dla mnie to była mała miejscina, potem pojechaliśmy na Przylądek Północny” [translation: “I have been to Scandinavia and I have visited Narvik. For me it was a small town, then we went to the North Cape”];

T: “OK, but how is it connected with the topic of the lesson? By the way, please switch into English”
Dobrze, ale może już zaczniemy lekcję bo mamy mało czasu” (**ideational function**);

Mathematics

L1: „Wiesz co, wcale nie rozumiem tych funkcji, a jak już zaczyna mówić po angielsku, to mam pustkę w głowie” [translation: “I don’t understand these functions when he starts speaking English my head is empty”];

L2: „Jeszcze tylko dwa miesiące, jakoś damy radę” [translation: “Two months only, we will manage somehow”];

L1: „Nie wydaje mi się, popatrz na moje oceny, starsi oszaleją jak to zobaczą” [translation: “I don’t think so, look at my marks, my parents will go mad”] (**interpersonal function**);

Biology

L1: „Powinniśmy pić 5 litrów wody dziennie, a ja chyba wypijam tylko 1 litr” [translation: “We should drink 5 litres of water every day and I think that I drink only a litre”]

L2: „Nie chodzi o samą wodę, tylko o płyny” [translation: “It’s not just about water but about liquids in general”]

L1: „No, ale i tak tyle nie będzie” [translation: “OK, but it’s not going to be enough”] (**functional and interpersonal function**);

In the first example given above, the CLIL geography teacher was involved in the conversation but it was not connected with the topic of the lesson (climate). In the next two examples, the CLIL teachers were not involved in the activities and did not have any control over them because the conversations took place between the CLIL learners.

Type 2:

Mathematics

T: “OK, you two, stop talking otherwise I will tell you to leave the classroom immediately”

L1: „My nie rozmawiamy, tylko próbowałem coś wytłumaczyć Szymonowi” [translation: “We are not talking I was trying to explain something to Simon”]

T: “I’m here to explain everything to you” (**interpersonal function and textual**);

Geography

T: “I told you that you were supposed to make notes about the climate. What are you doing now?”

L1: “We are trying to make notes.

T: “You haven’t made much so far” (**textual function**);

Biology

T: “Now we are going to talk about the functions of the excretory system. You should make notes and I cannot see that you are making any” (**ideational function**);

In the above mentioned type of interaction, the CLIL teachers controlled the topic but not the activity. Some of the CLIL learners were not concentrating on the lesson for a short period of time.

As in the previous cases, all the teachers spent about 10-15 minutes on giving a lecture concerning the topic of the lesson during which they had control over the topic but not over the activities going on in the classroom.

Type 3:

Mathematics

T: “So, making use of this diagram, could you please calculate it now? Susan, come to the blackboard” (**ideational function**);

Geography:

T: “Kasia, how does climate influence our life?”

L1: “It influences everything – the plants, animals etc.”

T: “OK, but how? Can you work in groups and make a list?” (**ideational function**);

Biology

T: “So now, please open your notebooks and draw the kidneys” - the CLIL biology teacher draws the kidneys on the blackboard; (**ideational function**);

As can be seen from the examples above, both the topic as well as the activity is controlled by all the CLIL teachers.

Type 4:

Mathematics

T: „Teraz podyktuję długie twierdzenie, a wy wszystko zapisujcie, ponieważ drugi raz nie będę powtarzał” [translation: “So now, I’m going to dictate a long formula and you should put down everything into your notebooks because I’m not going to repeat anything” (some of the CLIL learners do not make any notes) (**ideational function**);

Biology

T: “Please, draw the kidneys in your notebooks and name different parts”

L1: „Wiesz co nie chce mi się tego rysować, narysuję sobie w domu, to samo znajdę w Internecie” [translation: “You know, I don’t feel like drawing it, I will do it at home. I will find the same drawing on the Internet”]

L2: „Właściwie to możemy pożyczyć sobie zeszyt od Kaśki” [translation: “In fact, we can borrow the notebook from Kate”]

L1: „Masz rację” [translation: “You are right”]

L2: „Albo, wiesz co rysujemy teraz, będziemy miały z głowy” [translation: “Well, let’s do it now, we will have it over” (**interpersonal function**);

Geography

T: “Please, make a table and divide it into 6 parts. In each part we are going to describe a different type of climate” (**ideational function**);

Most of the CLIL learners were drawing the table but they were talking about something completely different, e.g.

L1: „Masz zadanie z polaja? [translation: “Have you got homework from Polish?”]

L2: „No coś tam mam” [translation: “Well, I have got something”]

L1: „Mogę zerknąć okiem?” [translation: “Can I have a look?”] (**ideational and interpersonal function**);

As can be seen from the above given examples, the CLIL teachers controlled the activity but not the topic. The CLIL learners had a personal conversation while doing the tasks given by the CLIL teachers.

The examples given above show that there was a lot of interaction going on between the CLIL learners as well as between the CLIL teachers and the CLIL learners. Generally speaking, it can be said that there was more interaction going on between the CLIL learners and the CLIL teachers than in the previous months. All types of interaction occurred during the lessons observed: ideational, textual and interpersonal.

6.3.2. The teacher's methodological approach

Geography

The CLIL geography teacher mainly used a learner-centred approach as in the previously described cases. The CLIL geography teacher started the lesson introducing the word *climate*. The CLIL learners were asked to provide the CLIL teacher with words which they associate with *climate* (brainstorming). Then they were asked to work out on a definition of *climate*. Then the CLIL geography teacher asked the CLIL learners to draw a table in their notebooks and divide it into 6 parts. Afterwards, the CLIL learners were put into six groups and on the basis of the information given in the Polish course book, they were asked to describe one type of climate. While working in groups, the CLIL learners used both Polish and English. In the meantime, some of the CLIL learners were “taken to the board” and asked some questions from the previous lessons. They were allowed to answer both in Polish or in English. After about 10 minutes, each group was asked to present features concerning a particular climate. In the next stage of the lesson, the CLIL learners were also asked to work in groups but they were put into different groups. Their task was to think about the positive and negative influence of the human being on the climate. At the end of the task, the CLIL learners were asked to exchange their ideas with other groups. The CLIL learners were involved in all the activities which were of a communicative nature.

Biology

The CLIL biology lesson observed in April as well as other lessons observed in this month were partly teacher-centred and learner-centred. The CLIL biology teacher gave a lecture on the excretory system which lasted about 20 minutes. In the meantime, the CLIL learners were making some notes. While describing the excretory system the CLIL biology teacher used OHP where the most important information was written together with the words that the CLIL learners were asked to pay special attention to. Apart from the English words, the CLIL biology teacher provided the learners with their Polish equivalents. Additionally, the CLIL learners were asked to make a drawing of a kidney which was also done by the CLIL biology teacher on the board. The CLIL learners were asked to name different parts of the kidney by putting appropriate terms. Afterwards, the CLIL learners were put into four groups. Each group was asked to make a list of functions of excretory system. Each group was given a pen and a transparency on which they were supposed to write the functions. After about 10 minutes, one person from each group was supposed to present functions of the excretory system. As a final exercise, the CLIL learners were provided with some vocabulary connected with the excretory system and had to translate it into Polish without using any help. As can be seen, the CLIL biology teacher used some communicative activities and gave the CLIL learners a chance to communicate in groups.

Mathematics

The whole CLIL mathematics lesson was of a theoretical nature this time. It was focused on trigonometry identities for simplified calculations. The CLIL mathematics lesson was mainly teacher-oriented and the lecture which was given by the CLIL mathematics teacher on various formulas lasted nearly 30 minutes. The CLIL mathematics teacher used dictation as a method of teaching. The teacher used both English and Polish. The CLIL learners' task was to make notes. Comparing the CLIL mathematics lesson analysed in April to the ones analysed in the previous months, there were nearly no activities which were learner-oriented. At the end of the lesson, the CLIL mathematics teacher wrote one example showing how to use the given formulas in practice. All in all, during the observed lesson of mathematics it can be said that some attempt of integrating content and language was made

but mainly on the part of the CLIL mathematics teacher who did not introduce any communicative activities during the lesson.

Concluding, both the CLIL geography teacher and the CLIL biology teacher used some communicative methods of teaching such as group work in order to integrate content and language and also give the CLIL learners an opportunity to use their language. During the CLIL mathematics lesson the CLIL mathematics teacher made an attempt to integrate content and language by using English but did not give the CLIL learners a chance to use their language which was probably due to the purpose of the lesson (purely theoretical). Both the CLIL geography teacher and the CLIL biology teacher used learner-centred approach while the CLIL mathematics teacher used the teacher-centred approach only. All the activities where the CLIL learner was in the centre made the CLIL learners more willing to participate in the lessons. No particular changes concerning the methods of teaching were noticed apart from the CLIL geography teacher who was trying to avoid teacher-centred approach as often as possible.

6.3.3. Learner's evaluation

During the CLIL lessons mentioned above both the CLIL geography teacher and the CLIL biology teacher used “oral evaluation”. The CLIL mathematics teacher did not use any “oral evaluation” during the lesson mentioned above due to the fact that the lesson was purely theoretical and teacher-centred. In case of CLIL geography and biology, the CLIL learners were asked to come to the blackboard or sit in front of the teacher and answer some questions concerning the previous lessons. The CLIL geography teacher asked five questions as during the previously lessons observed. All the questions were asked in English but the CLIL learners had a choice – they could either answer in English or in Polish. As in the case of answering a question in Polish they got a lower mark. Most of the CLIL learners asked were well prepared. There was only one CLIL learner who said that he was not prepared and therefore received a bad mark. The criteria concerning oral evaluation were the same as in the previous months, namely, the most important was content knowledge and the language was not very important. In case of CLIL biology, the CLIL

learners were given six main questions and some additional questions (the CLIL biology teacher was willing to help the CLIL learners). The CLIL learners were allowed to answer in English or in Polish. Like in case of CLIL geography, the CLIL learners received a lower mark if their answer was in Polish. All the CLIL learners turned out to be well prepared. All the CLIL teachers administered tests in April (the results of the tests were discussed in part II, chapter VI, 6.2.). The test in geography was mainly administered in Polish but the CLIL learners were obliged to provide the answers in English. Most of the questions were descriptive and one question was connected with translating some subject-related words from Polish into English. While evaluating the answers which were given in English the CLIL geography teacher did not pay attention to the language mistakes. In order to pass the test the CLIL learners had to get more than 60%. The test in biology was only in English and the questions were both open-ended and close-ended. While evaluating the answers the CLIL biology teacher also did not pay attention to the language mistakes. The test given in mathematics consisted of some mathematical formulas and the only opportunity to use English by the CLIL learners was while providing the answers which were very short and usually consisted of one or two sentences. While evaluating the test in English the CLIL mathematics teacher did not pay attention to the language mistakes. The geography CLIL teacher was still following the system of pluses. During the lesson discussed above four CLIL learners received a plus and two got a very good mark due to the number of pluses received during the whole semester.

6.3.4. Teaching materials

Geography:

During the CLIL geography lesson described above, the CLIL geography teacher used a map with different climate spheres. During the whole lesson the CLIL geography teacher was using the blackboard where she put all the new vocabulary. Apart from that, the CLIL learners were using their course books which were in Polish and also some additional materials prepared by the CLIL geography teacher which consisted of some short reading comprehension texts. Each CLIL learner had his/her own copy of the text. Additionally, the

CLIL geography teacher used some postcards illustrating different kinds of climate. No multimedia was used during the lesson.

Biology:

The CLIL biology teacher while explaining all the terms, used the blackboard where she put all the new words and also an OHP. Apart from that, the CLIL biology teacher used the blackboard to draw a kidney naming particular parts of it. In order to make the illustration clear, the CLIL biology teacher used different colours of chalk. Additionally, the CLIL learners were given some course books which were written in English and were used in the American High School. At the end of the lesson, the CLIL learners were provided with some handouts with words connected with excretory system. No multimedia was used during the lesson.

Mathematics:

The whole lesson was based on theory. The CLIL learners were provided with theorems which were in Polish. The CLIL mathematics teacher dictated all the theorems and the CLIL learners were asked to make notes. Additionally, as observed during the previous lessons, the CLIL mathematics teacher as well as the CLIL learners were using a Polish book which contained different mathematical tasks “Zbiór zadań z matematyki” [translation: “A set of mathematical tasks”]; Only one exercise was done during the lesson.

To summarise, all the materials used during the lessons observed were very similar to the ones used during the previously observed lessons. In case of CLIL mathematics no additional materials were provided in English. The lesson was mostly in Polish with a rare use of translation from English into Polish.

6.3.5. Classroom setting

Due to the fact that it was April, the classroom-newsletter contained some pictures and postcards connected with Easter and spring. It should be also pointed out that the TV set, video and DVD which was always brought by the CLIL geography teacher from a different

room had its own place in the classroom. One of the parents sponsored a special cupboard which was locked. No other changes in any of the classrooms were noticed by the researcher.

6.4. Attitudinal aspects and motivation

Further changes of the attitude towards CLIL which were investigated after the 2nd Semester as well as the motivating factors are to be presented later in this part of the thesis.

7. Data presentation – June 2007 (2nd Semester)

Sample lessons:

The following lessons were chosen to be presented and analysed:

Subject: geography

Date: 04.06.2007

Topic of the lesson: “Seas”

Number of learners: 26

Subject: biology

Date: 08.06.2007

Topic: “Circular cycle and disorders of the circulatory system ”

Number of learners: 33

Subject: mathematics

Date: 12.06.2007

Topic: “Exercising properties of linear functions”

Number of learners: 24

7.1. Language aspects

Having analysed the development of language skills and sub-skills at the end of the school, it can be said that the CLIL learners improved all their skills, namely speaking, writing, listening and reading. Most of them have become particularly fluent in speaking when comparing the lessons from September or November. In those months, while observing the lessons, there were many periods of silence when the CLIL learners were afraid to talk about the subject matter in English. In June such periods were hardly ever noticed. In the case of reading skills, the CLIL learners have also made a significant progress. They knew how to deal with texts written in English and they hardly ever had any problems with answering the comprehension questions. In the case of listening skills, the CLIL learners also seemed to improve as they could understand what the CLIL teachers were talking about and also answered their questions only with slight hesitation. Having analysed the written work of the CLIL learners it was noticed that they did not make as many spelling mistakes as they used to at the beginning of their CLIL education. As far as the sub-skills are concerned, the CLIL learners also acquired more knowledge concerning vocabulary and grammar. They could easily use some specialised words when discussing particular subject issues using proper grammatical sentences. In case of pronunciation only slight progress has been made due to the lack of attention being paid to pronunciation by the CLIL teachers. The progress made has probably not only been the result of the CLIL lessons but also the English lessons which the CLIL learners had throughout the whole semester. Taking into consideration the use of L1 during the lessons, the researcher noticed that the percentage of Polish used decreased both on the part of the CLIL teachers and the CLIL learners.

7.1.1. Second language development

When considering the lessons observed in June and comparing them with the lessons observed in the previous months it can be definitely said that most of the CLIL learners have made progress in all skills. As far as speaking skills are concerned, the CLIL learners were more willing to take part in all speaking activities. They were not afraid of asking

questions, giving presentations or discussing certain issues. In September or November there was a silence when a question on the part of any CLIL teacher was posed. In June, it was noticed that most of the CLIL learners got rid of their language barrier. What is more, their speech has become really fluent with a use of specialised vocabulary and complicated grammatical structures.

In the case of writing, the CLIL learners seemed to make fewer grammatical and spelling mistakes and on the basis of the test analysis, it can be said that their writing skills have improved when compared to their writing skills in the previous months. No particular problems were noticed by the researcher apart from the ones which have already been mentioned, namely some problems with the register. In the case of listening and reading comprehension, it could be also noticed that every day exposure to the foreign language inside the classroom and also outside has a positive influence on their listening skills. Fewer comprehension questions were asked by the CLIL learners and quicker answers to the questions were provided. The same can be said in the case of reading comprehension. Hardly any problems were noticed when the CLIL learners were dealing with specialised text in English. In the 1st semester the CLIL learners tended to ask a lot of comprehension questions – some specialised texts seemed to be a bit shocking to them.

The CLIL learners also acquired a lot of new subject-related vocabulary which was easily noticed when the CLIL learners were asked to answer some questions or deliver a presentation on a particular subject-related issue. Additionally, much progress was made in grammar – the CLIL made fewer mistakes and used more complicated grammatical structures. In the case of pronunciation, a slight progress was made due to the lack of attention paid to it both by the CLIL teachers and the CLIL learners as has already been mentioned.

On the basis of the observations, it can be said that the CLIL learners made a visible progress as far as speaking was concerned. Taking into consideration the criteria concerning speaking provided in the Common European Framework of Reference for Languages (Council of Europe, 2001: 58) the CLIL learners observed could produce clear, smoothly flowing well-structured speech with an effective logical structure which helped the recipient to notice and remember significant points. Additionally, they could give clear, smoothly flowing, elaborate and often memorable descriptions. They could also present a

complex topic confidently and articulately adapting the talk flexibly to meet the audience's needs.

Taking into consideration the observed lessons, the CLIL learners had an opportunity to develop and practice their **speaking skills** during all CLIL lessons. During the CLIL geography lesson, the CLIL learners had an opportunity to practice the language of speculation and prediction. The CLIL learners were asked to watch a video presentation on "Seas in the past, present and future" but before each major scene, the CLIL geography teacher stopped the video tape and provided the CLIL learners with some questions which they were asked to answer in pairs. Most of the questions were speculating questions such as: "Why do you think there is so much salt in the Black Sea?"; "How can we protect Antarctica from melting in your opinion?"; "Speculate on the following words *the greatest problem is with the Atlantic Ocean due to the lack of borders, why?*". Most of the CLIL learners while discussing the above mentioned questions used expressions such as: "Well, it's hard to say, but..."; "I'm sure that it's going to..."; "In my opinion..."; "It is definitely..." etc... Apart from that, the CLIL learners were also asked to report on what they had seen. While reporting, the CLIL learners were using various linking devices such as: "firstly..."; "secondly..."; "afterwards..."; "next ..."; "finally..."; etc...

During the CLIL biology lesson, the CLIL learners had an opportunity to speak English while being asked by the CLIL biology teacher (the CLIL biology teacher tended to ask open-ended questions during the whole lesson) and also while working in pairs. The CLIL learners were given a picture of a heart and were asked to name different parts. This exercise was supposed to be a revision of vocabulary from the previous lesson but most of the CLIL learners were using their notes. One of the last speaking activities which the CLIL biology teacher tended to repeat during the lessons of biology was a brainstorming in a group of 5 or 6 CLIL learners. This time the CLIL learners were asked to think of some disorders connected with the circulatory system. While doing this exercise most of the CLIL learners were using Polish due to the fact that they did not know the names of the disorders in English.

In the case of mathematics, the CLIL learners had an opportunity to practice their speaking skills while being "taken to the board" and asked to explain certain mathematical formula.

At the beginning of the lesson, the CLIL mathematics teacher posed some questions in English concerning the properties of linear functions. Surprisingly, quite a lot of the CLIL learners were willing to answer them which may mean that they had crossed the language barrier. Talking about mathematics in English was always very problematic. Breaking this language barrier is a very positive sign which leads to language development.

To summarise, taking into consideration all the lessons observed in June, it can be said that all CLIL teachers paid attention to the development of speaking skills and all CLIL learners had an opportunity to develop their skills. Some of the CLIL teachers paid more attention to the speaking skills and some less depending on the purpose of the lesson.

In June the CLIL learners were only given a test in mathematics. Apart from that, the CLIL learners were also given one more test in mathematics which took place in May. The reason why the CLIL learners were not given any tests in geography or biology in May or June was due to the fact that in May the final high school examinations (Matura) took place and the CLIL teachers were taking part in it. The CLIL learners were also not given any more tests in geography or biology in June because of the end of the school year (two weeks before the end of the school year all the learners had to be given the final mark). In the case of mathematics, the CLIL teacher was not as active with final high school examinations (Matura) as the other two teachers and this is why he still had some time to administer the tests. The only form of evaluation which the other two teachers used in May or June was the spoken evaluation. Due to the above mentioned circumstances, evaluation of the CLIL learners' **writing skills** in June is very difficult to provide on the part of the researcher. The tests that the CLIL learners were given in mathematics were based on solving the formulas. The only opportunity to write in English that the CLIL learners had was while giving the final answers at the end of each task. Most of the CLIL learners provided the answers in English which were very simple, e.g. "The final number is..." or "The answer to the first task is..." or "Taking into consideration the above given formula the answer is...". No language mistakes were noticed.

Having taken into consideration the frequency of given answers in English in the case of mathematics within the whole school year, it can be said that the CLIL learners were more

willing to provide answers in English than in the previous months which may indicate their language progress.

From the lessons observed, it can be said that the CLIL learners were all the time exposed to spoken English and therefore, they had an opportunity to develop their **listening comprehension skills**. As in the previous months, the CLIL learners were engaged in the process of comprehension accompanied by a wide variety of contexts.

During the CLIL geography lesson, the CLIL learners were exposed to the teacher's talk, to the other learners' talk and also to the visual material presented by the CLIL teacher. The CLIL learners watched a film on glaciers which had been originally recorded by the CLIL geography teacher in the USA. During the CLIL geography lesson mentioned above, the CLIL geography did not give any speech but provided the CLIL learners with a set of comprehension questions which were based on the material presented in the film. While answering the questions, the CLIL learners were offered a constant help on the part of the CLIL geography teacher.

During the biology lesson, like in the previous months, the CLIL learners were provided with a lecture on the circular cycle during which they were asked to make some notes, which required good listening comprehension skills on the part of the CLIL learners. Apart from that, the CLIL learners were "taken to the board" and evaluated by the CLIL biology teacher. They were asked 6 questions concerning their previous knowledge and were expected to answer them in English. The CLIL learners did not have any problems with understanding the questions but they had some problems with answering them due to lack of knowledge. Additionally, the CLIL learners were given some tasks which they were asked to do in pairs or in groups which also required their listening comprehension skills. As in the previous months, during the lesson of mathematics the CLIL learners were not as much exposed to English as in case of other CLIL lessons – both the CLIL mathematics teacher and the CLIL learners often switched into Polish. Comparing the CLIL lessons observed in the previous months to the ones observed in June, it can be said that the CLIL learners have made a significant progress in case of listening comprehension skills throughout the schools year. Their progress can be mainly judged on the basis of the data concerning asking for repetition. Throughout the school year the number of such entries

have been diminishing. In June during the CLIL geography lesson 13 instructions were given – the CLIL teacher was asked 5 times for repetition. In case of biology 16 instructions were given – the CLIL teacher was asked 7 times for repetition. In case of mathematics 24 instructions were given – the CLIL teacher was asked 7 times for repetition. All in all, taking into consideration the Common European Framework of Reference for Languages (Council of Europe, 2001: 66) it can be said that at this stage of the bilingual education, the CLIL learners could understand standard spoken language, live or broadcast, on both familiar and unfamiliar topics normally encountered in personal, social, academic or vocational life. Only extreme background noise, inadequate discourse structure and/or idiomatic usage or lack of knowledge concerning a particular subject could influence the ability to understand. What is more, at this stage, the CLIL learners could with some effort catch much of what was said around them, but may find it a bit difficult to participate effectively in discussion with several native speakers who do not modify their language in any way. Additionally, they could follow extended speech and complex lines of argument provided the topic was reasonably familiar. They could also follow the essentials of lectures, talks and reports and other forms of academic/professional presentation which are propositionally and linguistically complex. It is also important to mention that the CLIL learners could understand recordings in standard dialect likely to be encountered in social, professional or academic life and identify speaker viewpoints and attitudes as well as the information content. According to the Common European Framework of Reference for Languages (Council of Europe, 2001: 66-67), the listening comprehension abilities of the observed CLIL learners can be estimated at the B2 level at the end of the school year. At this point, it is worth mentioning that at the beginning of the school year the level of the observed CLIL learners according to the Common European Framework of Reference for Languages (Council of Europe 2001: 66-67) was B1.

In the case of **reading comprehension skills**, it can be generally said, that on the basis of the CLIL learners' performance and the ability to answer comprehension questions they have made progress throughout the whole school year. However, it is very difficult to say what kind of changes concerning their reading comprehension skills occurred during the school year due to the fact that no reading comprehension tests were administered to the

CLIL learners on the part of the researcher. During the lessons observed in June, the CLIL learners showed an ability to deal with the written texts independently and the researcher could suppose that this ability did not change. As in the previous months, the CLIL learners were asked to read some instructions, the information put on the board during the CLIL lessons and also some short text on particular topics which were distributed by the CLIL teachers. No test analysis was done in the case of geography and biology due to the fact that no tests were administered in this month. The only tests which were administered were tests in mathematics where instructions were given in Polish. During the CLIL geography lesson, the CLIL learners were only given some tasks concerning the film. They were asked to answer open-ended questions. The CLIL learners did not have any problems with understanding the questions. Apart from that the CLIL learners were also asked to copy some information from the blackboard. In the case of biology, the CLIL learners were given some descriptions of the disorders of the circulatory system and also the names of the disorders. On the basis of the descriptions, the CLIL learners were asked to identify the disorders. The only difficulty which occurred while doing this task was the problem with unknown words. In the case of mathematics, the CLIL learners still seemed to have problems with understanding the formulas in English. Yet, it should be pointed out that there were some CLIL learners who in case of having difficulties with understanding asked the CLIL mathematics teacher for an explanation in English.

All in all, looking at the whole school year it can be said that all the CLIL learners were provided with an opportunity to improve their reading comprehension skills. At the end of the school year most of the CLIL learners did not seem to have any problems with understanding geographical or biological texts. On the other hand, most of them still seemed to have some problems with “digesting” the language of mathematics in English. Taking into consideration the Common European Framework of Reference for Languages (Council of Europe, 2001 : 69) it can be said that the observed CLIL learners at this point of the study could read with a large degree of independence, adapting style and speed of reading to different texts and purposes, and using appropriate reference sources selectively. They had also a broad active reading vocabulary while reading geographical and biological texts. Their reading comprehension abilities could be classified at B2 level according to the Common European Framework of Reference for Languages (Council of Europe, 2001: 69).

As in the previous months, during the above mentioned lessons the most important was content not language. Most of the CLIL teachers hardly ever paid attention to **grammar**. Grammar seemed to be left out to be dealt with during the English classes. Comparing the CLIL learners language structures at the end of the school year with the ones used in September, it can be said that their language structures have become more sophisticated. The CLIL learners tended to use conditionals, passive voice or indirect speech more often with hardly any mistakes while using these structures. On the basis of these observations, it can be said that the CLIL learners made some progress which was probably due to their English lessons rather than CLIL lessons. The only thing which did not change was the mistakes made while using the articles. At this point, it should be mentioned that most Poles make mistakes while using the articles. During the CLIL geography lesson, the CLIL geography teacher devoted about 5 minutes to reminding the CLIL learners about the usage of relative clauses paying special attention to the defining and non-defining clauses. What is more, the CLIL learners were asked to work on their own examples using the topic discussed during the lesson “Seas”. Having worked on the examples, some CLIL learners still seemed to have problems with distinguishing the difference between defining and non-defining relative clauses. The CLIL geography teacher ended the short lecture saying that she would continue the topic during their English lesson. No particular grammar problems were noticed during the CLIL biology lesson. While describing the circular cycle the only mistakes that the CLIL learners made were connected with the use of articles and pronouns. They tended to say “*the** heart” instead of “a heart” – any kind of heart. The CLIL biology teacher did not pay attention to the mistakes made by the CLIL learners. As in the previous cases, during the CLIL mathematics lesson no particular grammar mistakes were noticed as the main language which was used during the lesson was Polish.

To summarise, taking into consideration the grammar level of the CLIL learners in September and the one observed in June, it can be said that the CLIL learners made significant progress, especially in the use of tenses, passive voice, indirect speech and conditionals. At this point of the study, there were still some mistakes made by the CLIL learners concerning the use of articles, prepositions, linking devices or pronouns which did not influence the communication flow.

Based on the lessons observed in June, it can be said that throughout the whole school year, the CLIL learners have made a significant progress as far as specialized **vocabulary** is concerned. It is quite difficult to say what kind of vocabulary mistakes the CLIL learners made in June as there were no tests to analyse apart from mathematics. Unfortunately, the mathematics tests were in Polish. Having observed the lessons mentioned above, it can be said that the CLIL learners mastered a wide range of vocabulary covering various fields of geography, biology and mathematics. They seemed to have no problems using the specialized vocabulary from the field of geography and biology in different contexts. The only problem was still with mathematics – the CLIL learners had a wide knowledge of specialized vocabulary from the field of mathematics but the mathematical concepts were still too difficult for them so they often switched into Polish. In comparison to the data provided at the beginning of the school year, it can be said that most of the CLIL learners mastered a huge amount of specialized vocabulary and what is more, most of them knew how to use it in various contexts. All the CLIL teachers corrected the CLIL learners' vocabulary mistakes. When forgetting or not knowing a particular word, most of the CLIL learners tried to explain it in English and only when having real difficulties they searched for the Polish substitution.

As far as **pronunciation** of the CLIL learners observed in June is concerned, it can be said that only slight changes occurred which were mostly visible in the word stress. As mentioned while analysing the data from April, the CLIL learners started paying more attention to the word stress. During the lessons observed in June, the researcher did not notice any particular stress errors which does not mean that they completely disappeared.

In the case of short and long vowels, the CLIL learners still tended to make mistakes. The researcher did not notice any changes in this matter. The most common errors which occurred during the lessons observed were the following, e.g. *northern* (there should be a long “o” – o: in “no” but the CLIL learners tended to use a short “o”) (geography); *removing* (there should be a long “o” – o: in “mo” but the CLIL learners tended to use a short “o”) (biology); *produce* (there should be a long “u” – u: in “du” but the CLIL learners tended to use a short “u”) (biology); In case of the “schwa” sound, the situation did not

change – the CLIL learners still tended to have a problem with using it properly. The most common substitution, as already mentioned were “e” or “a” like in the following words: *hurricane* (“e” used instead of the “schwa” sound in “cane”) (geography); *cycle* (“e” used instead of the “schwa” sound in the last syllable) (biology); *trigonometry* (“e” used instead of the “schwa” sound in “trigo”) (mathematics); In case of the “th” sound, most of the CLIL learners still tended to have problems pronouncing this sound as “w” or “f”. All in all, as already mentioned, it was very difficult for the researcher to go into detailed analysis in the case of pronunciation. As in the previous cases, the researcher concentrated only on the most visible pronunciation errors. Having analysed all the data, it can be said that the CLIL learners still tended to make the same errors in pronunciation but a significant change was noticed especially in the case of word stress.

In conclusion, it can be said throughout the whole school year, the CLIL learners made a significant progress in speaking, writing, listening and reading. They also made progress as far as grammar, vocabulary and pronunciation is concerned which was due to the CLIL classes and also English classes. Most of the CLIL learners were more willing to integrate content and language which was visible during all CLIL lessons. The CLIL teachers also tried to concentrate on the use of the English language in the classroom and integrate content and language but in most cases content was more important which was probably due to the fact that most of the CLIL teachers were subject teachers not language teachers.

7.1.2. The use of L1 (code-switching)

Having analysed the data from the lessons observed in June, it can be said that the percentage of Polish used during the CLIL lessons has not changed much in comparison to the CLIL lessons observed in April. In the case of the above mentioned geography lesson, about 15% of the lesson was in Polish. In the case of biology, it was about 30% of the lesson and in the case of mathematics it was still about 70%. All types of code-switching were noticed during the lessons mentioned above:

Linguistic switch:

“The linear function is *funkcja liniowa* po polsku” (teacher-learner code-switching, mathematics);

“Panie profesorze, jak przetłumaczyć na polski *linear inequalities*?” [translation: “How to translate *linear inequalities* into Polish, professor”] (learner-teacher code-switching, mathematics);

“*Cellular respiration* means *respiracja komórkowa*” (teacher-learner code-switching, biology);

Topic switch:

“Układ krążenia składa się z serca oraz naczyń krwionośnych. Serce jest pewnego rodzaju pompą, która wywiera nacisk na krew, aby ta obiegła całe ciało” [translation: “The circulatory system is made of a heart and blood vessels. The heart is a kind of pump that forces the blood to circulate throughout the body”] (teacher-learner code-switching, biology);

“Podczas epoki lodowcowej jak sama nazwa wskazuje było bardzo dużo śniegu oraz lodu. Jak śnieg i lód zaczęły topnieć, ziemia została zalana wodą” [translation: “During the Ice Age as the name indicates, there was a lot of snow and ice. When the snow and ice started to melt, the Earth was full of water”] (teacher-learner code-switching, geography);

“W układzie krążenia następują trzy fazy: faza odpoczynku serca, faza kurczenia się przedsionka oraz faza kurczenia się komory” [translation: “In the circular cycle, there are three stages: the stage of the heart relaxation, the stage of atria contraction, the stage of ventricle contraction”] (teacher-learner code-switching, biology);

“Występują dwa typy mórz: wewnątrzlądowe i międzykontynentalne” [translation: “There are two types of seas: inland and intercontinental”] (teacher – learner code-switching, geography);

Affective switch:

“Nie wiem jak mam dać sobie z Wami radę! Nie rozumiecie, bo nie słuchacie tylko całą lekcję gadacie” [translation: “I don’t know how to cope with you! You don’t understand

because you don't listen to me and what is more, you are talking during the whole lesson” (teacher-learner code-switching, mathematics);

“Paweł, dziecko drogie, skup się!” [translation: “Paul, dear child, concentrate!”] (teacher-learner code-switching, mathematics);

“Dlaczego ja do odpowiedzi, ma już tyle ocen?” [translation: “Why am I supposed to be asked? I have so many marks] - a learner while being taken to the board; (learner-teacher code-switching, biology);

Socialising switch:

“Pani profesor dzisiaj bardzo ładnie wygląda, pewnie jest też Pani w dobrym humorze i nie będzie pytać?” [translation: “You look really nice today, professor and you are probably in a very good mood so maybe you wouldn't take us to the board?”] (learner-teacher code-switching, biology);

“Fajny jest ten film o morzach, ale tak najlepiej to obejrzałabym jakąś komedyjkę, co Ty na to? [translation: “The film about the seas is interesting but I'd better see a comedy, what do you think about it?”]

“Myślę, że to dobry pomysł, to kiedy idziemy do kina?” [translation: I think that it's a good idea, so when are we going to the cinema?”]

“Dzisiaj wieczorem?” [translation: “tonight?”] (learner-learner code-switching, geography);

“Pani profesor, jak już mówimy o sercu, to jak jest z miłością i z sercem?” [translation: “So if we are talking about the heart, what about love and heart?”]

“Za uczucia odpowiedzialny jest Nasz umysł, ale to nie jest temat Naszej lekcji” [translation: “Our brain is responsible for feelings but it's not the topic of our lesson”] (learner-teacher code-switching, biology);

Clarity switch:

“Raz jeszcze powtarzam, problem z Oceanem Atlantyckim jest taki, że nie wiemy gdzie są jego granice” [translation: “So, once again, the problem with the Atlantic Ocean is that there are no borders”] (teacher-learner code-switching, geography);

“Czy rozumiecie tę funkcję? Po oczach widzę, że raczej nie, to może wytłumaczę wszystko raz jeszcze po polsku?” [translation: “Do you understand this function? I can see it in your

eyes that you don't. So I will explain everything in Polish, OK?"] (teacher-learner code-switching, mathematics);

“Raz jeszcze przypominam jaki jest wzór, czy wy nie rozumiecie jak ja mówię do was po angielsku?” [translation: “I will remind you of the formula once again, don't you understand when I speak English to you?"] (teacher-learner code-switching, mathematics);

As can be noticed from the data provided above, both the CLIL teachers as well as the CLIL learners switched into Polish during the lessons observed but not as often as they used to in the previous months. As mentioned previously, the frequent use of the Polish language during the CLIL lessons can be linked to the difficulty of the topics discussed. The purpose of code-switching in case of all subjects observed did not change – in most cases both the CLIL teachers and the CLIL learners switched into Polish in order to facilitate learning or for socializing purposes. On the whole, throughout the whole school year, the use of L1 during the CLIL lessons decreased.

7.2. Content aspects

In June, there were no tests administered apart from mathematics. The reason why the geography and biology CLIL teachers did not administer any tests was due to the end of the school year – most of the CLIL learners had their final marks already given. The marks presented below are the final marks which the CLIL learners received at the end of the school year. It should be born in mind that the marks which were a given on the basis of all marks received during the 2nd semester may be subjective to a certain extent due to the fact that they were given by only one subject teacher. The researcher was not in the position to evaluate the content but only to evaluate the marks received by the CLIL learners.

Mathematics

29 CLIL learners took the test concerning the trigonometry functions. The test was administered in English and it was based both on theory and practice.

Table 14. Marks received from the test in mathematics.

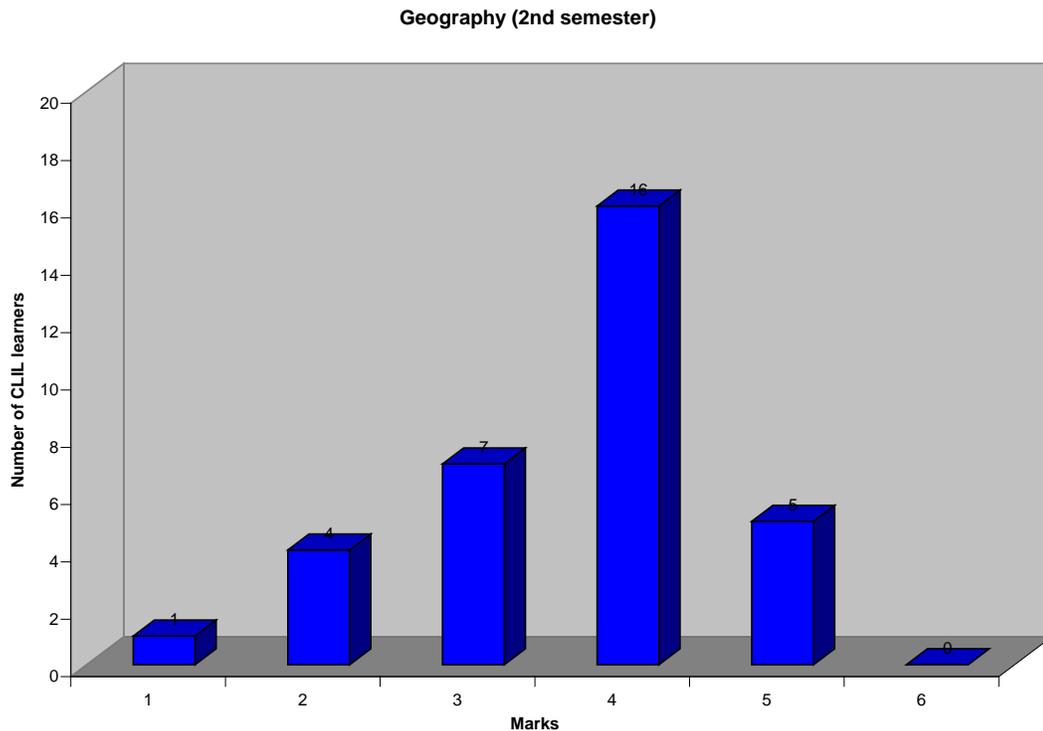
Excellent (6.0)	No learners
Very good (5.0)	No learners
Plus good (4.5)	No learners
Good (4.0)	6 learners
Plus satisfactory (3.5)	3 learners
Satisfactory (3.0)	1 learner
Pass (2.0)	15 learners
Fail (1.0)	4 learners

As it can be seen from the data provided above the results were not very good. Only 6 CLIL learners received good marks and 15 CLIL learners just passed the test. There were no excellent, very good and plus good marks. The CLIL learners either had problems with trigonometry or did not prepare for the test.

The following results are provided on the basis of the marks given by the CLIL teachers in each CLIL subject at the end of the 2nd semester. While giving the marks at the end of the semester, the CLIL teachers took into consideration not only the written tests but also the oral performance and participation in the lessons throughout the whole semester. In order to stress the importance of the marks and illustrate them clearly, all the data is to be displayed through graphs and then described in detail.

The following graph illustrates the marks received by the CLIL learners in geography at the end of the 2nd semester. One CLIL learner decided to change the school so as a result the number of marks analyzed was **33**:

Graph 4. Marks received at the end of the school year in geography.

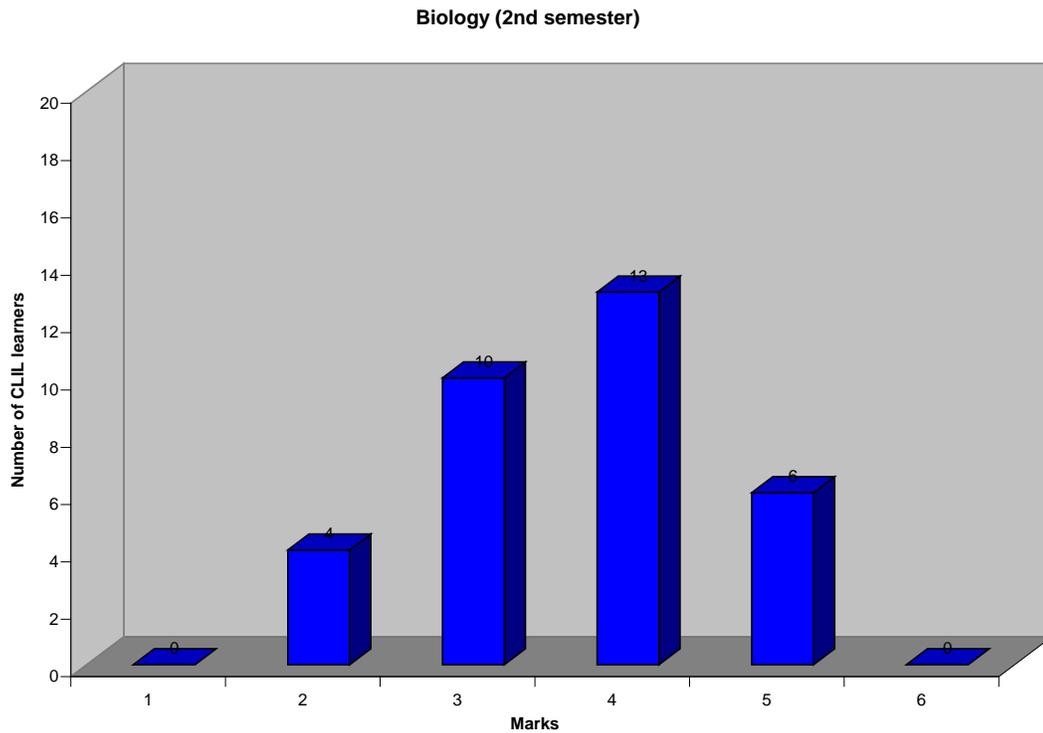


As can be seen from the data provided in the graph **1** CLIL learner received the lowest mark which is fail (1.0). **4** CLIL learners received pass (2.0) and **7** CLIL learners received a satisfactory mark (3.0). The highest number of the CLIL learners – **16** CLIL learners received a good mark (4.0) and **5** CLIL learners received a very good mark (5.0). **No** excellent marks were received at the end of the 1st semester.

In comparison to the marks received by the CLIL learners in geography at the end of the 1st semester, it can be said that they made a slight progress as far as content is concerned. More CLIL learners received a very good mark at the end of the 2nd semester. The data concerning the other marks did not change significantly. There was still **1** CLIL learner who failed the subject and **nobody** who received an excellent mark.

The following graph illustrates the marks received by the CLIL learners in biology at the end of the 2nd semester. One CLIL learner decided to change the school so as a result the number of marks analyzed was **33**:

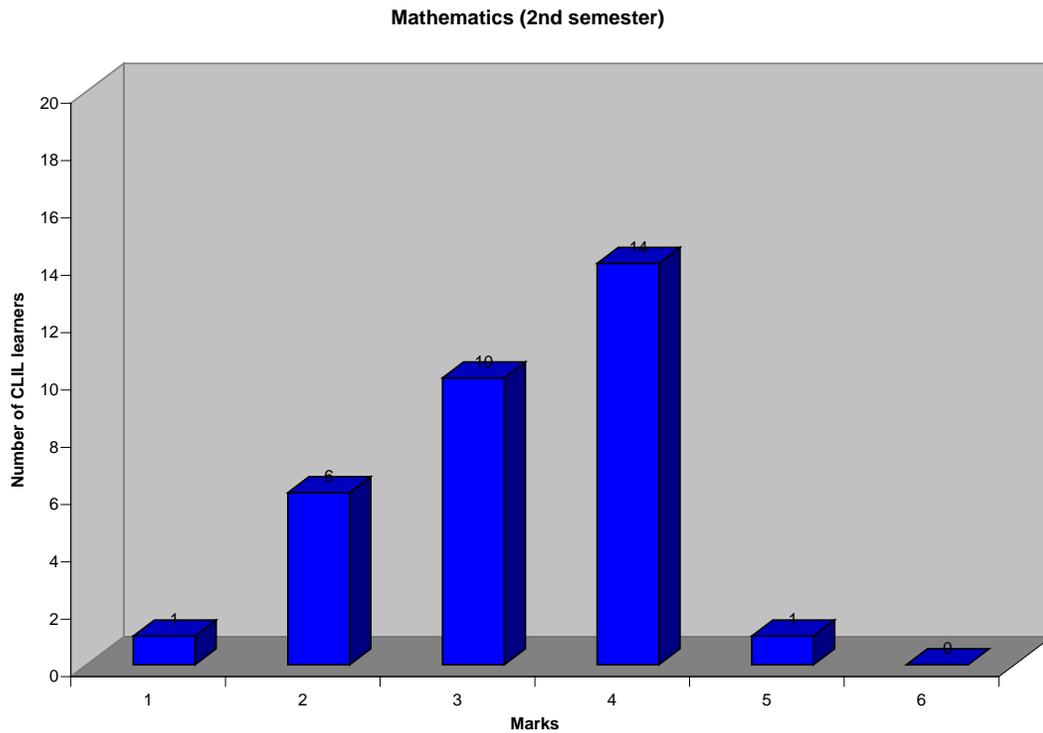
Graph 5. Marks received at the end of the school year in biology.



As can be seen from the data provided in the graph **no** CLIL learners received the lowest mark which is fail (1.0). **4** CLIL learners received pass (2.0), **10** CLIL learners received a satisfactory mark (3.0) and the biggest number of CLIL learners – **13** received a good mark (4.0). **6** CLIL learners received a very good mark (5.0). **No** excellent marks were received at the end of the 1st semester.

The following graph illustrates the marks received by the CLIL learners in mathematics at the end of the 2nd semester. One CLIL learner decided to change the school so as a result the number of marks analyzed was **33**:

Graph 6. Marks received at the end of the school year in mathematics.



As can be seen from the data provided in the graph **1** CLIL learner received the lowest mark which is fail (1.0). **6** CLIL learners received pass (2.0), **10** CLIL learners received a satisfactory mark (3.0) and the highest number - **14** CLIL learners received a good mark (4.0.). Only **1** CLIL learner received a very good mark (5.0). **No** excellent marks were received at the end of the 2nd semester.

Based on the data provided above, it can be seen that most of the CLIL learners received a good mark in mathematics at the end of the 2nd semester. However, it should be pointed out that most of the lessons were in Polish so the marks received by the CLIL learners in mathematics cannot be fully relied on as far as teaching mathematics through English is concerned. Probably, the marks would have been much lower if the subject had been taught mostly through English.

7.3. Learning environment aspects

In June, the aspects concerning learning environment have not changed much from the previous month described (Part II, chapter VI, 6.3.). There was quite a lot of interaction between the CLIL learners themselves and the CLIL learners and the CLIL teachers even though the CLIL lessons were still mostly teacher-oriented. The methodological approach of all CLIL teachers slightly changed – the CLIL teachers tried to use more learner-oriented activities such as pair work or group work. The materials used during the lessons consisted of handouts, books, visual aids and also some additional materials such as diagrams (biology) or maps (geography). Evaluation was done on the basis of all the marks gathered by the CLIL learners during the whole semester. The classroom setting has slightly changed. All the details concerning interaction, methods of teaching, materials used, evaluation and classroom setting are to be presented below.

7.3.1. Classroom interaction

Taking into consideration van Lier's (1988: 94-120) framework the following types of interaction as well as types of function were noticed during the lessons mentioned above:

Type 1:

Mathematics

L1: „I tak mamy już oceny wystawione, nie chce mi się już myśleć o matematyce” [translation: “We already have the final marks given, I don't feel like thinking about mathematics”];

L2: „Mnie też nie, ale nie bardzo mamy wybór” [translation: “Neither do I but I don't think we have any choice”]; (**interpersonal function**);

Biology

L1: „Pani profesor, jakie ma Pani plany na wakacje? [translation: “What plans have you got for the holidays, Professor?”]

T: “I don't know. It's not the topic of our lesson. By the way, you should use English”

L1: “OK, so what plans have you got for holidays?”

T: “Well, I still don’t have any” (**interpersonal function**);

Geography:

L1: „Fajny jest ten film o morzach, ale tak najlepiej to obejrzałabym jakąś komedijkę, co Ty na to? [translation: “The film about the seas is interesting but I’d rather see a comedy, what do you think about it?”]

L2: „Myślę, że to dobry pomysł, to kiedy idziemy do kina?” [translation: “I think that it’s a good idea, so when are we going to the cinema?”]

L1: „Dzisiaj wieczorem?” [translation: “tonight?”] (**interpersonal function**)

The first type of interaction presented above was a conversation between the CLIL learners in their mother tongue. In the second example the CLIL biology teacher switched into English while being asked a question in Polish and so did the CLIL learner who had asked the question.

Type 2:

Geography

T: “I can see that you are not watching the film.

L1: “We are discussing the questions that we have.

T: “Really? OK, so what’s the answer to the first question?”

(The CLIL learners had some problems with answering the questions) (**textual function**);

Biology

T: “Now, please take different colour pencils and we are going to draw a heart”

(Some of the CLIL learners did not draw the diagram in their notebooks) (**ideational function**);

Mathematics

T: “Who would like to come to the blackboard and explain to us this function?”

(Nobody wants to come)

T: “OK, so I will do it and you should listen very carefully because I’m not going to repeat it again” (**textual function**);

In the above mentioned type of interaction, the CLIL teachers controlled the topic but not the activity. As in the previous months some of the CLIL learners were not concentrating on the lesson for a short period of time.

As in the previous cases, both the geography and the biology CLIL teachers spent about 10-15 min on giving a lecture concerning the topic of the lesson during which they had control over the topic but not over the activities going on in the classroom. The mathematics CLIL teacher did not spend any time on giving a lecture due to the fact that the lesson was mostly based on exercises.

Type 3:

Biology

T: “Caroline, come to the blackboard and draw veins and arteries. Then explain the difference, please” - the CLIL learner comes to the blackboard and explains the difference;
(textual function);

Mathematics

T: “Can you please remind us of the formula? Let’s start from a short revision from the previous lesson”

(One of the CLIL learners repeats the formula and gets “a plus”) **(textual function);**

Geography:

(While asking one CLIL learner)

T: “What are hurricanes?”

L1: “Hurricanes are a kind of very strong storm”

T: “OK, where do hurricanes occur?”

L1: “In North America”

T: “Where exactly?”

L1: “Alaska”

T: “Alaska? Are you sure?”

L1: “No, maybe India”

etc...

(textual function);

As can be seen from the examples above, both the topic and the activity were controlled by all the CLIL teachers. Most of the interaction took part while the CLIL learners were asked questions and were required to answer them.

Type 4:

Biology

Type 4 where the CLIL teacher controls activity but not the topic was not noticed during the lesson.

Geography

While watching the video some of the CLIL learners were exchanging pieces of papers where some information was written. The researcher did not have an access to it. Probably this type of interaction could have an **interpersonal function**.

Mathematics

T: “OK, so open your books on page 78 and look at exercise 5. I will give you ten minutes to do all the examples”

L1: „Dobra, to robimy. A jak tam Twoja sytuacja z chemii?” [translation: “OK, let’s do it. What about your chemistry?”]

L2: „Lepiej, ale rodzice i tak nie będą zadowoleni” [translation: “Better but my parents won’t be happy”]

L1: „Najważniejsze, że zaliczone” [translation: “The most important is that you have passed” (**ideational function**)];

As it can be seen from the above given examples, in case of geography and mathematics the CLIL teachers controlled the activity. There was no type 4 interaction taking place during the CLIL biology lesson. As in the previous months the CLIL learners mostly had a personal conversation while doing the tasks given by the CLIL teachers.

To sum up, as can be seen from the examples given above, there was a lot of interaction going on between the CLIL learners as well as between the CLIL teachers and the CLIL learners. Taking into consideration the whole school year, there was more interaction

between the CLIL learners and the CLIL teachers at the end of the school year which was probably due to the fact that the CLIL learners got to know the CLIL teachers better. Unfortunately, a lot of this interaction, especially between the CLIL learners was taking place in Polish. What is more, all types of interaction occurred during the CLIL lessons observed.

7.3.2. The teacher's methodological approach

Geography

As in previous months, the CLIL geography teacher mainly used a learner-centred approach. The CLIL geography teacher started the lesson with a short lecture on *seas* which lasted about 10 minutes. The CLIL geography teacher talked about different types of seas giving particular examples at the same time. The CLIL geography teacher provided the CLIL learners with some postcards where different kinds of coasts were shown. Afterwards, the CLIL learners were provided with handouts with open-ended questions. The questions were based on the documentary which the CLIL learners were going to see. The CLIL geography teacher checked the understanding of the questions. During the documentary, the CLIL geography teacher used a method called *freeze frame*. After few minutes of watching the documentary, the CLIL teacher stopped the video tape and asked the questions which had been provided on the handouts. Additionally, the CLIL learners were asked to predict what was going to happen in the next part of the documentary. After the film, the CLIL learners were asked to work in pairs and write a short summary of the documentary (100 – 120 words). The CLIL geography teacher collected the summaries after the lesson. The CLIL learners were involved in the lesson and they were willing to answer the questions without any hesitation.

Biology

The CLIL biology lesson observed in June did not differ much from the other lessons observed. The CLIL biology teacher used both a teacher-centred and learner-centred approach. At the beginning of the CLIL biology lesson, the CLIL biology teacher distributed American course books and asked the CLIL learners to read about circulatory

system. In the meantime, a few CLIL learners were evaluated. About 10 minutes later, the CLIL biology teacher started asking questions which were based on the chapter concerning the circulatory system which CLIL learners were asked to read. The questions asked were open-ended. Then, the CLIL biology teacher gave a short lecture on the circulatory system which lasted about 10 minutes. In the meantime, the CLIL learners were making some notes. While describing the excretory system the CLIL biology teacher used OHP where the most important information was written together with the words. The CLIL biology teacher also provided the learners with their Polish equivalents. In the next part of the CLIL biology lesson, the CLIL biology teacher brought different kinds of hearts which had been preserved in formalin and the CLIL learners were put in groups and asked to recognise the hearts and find the differences, (e.g. there was a heart from a frog, cow, human being etc.). At the end of the lesson, the CLIL learners were provided with some descriptions of disorders of the circulatory system. They were asked to read them and discuss possible ways of preventing the disorders. As it can be seen, the CLIL biology teacher used some communicative activities and gave the CLIL learners a chance to communicate in groups. The whole CLIL biology lesson described above was full of different kinds of activities in which the CLIL learners were involved. All the CLIL learners had an opportunity to practice their English. The CLIL biology teacher tried to integrate both content and language however, there were no purely language-oriented exercises.

Mathematics

The CLIL mathematics lesson was based on exercises connected with linear functions. It can be said that the lesson was rather learner-oriented due to the fact that the exercises were solved by the CLIL learners. At the beginning of the lesson the CLIL teacher spent about 5 minutes on repeating the basic formulas, however, the CLIL mathematics teacher did not provide the CLIL learners with the functions but asked them to write the functions on the blackboard (one CLIL learner was taken to the blackboard). Afterwards, particular CLIL learners were taken to the blackboard and asked to solve the exercises. The CLIL mathematics teacher was in control of the lesson. While one CLIL learner was solving the exercise the other CLIL learners were making some notes. Most of the CLIL learners tried to explain the exercises in English but when they had a problem they switched into Polish.

All the CLIL mathematics lessons observed in June were very similar to the one described above. The CLIL mathematics teacher tried to integrate content and language but there were no particular exercises where language was focused on. Language was a medium of instruction.

Concluding, both the CLIL geography teacher and the CLIL biology teacher used some communicative methods of teaching in order to integrate content and language and also give the CLIL learners an opportunity to use their language. The CLIL mathematics teacher used English as a tool and did not introduce any language exercises. Throughout the whole school year there were slight changes concerning the methods of teaching which will be fully described in the next part of the thesis (part II, chapter VII, 4.2.). To summarise, it can be said that all CLIL teachers showed an attempt to use a learner-centred approach during the lessons in June which made the lessons more interesting for the CLIL learners.

7.3.3. Learner's evaluation

During the CLIL lessons mentioned above all the CLIL teachers used “oral evaluation”. In case of CLIL geography and biology, the CLIL learners were asked to come to the blackboard or sit in front of the teacher and answer some questions concerning the previous lessons. The CLIL geography teacher asked five questions as during the previously observed lessons. All the questions were asked in English but the CLIL learners had a choice – they could either answer in English or in Polish. If answering a question in Polish they got a lower mark. Most of the CLIL learners asked were well prepared. The criteria concerning oral evaluation were the same as in the previous months, namely, the most important was content knowledge and the language was not very important. In case of CLIL biology, the CLIL learners were given six main questions and some additional questions (the CLIL biology teacher was willing to help the CLIL learners). The CLIL learners were allowed to answer in English or in Polish. As in the case of CLIL geography, the CLIL learners received a lower mark if their answer was in Polish. All the CLIL learners turned out to be well prepared. In case of CLIL mathematics, the CLIL learners were asked to solve some mathematical formulas and explain them either in English or in

Polish. Only the CLIL mathematics teacher administered a test in June (the results of the tests were discussed in part II, chapter VI, 7.2.). The test in geography was mainly administered in Polish but the CLIL learners were obliged to provide the answers in English. The test given in consisted of some mathematical formulas and as in the previous months the only opportunity to use English by the CLIL learners was while providing the answers which were very short and usually consisted of one or two sentences. While evaluating the test in English the CLIL mathematics teacher did not pay attention to the language mistakes. At this stage of the study, it should be mentioned that in June the CLIL learners were given the final marks which were based on the final marks received in the 1st semester and also on other marks received in the 2nd semester from the tests and the oral evaluation. In case when the final mark was not clear, e.g. the CLIL teacher was not sure whether to give good or very good mark (there were no plus good or plus satisfactory marks given at the end of the school year) the CLIL teacher asked the CLIL learners additional questions. All the final marks were presented and discussed in part II chapter VI, 7.2.

7.3.4. Teaching materials

Geography:

During the CLIL geography lesson described above, the CLIL geography teacher used a map showing the CLIL learners different kinds of seas. Before the lesson, the CLIL geography teacher distributed a few handouts with vocabulary concerning *seas*. All the words were provided both in English and in Polish. Additionally, visual aids were used – the CLIL learners watched a documentary on *seas* which was recorded from the BBC television. The CLIL geography teacher distributed handouts with open-ended questions which were based on the documentary. The CLIL geography teacher also used the blackboard in order to write new words which had appeared in the documentary.

Biology:

The CLIL biology teacher was using OHP during the whole lesson. Additionally, the CLIL biology teacher was using the blackboard where she put the most important vocabulary.

The blackboard was also used in order to draw the heart – the CLIL biology teacher used different colours of pencils in order to make the drawing more clear. During the CLIL biology lesson, the CLIL learners were using the course books which were written in English and were used in the American High School. At the end of the lesson, the CLIL learners were provided with some realia: the CLIL biology teacher brought different kinds of hearts which had been preserved in formalin. The CLIL learners were asked to recognise the hearts and also name its part. The CLIL learners were also provided with some additional handouts concerning vocabulary. No multimedia was used during the lesson.

Mathematics:

During the CLIL mathematics lesson mentioned above, the CLIL learners were mainly working with a Polish book which contained different mathematical tasks “Zbiór zadań z matematyki” [translation: “A set of mathematical tasks”]. All the exercises were put on the blackboard either by the CLIL learners or the CLIL mathematics teacher. No additional handouts were used during the lesson.

To summarise, in comparison to the previous months, the materials used during the CLIL lessons did not change much. The CLIL geography teacher tried to use a lot of additional materials prepared especially for the lessons and also some visual aids (e.g. films, documentaries etc.) in order to facilitate learning. The CLIL biology teacher always used OHP and tried to use some realia such as hearts in formalin, different bones, diagrams etc. The CLIL biology teacher also used American course books which turned out to be very helpful for the CLIL learners. The CLIL mathematics teacher mainly used Polish books but also some handouts which were prepared by the CLIL mathematics teacher himself.

To conclude, all the CLIL teachers made a lot of effort to integrate content and language as far as teaching materials were concerned.

7.3.5. Classroom setting

In June a new classroom-newsletter appeared which was connected with the coming holidays. The CLIL learners put some pictures from beautiful places in the world and some

humorous sentences. The biology classroom did not change at all. Throughout the school year there were not many changes which took place as far as classroom setting was concerned.

7.4. Attitudinal aspects and motivation

The data concerning attitudinal aspects as well as motivation is to be presented below. It should be noted that the data concerning attitudinal aspects and motivation was gathered through questionnaires distributed among the CLIL learners and the CLIL teachers.

7.4.1. Attitudinal aspects

After the 2nd semester, the researcher decided to conduct the same questionnaire as which was conducted at the beginning of the school year and after the 1st semester (Appendix: part 2). The aim of the questionnaire was to find out the changes in the CLIL learners' attitude towards CLIL. The questions which the CLIL learners were asked was the same as the one asked previously, namely: *What do you think about learning subjects in a foreign language? Please, express your opinion in three to five sentences paying attention to the advantages and disadvantages of learning subjects in a foreign language.* The question was asked in Polish so there was no language barrier in providing honest answers. The questionnaire was distributed by the researcher during the lesson and the CLIL learners had a few minutes to answer the question. **32** CLIL learners provided the answer to the above mentioned question. On the basis of the answers given in the questionnaire it can be said that all the CLIL learners did not change much their attitude towards CLIL and were still very positive. **16** of them enumerated only advantages of learning subjects in a foreign language, **15** of them provided both advantages and disadvantages and **1** of them provided only disadvantages. After having learnt the subjects in a foreign language for a period of one school year, it can be said that on the basis of the answers provided by the CLIL learners most of the advantages and disadvantages mentioned were the same as the ones mentioned after the 1st semester but different from the ones mentioned in September. When talking about advantages and disadvantages, the CLIL learners rather concentrated on the

knowledge than on the future opportunities. This change was also noticed after the 1st semester. The advantages that the CLIL learners provided while answering the question were the following:

- “we are able to improve our knowledge concerning the subjects as well as English”;
- “possibility to get to know more vocabulary as well as some English idioms and expressions – they just stay in our head”;
- “language skill development”;
- “more possibilities to speak”
- “possibility to learn more specialised vocabulary which would be impossible to learn in everyday life”;
- “a perfect way of learning a foreign language”;
- “personal development and the ability to think in two languages”;
- “gives us a possibility to get to know another culture”;
- “helps us to speak with native speakers and people from other countries”;
- “minimises the language barrier”;
- “possibility to take part in different projects, e.g. it’s easier to get a scholarship due to the knowledge of English ”;
- “possibility to take bilingual final secondary school examination”;
- “more opportunities to win Secondary School competition in English – *English Olympics*”;
- “helps with writing and reading”;
- “learning subjects in a foreign language gives more pleasure”;
- “if we decide to be translators, we will already know a lot of specialised vocabulary”;
- “we are in touch with English every day”;
- “we can better understand the films on the DVD”;
- “we are respected more by learners from other classes”;

The following disadvantages were mentioned:

- “a lot of concepts are not understood”;
- “it takes a lot of time to prepare oneself for the classes”;
- “too much Polish during the lessons”;

- “less free time”;
- “we often don’t know Polish equivalents of certain words”;
- “mathematics is mainly in Polish”;
- “bad pronunciation of some teachers”;
- “the final examination *Matura* in Polish”;
- “some teachers expect much more from us because they think that we are more intelligent”;
- “studying in a foreign language is time-consuming”;
- “lots of studying by heart”;
- “a lot of problems while answering questions orally – we need more time to think and a lot of teachers think that we are worse prepared”;
- “I keep forgetting everything”;
- “systematic learning which is killing”;
- “no proper course books”;

As can be seen from the above given opinions, the attitude towards CLIL did not change much. Most of the CLIL learners still had a very positive attitude towards learning subjects in a foreign language. Similar to the previous questionnaire, nearly all of the CLIL learners mentioned the usefulness of learning new vocabulary, the ability to think and communicate in English, the possibility to get to know other cultures etc. Comparing the advantages mentioned at the end of the school year to the ones mentioned at the beginning, it can be said that most of the CLIL learners started noticing the advantages concerning the development of their language abilities as well as the improvement of their knowledge concerning particular subjects. There were only few of them who mentioned the opportunity to study abroad or opportunities concerning their career while in September most of them mentioned their studies abroad or future career. As can be noticed, the instrumental motivation changed into integrative motivation. The CLIL learners seemed to have a more mature attitude towards learning subjects in a foreign language. Bearing in mind disadvantages concerning learning subjects in a foreign language, there were more of them enumerated in June than in September which was due to the CLIL learners experience with bilingual education. The disadvantages which were most often enumerated were very

similar to the ones mentioned in January and they were mostly connected with the difficulties of learning subjects in a foreign language as well as with understanding some concepts. Most of them also complained about the amount of time that bilingual studying took – most of them had to spend twice the time on studying.

Apart from the questionnaire distributed among the CLIL learners there was also a questionnaire concerning attitude towards teaching subjects in a bilingual classroom distributed among the CLIL teachers (Appendix: part 6). The CLIL teachers were asked the same question, namely: *What do you think about learning subjects in a foreign language? Please, express your opinion in three to five sentences paying attention to the advantages and disadvantages of learning subjects in a foreign language.* The question was also asked in Polish so there was no language barrier in providing honest answers. 3 CLIL teachers filled in the questionnaire which was distributed by the researcher and collected within few days. While answering the question concerning their attitude towards CLIL the teachers tried to be very objective and as a result both advantages and disadvantages of CLIL were provided.

ADVANTAGES:

- “a lot of educational materials available in English”;
- “the teacher is obliged to express his/her thoughts very clearly”;
- “bilingual education ‘opens the door’ to Europe”;
- “the possibility to study abroad”;
- “the teacher acquires vocabulary in a foreign language”;
- “the learner develops all language skills i.e. speaking, writing, listening and reading”;
- “bilingual education prepares the learners for their future career”;

DISADVANTAGES:

- “it’s time-consuming”;
- “learners who are considered to be weaker may have some problems in acquiring subjects in a foreign language”;
- “available materials may not be adaptable to certain levels”;

- “language teaching is neglected – the most important is the subject”;
- “the lessons seem to be slower – the teacher has to repeat certain information many times”;
- “most of the information has to be put on the blackboard which is time-consuming”;
- “in many cases the learners pay attention to the English vocabulary and tend to forget the Polish equivalents”;

Due to the number of CLIL teachers questioned, there were fewer opinions provided than in case of CLIL learners. Having analysed the data provided by the CLIL teachers it can be said that their attitude towards CLIL was more negative than the CLIL learners’ attitude which was due to their rich experience in teaching.

7.4.2. Motivation

At the end of the 2nd semester additional questionnaires were conducted concerning motivation (Appendix: parts 4 & 8). The questionnaires were addressed to both the CLIL learners and the CLIL teachers. The aim of the learners questionnaire was to find out why they decided to take part in bilingual classes and what their motivation was – extrinsic or intrinsic (Appendix: part 4). In the case of the teachers questionnaire the aim was to find out why they had decided to teach in such classes (Appendix: part 8).

LEARNERS

A question number 1 was a close-ended question: *Who decided about your bilingual education?* The learners had a choice between: *my parents, my friends, I decided* and *other*. **32** learners out of **33** chose “*I decided*” and one person has chosen “*other*”.

A question number 2 was also a close-ended question which was the following: *Why did you decide to start your education in a bilingual classroom?* The learners could choose: “*I wanted to learn English and get to know the Anglo-Saxon culture*”, “*I was sure that I would have more possibilities in the future*” and “*other*”. **27** learners out of **33** chose the answer concerning their possibilities in the future. Only **5** learners chose the first answer.

A question number 3 was the following: *Are you satisfied with learning subjects in English? Justify your answer.* All the respondents answered *yes* and the reasons did not differ much. The following were the most often mentioned, e.g.

- “learning subjects in English is interesting – I can read various books”;
- “my English is much better”;
- “I have learnt a lot of different words”;
- “there are just advantages”;
- “I can improve my speaking skills”;
- “I will have more chances abroad”;

A question number 4 was the following: *What do you like about the lessons in English?* The most common answers were the following:

- “we get to know new vocabulary”;
- “we practice different skills – speaking, listening, reading and writing”;
- “we watch a lot of films, e.g. geography”;
- “the lessons are more interesting, e.g. we prepare projects for biology”;
- “English – the most beautiful language in the world”;
- “satisfaction when I understand my maths teacher”;

A question number 5 was the following: *What don't you like about the lessons in English?* The most common answers were:

- “too much Polish”;
- “language mistakes made by the teachers”;
- “teachers' accent and intonation – it's not natural”;
- “sometimes I have no idea what the teacher is talking about”;
- “a lot of new vocabulary”;
- “Polish books – we should have English books”;

The last question was a close-ended question: *When were you more motivated towards learning subjects in English?* The learners could choose one of the following answers: *at the beginning of the 1st class (September 2006)* or *at the end of the 1st class (June 2007)*. All the learners chose answer A – *at the beginning of the 1st class*.

From the data provided above, it can be seen that most of the learners are extrinsically motivated due to the fact that most of them decided to choose bilingual education because of the future possibilities. It should be also pointed out that most of them took the decision concerning bilingual education on their own which means that these students are mature and fully aware of their future prospects. However, in my opinion most of them must have discussed their choice with their parents due to their age – when taking the decision, the learners were at the age of 16. What is more, all the learners were satisfied with their bilingual education, however, all of them claimed that they were more motivated in the beginning (September 2006). From the data provided above, it is obvious that they all wanted to continue their bilingual education yet they were fully aware of its drawbacks due to their one year experience. The most motivating factor turned out to be the possibility to learn English which is the lingua franca. The most de-motivating factor was the amount of material they have to learn. All in all, the learners seemed to be still motivated to continue their bilingual education which “opens the door” to the future world.

TEACHERS:

The teachers were only asked two open-ended questions: *What are the motivating factors as far as teaching in a bilingual classroom is concerned* and *what are the de-motivating factors as far as teaching in a bilingual classroom is concerned?*

The teachers enumerated the following motivating factors:

- “learners’ achievements – they are able to speak, e.g. about bones in English or they take part in language competitions which they win”;
- “learners future achievements at foreign Universities”;
- “the possibility to improve my own knowledge in a foreign language”;
- “a lot of possibilities, e.g. trips abroad, meeting foreigners, exchanges etc”;

The teachers enumerated the following de-motivating factors:

- “lack of materials”;
- “lack of financial support”;
- “lack of teacher training concerning CLIL methodology and some established criteria for the creation of teaching materials”;
- “lack of agendas for schools”;

- “lack of teacher cooperation as far as sharing materials is concerned”;
- “teaching materials created for native speakers which are often too difficult to use in the early years of a CLIL course”;

As it can be seen from the data provided above, the teachers enumerated more demotivating factors than the motivating ones. These factors are mostly connected with extrinsic motivation. Hopefully, these factors will not take over the motivating factors which are mainly intrinsic ones.

8. Second language development – a questionnaire

The questionnaire was conducted among the CLIL learners at the end of the school year (June 2007) (Appendix: part 5). The aim of the questionnaire was to find out the CLIL learners’ opinion concerning their development of L2 abilities as well as to find out which CLIL subjects they considered the most difficult. The questionnaire was conducted in Polish due to the language barrier which could still occur. The questionnaire was distributed by the researcher during the lesson and the CLIL learners were asked to fill it in. **30** CLIL learners filled in the questionnaire.

In the 1st part of the questionnaire the CLIL learners were asked whether they had made progress in particular second language skills such as speaking, writing, listening comprehension and reading comprehension. They were also asked in which areas, if any, they had made progress. In the case of speaking, writing and reading comprehension **29** CLIL learners answered that they had made progress. In the case of listening comprehension **27** CLIL learners answered that they had made progress and only **3** answered that they had not made any progress.

Most of the CLIL learners provided additional information concerning areas in which they had made progress or had not made any progress. The additional answers were the following:

Speaking:

- “we know more vocabulary and as a result we are better in communication especially with native speakers”;

- “the bilingual classes were very helpful because we had to speak in English all the time”;
- “we are more fluent”;
- “there is no language barrier anymore in case of speaking”;
- “we are much better in using linking devices”;
- “we are much better in explaining things in English and in translation”;
- “The student exchanges were really useful”;
- “we have no problems with expressing ourselves”;
- “we know more synonyms”;
- “pronunciation is much better”;
- “we are used to thinking in English”;
- “more self-confidence”;
- “we understand questions that the teachers ask us”;
- “British pronunciation”;
- “our grammar has really improved”;
- “now we know lots of expressions which are useful in discussion”;

The CLIL learner who chose answer “no” did not provide any explanation.

Writing:

- “our spelling is much better”;
- “we have no problems with using linking devices”;
- “our grammar has definitely improved – I’m not afraid of using conditionals, passive voice or indirect speech”;
- “we got to know different styles of writing”;
- “now we know the layout of particular written forms”;
- “everywhere – I haven’t written many compositions before”;
- “we write a lot”;
- “we are really good at writing reports, articles and descriptions”;
- “we rather don’t have any problems with writing formal compositions”;

The CLIL learner who chose answer “no” provided the following answer:

- “I know how to write because I already passed CAE and we had to write a lot of compositions. Nothing can surprise me anymore. I don’t think that I can make any progress here”;

Listening comprehension:

- “we can understand different accents – British, American, Indian etc.”;
- “I’m much better at getting the details while doing some listening comprehension tasks”;
- “we can associate words”;
- “we understand native speakers who speak really fast”;
- “I can understand Scottish”;
- “I don’t pay attention to accents anymore, I just understand them”;
- “we have a lot of listening comprehension tasks during our bilingual lessons”;
- “we have no problems with talking to native speakers”;
- “we are used to the sound of English now”;
- “I have no problems with English songs”;
- “Foreign exchanges really helped us with listening”;
- “I know more words so I understand more”;

The CLIL learners who chose answer “no” did not provide any explanation.

Reading comprehension:

- “more vocabulary”;
- “we got used to sophisticated grammar because of the number of articles that we had to read”;
- “we have fewer problems with reading comprehension”;
- “I have no problem with reading British or American newspapers”;
- “we are more fluent and quicker while reading”;
- “I have started reading books in English, e.g. Harry Potter”;
- “we can guess words from the context”;
- “we get a lot of texts to read during geography or biology”;
- “I don’t highlight as many words as I used to”;
- “reading has become more friendly”;

- “there are lots of nice expressions, colloquialisms and idioms which we can learn from different texts”;

- “I don’t have any problems with interpreting texts”;

The CLIL learner who chose answer “no” did not provide any explanation.

Having analysed the data provided above, it can be seen that most of the CLIL learners were sure that they had made progress in all second language areas. When talking about the areas of L2 development most of them enumerated vocabulary which turned out to be helpful in speaking, writing, reading comprehension and listening comprehension. All the positive answers provided turned out to be very enthusiastic – the CLIL learners often used exclamation marks or “smiling faces” in order to underline that in this particular area they had made a significant progress. The data provided above also shows the CLIL learners attitude towards learning English as a second language.

In the second part of the questionnaire there were two questions asked concerning the bilingual subjects. They were asked whether learning subjects in a foreign language is easier, more difficult or the same as in Polish and which subjects they considered particular difficult to learn in a foreign language. In both cases they were asked to justify their answers.

16 CLIL learners chose the second answer “more difficult” and **14** CLIL learners chose the third answer “the same as in Polish”. Nobody chose the first answer, which was “easier”.

In the case of the CLIL learners who chose the second answer “more difficult” the additional answers were the following:

- “sometimes I don’t understand what the teacher is talking about, especially in case of biology”;

- “apart from the content we also have to learn a lot of vocabulary”;

- “we have to spend a lot of time on checking the meaning of vocabulary”;

- “we have to think in English which is more difficult”;

- “we need to learn both in English and in Polish”;

- “we need to spend a lot of time translating from Polish into English”;

- “the course books are in Polish and therefore it is more difficult”;
- “we need describe the things more often especially when we don’t know vocabulary”;
- “I have to learn a lot of things by heart”;
- “learning in English is time-consuming”;
- “it requires more concentration”;

In the case of the CLIL learners who chose the third answer “the same as in Polish” the additional answers were the following:

- “I can think in Polish and in English, I can’t see any difference”;
- “we just get used to using English – it’s natural”;
- “there are a lot of thematic words in English which are similar to the ones in Polish”;
- “there is no language barrier anymore, so learning in English has become a pleasure”;
- “our level of English is very high”;
- “when we learn in Polish we also get to know new concepts so there is no difference whether you do it in Polish or in English”;

As it can be seen from the data provided above, the CLIL learners who chose the second answer usually considered learning subjects in a foreign language more difficult due to the amount of new vocabulary. However, there were also a lot of them who did not consider learning subjects in a foreign language more difficult due to the fact that they felt very confident in using English.

In the case of the question concerning difficulty of particular subjects, **14** CLIL learners chose stated that none of the subjects was difficult to learn in a foreign language, **6** CLIL learners chose “geography”, **8** CLIL learners chose “biology” and only **2** CLIL learners chose “mathematics”.

The additional information concerning difficulty of particular subjects provided by the CLIL learners were the following:

Geography:

- “a very difficult vocabulary”;
- “a course book in Polish”;

- “difficult additional materials, e.g. articles from *National Geographic*”

Biology:

- “a lot of new vocabulary”;
- “the teacher is too fast”;
- “too many notes – just writing during the lessons”;
- “double learning – English and Polish vocabulary”;

Mathematics:

- “I cannot understand the teacher”;
- “the teacher’s pronunciation is very bad”;
- “Mathematics is difficult itself – I just can’t understand it in any language”;

None of the subjects:

- “the difficulties are not connected with the subject”;
- “I got used to learning subjects in English, the language is not important here”;
- “my level of English is high enough to understand the above mentioned subjects”;
- “most of us have learnt English since we were kids, it’s like our mother tongue”;

Surprisingly, most of the CLIL learners did not consider any subject difficult in a foreign language. Only few of them chose geography or biology which they considered difficult due to the amount of new vocabulary.

9. The use of L1 (code-switching) – a questionnaire

The questionnaires concerning the use of L1 were also conducted at the end of the school year among the CLIL learners and among the CLIL teachers (Appendix: parts 3 & 7). The aim of the questionnaires was to find out the attitude of the CLIL learners as well as the CLIL teachers towards using Polish during the CLIL classes. The questionnaires were in English and all the questions were close-ended. 32 CLIL learners filled in the questionnaire which was distributed during the lesson. The CLIL learners had a few minutes to fill in the

questionnaire (Appendix: part 3). **3** CLIL teachers were asked to fill in the questionnaire. The CLIL teachers were not given any time limit but they all brought the questionnaires back to the researcher within a week (Appendix: part 7).

LEARNERS

In the case of the 1st question concerning the use of Polish during the lessons where subjects are taught in English, **19** CLIL learners chose answer “yes” and **13** CLIL learners chose answer “no”. For most of the CLIL learners Polish is useful and it probably facilitates learning difficult geographical, biological or mathematical concepts.

Having analysed the answers concerning question number 2 which concerned the use of Polish language by the teacher, **6** CLIL learners chose the answer “*not at all*”, **10** CLIL learners chose the answer “*a little*” and **16** CLIL learners chose the answer “*sometimes*”. **Nobody** chose the answer “*a lot*”. It can be also said that most of the CLIL learners like when their teachers use Polish. All the CLIL learners who chose answer “yes” in the 1st question also chose answer “*sometimes*”. Some of them even wrote additional information next to the answer, namely, “*when needed*” or “*in case of difficult vocabulary*”. The CLIL learners who chose answer “no” in the 1st questions either answered “*not at all*” or “*a little*” in the 2nd question. The fact that nobody chose the answer “*a lot*” may mean that the CLIL learners’ level of English was high.

When having been asked when they thought it was necessary to use Polish in the classroom, **26** CLIL learners chose answer a “*to help define some new vocabulary items (e.g. some abstract words)*”, **8** CLIL learners chose answer b “*to practise the use of some phrases and expressions (e.g. doing translation exercises)*”, **6** CLIL learners chose answer c “*to explain complex grammar points*”, **19** CLIL learners chose answer d “*to explain difficult concepts or ideas*”, **nobody** chose answer e “*to give instructions*” **3** CLIL learners chose answer f “*to give suggestions on how to learn more effectively*” **3** CLIL learners chose answer g “*other, specify*”. The additional answers were: “*when explaining the rules*” and “*when having problems with understanding something*”;

On the basis of the data given, it can be seen that the CLIL learners find Polish the most useful when they have problems with new vocabulary as well as some difficult concepts or ideas. The reason why so many CLIL learner chose this answer could be due to the fact that vocabulary is very essential in a CLIL classroom and misunderstanding any new words means misunderstanding the whole concept. The reason why so few learners chose the other answers could be connected with the fact that most of the CLIL learners did not associate a CLIL lesson with explaining new grammar concepts. They had 6 hours of English lessons during a week. As far as instructions and suggestions are concerned, the language is not very difficult so there was no need to use Polish.

When having been asked about the reasons concerning the use in the bilingual classroom, **14** CLIL learners chose answer a *“it helps me to understand difficult concepts better”*, **12** CLIL learners chose answer b *“it helps me to understand new vocabulary items better”*, **3** CLIL learners chose answer c *“it makes me feel at ease, comfortable and less stressed”*, **3** CLIL learners chose answer d *“I don’t feel lost”* and **nobody** chose answer e *“other, please, specify”*; **13** CLIL learners did not circle any answer.

In most cases, the CLIL learners find Polish useful because it helps them to understand difficult concepts and new vocabulary items. The CLIL learners who did not circle any answer also answered *“no”* in question number 1 when being asked if Polish should be used in a CLIL classroom. Nevertheless, when having been asked if Polish helped the CLIL learners to learn the subjects **26** CLIL learners chose answer the *“a little”* and **1** CLIL learner chose answer *“a lot”* and only **5** CLIL learners chose the answer *“no”*.

Having been asked about the frequency of Polish used in a class where subjects are taught in English **1** CLIL learner chose answer *“never”*, **24** CLIL learners chose answer *“very rarely”*, **6** CLIL learners chose answer *“sometimes”*. In the case of percentages, **16** CLIL learners chose *5%*, **10** CLIL learners chose *10%*, **3** CLIL learners chose *20%* and **3** CLIL learners chose *30%*.

On the basis of the data, it can be seen that most of the CLIL learners prefer Polish to be used very rarely during the CLIL classes which may also indicate their high level of English.

TEACHERS

In the case of the questionnaire concerning the use of L1 during the class where subjects are taught in English which was conducted among the CLIL teachers, all 3 CLIL agreed that Polish should be used in the class where subjects are taught in English due to the fact that some concepts are very difficult to explain in English.

They also agreed that the use of Polish helps to define some new vocabulary items (e.g. some abstract words) and to explain difficult concepts and ideas. All the CLIL teachers were fully aware of the purpose of using Polish in a CLIL classroom. They also added that the use of Polish in the class where subjects are taught in English facilitates comprehension and is less time-consuming.

Having analysed the answers given by the CLIL learners, it is important to mention that all the CLIL teachers had the same opinion concerning the necessity of the use of Polish in a CLIL classroom, which indicates homogeneous way of thinking.

10. Bilingual education – an interview with the teachers

At the end of the school year the researcher interviewed 3 CLIL teachers. The purpose of the interview was to find out what the needs concerning bilingual education are.

A question number 1 was the following:

Is there a recognized need to create more bilingual classes in the school ?

All the CLIL teachers interviewed answered that there was a need to create more bilingual classes in the school due to the fact that the knowledge of English language is not enough in today's world. What is needed is the knowledge about particular subjects in a foreign language.

A question number 2 was the following:

Over the year, what proportion of English language (texts, teacher talk, student-to-student – holistic appraisal) is used in a bilingual lesson?

Geography – 90%

Biology – 90%

Mathematics – 40%

Having taken into consideration the data from observations, in case of geography and biology it was about 80% of English language and in case of mathematics about 30%.

A question number 3 was the following:

Are you actively doing in-service professional development or likewise?

All the CLIL teachers take part in bilingual workshops organised in Warsaw and Toruń. The geography CLIL teacher and the biology CLIL teacher took part in a conference on ecology.

It is very good that the CLIL teachers take part in bilingual workshops as it helps them to develop professionally.

A question number 4 was the following:

Are the bilingual classes more oriented towards European and international orientation than Polish-medium within the school?

The bilingual classes are rather Polish-medium oriented due to the fact that the CLIL learners are obliged to take their final secondary school examination (“Matura”) in Polish.

A question number 5 was the following:

How is the content affected by the use of the foreign language?

All the CLIL teachers interviewed answered that content was NOT affected by the use of the foreign language but it required more effort and time both on the part of the teacher and the learner.

A question number 6 was the following:

Are you a different teacher in English than in Polish?

- “No, the lesson looks the same” (mathematics);

- “Yes, it’s different – I introduce a lot of English vocabulary, translate certain aspects into Polish and do less exercises because there is not time” (geography);

- “Yes, I am. I try to use certain methods which are used in the language classroom, e.g. PW or GW” (biology);

As it can be seen from the answers provided, the geography and biology CLIL lessons differed from the ones in Polish while the mathematics CLIL lessons did not differ which was visible during observations.

A question number 7 was the following:

What professional needs do you have when teaching through English (if any)?

- “To be a good teacher”;
- “To have more teaching materials (films, presentations, articles etc.)”;
- “To have a course book for Geography in English”
- “To have materials in English preparing for the final examination (e.g. a set of exercises)”;
- “To have good students who want to study hard”;
- “I would like to be better paid”;
- “I wish there were more teacher trainings organised”;
- “I need some support from other teachers”;
- “A special curriculum for the bilingual stream of education”;
- “Student and teacher exchanges between bilingual school”;

As it can be seen from the data, the CLIL teachers have different needs – some of them are connected with professional development, some are connected with the learners and some with financial needs.

VII. Data analysis

1. Scheme of data analysis

Data analysis discussed in this chapter is based on the data presented in the previous chapter. The data stems from the observations made by the researcher, questionnaires carried out among the CLIL learners and the CLIL teachers and an interview conducted with the CLIL teachers. The analysis presented in this chapter will be done according to the categories described in part II, chapter V, 3.4. Firstly, changes concerning second language development will be discussed, secondly the use of L1 (code-switching), then content aspects, learning environment and finally attitudinal aspects and motivation. It should be also remembered that the main aim of this PhD thesis was to analyse changes which have taken place in a CLIL classroom therefore, the following research question and research sub-questions will be discussed in detail:

What changes in language education have taken place during one school year in a classroom in which three content subjects are taught in English?

- What changes concerning second language development have taken place during one school year in a CLIL classroom?
- What changes concerning the use of L1 by learners and teachers have taken place during one school year in a CLIL classroom?
- What changes concerning the processing of content have taken place during one school year in a CLIL classroom?
- What changes concerning the learning environment have taken place during one school year in a CLIL classroom?
- What changes concerning learners' and teachers' attitude and motivation have taken place during one school year in a CLIL classroom?

2. Language aspects

Throughout the school year, a lot of changes concerning language aspects were observed. In the following chapters the analysis of second language development and the use of L1 (code-switching) will be presented.

2.1. Second language development

Taking into consideration all the data gathered throughout the school year, it can be said that changes occurred in all language skills and sub-skills. At the end of the school year, the CLIL learners' level of English could be defined as B2 according to the Common European Framework of Reference for Languages (Council of Europe, 2001: 24) while in September it was B1. According to the Common European Framework of Reference for Languages (Council of Europe, 2001: 24) the CLIL learners reaching level B2 could be called *independent users* who “can understand the main ideas of complex text on both concrete and abstract topics, including technical discussions in his/her field of specialisation. Can interact with a degree of fluency and spontaneity that makes regular interaction with native speakers quite possible without strain for either party. Can produce clear, detailed text on a wide range of subjects and explain a viewpoint on a topical issue giving the advantages and disadvantages of various options” (Council of Europe, 2001: 24).

As far as **speaking skills** are concerned, a lot of changes were noticed during one school year. The most important change which started being visible quite early (in October) was the one connected with language barrier. Most of the CLIL learners started “crossing” it gradually. Each month they were more willing to speak about a particular aspect concerning geography, biology or mathematics in English. What is more, gradually, the CLIL learners stopped being afraid of asking questions which was probably due to the fact that they stopped feeling ashamed of lack of knowledge and were acquiring more vocabulary which allowed them to speak freely. What is also worth mentioning is that, the quality of speech was definitely changing during the whole school year. The CLIL learners were using more specialised vocabulary, linking devices as well as more sophisticated

grammar structures. What is very important to point out is the change which took place in the case of mathematics. In the 1st semester, the CLIL learners were afraid of speaking about mathematical concepts in English which was probably due to the difficulty of the subject itself. However, slight changes were occurring throughout the 2nd semester when the CLIL learners tried to use English during lessons of mathematics. They started using simple words and gradually were using more and more specialized vocabulary. Taking into consideration the questionnaire conducted among the CLIL learners at the end of the school year (Appendix: part 5), nearly all CLIL learners noticed progress as far as speaking is concerned. In other words, all CLIL learners noticed changes in their speaking abilities. While enumerating these changes, most of them point to fluency, language barrier which disappeared, self-confidence, the acquired ability to express themselves and lack of fear in discussions.

To sum up, all the changes concerning speaking skills go in tandem with the researcher's and CLIL learners' observations. All of them are very positive and show that CLIL classes help in improving speaking skills.

In the case of **writing**, the only possibility to analyse the changes which occurred throughout the whole school year was to examine the CLIL learners' written tests. The main changes which occurred were connected with the use of vocabulary – the CLIL learners gradually used more specialised vocabulary which was due to the knowledge they were gaining. They also gradually avoided switching into Polish, e.g. in September or October it was noticed that when not knowing a word in English, the CLIL learners tended to switch into Polish while in April or May they rather tried to explain a particular word using their own language. This change also suggests overcoming the language barrier as far as written English is concerned. Other changes which are worth paying attention to are connected with spelling and grammar. On the basis of the analysed tests, it can be said that the CLIL learners tended to make fewer spelling mistakes and use more sophisticated grammar structures at the end of the school year which is due to the fact that they acquired more knowledge concerning both vocabulary and grammar. What is more, most of the CLIL learners started using linking devices such as *however, therefore, in spite of, despite, nevertheless* in their written test which suggests a significant change in the style of giving

answers to questions. Another important change which was noticed while analysing the tests is connected with the ability to describe and characterise particular processes. At the beginning of the school year, the CLIL learners had problems with distinguishing particular information, describing and characterising particular processes and throughout the whole school a significant progress was noticed which was due to practice (the CLIL learners were often asked to describe or characterise certain processes either in a written or oral form). The last but not least is a very important change connected with the subject itself, mainly mathematics. In October or November, the CLIL learners would have hardly ever provided written answers in English being still afraid of their ability to talk about mathematics in English. However, within time it was noticed that more and more CLIL learners plucked up their courage and started providing answers in English. Taking into consideration the CLIL learners' answers in the questionnaire concerning writing skills (Appendix: part 5), nearly all of them answered that they had made progress in the case of writing skills. Most of them enumerated progress in spelling, the use of linking devices, grammar as well as fluency.

All in all, taking into consideration all the changes in writing skills which occurred during the whole school year, it can be said that CLIL classes helped the CLIL learners to improve their writing abilities and in most cases to get rid of a language barrier.

As far as **listening comprehension** skills are concerned, it was very difficult to find out the changes which occurred during the school year because the CLIL learners did not take any listening comprehension tests during their CLIL classes. The only reliable data was the researcher's own observations and the CLIL learners' answers to the questionnaire administered at the end of the school year. The CLIL learners made progress as far as listening comprehension is concerned since they were exposed to English all the time. They were either exposed to the CLIL teachers' talk, their own schoolmates (in certain group or pair work activities) and also to various multimedia. On the basis of the observations, it can be said that the CLIL learners could understand more because they tended to ask fewer questions. At the beginning of the school year they often asked teachers for repetition. When analysing the number of inquiries requiring repetition on the part of a CLIL teacher it even reached 20 (mathematics, part II, chapter VI, 2.1.1.). In the middle of the school year,

the number of inquires requiring repetition was between 10 and 15 (part II, chapter VI, 5.1.1.) and at the end of the school year it was between 6 and 10 (part II, chapter VI, 7.1.1.). The decreasing number of CLIL learners' demands for repetition on the part of a CLIL teacher may suggest better understanding and therefore improvement in listening comprehension skills. An additional change which is worth mentioning when talking about listening comprehension skills is connected with CLIL learners' understanding of one another while working in groups or pairs. Throughout the whole school year, the CLIL learners were using more English when working in pairs and groups which may be connected with better listening comprehension skills. There was also a significant change in CLIL learners' responses to the CLIL teachers' questions. At the beginning of the school year, most of the CLIL learners used short answers with many hesitations such as "well", "let me think", "just give me a minute, please", "what shall I say" etc. while answering the CLIL teachers questions which may imply some problems with listening comprehension. Within the school year, the CLIL learners' answers to the CLIL teachers' questions were longer and featured fewer hesitations. The last but not least change which is worth mentioning as far as listening comprehension is considered is connected with mathematics. At the end of the school year, the CLIL learners provided more answers in English, asked fewer questions and were more willing to be active during mathematics lessons in English which could be also a sign of better listening comprehension skills acquired throughout the whole school year. Taking into account the CLIL learners' answers in the questionnaire concerning listening comprehension skills (part II, chapter VI, 8.) they also admitted that their listening comprehension skills had developed, namely they could understand different accents, felt progress as far as getting the details while doing some listening comprehension tasks, could associate words, could better understand native speakers and got used to the sound of the English language.

All in all, being exposed to the English language through the CLIL lessons, the CLIL learners made significant progress as far as listening comprehension is concerned and the changes which occurred throughout the whole school year were very positive.

As has been mentioned in all the empirical sections concerning **reading comprehension skills**, it was very difficult to observe the changes which took place throughout the whole

school year. The researcher was not allowed to conduct any test and as a result the only ways of distinguishing the changes was the researcher's observations, the tests and a questionnaire conducted at the end of the school year. Judging by the CLIL learners' participation in the CLIL classes as well as by their task interpretation and understanding both in the written and oral form, it can be said that throughout the whole school year the CLIL learners acquired more skimming and scanning skills. When being given a task at the beginning of the school year, most of them had difficulties with approaching the reading comprehension task which was probably due to the lack of certain skills and also difficulty of the content subjects – the CLIL learners had to get used to approaching geographical, biological or mathematical tasks in English. At the end of the school year, the CLIL learners seemed to have fewer problems while dealing with reading comprehension tasks which was visible through the way they were answering comprehension questions – their answers were longer, well-organised and to the point. What is more, they asked fewer questions requiring explanation of the comprehension tasks or written instructions. These observed changes apply both to the CLIL learners' performance during the CLIL lessons as well as to their performance during written tests. A slight change concerning reading comprehension skills was noticed in the case of mathematics. At the beginning of the school year, the CLIL learners had problems with understanding the instructions as well as the other comprehension tasks. In most cases they asked the CLIL mathematics teacher to translate the tasks into Polish. In the middle of the semester, it was visible that a lot of the CLIL learners could understand the tasks with slight difficulty. In the case of misunderstanding, they did not ask the CLIL teacher for translation but rather for additional explanation in English. At the end of the semester, the situation was similar to the one described in the middle of the semester. Taking into consideration the CLIL learners' answers in the questionnaire conducted at the end of the semester (part II, chapter VI, 8.), nearly all of them admitted that they had made progress in reading comprehension skills which means that some changes in the learning process took place. They said that through reading comprehension they had acquired more vocabulary, got used to more difficult grammatical structures, had no problems with reading British or American newspapers, started reading original books, learnt more idioms, collocations and phrasal verbs as well as had fewer problems with interpreting various texts.

To conclude, being exposed to so many varied and specialised texts in English must have brought some changes in terms of reading comprehension skills which was the best expressed by the CLIL learners themselves.

Grammar is not very often paid attention to during the CLIL lessons, however, the CLIL learners use grammar and as they are all the time exposed to English, they also make progress. In the case of the CLIL learners observed some changes concerning grammar occurred during the school year. One of the most important changes was the use of tenses (especially the Perfect Tenses) and other grammatical structures such as passive voice or indirect speech. At the beginning of the school year, a lot of the CLIL learners tended to have problems with the above mentioned grammatical concepts. However, throughout the whole school year, it was observed that the number of errors made while using Perfect Tenses, passive voice or indirect speech was gradually decreasing. It should be mentioned here that the CLIL learners were often asked to use the above mentioned grammatical concepts especially during geography or biology. They were often asked to report other CLIL learners' words or use Perfect Tenses when talking about an influence particular phenomenon has on something. What is also worth paying attention to and can be considered an important change is the use of prepositions. At the very beginning of the school year, most of the CLIL learners had a lot of problems with using correct prepositions. They tended to make simple mistakes which came from the influence of the mother tongue. Within the school year, the CLIL learners made fewer mistakes concerning the use of prepositions which was the outcome of the CLIL classes. It is important to mention that the CLIL learners tended to confuse pronouns, e.g. "she" with "it" which was also coming from the influence of the mother tongue. However, at the end of the school year, hardly any CLIL learners had problems with the correct use of pronouns.

To summarise, having taken a close look at grammatical structures used by the CLIL learners throughout the whole school year, it can be said that some changes were definitely noticeable which were to a certain extent due to the exposure to English language during the CLIL lessons.

There were a lot of changes concerning **vocabulary** noticed throughout the school year. Firstly, it cannot be denied that due to the extended exposure of various geographical, biological and mathematical concepts, all the CLIL learners acquired a huge amount of vocabulary from these fields. At the beginning of the school year, a lot of the CLIL learners had problems with using specialised vocabulary. What is more, they did not try to explain certain concepts but when they did they just asked for a Polish equivalent of a particular word. The same was observed in their written work – instead of using some synonyms or explanations, they provided a Polish equivalent. Throughout the whole school year some changes were observed. The CLIL learners gradually stopped using translation both in the written and oral form and instead they tried to provide an English synonym of a word they did not know or explain it in their own words. Taking into consideration the written tests, it was also noticed that the CLIL learners made fewer spelling mistakes which was due to exposure to English. The more they read in English the more proper vocabulary they acquired and were able to use it in various contexts without making any spelling mistakes. It is also worth paying attention to the change which took place in the case of mathematics. Most of the CLIL learners hardly ever used any mathematical words at the beginning of the school year but gradually their knowledge improved and some of them were trying to use English words both while speaking and while giving written answers in the tests. However, there were still many CLIL learners who found English vocabulary from the field of mathematics pretty difficult.

All in all, taking into consideration the data gathered from observations as well as from the written tests, it can be said that the knowledge concerning vocabulary has definitely changed throughout the school year which was due to the CLIL lessons. Wider knowledge of specialised vocabulary is one of the most important outcomes of CLIL classes. According to the Common European Framework of Reference for Languages (Council of Europe, 2001: 112) as far as the knowledge of vocabulary is concerned, the CLIL learners would be classified at B2 level at the end of the school year, which is the following description “have a good command of a broad lexical repertoire allowing gaps to be readily overcome with circumlocutions; little obvious searching for expressions or avoidance strategies. Good command of idiomatic expressions and colloquialisms”.

In the case of **pronunciation**, there were not many changes observed during the whole school year. The most visible change was connected with word stress. At the beginning of the school year, most of the CLIL learners did not pay much attention to the word stress and as a result they made a significant number of mistakes linked to the switch of the stress. However, due to exposure to English during the CLIL lessons, the CLIL learners started paying more attention to word stress and what is more they started acquiring proper pronunciation. At the end of the school year, hardly any errors were noticed on the part of the researcher. Taking into consideration the Common European Framework of Reference for Languages (Council of Europe, 2001: 117), it can be said that as far as pronunciation is considered the CLIL learners could be placed at level B2 which is described as the following “have acquired a clear, natural, pronunciation and intonation”.

To summarise, pronunciation was not paid attention to during the CLIL lessons but its improvement has been the natural positive outcome due to constant exposure to English language.

As can be noticed from the above provided analysis changes concerning second language development took place in all language skills and sub-skills. In speaking or writing, the changes were more noticeable while in listening or reading less noticeable. The same applies to sub-skills such as grammar, vocabulary or pronunciation awareness. The most visible changes were seen in the case of vocabulary which is a part of content knowledge and is very much paid attention to in CLIL lessons. All in all, there is obvious evidence that changes concerning second language development do take place in CLIL lessons and what is more, they are of a positive nature.

2.2. The use of L1 (code-switching)

Having analysed all the lessons observed as well as the tests written by the CLIL learners there were quite significant changes concerning the percentage of Polish language used during the CLIL lessons. In the case of geography, it should be noted that about 30% of Polish was used in the beginning of the school year both in the written and spoken in interaction. The percentage did not change until January when it dropped to about 20%. In

April the percentage of Polish used during the lessons was lower – 15% and became stable until the end of the school year. In the case of biology, the situation was very similar. At the beginning of the school year, the percentage of Polish language used was about 50%. It dropped in January down to 40% and in April to 30%. In the case of mathematics the situation was a bit different. The percentage of Polish language used in September was 80%. It dropped to 70% in January and became stable until the end of June. As can be seen from the data provided, significant changes concerning the use of the Polish language during CLIL lessons could be observed. Both in the case of geography and biology the percentage of Polish used was dropping gradually which was due to the knowledge acquired by the CLIL learners. Throughout the whole school year the CLIL learners made a visible progress concerning second language development (part II, chapter VII, 2.1.) and as a result of that they did not need as much Polish as they used to at the beginning of the school year. The CLIL learners grew familiar with learning subjects in a foreign language and they were also overcoming the language barrier which they definitely possessed at the very beginning. While analysing the CLIL teachers' and the CLIL learners' responses to the questions prompted in the questionnaire concerning the use of L1 during the lessons (Appendix: parts 3 & 7), they all answered that there was a need to use Polish during the CLIL lessons in order to help define some new vocabulary items as well as to explain difficult concepts.

As far as different types of code-switching are concerned, it is worth mentioning that all types of code-switching were constantly noticed during the CLIL lessons observed as well as in the analysed tests. Changes mainly occurred within the lessons or the type of the test the CLIL learners were given. Sometimes there was more linguistic switch due to the need to explain difficult vocabulary both on the part of the CLIL teachers and the CLIL learners. In order to avoid misunderstandings the CLIL teachers explained some vocabulary items translating them into Polish. In different situations more topic switch was used due to the need to explain complex ideas both by the CLIL teachers and the CLIL learners. In the case of affective and socialising switch, the occurrence was rather on the part of the CLIL learners and also depended on the learning situation. The clarity switch was noticed during the whole school year. It diminished slightly due to the development of second language on the part of the CLIL learners (part II, chapter VII, 2.1.). This type of switch was connected

with repetition of the same message, and as the CLIL learners were acquiring more knowledge in a foreign language their need to repeat certain messages was decreasing.

Having observed the CLIL lessons as well as having analysed the CLIL learners' and the CLIL teachers' answers in the questionnaire concerning the use of L1 during the CLIL classes (part II, chapter VI, 9.) it should be agreed that in a CLIL classroom mother tongue should not be eliminated but used when needed. A mother tongue used in a CLIL classroom facilitates the learners' understanding and memorizing of new material, the CLIL lesson is also less stressful especially for weaker learners. Taking into consideration the CLIL teachers, it is also easier for them to explain some concepts and what is even more important, it is less time consuming.

3. Content aspects

In order to notice all the changes concerning content knowledge which took place throughout the whole school year the marks received from the tests as well as at the end of the 1st and 2nd semesters will be provided in tables. The marks are to be grouped according to the subjects.

Table 15. Marks received from the tests in geography.

Marks	November	January	February	April	June
Excellent (6.0)	No learners	No learners	No learners	No learners	No test
Very good (5.0)	7 learners	2 learners	3 learners	1 learner	No test
Plus good (4.5)	2 learners	5 learners	3 learners	1 learner	No test
Good (4.0)	10 learners	9 learners	9 learners	13 learners	No test
Plus satisfactory (3.5)	2 learners	6 learners	No learners	1 learner	No test
Satisfactory (3.0)	6 learners	4 learners	8 learners	5 learners	No test
Pass (2.0)	2 learners	2 learners	9 learners	10 learners	No test
Fail (1.0)	4 learners	5 learners	1 learner	2 learners	No test

Looking at the marks received by the CLIL learners in geography throughout the whole school year, it should be taken into consideration that all the marks were given according to criteria adopted by the CLIL geography teacher so they may be subjective. However, the researcher did not have any possibility to test CLIL learners knowledge and this is why the researcher had to analyse the marks given by the geography CLIL teacher. Having analysed the above given marks it can be seen that the marks received in April were worse than the marks received in November. Nobody received an excellent mark which was due to the fact that this mark is only given to learners who have written something outstanding. There were also fewer very good and plus good marks which does not have to be linked to the learners knowledge but to other factors such as the difficulty of the test or the topic itself, e.g. in January there were more very good marks than in November. As far as the good marks are concerned, it can be noticed that a lot of CLIL learners received them in November as well as in April. One considerable change which is worth paying attention to is connected with the pass mark – fewer CLIL learners received it in November than in

April. The pass mark is not considered to be a very positive mark. The reason why so many CLIL learners (10) received it in April may be due to the difficulty of the topic or the number of tests they had in April (April is a very difficult month because it is before the final secondary school examination, which lasts the whole May and many teachers give their learners various tests in order to have marks. (Sometimes the learners may have up to 8 tests once a week!).

All in all, having analysed the marks received throughout the whole school year in geography, it can be seen that some changes took place – the CLIL learners definitely had more knowledge but the level varied from very good to just satisfactory which was due to different factors.

Table 16. Marks received from the tests in biology.

Marks	November	January	February	April	June
Excellent (6.0)	No learners	No learners	No learners	No learners	No test
Very good (5.0)	5 learners	5 learners	12 learners	10 learners	No test
Plus good (4.5)	5 learners	1 learner	1 learner	6 learners	No test
Good (4.0)	4 learners	15 learners	6 learners	4 learners	No test
Plus satisfactory (3.5)	3 learners	2 learners	No learners	3 learners	No test
Satisfactory (3.0)	6 learners	10 learners	7 learners	5 learners	No test
Pass (2.0)	4 learners	1 learner	1 learner	5 learners	No test
Fail (1.0)	6 learners	No learners	6 learners	No learners	No test

Looking at the marks received by the CLIL learners in biology throughout the whole school year, it should be taken into consideration that all the marks were also given according to criteria adopted by the CLIL biology teacher so they may be subjective. However, the

researcher did not have any possibility to test CLIL learners knowledge and this is why the researcher had to analyse the marks given by the CLIL biology teacher.

As can be noticed, the situation in biology is different from that of geography. The changes concerning content aspects are visible from the marks. Gradually, the CLIL learners were receiving better marks. Nobody received an excellent mark which was due to the fact that this mark is only given in case of outstanding oral or written performance. In November 5 CLIL learners received a very good mark while in February and April 12 and 10 learners respectively. In the case of plus good mark, the situation was very similar – more CLIL learners received this mark in April than in November. Looking at this significant change, it can be said that the CLIL learners knowledge was better due to the quality of the marks received. Additionally, it should be also noticed that changes concerning satisfactory, pass and fail marks also occurred. Fewer CLIL learners received satisfactory and pass marks in April than in November. In the case of the fail mark, 6 CLIL learners received it in November and nobody in April. The above presented results suggest significant improvement as far as acquiring knowledge is concerned.

To sum up, having analysed all the marks received in biology throughout the whole school year, it can be noticed that positive changes occurred as far as content aspects are concerned. The marks received by the CLIL learners in April were much better than the ones received in November or January.

Table 17. Marks received from the tests in mathematics.

Marks	November	January	February	April	June
Excellent (6.0)	No learners				
Very good (5.0)	6 learners	1 learner	2 learners	1 learner	No learners
Plus good (4.5)	3 learners	2 learners	7 learners	5 learners	No learners
Good (4.0)	6 learners	7 learners	8 learners	8 learners	6 learners
Plus satisfactory (3.5)	4 learners	8 learners	2 learners	3 learners	3 learners
Satisfactory (3.0)	6 learners	3 learners	4 learners	6 learners	1 learner
Pass (2.0)	No learners	9 learners	9 learners	7 learners	15 learners
Fail (1.0)	5 learners	3 learners	No learners	2 learners	4 learners

Looking at the marks received by the CLIL learners in mathematics throughout the whole school year, it should be taken into consideration that all the marks were also given according to criteria adopted by the CLIL mathematics teacher so they may be subjective. As in the previous cases, the researcher did not have any possibility to test CLIL learners knowledge and this is why the researcher had to analyse the marks given by the CLIL mathematics teacher.

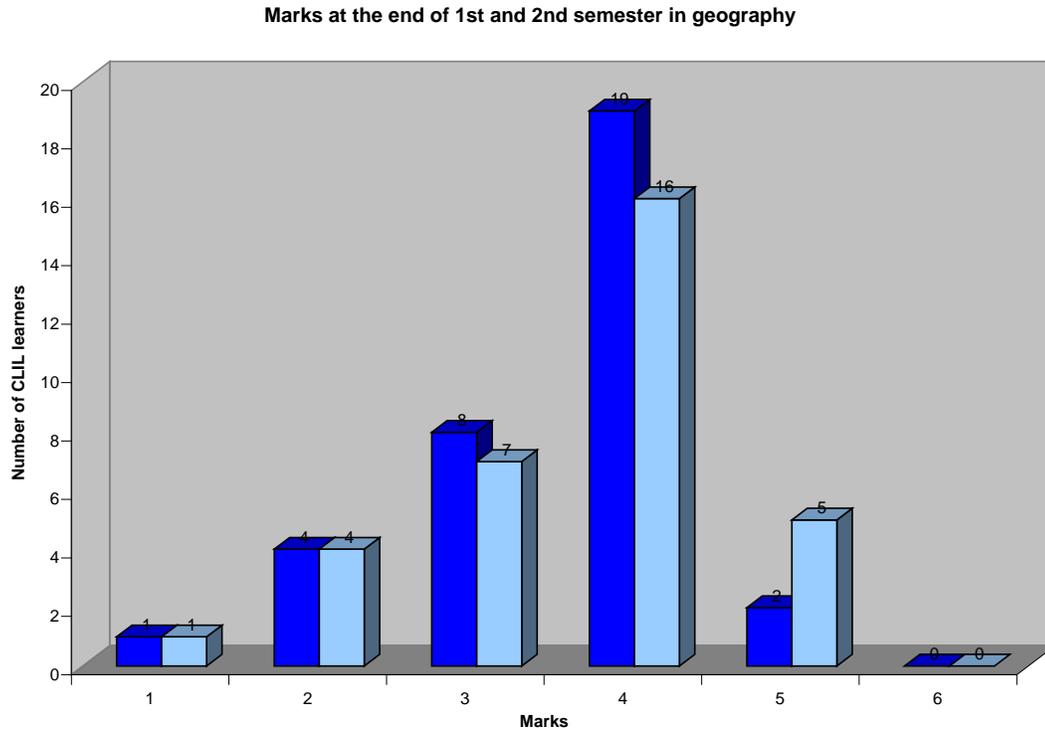
As can be noticed from the marks received in mathematics, there are not many changes which took place in the case of content aspects. Nobody received an excellent mark which was due to the fact that this mark is only given for outstanding oral or written performance as has already been mentioned. In November there were 6 CLIL learners who received a very good mark while in June there was nobody who received this mark. Having analysed the other months, the number of CLIL learners who received a very good mark was decreasing. In the case of plus good marks, the situation was very similar but in the case of good marks received by the CLIL learners the situation was rather stable – 8 CLIL learners

received good marks in November and the same number in June. In the case of plus satisfactory and satisfactory marks, the number of the CLIL learners who received these marks was decreasing while in the case of pass and fail marks the situation was completely different – more CLIL learners received these marks at the end of the school year than at the beginning. As it can be seen from the analysis provided above, the changes concerning content aspects were rather of negative nature. In general, the CLIL learners' marks were worse at the end of the school year than at the beginning of the school year. One of the explanations provided here could be linked to the difficulty of the subject itself. The CLIL learners were receiving worse marks because the material which they had to cover was becoming more difficult. The other explanation could be connected with the CLIL learners' interests – while observing the CLIL learners they did not seem to be very eager on mathematics, most of them found it quite difficult and sometimes even boring to learn.

All in all, some changes concerning mathematics could be noticed throughout the whole school year but they were not of a positive nature which was due to two factors: the difficulty of the subject itself and interests of the CLIL learners which were not particularly linked to mathematics.

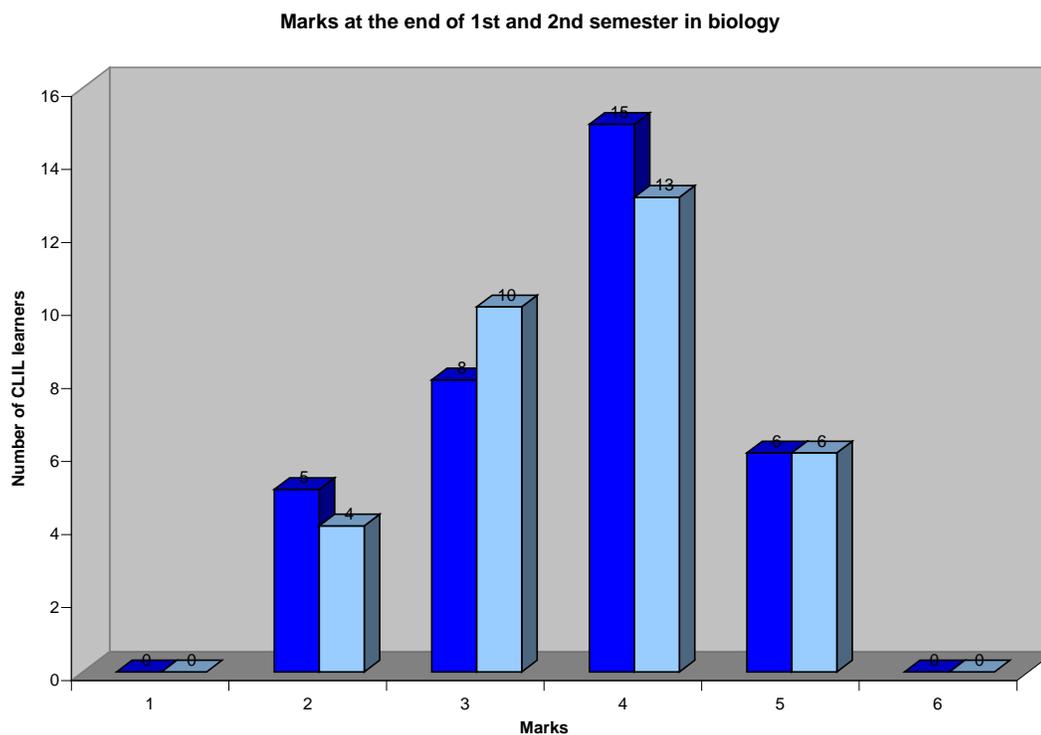
The graphs presented below show the marks received by the CLIL learners in geography, biology and mathematics at the end of the 1st and 2nd semester. In all cases, the CLIL learners receive their final semester mark on the basis of all the marks they receive throughout the whole semester or the whole school year (in case of the final school year mark). In other words, while giving the semester or the final mark, a CLIL teacher takes into consideration all the marks received from tests as well as oral performance. It should be also pointed out that marks such as plus satisfactory or plus good are not given at the end of the semester or the school year which is due to the school regulations. An excellent mark is only given in case of an outstanding performance.

Graph 7. Marks received at the end of the 1st and 2nd semester in geography.



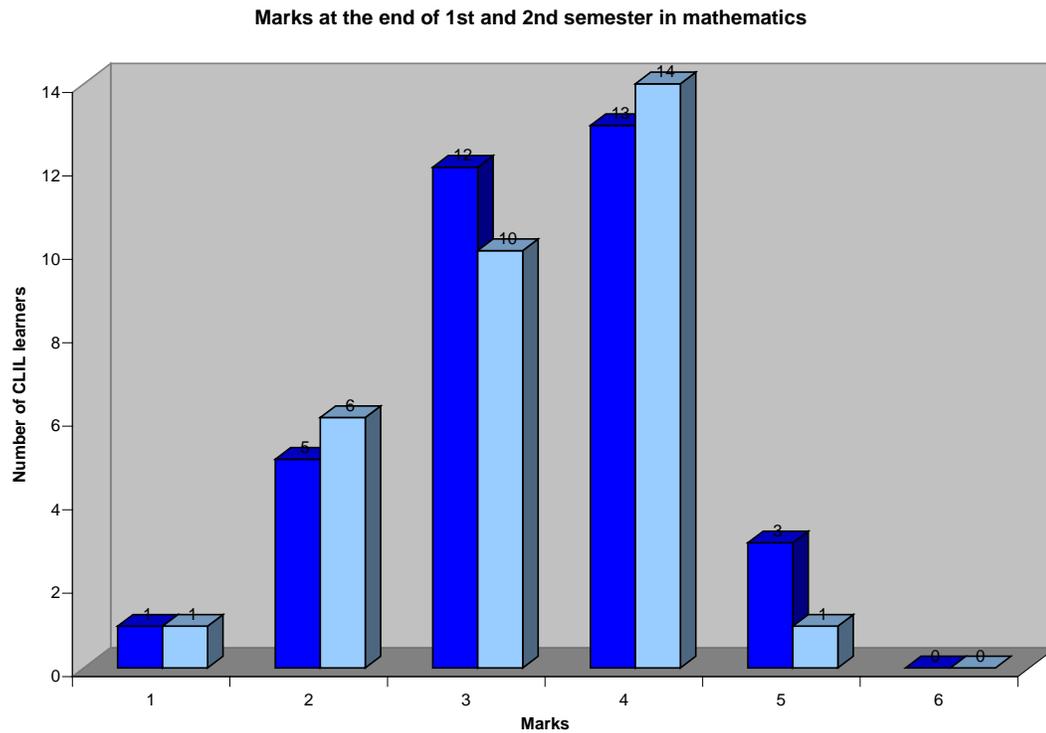
Comparing the marks received in geography at the end of the 1st semester to the marks received at the end of 2nd semester, only two significant changes can be noticed. Fewer CLIL learners (16) received a good mark at the end of 2nd semester than at the end of the 1st semester (19). In the case of a very good mark, the situation was different – there were more CLIL learners (6) who received a very good mark at the end of 2nd semester than at the end of the 1st semester (2). On the basis of the marks received by the CLIL learners at the end of the 1st and 2nd semester, it can be said that the changes concerning content aspects were of positive nature – the CLIL learners acquired more knowledge and also received better marks at the end of 2nd semester than at the end of the 1st semester.

Graph 8. Marks received at the end of the 1st and 2nd semester in biology.



Having analysed the marks received in biology at the end of the 1st and 2nd semester, it can be noticed that changes occurred only in the case of a pass, satisfactory and good mark. More CLIL learners (6) received a pass mark at the end of the 1st semester than at the end of 2nd semester (4). In the case of a satisfactory mark, there were more CLIL learners (10) who received it at the end of 2nd semester than at the end of the 1st semester (8). In the case of a good mark, there were more CLIL learners (16) who received it at the end of the 1st semester than at the end of 2nd semester (13). In the case of other marks, the situation did not change. As it can be seen from the data provided above, the changes concerning content aspects in biology which took place throughout the whole school year were not very significant. The CLIL learners' performance was rather at the same level throughout the whole school year.

Graph 9. Marks received at the end of the 1st and 2nd semester in mathematics.



As can be seen from the data provided, only a few changes concerning mathematics occurred throughout the whole school year. There were fewer CLIL learners (1) who received very good marks at the end of 2nd semester than at the end of the 1st semester (3). In the case of a good mark received, there were more CLIL learners (14) at the end of 2nd semester than at the end of the 1st semester (13). In the case of a satisfactory mark the number of CLIL learners who received this mark was higher (12) at the end of the 1st semester than at the end of 2nd semester (10). There was also a very slight difference when taking into consideration the pass mark: 5 CLIL learners received it at the end of the 1st semester and 6 CLIL learners received it at the end of 2nd semester. Comparing all the marks received at the end of the 1st and 2nd semester in mathematics, it can be said there were not many changes visible. The level of the CLIL learners as far as mathematics is concerned was rather stable with some slight differences in marks received at the end of the 1st and 2nd semester.

Summarising, the changes concerning content aspects were very difficult to measure. The only possibility was to present and analyse the marks which the CLIL learners received throughout the whole school year. On the basis of the marks received, it can be noticed that there were only slight changes which occurred throughout the whole school year. The CLIL learners acquired more knowledge in geography, biology and mathematics due to the fact that they were receiving positive marks. If they hadn't acquired any knowledge they would have failed the tests. All the marks apart from the fail one were of a positive nature and more than 90% of CLIL learners were receiving them throughout the whole school year. To conclude, it can be said, that the changes concerning marks were not visible but the changes concerning the CLIL learners' knowledge were visible through the marks – hardly any CLIL learner failed the tests which meant that some knowledge must have been acquired. If so many CLIL learners had passed their tests and had been allowed to start their 2nd grade, learning geography, biology and mathematics through English must have had a positive impact on them.

4. Learning environment aspects

In the following part changes concerning learning environment will be presented and discussed. Firstly, changes concerning interaction between the CLIL teachers and the CLIL learners as well as the CLIL learners themselves will be discussed, then changes connected with the methodological approach of the CLIL teachers, materials used and different methods of evaluation. Finally, changes concerning classroom setting will be discussed.

4.1. Classroom interaction

Having observed the classes and having paid special attention to interaction, it can be said that as far as different types of interaction are concerned there were only small changes noticed. All types of interaction were present during the CLIL lessons observed: type 1 when a teacher controls neither the topic nor the activity. This type of interaction was more often observed during the CLIL geography lesson due to the fact that the teacher was responsible for that particular class and there were often a lot of additional topics occurring

such as a trip or performance etc. This type of interaction was also more often noticed at the end of the semesters when the CLIL learners wanted to discuss some matters concerning their marks. Type 2, namely controlling the topic but not the activity occurred during all CLIL lessons observed. One particular change noticed was connected with the frequency of this type occurring throughout the school year. This type of interaction was diminishing due to the fact that the CLIL learners got used to certain CLIL teachers' instructions and at the end of the school year they knew what to do and did not need a lot of instructions. There were no changes observed concerning type 3 when a teacher controls both the topic and the activity. This type of interaction was the one which occurred most often throughout the whole school year. Type 4 - controlling the activity but not the topic was especially observed at the beginning of the school year (in September and in November) when the CLIL learners could not settle in the new circumstances and often ended up talking in groups about something completely different. This situation could have been also caused by lack of vocabulary or misunderstanding. A significant change was noticed at the beginning of 2nd semester as well as in other months following February, namely this type of interaction was not as often present as at the beginning of the school year. The CLIL learners had more knowledge in English concerning particular topics and therefore there was less need to change the topic while working in groups or pairs. One very significant change should be also paid attention to, namely the frequency of interaction between the CLIL teachers and the CLIL learners. In the 1st semester there was much more interaction going on between the CLIL learners themselves than between the CLIL learners and the CLIL teachers. What is more, this interaction between the CLIL learners was usually in Polish and it was not connected with the topic of the lesson. Within time, it was noticed that the CLIL learners started cooperating more with other CLIL learners and also with the CLIL teachers in English, which was probably due to the fact that they started feeling more confident and had fewer problems with communicating in a foreign language. Taking into consideration the functions of interactions mentioned, there was only a slight change noticed. In most cases, the functions of interactions between the CLIL learners and the CLIL teachers were ideational (telling about the facts or experiences) or textual (signaling boundaries, clarifying, summarizing and revising). Within time (around January) it was noticed, that the interpersonal function of the interaction between the CLIL learners and the

CLIL teachers was occurring more often. The CLIL learners were feeling more comfortably in a new environment and they were trying to work on their relationship with the CLIL teachers, which was very positive. One more change concerning interaction should be pointed out, namely, it was noticed that at the beginning of the school year, interaction type 2 usually took place during the lessons of mathematics. In many cases the CLIL mathematics teacher controlled the topic but did not control the activities going on. A lot of the CLIL learners seemed to have lost concentration and as a result they were working on their interpersonal interactions in Polish with other CLIL learners. This situation was caused by lack of understanding and the difficulty of the subject itself. However, gradually, the situation changed. Throughout the whole school year all types of interaction occurred during mathematics, especially type 3 when the CLIL mathematics teacher controlled both the topic and the activity. This change was also caused by the fact that the CLIL learners were acquiring more knowledge about mathematics in English and were becoming more interested in it.

To sum up, at the beginning of the school year CLIL could have had a negative impact on CLIL learners interaction in a foreign language with the CLIL teachers and also other CLIL learners which was probably due to the lack of vocabulary, self-confidence and misunderstanding. However, throughout the whole school year, the situation was changing gradually and changes concerning interaction were visible. At the end of the school year, it could be seen that all types of interaction as well as all the functions of interaction were noticed during the CLIL classes.

4.2. The teacher's methodological approach

Geography

There were not many changes noticed concerning the CLIL geography teacher's methodological approach. From the very beginning the CLIL geography teacher tried to adopt the learner-centred approach which meant that the CLIL geography teacher tried to concentrate on the CLIL learners' performance during the lessons. At the beginning of the school year, the CLIL geography teacher used a teacher-centred approach from time to time by providing the CLIL learners with some short (up to 10 minutes) lectures. The purpose of

these lectures was to introduce some geographical concepts that the CLIL learners were not familiar with. Throughout the school year, the CLIL geography teacher was concentrating more on communication by introducing pair or group work, providing the CLIL learners with comprehensible input (e.g. documentaries) or projects which required active participation on the part of the CLIL learners.

All in all, throughout the whole school year, the CLIL geography lessons were becoming slightly more learner-oriented which had a positive impact on language development as well as on content and language integration.

Biology

Most of the biology CLIL lessons were both teacher- and learner-centred. At the beginning of the school year the lessons were more teacher-centred due to the fact that the CLIL learners did not have a lot of input. However, throughout the whole school year, the teacher-centred approach shifted gradually into learner-centred approach. The CLIL biology teacher started introducing more communicative exercises. The CLIL learners were asked to work in pairs or groups. They were also stimulated to take part in various discussions such as: the role of water in our organism, functions of excretory or circulation system which required communication and active participation. However, it should be mentioned that the CLIL biology teacher did not withdraw from providing the CLIL learners with lectures but rather slightly decreased the time spent on giving lectures from 20 minutes to 15 minutes.

To sum up, by gradual introduction of communicative exercises throughout the whole school year, the CLIL biology teacher tried to integrate content and language which was visible in CLIL learners' performance during the CLIL biology lessons.

Mathematics

In the case of mathematics, the only change which was noticed concerning the methods of teaching was connected with the language and not with the approach, which was mostly teacher-centred. At the beginning of the school year, while talking about the theory, the CLIL mathematics teacher was mainly giving lectures in English which he then translated into Polish. At the end of the school year, the CLIL mathematics teacher avoided

translating the whole lecture but instead he provided the CLIL learners with some vocabulary. The reason why the CLIL mathematics teacher was using translation could be connected with the lack of knowledge on the part of the CLIL learners as well as with the difficulty of the subject itself. While concentrating on practising certain formulas, the CLIL mathematics teacher as well as the CLIL learners mainly used Polish in the 1st semester and more and more English in 2nd semester. That was the only change which was noticed. The methods of teaching did not change throughout the whole school year. Content and language integration was only based on translation which was not very successful.

To conclude, the most significant change concerning methods of teaching was observed during the CLIL geography and biology lessons where the approach from teacher-centred gradually shifted into learner-centred. This change had an impact on integrating content and language. By introducing communicative exercises, the CLIL learners had an opportunity to memorize content and also develop their language skills. No changes, apart from the language shift occurred during mathematics.

4.3. Learner's evaluation

As far as methods of learners' evaluation are concerned there were no changes noticed throughout the whole school year. All the CLIL teachers were using the same methods of evaluation. The methods of evaluation are going to be briefly discussed here.

Geography

The CLIL geography teacher administered tests which were partly in English and partly in Polish. The descriptive part was in English and vocabulary was done in Polish (translation). While assessing the learners' written work the CLIL geography teacher did not pay attention to language errors made by the CLIL learners. In my opinion, this strategy was not very good as content and language should be treated equally and the CLIL learners who do not make any language errors should be awarded. In the case of the oral evaluation, the CLIL learners were given 5 questions and they could choose between answering in English or in Polish. If answering in Polish they were given a lower mark. This methods was very

effective as it was motivating for the CLIL learners and what is more, both content and language was evaluated. One more thing which is worth mentioning here is the system of pluses. The CLIL learners received a plus in case of active participation during the lesson. Through collecting five pluses they could receive a very good mark. This system of evaluation was very effective and it stimulated the CLIL learners to take active participation in the lessons.

Biology

The CLIL biology teacher was also administering tests throughout the whole school year but the tests were only in English. There were only few descriptive questions and a lot of multiple choice and gap-filling exercises. While assessing the CLIL learners' written work, the CLIL biology teacher also did not pay attention to language errors. The most important was content and this is what the CLIL learners got marks for. As mentioned in the paragraph above, this method of evaluation was not very efficient due to the fact that it was mainly content which was paid attention to and not language. During the oral evaluation, the CLIL learners were also given questions to answer. They were usually given five or six questions depending on the difficulty. The CLIL learners also had a choice between answering in English or in Polish. When answering in Polish they were given a lower mark. This system of oral evaluation as in the case of geography was very good due to the fact that both content and language was evaluated and what is more, the CLIL learners were more motivated to learn content in a foreign language. Additionally, the CLIL learners were given projects which they were asked to work on in groups, e.g. they were asked to build a model of a cell (all techniques were allowed). Then the CLIL learners were asked to present their projects and on the basis of their presentation they were evaluated. Projects had a very good impact on content and language as they facilitated learning and what is more, stimulated cooperation.

Mathematics

There were also tests administered in mathematics as one of the methods of evaluation but unfortunately, most of the tests were administered in Polish. The most important was content. During the oral evaluation, the CLIL learners were asked to solve some

mathematical formulas and it was not important whether they did it in Polish or in English – no credit was given for language and no attention was paid to language errors made by the CLIL learners. Both of the above mentioned methods of evaluation were not very effective due to the fact that no language was taken into consideration.

To conclude, the oral methods of evaluation used by the CLIL geography and CLIL biology teachers were effective because both content and language was paid attention to. In the case of written evaluation more attention should be paid to language. In the case of mathematics, evaluation was not effective due to the fact that it was done in Polish.

4.4. Teaching materials

As far as teaching materials are concerned both the CLIL geography teacher and the CLIL biology teacher were spending a lot of time on preparing communicative exercises however no particular changes were noticed.

Geography

The CLIL geography teacher did not have an English course book that could be used in the classroom and therefore she had to spend a lot of time inventing the materials. Throughout the whole school year, the CLIL learners were provided with handouts where special vocabulary concerned the particular topic of the lesson. Additionally, the CLIL geography teacher used a lot of visual materials such as films, pictures, maps and postcards in order to facilitate learning.

Biology

During the biology CLIL lesson, the CLIL learners were provided with American course books but they were only used during the lessons. Additionally, the CLIL learners had their own Polish course book which they could use at home. What is more, the CLIL biology teacher used many real objects, e.g. a skeleton or cells which the CLIL learners could observe through a microscope. All these real objects help learners in memorizing difficult vocabulary. The CLIL biology teacher was also using OHP and documentaries which the

CLIL learners watched either in Polish or in English. Apart from that the CLIL learners were provided with many handouts with various exercises prepared by the CLIL biology teacher.

Mathematics

In the case of mathematics, the only book that the CLIL learners worked with was a “A set of mathematical tasks” which was in Polish. From time to time the CLIL learners were provided with additional handouts in English prepared by the CLIL mathematics teacher. No visual aids were used throughout the whole school year.

To conclude, all the lessons prepared by the CLIL geography and CLIL biology teacher were very creative and consisted of various materials the aim of which was to integrate content and language. Mathematics turned out to be problematic due to the fact that most of the tasks were done on the basis of one book which was in Polish. Hardly any additional materials were prepared.

4.5. Classroom setting

There were no changes concerning classroom setting noticed during the school year apart from the one connected with the classroom-newsletter which was changed in accordance with various celebrations. In all the classrooms, the tables were arranged in rows which could have had some impact on the CLIL learners. Due to this arrangement of the tables, it was very difficult to introduce some communicative exercises requiring group work. At this point, it should be pointed out that such exercises may have a very good influence on content and language. The CLIL learners could work more often in groups which could facilitate learning. All the classrooms had a TV set and a video or DVD which could be used during the lessons. The real objects which could stimulate learning were usually present in other rooms and were just brought to the classrooms when needed. All the classrooms were quite small and as a result in many cases windows had to be opened. The incoming noise from the street (the school was situated in the centre of the city) sometimes disturbed the CLIL learners.

5. Attitudinal aspects and motivation

In the following part changes concerning attitude towards bilingual education will be presented. The data was analysed on the basis of 3 questionnaires conducted among the CLIL learners at the beginning of the school year, in the middle and at the end of the school year (Appendix: part 2). One questionnaire concerning attitude towards bilingual education was conducted among the CLIL teachers at the end of the school year (Appendix: part 6). Additionally, data concerning motivation and attitude towards the use of L1 will be discussed. Questionnaires concerning motivation and the use of L1 were also conducted at the end of the school year among the CLIL learners and among the CLIL teachers (Appendix: parts 3, 4, 7 & 8).

5.1. Attitudinal aspects

As far as changes of attitude towards bilingual education are concerned at the beginning of the school year the CLIL learners enumerated a lot of positive aspects about their future career such as the possibility to study and also work abroad. Additionally, they also mentioned a possibility to travel a lot and take part in some trips (the CLIL classes usually go abroad once a year). When asked the same question in the middle of the school year, a lot of CLIL learners enumerated other advantages connected with the language. They noticed that the CLIL lessons give them an opportunity to develop their language skills such as speaking, writing, listening or reading. A lot of them mentioned the fact that CLIL classes helped them in getting rid of a language barrier. At the end of the school year, the CLIL learners also enumerated the advantages concerned with language. They noticed that their knowledge of specialized vocabulary definitely increased and as a result they could start thinking about taking part in some language competitions or about taking a bilingual final secondary school examination. As far as disadvantages of bilingual education are concerned, the CLIL learners' attitude also slightly changed. At the beginning of the school year, the only disadvantages of bilingual education which the CLIL learners noticed were connected with the difficulty of understanding, especially mathematics. They also did not

like the idea that no proper course books were available in English. In the middle of the school year, when enumerating the disadvantages of bilingual education, the CLIL learners mentioned the difficulty of studying in a foreign language. A lot of them noticed that they had to learn a lot of new vocabulary which was time-consuming. They also noticed that there was no special programme preparing them for the final secondary school examination and as a result they had to cover material which is covered by classes which are not CLIL classes. At the end of the school year any disadvantage was connected with the extensive use of Polish by some of the CLIL teachers. Additionally, the CLIL learners noticed that not enough time was spent on language aspects, e.g. pronunciation.

To sum up, at the beginning of the school year, a lot of CLIL learners had no idea of what to expect. When starting their bilingual education, they were thinking about their future prospects and the only problem which occurred was connected with the difficulty of understanding some concepts in mathematics. Gradually, their attitude was changing. In the middle of the school year they noticed the advantages connected with their language development and also the disadvantages connected with hard work. At the end of the school year, the CLIL learners got used to learning subjects in English and they started thinking about some competitions in English. They started being aware of the tool that they possessed due to CLIL classes. They also started noticing disadvantages connected with curriculum and the materials used.

In the case of the CLIL teachers, their attitude was not changing due to the fact that they had been working in bilingual education for a few years. When talking about advantages they also enumerated the importance of second language development, a lot of possibilities for learners as well as for the teachers. The disadvantages enumerated were mainly connected with lack of proper materials, lack of proper curriculum and the amount of time spent on preparing materials.

5.2. Motivation

It is very difficult to discuss changes in motivation as only one questionnaire concerning motivation was conducted among the CLIL learners and the CLIL teachers at the end of the school year (Appendix: parts 4 & 8).

Having analysed all the answers provided by the CLIL learners, it was noticed that most of the CLIL learners were extrinsically motivated. However, taking into consideration the CLIL learners answers provided in the questionnaires concerning attitude, they were also intrinsically motivated due to the fact that they could notice how much influence the CLIL classes had on their second language development. In my opinion, at that stage of their bilingual education it was not important how they were motivated but it was important that they were still motivated to learn a subject in a foreign language. As has been mentioned previously, they were all willing to continue their bilingual education. As soon as they grow older and have more experience with bilingual education they will start noticing factors which are intrinsically motivating. This change will take place within a few years. The changes which can be observed concerning the CLIL teachers are rather negative. From the questionnaire conducted among the CLIL teachers as well as from the interview, the CLIL teachers are rather de-motivated due to the fact that they cannot observe any changes in curriculum development, teacher cooperation, organisation of training, teaching materials development and also pay rise. Unless some changes are introduced in these aspects, the CLIL teachers motivation concerning bilingual education may slowly decrease within the next few years.

Having discussed the changes concerning language aspects, content aspects, learning aspects as well as attitudinal aspects and motivation which were distinguished on the basis of the data collected through observations, questionnaires and an interview with the CLIL teachers, final remarks and further recommendations are going to be presented in the next chapter.

VIII. Final conclusions

The major aim of this work has been to explore Content and Language Integrated Learning (CLIL) in secondary education and to evaluate its effectiveness by looking at the changes in language education which took place in a CLIL classroom throughout the whole school year. In particular, it has been attempted to analyse the changes according to the following categories: language aspects, content aspects, learning environment as well as attitudinal aspects and motivation. In order to accomplish these goals, one CLIL class and three CLIL teachers were investigated with a eye to determining the changes concerning the above mentioned categories. Since it was the intention of the author to describe process variables as they naturally operate in the CLIL classroom as well as to get a comprehensive picture of the phenomena under investigation, a non-interventionist approach in the form of a descriptive study was adopted with different instruments of data collection.

The qualitative as well as quantitative presentation of the available data presented in part II, chapters VI and VII demonstrated the changes in language education which were taking place in a CLIL classroom throughout the whole school year. The analysis of the changes in language education observed during the whole school year allows the researcher to draw the following conclusions:

1. **Second language Development:** A considerable change was noticed in the case of speaking as well as listening skills development. Most of the CLIL learners gradually were getting rid of their language barrier and what is more, they were more willing to take part in various discussions and also express their mind. This change was also due to the lexical development. The CLIL learners were acquiring more vocabulary due to the CLIL lessons. As far as writing and reading skills are concerned, some changes were noticed, especially when analysing the CLIL learners' register and comprehension.
2. **The use of L1 (code-switching):** It was also noticed that there was a significant change concerning the use of L1 during the CLIL classes both on the part of the CLIL learners and the CLIL teachers. The use of L1 during the CLIL lessons was diminishing especially in the case of geography and biology which was mainly due

to the fact that the CLIL learners were gaining more content and language knowledge which made them feel more confident in a foreign language. When the CLIL teachers noticed that the CLIL learners understood more, they also tried to avoid code-switching.

3. **Content aspects:** The marks received by the CLIL learners throughout the whole school year as well as at the end of the 1st and 2nd semester revealed that there were some changes concerning content aspects. Even though a lot of CLIL learners did not receive very good or plus good marks, they received good or satisfactory marks which suggested having mastered the content quite well in a foreign language.
4. **Interaction:** As far as interaction in concerned, a few very important changes were noticed. Firstly, gradually there was more interaction taking place between the CLIL teachers and the CLIL learners because the CLIL learners were getting rid of the language barrier mentioned above and what is more, they were getting used to the new environment. Secondly, there was more interpersonal interaction going on between the CLIL learners and the CLIL teachers in English – the CLIL learners were trying to get friendly with the CLIL teachers. Finally, more interaction was being observed between the CLIL learners. Gradually, they started completing all the group or pair work tasks and what is even more important, they started doing it in English.
5. **Teacher's methodological approach:** The most significant change concerning methodological approach is connected with the shift from teacher-centred to learner-centred approach which was visible during the CLIL geography and biology lessons. This shift had a very good influence on the CLIL learners as they got more interested in the lessons and more willing to take part in them. Additionally, it was much easier for the CLIL teachers to integrate content and language by providing the CLIL learners with more communicative exercises.
6. **Learner's evaluation:** No particular changes concerning learner's evaluation were noticed. However, it should be mentioned that the oral evaluation adopted by the CLIL teachers was very effective in a CLIL classroom. By providing the CLIL learners with a possibility to choose between answering in Polish or in English, the CLIL learners felt independent and responsible content and language learners.

Additionally, an opportunity to receive higher marks when answering in English was a very good motivating factor for the CLIL learners.

7. **Teaching materials:** Both the CLIL geography and the CLIL biology teachers were spending a lot of time on preparing their teaching materials which are extremely important, especially in a CLIL classroom. While preparing the materials, the CLIL teachers were trying to concentrate both on content and language which made learning much easier for the CLIL learners. All the materials were carefully examined by the researcher.
8. **Classroom setting:** The classrooms were not very big but they were all equipped with a TV set, video or DVD and various authentic materials which were necessary in a CLIL classroom and could be used during the CLIL lessons.
9. **Attitude:** Attitude towards bilingual education turns out to be very important in a CLIL classroom as it may help in learning the subjects in a foreign language. On the basis of the questionnaire some changes were noticed which were of a very positive nature, e.g. at the beginning of the school year, the CLIL learners mainly noticed the advantages connected with their future career while at the end of the school year they were fully aware of their language abilities. At this point, it may be said, that CLIL had a positive influence on the CLIL learners' attitude which changed from a "materialistic" one to a more "personal" one.
10. **Motivation:** Following the attitudinal aspects, it can be also said that being in a CLIL classroom had a positive influence on the CLIL learners' motivation which was also noticed on the basis of the answers provided in the questionnaire. The CLIL learners seemed to have shifted from the extrinsic one at the beginning of the school year to the intrinsic one at the end of the school year.

Having provided the brief conclusions above, it can be said that the observed changes in language education which took place in the CLIL classroom throughout the whole school year had a positive influence on the CLIL learners and therefore, it can be stated that teaching subjects using the "CLIL method" can be very efficient. One should ask oneself

the question: “What makes the CLIL method efficient?”. A few factors could have influenced its effectiveness:

- **The ability to explore content deeply** which comes from the fact that the CLIL learners had to spend more time on “digesting” all the information. According to Craik and Lockhart (1972: 671-684), the deeper the content is explored the more it is remembered. The observed CLIL learners were spending a lot of time on learning geographical, biological and mathematical concepts often in both languages.
- **Cohesion of the topics** – when the topics of particular subjects are related to each other there is a higher possibility that the CLIL learners will better remember the language forms through which particular concepts are expressed.
- **Organisation of data** – all the concepts were organised according to particular topics which facilitated learning.
- **Learner Autonomy** – the more autonomy the CLIL learners have the more motivated they would feel. It was particularly noticed when the CLIL learners were asked to work on their own projects (e.g. biology).
- **Productivity** – according to Swain and Lapkin (1995: 371-391) language productivity is very important because apart from the content that the CLIL learners have to “digest” they also have to think how to say it in a foreign language. It definitely had an influence on second language development.
- **Regularity** – being exposed to a foreign language through CLIL classes a few times a week has a huge influence on second language development. Improvement in all foreign language skills as well as decrease in the use of L1 during the CLIL lessons was a visible outcome of the CLIL classes.

The results of the analysis of different changes in language education taking part in a CLIL classroom during the lessons observed as well as the results of the study carried out in other bilingual schools (Part I, chapter I, 5.) have significant implications for bilingual education in Poland and make it possible to make further recommendations. However, it is very important to keep in mind that the CLIL classroom practices and educational policy choices presented below are not necessarily generalizable to all CLIL teaching contexts in Europe and therefore, should be viewed as suggestions to be taken rather than as definitive

solutions. The following recommendations will be divided into three parts: classroom practice, school practice and educational system:

1. **Classroom practice:**

- As far as the choice of the teaching method is concerned, the CLIL teacher should aim at a combination of content and language focused instruction, which would enable the CLIL learners to use language for genuine communication as well as to attain a high level of content accuracy;
- The quality of the CLIL learners' output may also be significantly improved when they have sufficient time to plan and enough tangible stimuli;
- The CLIL learners' motivation can be enhanced further by getting them more involved in the process of the lesson, e.g. providing them with some project work;
- The CLIL teachers should be careful not to take up most of the available speaking time with their explanations or instructions so the CLIL learners will have an opportunity to have more practice in their target language;
- Since the CLIL learners are bound to fall upon their mother tongue to a greater or lesser extent when encountering problems they should be provided with frequent opportunities to work on information exchange closed tasks which may help them in expressing their thoughts;
- The CLIL teachers should also use the mother tongue only when they find it necessary;
- The CLIL learners should be provided with corrective feedback on the deviant forms in their language production in order to be able to understand their errors;
- The CLIL learners should be also encouraged to develop critical thinking as well as to reflect upon and evaluate progress in meeting outcomes (e.g. introduction of Language Portfolio);
- The CLIL learners should have a lot of possibilities to use their content and language knowledge outside the classroom;

2. **School practice:**

- Each school should be able to state as well as to implement objectives of bilingual education into its curriculum;
- There should be a partnership formed between CLIL teachers and schools with bilingual streams;
- All the CLIL teachers should be able to join professional networks connected with bilingual education which could help them with exchanging ideas with other CLIL teachers from all over the world;
- The CLIL teachers should be provided with opportunities to develop their second language proficiency in all skills;
- The teachers should be encouraged to use the European Language Portfolio and also work with the Common European Framework of References for Languages (at the moment a special Common European Framework of References for CLIL is being established in Italy) (Barbero, T., Damascelli, A.D. & Vottoz, M.B., unpublished materials from CLIL Fusion Conference 2008, Tallinn);

3. **Educational system:**

- A new curriculum should be offered for *Matura* (Polish Secondary final examination) which could be taken in English;
- The teachers as well as the learners should be provided with some preparation materials for *Matura* in English as well as with mock exams;
- Special teaching resources should be provided which could be used by all teachers in order to achieve standardization (Hamp, 1996: 240);
- The CLIL teachers should be provided with opportunities to take part in teacher training devoted to bilingual education;
- The CLIL teachers should be provided with opportunities to take part in meetings where they could share their experience, get access to materials or work on curriculum development;
- The higher education institutes should be persuaded to take into account secondary level bilingual streams during student application process;

- Cooperation between schools and higher education should be established and supported;

It is the author's hope that the above outlined principles will make CLIL lessons more conducive to integration of content and language as well as enhance the quality of bilingual education in Poland. These guidelines appear to be particularly valuable at a time when Content and Language Integrated Learning is becoming more popular all over the world.

Suggestions for further research

The most important issue that seems to warrant further investigation is to discover **whether** there are any differences between the learners who study subjects in Polish and the CLIL learners. If there are any, it would be interesting to study these differences paying special attention to content aspects.

The empirical part of this study could not provide answers to this question due to the fact that the researcher did not have a possibility to observe a group of learners who were not in a bilingual class and therefore could not compare the two groups. The main aim of this study was to provide a description of the changes in language education taking place in a CLIL classroom throughout the whole school year.

The question relating to differences between the learners who study subjects in Polish and the CLIL learners is likely to be best answered through video-taping and observing the two groups separately during the chosen subjects as well as comparing them. Additionally, interviews and questionnaires could be conducted among the two groups of learners.

Another suggestion for further research would be to limit the number of subjects in the study (e.g. geography or biology only) in order to allow a more thorough analysis to be conducted.

Another option is to conduct the lesson observation with a limited number of categories to be paid attention to (e.g. concentration on code-switching or interaction only). This

modified approach would allow the researcher to concentrate more thoroughly on particular aspects and also make appropriate comparisons between the two groups observed. The present study allowed the researcher only to note general tendencies according to many categories concentrating on one observed group only.

For the study above, it would be also advisable to conduct observations followed by an interview with a CLIL teacher. Lesson observation followed by an interview would allow the researcher to obtain two perspectives: one from the researcher and the other from the teacher, which would make presentation of the results obtained more appropriate and interesting.

Most beneficial to our understanding of the differences between the learners who do not learn subjects through a foreign language and the CLIL learners would be to conduct the above suggested study as a longitudinal study lasting three years (the whole period of secondary education). The research tools would consist of regular video-taping, observations and interviews with the learners and the teachers. Longitudinal and qualitative studies have found their own place in second language education in recent years and seem to provide a source of valid information.

APPENDIX

The appendix consists of different research tools which were used during the main study and the pilot studies: observation sheets, questionnaires and criteria of subjects' evaluation. Questionnaires which consist of open-ended questions were distributed among the CLIL learners in Polish, however, in the following pages they are provided both in Polish and in English.

Part 1: Observation sheets – learner and teacher

Part 2: A questionnaire – attitude towards bilingual education – learner (September 2006 – June 2007, English and Polish version)

Part 3: A questionnaire – the use of L1 (learner)

Part 4: A questionnaire – motivation – learner (English and Polish version)

Part 5: A questionnaire – second language development – learner (English and Polish version)

Part 6: A questionnaire – attitude towards bilingual education – teacher (English and Polish version)

Part 7: A questionnaire – the use of L1 (teacher)

Part 8: A questionnaire – motivation – teacher (English and Polish version)

Part 9: A questionnaire – attitude towards subjects taught in English – learner – pilot study (English and Polish version)

Part 10: Criteria of subjects' evaluation

PART 1
OBSERVATION SHEET
(learner)

Subject:.....

Date:.....

Teacher:.....

The number of learners.....

Classroom setting:.....

THE STAGE OF THE LESSON	THE DEVELOPMENT OF TARGET LANGUAGE ABILITIES	THE DEVELOPMENT OF GRAMMAR, VOCABULARY AND PRONUNCIATION	THE USE OF L1	CONTENT MANAGEMENT	LANGUAGE DIFFICULTIES	PROBLEMS AND MY OWN COMMENTS

OBSERVATION SHEET
(teacher)

Subject:.....

Date:.....

Teacher:.....

The number of learners:.....

Classroom setting:.....

THE STAGE OF THE LESSON	THE METHODS OF TEACHING	INTERACTION T-L/L-T/L-L	THE USE OF L1	ERROR CORRECTION	EVALUATION	TEACHING MATERIALS	PROBLEMS AND MY OWN COMMENTS

PART 3
A questionnaire – THE USE OF L1
(learner)

This questionnaire forms part of the research study for my PhD. I would appreciate it very much if you would be kind enough to help me by filling in the answers to the questions. Please note that there are no right or wrong answers – I am interested in obtaining your opinions. Replies to the questionnaire are anonymous.

If you are interested in the results of the study, please feel free to contact me at: kasiapapaja@interia.pl

Fill in the questionnaire, please.

1. Should Polish be used in the class where subjects are taught in English?

Yes

No

2. Do you like your teacher to use Polish in the class where subjects are taught in English?

Not at all

a little

sometimes

a lot

3. When do you think it is necessary to use Polish in the class where subjects are taught in English? (more than one answer possible)

a). to help define some new vocabulary items (e.g. some abstract words);

b). to practise the use of some phrases and expressions (e.g. doing translation exercises);

c). to explain complex grammar points;

d). to explain difficult concepts or ideas;

e). to give instructions;

f). to give suggestions on how to learn more effectively;

g). other, please specify;

4. Why do you think the use of Polish is necessary in the class where subjects are taught in English? (more answers are possible)

- a). it helps me to understand difficult concepts better;
- b). it helps me to understand new vocabulary items better;
- c). it makes me feel at ease, comfortable and less stressed;
- d). I don't feel lost;
- e). other, please, specify;

5. Do you think the use of Polish in the bilingual class helps you learn the subject?

No a little a lot

6. How often do you think Polish should be used in a class where subjects are taught in English?

Never very rarely sometimes fairly frequently

7. What percentage of the time do you think Polish should be used in a class where subjects are taught in English? Choose ONE answer ONLY.

5% 10% 20% 30% 40%
50% 60% 70% 80% 90%

Thank you for your cooperation😊

PART 4
A questionnaire - MOTIVATION
(learner)
(POLISH VERSION)

Proszę o udzielenie odpowiedzi na poniższe pytania.

Poniższy kwestionariusz jest częścią pracy doktorskiej. Byłabym dożgonnie wdzięczna za udzielenie odpowiedzi podane pytanie. Wszystkie odpowiedzi są anonimowe i będą tylko wykorzystane w pracy naukowej

Jeżeli są Państwo zainteresowani wynikami badanie, to bardzo proszę o kontakt drogą elektroniczną na następujący adres: kasiapapaja@interia.pl

Proszę o udzielenie odpowiedzi na poniższe pytania.

1. Kto zdecydował o podjęciu Twojej nauki w klasie dwujęzycznej?

- Rodzice
- Znajomi
- Sam / -a zdecydowałem / -am
- Inne...

2. Dlaczego zdecydowałeś / -aś podjąć naukę w klasie dwujęzycznej?

- Chciałem / -am nauczyć się angielskiego i poznać kulturę anglosaską
- Byłem / -am pewny / - a, że edukacja w klasie dwujęzycznej stworzy mi więcej możliwości w życiu zawodowym
- Inne powody...

3. Czy jesteś zadowolony / -am z uczenia się przedmiotów w obcym języku?

TAK NIE

Dlaczego? Uzasadnij swoją odpowiedź.

4. Co najbardziej podoba Ci się w lekcjach prowadzonych w obcym języku?

5. Czego najbardziej NIE lubisz w lekcjach prowadzonych w obcym języku?

6. Kiedy byłeś / -aś bardziej zmotywowany do uczenia się przedmiotów w obcym języku?

- Na początku klasy pierwszej (wrzesień 2006)
- Pod koniec klasy pierwszej (czerwiec 2007)

Dziękuję za współpracę☺

A questionnaire - MOTIVATION
(learner)
(ENGLISH VERSION)

This questionnaire forms part of the research study for my PhD. I would appreciate it very much if you would be kind enough to help me by filling in the answers to the questions. Please note that there are no right or wrong answers – I am interested in obtaining your opinions. Replies to the questionnaire are anonymous.

If you are interested in the results of the study, please feel free to contact me at: kasiapapaja@interia.pl

Fill in the questionnaire, please.

1. Who decided about your bilingual education?

- My parents
- My friends
- I decided
- Other...

2. Why did you decide to start your education in a bilingual classroom?

- I wanted to learn English and get to know the Anglo-Saxon culture
- I was sure that I would have more possibilities in the future
- Other reasons...

3. Are you satisfied with learning subjects in English?

YES NO

Why? Justify your answer.

4. What do you like about the lessons in English?

5. What DON'T you like about the lessons in English?

6. When were you more motivated towards learning subjects in English?

- At the beginning of 1st class (September 2006)
- At the end of 1st class (June 2007)

Thank you for your cooperation ☺

PART 5
A questionnaire – SECOND LANGUAGE DEVELOPMENT

(POLISH VERSION)

Proszę o udzielenie odpowiedzi na poniższe pytania.

Poniższy kwestionariusz jest częścią pracy doktorskiej. Byłabym dozgonnie wdzięczna za udzielenie odpowiedzi podane pytanie. Wszystkie odpowiedzi są anonimowe i będą tylko wykorzystane w pracy naukowej

Jeżeli są Państwo zainteresowani wynikami badania, to bardzo proszę o kontakt drogą elektroniczną na następujący adres: kasiapapaja@interia.pl

Proszę o udzielenie odpowiedzi na poniższe pytania.

- 1. Czy uważasz, że zrobiłeś / -aś postępy językowe w mówieniu w ostatnim roku szkolnym?**

TAK

NIE

Jeżeli TAK, to gdzie zrobiłeś / -aś postępy?

Jeżeli NIE, to gdzie NIE zrobiłeś / -aś postępów?

- 2. Czy uważasz, że zrobiłeś / -aś postępy językowe w pisaniu w ostatnim roku szkolnym?**

TAK

NIE

Jeżeli TAK, to gdzie zrobiłeś / -aś postępy?

Jeżeli NIE, to gdzie NIE zrobiłeś / -aś postępów?

3. Czy uważasz, że zrobiłeś / -aś postępy językowe w rozumieniu ze słuchu w ostatnim roku szkolnym?

TAK NIE

Jeżeli TAK, to gdzie zrobiłeś / -aś postępy?

Jeżeli NIE, to gdzie NIE zrobiłeś / -aś postępów?

4. Czy uważasz, że zrobiłeś / -aś postępy językowe w rozumieniu tekstu w ostatnim roku szkolnym?

TAK NIE

Jeżeli TAK, to gdzie zrobiłeś / -aś postępy?

Jeżeli NIE, to gdzie NIE zrobiłeś / -aś postępów?

5. Czy uważasz, że nauka przedmiotu w języku angielskim jest:

- łatwiejsza
- trudniejsza
- taka sama jak nauka w języku polskim

Uzasadnij swoją opinię:

6. Który przedmiot sprawiał Ci trudności w przyswajaniu go w obcym języku?

- Geografia
- Biologia
- Matematyka
- Wszystkie
- Żaden

Dlaczego? Uzasadnij swoją wypowiedź:

Dziękuję za współpracę ☺

A questionnaire – SECOND LANGUAGE DEVELOPMENT

(ENGLISH VERSION)

This questionnaire forms part of the research study for my PhD. I would appreciate it very much if you would be kind enough to help me by filling in the answers to the questions. Please note that there are no right or wrong answers – I am interested in obtaining your opinions. Replies to the questionnaire are anonymous.

If you are interested in the results of the study, please feel free to contact me at: kasiapapaja@interia.pl

Answer the questions, please.

- 1. Do you think you have made progress in speaking in the recent school year?**

YES

NO

If YES, in which areas have you made progress?

If NO, in which areas haven't you made progress?

- 2. Do you think you have made progress in writing in the recent school year?**

YES

NO

If YES, in which areas have you made progress?

If NO, in which areas haven't you made progress?

3. Do you think you have made progress in listening comprehension in the recent school year?

YES

NO

If YES, in which areas have you made progress?

If NO, in which areas haven't you made progress?

4. Do you think you have made progress in reading comprehension in the recent school year?

YES

NO

If YES, in which areas have you made progress?

If NO, in which areas haven't you made progress?

5. Do you think that learning subjects in a foreign language is:

- easier
- more difficult
- the same as in Polish

Why? Justify your answer:

6. Which subject when learnt in a foreign language do you consider difficult?

- Geography
- Biology
- Mathematics
- All of them
- None

Why? Justify your answer:

Thank you for your cooperation ☺

PART 7
A questionnaire – THE USE OF L1
(teacher)

This questionnaire forms part of the research study for my PhD. I would appreciate it very much if you would be kind enough to help me by filling in the answers to the questions. Please note that there are no right or wrong answers – I am interested in obtaining your opinions. Replies to the questionnaire are anonymous.

Fill in the questionnaire, please.

8. Should Polish be used in the class where subjects are taught in English?

Yes

No

9. When do you think it is necessary to use Polish in the class where subjects are taught in English? (more answers are possible)

- a). to help define some new vocabulary items (e.g. some abstract words);
- b). to practise the use of some phrases and expressions (e.g. doing some translation exercises);
- c). to explain complex grammar points;
- d). to explain difficult concepts or ideas;
- e). to give instructions;
- f). to give suggestions on how to learn more effectively;
- g). other, please specify;

10. If you think the use of Polish is necessary in the class where subjects are taught in English, why?(more answers are possible)

- a). it facilitates comprehension;
- b). it is more effective;
- c). it is less time-consuming;
- d). other, please specify;

Thank you for your cooperation😊

Inne powody:

Jeżeli odpowiedź jest **NIE** to zaznacz proszę **X** w tabeli obok powodów, które według Ciebie mają wpływ na Twoje niezadowolenie z lekcji.

Lekcje nie są ciekawe	
Lekcje są trudne	
Cieężko jest się skupić na nowym zagadnieniu i na nowym słownictwie	
Nie widzę celu prowadzenia lekcji np. fizyki w języku angielskim	
Słownictwo nie jest przydatne – nie używam go poza klasą	
Często posługujemy się językiem polskim.	
Atmosfera w klasie jest bardzo napięta	
Lekcja jest bardziej stresująca	

Inne powody:

Dziękuję za współpracę ☺

**A questionnaire – ATTITUDE TOWARDS SUBJECTS TAUGHT IN ENGLISH
(LEARNER)
pilot study
(ENGLISH VERSION)**

This questionnaire forms part of the research study for my PhD. I would appreciate it very much if you would be kind enough to help me by filling in the answers to the questions. Please note that there are no right or wrong answers – I am interested in obtaining your opinions. Replies to the questionnaire are anonymous.

If you are interested in the results of the study, please feel free to contact me at: kasiapapaja@interia.pl

Please, circle YES or NO

4. I like learning:

biology	YES	NO
geography	YES	NO
history	YES	NO
mathematics	YES	NO
chemistry	YES	NO
physics	YES	NO

5. I like learning English YES NO

6. Are you satisfied with learning subjects in a foreign language (i.e. English)?

YES NO

If the answer is YES, please, put an **X** in the table below next to the reasons which you think have an influence on your satisfaction with bilingual classes.

Better atmosphere during the lessons	
The lessons are more funny	
A noticeable progress in the foreign language	
The learners are more involved in the lessons	
The learners are more concentrated on the lessons	
The lessons are more interesting	
Vocabulary is acquired faster	
Content knowledge is acquired faster	
The methods of teaching are better, more interesting	
More motivating	

Other reasons:

If the answer is NO, please, put an **X** in the table below next to the reasons which you think have an influence on your dissatisfaction with bilingual classes.

The lessons are not interesting	
The lessons are difficult	
It is difficult to concentrate on both content and language	
I don't see any purpose in learning e.g. physics in English	
Vocabulary is not useful, I don't use it outside the classroom	
We often use the Polish language	
The atmosphere in the classroom is very tense.	
The lessons are more stressful	

Other reasons:

Thank you for cooperation ☺

PART 10

CRITERIA OF SUBJECTS' EVALUATION¹ (GEOGRAPHY, BIOLOGY AND MATHEMATICS)

Geography:

Fail 0% -40%

Pass 41% - 55%

Fair 56% - 74%

Good 75% - 89%

Very good 90% - 100%

Excellent more than 100%

A detailed description of the criteria:

Pass

The learner:

- remembers the most important facts and names;
- has the necessary information needed to follow the content of the lesson;
- can do simple activities necessary to take part in the lesson;
- deals with simple tasks with the help of a teacher;
- reads simple graphs and tables;
- shows the most important geographical locations on the world and Polish maps;

Fair

The learner:

- remembers and explains the main geographical terms;
- tries to establish reasons and results of particular geographical phenomena;
- deals with typical geographical tasks;
- describes and tries to explain graphs and tables with statistical numbers;
- shows the basic geographical locations on the world and Polish maps;

¹ The translation of the criteria from Polish into English was done by the author of the PhD thesis

Good

The learner:

- deals with geographical tasks on his/her own;
- has information which is difficult to acquire but which is necessary to understand well the content of the lesson;
- explains reasons and results of particular geographical phenomena;
- can analyse statistical tables and draw conclusions;
- shows most of the geographical locations on the world and Polish maps;

Very good

The learner:

- deals with geographical tasks and looks for additional information on his/her own;
- deals with difficult geographical tasks;
- is creative while dealing with geographical tasks;
- can evaluate statistical data and make predictions on the basis of the data;
- shows all important geographical locations on the world and Polish maps;

Excellent

The learner:

- is aware of the knowledge he/she has and systematically acquires new knowledge from various sources;
- is very creative;
- deals with tasks which are extremely difficult and out of the school curriculum;
- evaluates geographical processes and phenomena;
- offers his/her own solutions concerning geographical tasks;
- shows all important geographical locations as well as less important ones on the world and Polish maps;

Biology:

Fail 0% -40%

Pass 41% - 55%

Fair 56% - 74%

Good 75% - 89%

Very good 90% - 100%

Excellent more than 100%

Pass

The learner:

- knows basic information concerning the content of the curriculum;
- uses understandable language to explain the content of the lesson;
- associates biological phenomena with examples given by a teacher;
- defines basic biological terms;

Fair

The learner:

- knows about 60% of the content required;
- uses understandable language to explain the content of the lesson;
- uses basic biological terms and understands them;
- describes biological phenomena;
- gives basic examples of biological phenomena;

Good

The learner:

- knows about 80% of the content required;
- uses clear and precise language to explain the content of the lesson;
- uses most of the biological terms and can explain them clearly;
- describes biological phenomena and draws conclusions;
- gives correct examples of biological phenomena;

Very good

The learner:

- knows about 90% of the content required;
- uses clear and precise language to explain the content of the lesson;
- can analyse data and graphs;
- can analyse biological phenomena;
- knows and uses advanced biological terms;
- gives many correct examples of biological phenomena;

Excellent

The learner:

- knows 100% of the content required;
- has additional knowledge concerning the content of the lesson;
- can use knowledge from additional sources;
- can analyse data and graphs;
- is creative;
- draws conclusions on his/her own;
- can analyse biological phenomena;
- can design biological experiments;
- uses clear and sophisticated language to explain biological terms and phenomena;
- gives a lot of examples of biological phenomena from different sources;

Mathematics:

Fail 0% -40%

Pass 41% - 55%

Fair 56% - 74%

Good 75% - 89%

Very good 90% - 100%

Excellent more than 100%

Pass

The learner:

- knows how to perform mathematical operations on rational numbers;
- knows definitions of trigonometrical functions;
- draws the graph of a linear function;
- knows basic geometric figures;
- knows different vectors,
- recognizes different functions;

Fair

The learner:

- knows how to define an absolute value;
- knows how to use definitions of trigonometrical functions;
- can graphically present mathematical formulas such as $f(x)=a$ or $y=f(x+a)+b$;
- knows quadratic and linear equations;
- recognizes relations between different vectors,
- knows the examples of different functions;

Good

The learner:

- knows how to present Venne's graphs;
- knows how present trigonometrical functions such as $y=a*\sin kx$ or $\text{tg}x < b$;

- can graphically present the following function: $f(x) > a$;
- can create geometrical figures on his/her own;
- can solve an equation with one unknown and two unknowns;
- knows most of the mathematical formulas;
- knows how to present graphically mathematical inequality;

Very good

The learner:

- recognizes all types of sets;
- can deal with difficult trigonometrical functions;
- knows the definition of the inverse of a number;
- can prove mathematical hypotheses;
- describes in details various vectors;
- knows how to define and present a mathematical curvature;
- knows the definition of the inverse function;

Excellent

The learner:

- can analyse new mathematical problems and predict results;
- knows how to present graphically the most difficult trigonometrical functions such as $\sin kx > a$ or $\operatorname{tg} kx > b$;
- can draw all trigonometrical functions;
- knows analytical description of most of the mathematical figures;
- can present and describe in detail all vectors;
- knows and can prove mathematical hypotheses;
- knows the definitions of the inverse function and can present it graphically;

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SUMMARY

A QUALITATIVE EVALUATION OF CONTENT AND LANGUAGE INTEGRATED LEARNING (CLIL) IN POLISH SECONDARY EDUCATION

The aim of this dissertation is to explore Content and Language Integrated Learning (CLIL) in Polish Secondary Education through a qualitative study. The empirical study was conducted for a period of one school year in a secondary school in Krakow where subjects such as geography, biology and mathematics were offered in English. The participants of the study were 33 learners who attended the 1st class and 3 teachers who were teaching their content subjects through English. The learners as well as the teachers were observed during their bilingual classes and additionally, they were asked to fill in questionnaires especially designed for the purpose of the study. Apart from that, the learners' written tests were evaluated by the researcher and an interview was carried out with the teachers. The primary interest of the researcher was to observe and evaluate the changes in terms of language development of the learners, the processing of content, the learning environment and the learners' and teachers' attitude and motivation.

The aim of the first chapter is to provide a definition of CLIL together with its different variations and to present it in a historical outline. Additionally, the purpose of this chapter is to describe CLIL in the international and Polish context paying special attention to the support of this programme in the European Union.

In the second chapter CLIL is presented according to four aspects: language aspects, content aspects, learning environment aspects and attitudinal aspects and motivation. All these aspects are further elaborated on and closely linked to the empirical part of the thesis. In spite of that, the main features of the CLIL learner and the CLIL teacher are described.

The recent research on CLIL is illustrated in the next chapter. Even though, Wolff (2005) claims that "research on CLIL is unfortunately still in its infancy" (2005: 20), there are five fields of interest concerning CLIL: the acquisition of linguistic

competence in a CLIL classroom; the acquisition of content subject competence in a CLIL classroom; the acquisition of intercultural competence in a CLIL classroom; content subject methodology in a CLIL context and the evaluation of CLIL by teachers and learners.

The aim of the fourth chapter is to present the beneficial effects of a generalized adoption of CLIL in schools which can be seen at four levels: the learners, the teacher, the school and the society at large (Coonan, 1998: 109-123).

The next chapter illustrates the organisation of the research. One of the main objectives of the study is to describe and analyse the changes which occur in the Content and Language Integrated Learning (CLIL) classroom in Secondary Education throughout one school year. The study took place in the 1st Secondary School in Krakow and number of CLIL learners and CLIL teachers were examined. The study is based on analysing data gathered through classroom observation, questionnaires, interviews with the teachers and tests' analyses. The researcher decided to apply various instruments of data collection which helped to investigate the changes which occur in a CLIL classroom. Additionally, two pilot studies are described in detail. One pilot study was conducted in a Secondary School in Poland for a period of six months (January 2006 – June 2006) and the other one was conducted in a Secondary School in Germany for a period of one week (August 2006). The aim of the study was to have a closer look at the CLIL classroom in Germany where CLIL is very well developed and to compare it to the CLIL classroom in Poland where CLIL is a novelty.

The main purpose of chapter VI is to present the data aimed at investigating the changes which took place during the CLIL lessons throughout the whole school year. Such a focus seems to be fully warranted in view of the fact that bilingual education has become not only a possibility but a necessity in the 21st century especially in a country like Poland where the knowledge of languages in different contexts is very important due to the economical changes. Taking into consideration the changes which took place throughout one school year, the researcher decided to present the data according to the "time-line" analysing three lessons (geography, biology and mathematics) each month from September 2006 to June 2007. The researcher observed 14 lessons per week but due the huge amount of data it proved impossible to analyse all of them. As a result, the

researcher decided to analyse 18 lessons in total and treat them as sample lessons. The researcher did not use any categories while choosing the lessons – they were picked at random. All the data is presented every second month according to the established categories namely: language aspects (second language development, the use of L1), content aspects, learning environment aspects (interaction, the teacher's methodological approach, learner's evaluation, teaching materials, classroom settings), attitudinal and motivational aspects. Additionally, the data obtained from questionnaires and from the analysed tests is presented. Finally, the data gathered during the interviews with the CLIL teachers is also provided.

In the next chapter data analysis based on the data presented in the previous chapter is provided. All the data is based on the observations made by the researcher, questionnaires carried out among the CLIL learners and the CLIL teachers and an interview conducted with the CLIL teachers. The analysis presented in this chapter is done according to the established categories. Firstly, changes concerning second language development are discussed, secondly the use of L1 (code-switching), then content aspects, learning environment and finally attitudinal aspects and motivation. In this chapter the researcher also tries to provide answers to the main research questions and research sub-questions concerning the changes occurring in a CLIL classroom throughout the whole school year.

In the conclusion, the author of the PhD thesis draws attention to particular changes which occurred in a CLIL classroom and also discusses factors which could have influenced the effectiveness of CLIL. Additionally, the author provides future recommendations which put into practice could have a positive effect on CLIL as methodological framework in Polish reality. The recommendations are divided into: classroom practice, school practice and educational system. Finally, suggestions concerning further research in CLIL are provided.

STRESZCZENIE

JAKOŚCIOWA OCENA ZINTEGROWANEGO NAUCZANIA TREŚCI I JEZYKA (CLIL) W POLSKIEJ SZKOLE ŚREDNIEJ

Celem pracy doktorskiej jest zbadanie zintegrowanego kształcenia przedmiotowo-językowego (CLIL) w polskiej szkole średniej poprzez jego jakościową ocenę. Badanie empiryczne zostało przeprowadzone w jednej ze szkół średnich w Krakowie w której uczniowie mają możliwość uczenia się geografii, biologii oraz matematyki w języku angielskim. Badanie zostało przeprowadzone przez okres jednego roku szkolnego. 33 uczniów z klasy 1-szej dwujęzycznej oraz 3 nauczycieli uczących w klasach dwujęzycznych wzięło udział w badaniu. Uczniowie oraz nauczyciele byli obserwowani przez autorkę pracy doktorskiej oraz zostali poproszeni o wypełnienie kwestionariuszy związanych z przeprowadzanym badaniem. Oprócz tego, autorka pracy doktorskiej przeanalizowała testy przedmiotowe napisane przez uczniów biorących udział w badaniu, a nauczyciele z klas dwujęzycznych wzięli udział w wywiadzie. Głównym celem pracy doktorskiej była obserwacja, a także ocena zmian zachodzących w rozwoju językowym, przyswajaniu treści, otoczenia edukacyjnego oraz nastawienia uczniów i nauczycieli do edukacji dwujęzycznej a także zmian związanych z motywacją uczniów i nauczycieli.

Celem rozdziału pierwszego jest zdefiniowanie zintegrowanego nauczania treści i języka (CLIL), opisanie jego różnych wariantów a także przedstawienie zarysu historycznego. Celem tego rozdziału jest także przedstawienie zintegrowanego kształcenia przedmiotowo-językowego (CLIL) w kontekście polskim jak i międzynarodowym zwracając szczególną uwagę na poparcie tego programu edukacyjnego przez Unię Europejską.

W rozdziale drugim zintegrowane nauczanie treści i języka (CLIL) przedstawione jest pod kątem czterech aspektów: językowego, aspektu związanego z treścią, aspektu związanego z otoczeniem edukacyjnym a także nastawieniem do edukacji dwujęzycznej oraz aspektu motywacyjnego. Wszystkie przedstawione aspekty związane są z częścią empiryczną pracy doktorskiej. Kolejnym celem rozdziału

drugiego jest przedstawienie cech ucznia dwujęzycznego oraz nauczyciela uczącego w klasach dwujęzycznych.

W rozdziale trzecim opisane są badania, które zostały przeprowadzone w dziedzinie zintegrowanego nauczania treści i języka (CLIL). Mimo tego iż Wolff (2005) twierdzi, że „badania związane z zintegrowanym nauczaniem treści i języka (CLIL) są niestety wciąż w stadium początkowym” (Wolff, 2005: 20) w Europie widocznych jest pięć dziedzin zainteresowania związanych z zintegrowanym kształceniem językowo-przedmiotowym (CLIL): akwizycja kompetencji lingwistycznej w klasie CLIL; akwizycja kompetencji przedmiotowej w klasie CLIL; akwizycja kompetencji interkulturowej w klasie CLIL, a także metodyka nauczania przedmiotów w kontekście CLIL oraz ocena zintegrowanego nauczania treści i języka poprzez nauczycieli i uczniów.

Celem rozdziału czwartego jest przedstawienie korzyści wypływających z wprowadzenia zintegrowanego nauczania treści i języka (CLIL) w szkołach. Korzyści te przedstawione są z perspektywy ucznia, nauczyciela, szkoły, a także społeczeństwa (Coonan, 1998: 109-123).

W rozdziale piątym przedstawiona jest struktura badania empirycznego. Głównym celem badania jest opisanie oraz analiza zmian w edukacji językowej w klasie gdzie został wprowadzony program zintegrowanego nauczania językowo-przedmiotowego (CLIL). Badanie zostało przeprowadzone w Liceum Ogólnokształcącym nr. 1 w Krakowie. Zarówno uczniowie klasy dwujęzycznej jak i nauczyciele uczący w klasach dwujęzycznych wzięli udział w badaniu. Badanie oparte jest na analizie danych zebranych na podstawie obserwacji, kwestionariuszy, wywiadu przeprowadzonego z nauczycielami oraz na analizie testów przedmiotowo-językowych uczniów. Autorka pracy doktorskiej zdecydowała się na zastosowanie różnych metod badawczych w celu głębszej analizy zmian zachodzących w edukacji językowej w klasie CLIL. W rozdziale tym opisane są także badania pilotażowe przeprowadzone w Liceum Ogólnokształcącym nr. 1 w Krakowie (styczeń 2006 – czerwiec 2006) oraz w Matars-Gymnasium w Meerbusch (Niemcy) (sierpień 2006). Celem badania pilotażowego była obserwacja edukacji językowej w klasach gdzie został wprowadzony program zintegrowanego nauczania językowo-przedmiotowego (CLIL) oraz dokonanie

porównania pomiędzy programem CLIL wprowadzonym w szkole średniej w Niemczech oraz w Polsce, gdzie CLIL jest nowością.

Celem rozdziału szóstego jest przedstawienie danych dotyczących zmian zachodzących w edukacji językowej w klasie, gdzie został wprowadzony program zintegrowanego nauczania treści i języka (CLIL). Badanie trwało przez okres jednego roku szkolnego (10 miesięcy). Przeprowadzenie takiego badania ma swoje uzasadnienie patrząc z perspektywy rozwoju edukacji dwujęzycznej, która nie tylko stała się w wieku XXI możliwością, ale koniecznością szczególnie w kraju takim jak Polska gdzie wiedza językowo-przedmiotowa stała się bardzo znacząca ze względu na zmiany polityczno-ekonomiczne. Koncentrując się na zmianach w edukacji językowej zaobserwowanych w ciągu jednego roku szkolnego, autorka pracy doktorskiej zdecydowała się na analizę danych według tzw. „linii czasowej”. Autorka pracy doktorskiej obserwowała 14 lekcji tygodniowo, ale ze względu na ogromną ilość zebranych danych postanowiła dokonać analizy trzech lekcji miesięcznie (geografii, biologii i matematyki) w okresie od września 2006 do czerwca 2007. W sumie autorka pracy doktorskiej prezentuje oraz analizuje 18 godzin lekcyjnych, które potraktowane są jako lekcje przykładowe. Autorka pracy doktorskiej wybierając przykładowe lekcje do analizy nie zastosowała żadnych kategorii – wszystkie lekcje zostały wybrane przypadkowo. Wszystkie dane zaprezentowane są co drugi miesiąc według kategorii określonych przez autorkę pracy doktorskiej: aspektu językowego (rozwój języka drugiego oraz użycie języka pierwszego), aspektu związanego z przyswajaniem treści, aspektu związanego z otoczeniem edukacyjnym (interakcja, metodyka nauczania przedmiotu, ocena ucznia, materiały edukacyjne oraz cechy charakterystyczne klasy jako pomieszczenia), aspektu związanego z nastawieniem uczniów oraz nauczycieli do edukacji dwujęzycznej, a także aspektu motywacyjnego. Dodatkowo w rozdziale tym przedstawione są dane pochodzące z kwestionariuszy, wywiadu przeprowadzonego z nauczycielami oraz analizy testów napisanych przez uczniów.

W rozdziale siódmym autorka pracy doktorskiej dokonuje analizy danych przedstawionych w poprzednim rozdziale. Wszystkie dane pochodzą z obserwacji, kwestionariuszy wypełnionych przez uczniów oraz nauczycieli, wywiadu przeprowadzonego z nauczycielami, a także testów przeanalizowanych przez autorkę

pracy doktorskiej. Analiza danych dokonana jest według kategorii określonych przez autorkę pracy doktorskiej: aspektu językowego (rozwój języka drugiego oraz użycie języka pierwszego), aspektu związanego z przyswajaniem treści, aspektu związanego z otoczeniem edukacyjnym (interakcja, metodyka nauczania przedmiotu, ocena ucznia, materiały edukacyjne oraz cechy charakterystyczne klasy jako pomieszczenia), aspektu związanego z nastawieniem uczniów oraz nauczycieli do edukacji dwujęzycznej, a także aspektu motywacyjnego. Analizując dane autorka pracy próbuje odpowiedzieć na główne pytanie badawcze związane ze zmianami w edukacji językowej, które zachodzą w klasie w okresie jednego roku szkolnego, gdzie przedmioty (geografia, biologia i matematyka) nauczane są w języku obcym, a także na dodatkowe pytania badawcze przedstawione w pracy doktorskiej.

W konkluzji, autorka pracy doktorskiej koncentruje się na zmianach w edukacji językowej, które zaobserwowała w klasie dwujęzycznej w okresie jednego roku szkolnego oraz przedstawia czynniki, które mogły mieć wpływ na efektywność programu CLIL. Autorka pracy doktorskiej przedstawia także przyszłościowe rekomendacje, które mogłyby mieć pozytywny wpływ na zintegrowane nauczanie treści i języka (CLIL) szczególnie w polskiej rzeczywistości. Rekomendacje te podzielone są na: zastosowanie w klasie, zastosowanie w szkole oraz na zastosowanie w systemie edukacji. Autorka kończy konkluzję poprzez zasugerowanie dalszych badań nad zintegrowanym kształceniem przedmiotowo-językowym (CLIL).