CLIL TECHNOLOGY FOR THE FORMATION OF INTERCULTURAL

COMMUNICATIVE COMPETENCY ON SENIOR STAGES OF

PROFILE SCHOOL

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T.C.
TEKİRDAĞ NAMIK KEMAL ÜNİVERSİTESİ
SOSYAL BİLİMLER ENSTİTÜSÜ
İNGİLİZ DİLİ VE EDEBİYATI ANABİLİM DALI
YÜKSEK LİSANS TEZİ

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Günümüzde yabancı dil öğretime yönelik yaklaşımlar değişmiştir. Avrupa'da yabancı dil eğitimin etkili yaklaşımlarından biri, *Content-Language Integrated Learning* (*CLIL*), yani içerik ve dil ile bütünleşik öğretimdir. *CLIL*, bir konuyu yabancı bir dil aracılığıyla öğretme yöntemi olarak tanımlanır ve bu yöntemin temel amacı, bir konuyu hem öğretmek hem de bu konuyla ilgili yabancı dil becerilerini geliştirmektir. *Content-Language Integrated Learning* yöntemi Avrupa Komisyonu tarafından tavsiye edilmektedir, zira öğrencilerin aynı anda hem alan bilgisini hem de yabancı dil bilgisini geliştirmektedir. Buna ek olarak, müfredatta yabancı dil öğretimi için ayrı ders saati gerekmediği için profil okullarındaki mesleki eğitimin yoğunlaşmasına katkıda bulunmaktadır.

CLIL, etkili yabancı dil eğitimi için olağanüstü bir yaklaşımdır ve aynı zamanda eğitim sürecindeki birçok sorunu çözebilmektedir. Tüm etkenleri göz önünde bulundurma şartıyla *Content-Language Integrated Learning* yöntemin uygulanması öğrencilerin yabancı dil öğrenme motivasyonunu önemli ölçüde artmasını, yabancı bir dili günlük hayatta bilinçli ve özgürce kullanmasını; alan ve yabancı dil bilgisinin artmasını; başka kültürleri ve değerleri anlamasını ve bunlara karşı saygı duymasını; seçtikleri uzmanlık alanında sürekli öğrenmesini; eleştirel kültür bilincini ve aynı zamanda dilbilim ve kültürlerarası iletişim becerilerini geliştirmesini sağlamaktadır.

Anahtar kelimeler: İçerik ve dil ile bütünleşik öğretim, Kültürlerarası iletişim becerileri, Eleştirel kültür bilinci, Müfredat, Profil okulu.

ABSTRACT

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Nowadays the approaches to learning foreign languages have changed. One of the effective approaches to teaching students a subject in a foreign language in Europe is the so-called *Content-Language Integrated Learning* (*CLIL*). It is often used to describe the method of teaching a subject content through a foreign language, the main purpose of which is to study the subject and master language skills in and recommended by the European Commission, as it enables students to study discipline and foreign language simultaneously. Besides, to learn a foreign language does not require additional hours in the curriculum, which contributes to the intensification of professional training in profile school.

CLIL is an extraordinary approach to learning foreign languages which allows to solve many problems in the educational process. With proper consideration of all factors, the implementation of *Content-Language Integrated Learning* methodology allows: to significantly increase student motivation to learn foreign languages, to teach students to consciously and confidently use a foreign language in everyday communication; to broaden the horizons of students' knowledge, understand and respect other cultures and values; to prepare students for continuing education in

their chosen specialty; to develop their critical cultural awareness, and to improve linguistic and intercultural communicative competence through the study of a foreign language.

Keywords: Content and language integrated learning (CLIL), Intercultural communicative competence (ICC), Critical cultural awareness (CCA), Curriculum, Profile school.

ACKNOWLEDGEMENT

CONTENTS

INTRODUCTION

Usage of *Content-Language Integrated Learning* (*CLIL*) technology in the process of foreign language acquisition in senior classes of profile schools became significant in recent years. As we live in a time of competition, technology and new ways of living and working, it is impossible not to integrate innovative technologies in foreign language classrooms. Besides, English proficiency is the key to success that opens doors to educational and job opportunities for students.

CLIL is a type of bilingual education and successfully applied in twenty European countries. This technology is not so common in Turkey. Taking into consideration the modern format, the implementation of *CLIL* technology helps to develop linguistic and communicative competences that are necessary for a successful individual, socio-cultural and professional growth of students. Besides, *CLIL* in the classroom provides an opportunity to interact in a foreign language without requiring additional time in the curriculum.

The term *Content-Language Integrated Learning* (*CLIL*) was coined by D. Marsh (1994), a researcher in the field of multilingual education, in the process of coordinating research on the state of language education in Europe. This led to a pan-European discussion with experts from Finland and the Netherlands. The question of how to use the experience of advanced foreign language learning in certain types of private schools and colleges was brought into discussion.

At that time, interest in the methodology of *Content-Language Integrated Learning* (*CLIL*) was also associated with the political situation in Europe and the European educational standards. Nowadays, more than twenty years later, the *CLIL* concept has become not only a way to gain access to additional languages, but also to attract innovative practices to the curriculum as a whole. *CLIL* as an approach is gradually gaining recognition in European countries. It seems that the trend in learning through the *CLIL* technology will be implemented more and more in the future in most countries.

In this research work, the researcher primarily takes a new approach to teaching other subjects through English language on senior stages of profile school. It is suggested that implementation of *Content-Language Integrated Learning* technology would be efficient in forming intercultural communicative competence for adolescents. The research work also includes theoretical background of teaching other subjects through *CLIL* technology in profile schools. The author carries out a careful research on content of integrated content-language teaching in profile schools and a questionnaire for teachers and students on *CLIL* methodology.

The object of research is the process of foreign language education in profile school through *CLIL* technology. The subject of research is teaching other subjects through English language on senior stages of profile school. The aim of research work is to find out the effective ways of using *CLIL* technology in the process of foreign language learning. In accordance with the aim, there are the following objectives: to look into the historical background of *CLIL* technology; to consider the usage of *CLIL* technology in other subject teaching through English language; to determine the role of assessment within the frame of *CLIL*; and to facilitate the challenges of using *CLIL* technology on senior stages of profile school.

In this research the author mainly relies on the works of the following scholars: Baker / Jones (1998), Baker (2001), Ball (2009), Cummins (1979; 1981; 2000), Krashen (2009), Marsh (1994; 2002) and Swain (1996; 2000). During the research, several research methods are used: *theoretical method* that helps to carry out analysis and synthesis of psycho-pedagogical and scientific-methodical literature on the theory and practice of teaching subject content in a foreign language and the use of content-language integrated approach in teaching process; *bibliographical method* that contributes to work with a great number of sources and materials; *descriptive-analytical method* that is the method of contextual analysis based on a questionnaire on the issues mentioned in the research.

The theoretical significance of the research is to identify the conditions for the integration of a foreign language and subject content in the process of bilingual education, to enrich the theory of vocational training of teachers with new knowledge for the implementation of *Content-Language Integrated Learning* technology.

The practical significance of the research lies in the assumption that the *CLIL* technology might be implemented into foreign language teaching. The examples and research materials about *CLIL* technology might be used by foreign language and subject teachers as well.

The following provisions are to be defended:

1. The content-language integrated approach pursues achieving a dual learning goal in which the second language is used as a means of teaching subject and at the same time is the object of study.

2. The use of a foreign language in teaching non-linguistic subjects contributes to a deeper development of students' language competence.

3. A model of training based on the content-language integrated approach in profile schools contributes to the formation of students' content-language competence.

The research work consists of an introduction, two chapters, a conclusion and a list of references and applications.

1. THEORETICAL ASPECTS
OF TEACHING SUBJECTS THROUGH ENGLISH

1.1 Cognitive Theories of Bilingualism

Great Encyclopedic Dictionary (Prokhorov 2004: 37) defines *bilingualism* (*bi*: double; *lingua*: language) or *bilingual*, as an acquisition of two languages to the same extent. In connection with modern sources of linguistics, these two concepts are used as equivalent. However, in literature there are different options or variations of *bilingualism*:

Bechert / Wildgen (1991: 178) use in their work *"Einführung in die Sprachkontaktforschung"* three basic concepts: *bilingualism*, *diglossia* and *language contact*. They believe that *bilingualism* is an alternate use of two languages by an individual or group of individuals studied by psycholinguistics and sociolinguistics. *Diglossia* occurs when service of the most typical social situations is distributed between two languages or one variant, and there is a subject of sociolinguistics consideration. *Language contact*, in turn, is a situation in which languages are used by a bilingual or bilingual group.

In the research work, the concept of *bilingualism* given by the American scientists Siguan / Mackey (1987) is used. According to Siguán and Mackey (Moreno 2009: 17-18) a bilingual person is that person "who, besides his/her L1, possesses a similar competence in a different language, and is able to use either of them within any circumstance with similar effectiveness". Siguan / Mackey (1987: 180) emphasize several characteristic features of *bilingualism*:

The first, a bilingual individual possesses two independent linguistic codes (L1 and L2) and is able to use one of them in each specific situation. Speaking one of the languages (for example, L1), the bilingual makes sounds, utters words and makes phrases in accordance with the rules of L1, choosing them from one language system, not two. Any bilingual individual while communicating or texting in L1, from time to time introduces phonetic, semantic or syntactic elements to L2 and vice versa. Therefore, both language systems are independent. This is a linguistic deviation identified as an interference. Bilingualism with it is unbalanced and

dominated by one of the languages. Sometimes we can observe the opposite effect of weaker language on dominant one.

The second characteristic of bilingualism is an ability of bilingual individual to move quickly from one language system to the alternation of language systems. For example, two people who speak L1 and L2 can freely switch to L2 when a third person, speaking only L2, joins the conversation. Moreover, alternation can become a continuous transition that is necessary for consecutive and simultaneous interpreters who need to translate speech acting in series or parallel.

Third, a bilingual is able to translate equal meanings of phrases or texts in two language systems. Additionally, if the bilingual begins to speak in L1, then he can continue it using L2 without preliminary translation.

Sciences as psychology and psycholinguistics, which study the relationship between language and thinking, considers the fourth characteristic of bilingualism. "Different languages can express only general meanings, but they partially add their own conceptual meanings. Translation process is not always simple and never perfect.

The irreducibility of one language to another is twofold. On the one hand, the impossibility for a bilingual to make a perfect translation is explained by objective reasons, such as differences in linguistic culture. On the other hand, subjective reasons are also added, for instance, the result of bilingual's personal experience in connection with the languages that he/she speaks." (Zaripova 2016: 196)

In our study, we refer to the definition of *bilingual education* given by Salekhova (2005: 46): "Bilingual education is an interrelated activity between teacher and students in the process of studying different subjects in native and foreign languages, which results in the synthesis of certain competencies providing a high proficiency level in foreign languages and deep mastering of subject content". Relying on the definition cited above, bilingual education can be considered as a means of obtaining bilingual education and processes of personality formation of the student who is open to interaction with the outside world.

Taking into consideration the experimental arguments about the benefits of positive influence of bilingualism on the intellectual development of the individual, linguistic scientists have described its effect on theoretical basis, developing different *cognitive theories*. In this research work, we consider the cognitive theories of bilingualism by foreign researchers explaining bilingual personality development:

In the first turn, it is necessary to distinguish the so-called *naive theories* based on different everyday ideas about bilingualism. According to these theories, human brain has a limited ability to use languages, therefore, monolingualism seems more preferable. Baker's (2001: 163) research into bilingualism and cognitive functioning describes one example of these naive theories: *the balance and balloon theory*. The theory is described in the picture (see Figure 1.1) given below. The theory states that two different languages represent two language balloons that are inside the head of a person. In the picture the monolingual is depicted as having one well-filled balloon, while the bilingual is pictured as having two less or half-filled balloons. As the second language is inflated (for example, Turkish in Turkey), the first language diminishes in size (for example, English). Thus, bilinguals do fully speak neither L1 nor L2. The reasoning is based on the fact that as there is a limited space in the brain, then increase of one language balloon (L1) decreases space for another language balloon (L2) and vice versa. The *balance and balloon theory* of bilingualism seems to be accepted intuitively by many people, as they are consistent with common sense and our understanding of the physical world. Cummins (1980: 81) names the model based on naive theories of bilingualism as the *Separate Underlying Proficiency Model of Bilingualism*, which clearly defines the two different languages functioning without interaction and with a bounded amount of space for languages (Figure 1.1). Having separate language skills is the basis of this theory.

However, logical explanations cannot always describe all valid psychological facts. In this way, naive theories are not suitable for explaining empirical and experimental data. As it is early indicated, when children become balanced bilinguals, scientific studies illustrate the cognitive advantages rather than the disadvantages for being bilinguals in relation to monolinguals. The evidence also proves the fallacy with the assumption of the balance and balloon theory that there is

a limited space in the human brain for language skills, and monolingualism is preferred. The research suggests the opposite: that language attributes do not operate separately in the cognitive system, but interact and transfer simply. For instance, when school lessons are conducted in L1, they do not activate solely the L1 part of the brain or when other classes are through the L2, they do not activate only the L2 part of the brain. Information acquired in one language can be simply conveyed into the other language. A child who has learned to multiply numbers in one language, can multiply in the other language, and there is no need to re-teach the child to multiply numbers in the second language. Any concept can be easily understood and utilized by the child in both languages if those languages are sufficiently well developed. Thereby, Cummins (1980: 81-103) suggests an alternative idea called *Common Underlying Proficiency Model of Bilingualism* (see also Figure 1.1 and Baker 2001: 165). This means common proficiency skills and universal bilingual skills.

Figure 1.1: *Separate* **and** *Common Underlying Proficiency* (Baker 2001: 164)
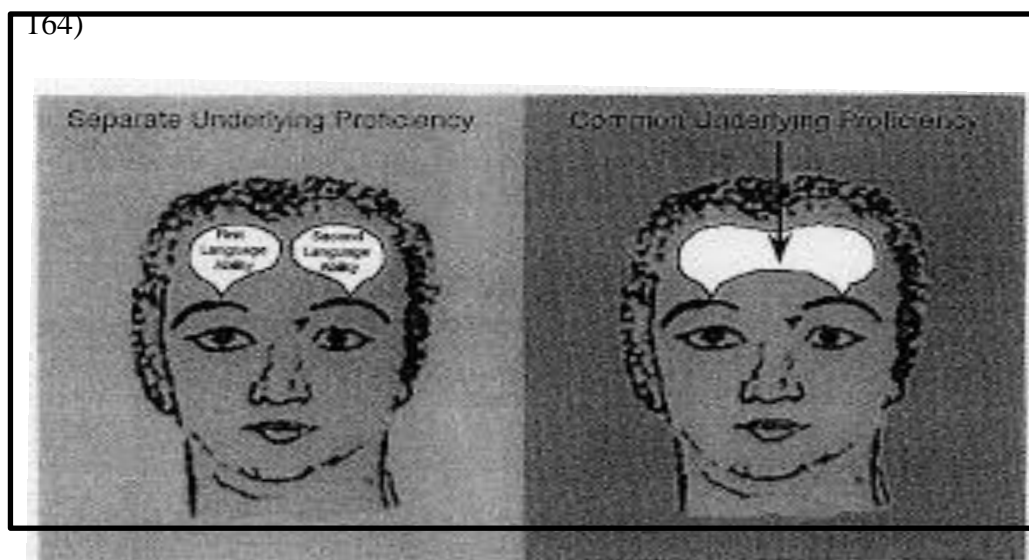
In the 1960s Kolers (1963: 291-300) shed light on this distinction from a similar point of view and developed two memory storage hypotheses (see also Baker 2001: 144) – the *separate storage hypothesis* and *shared storage hypothesis*: The *separate storage hypothesis* suggests that each perceived element must be encoded

by bilingual several times, according to the number of known him languages. Therefore, it is impossible to directly name or extract from memory some experience using the wrong language on where it was encoded. It is possible only when performing an additional operation-transfer. The *shared storage hypothesis*, in turn, assumes that components are encoded once in a lifetime at the first perception and there is some kind of common storage traces of perceptions from which they can be extracted using two languages. Perceptions originally obtained in one language can be easily retrieved from memory and described in another language. The fact that bilingual responds differently to the set standard words depending on which of the two languages he/she is currently speaking, can be interpreted using storage hypotheses.

There is an influence of languages on the thinking process, and on content, that is, on thought. Different languages can render the influence on thinking in different ways, through its structure and especially through familiar discourse, concepts and meanings. Otherwise, due to learning a second language, comprehension and representations expand and deepen, further the individual realizes the alternative and additional values. The problem is how much the bilingual's thinking changes, if it switches from one language code to another.

Cummins (1979a: 121-129; 1981a: 132-149; 2000: 54-83) expresses the distinction between surface fluency and the more evolved language skills by highlighting two aspects of linguistic competence: *Basic Interpersonal Communicative Skills* (*BICS*) and *Cognitive Academic Language Proficiency* (*CALP*). *BICS* show up when there are contextual supports and props for language comprehension. Direct *context embedded* situations come up with non-verbal support to obtain language understanding: mimicry, sign language, instant feedback, hints and clues maintain verbal communication. *CALP*, in turn, appear in context reduced academic situations where higher-level thinking skills such as evaluation, analysis, synthesis, comparison, and language are *disembedded* from a maintained context. *CALP* is a characteristic of the learning process. The analysis shows that the developed cognitive theories of bilingualism were primarily used to explain the effect of bilingualism on the intellectual development of students. However, the

theory of *BICS* and *CALP* by Cummins (1979a; 1981b; 2000) may be applied as a theoretical basis for modeling bilingual learning in high schools.

1.2 *Two-Factor Communication Model* by Cummins (1981):
Basis for Teaching Subject-Content in a Foreign Language

Foreign language teachers often emphasize on the external manifestations of speech, i.e. pronunciation, vocabulary and grammar, and do not notice the role of the language that plays in complex thinking processes. The issue here is that the use of language is considered as a distinctive feature of individual which allows him/her to go beyond direct experience and form relationships between different parts of information, establish patterns and make predictions.

Cummins (1981b: 35-37) states that the *CALP* competence is part of the *Common Underlying Proficiency*, therefore, these competencies in both languages develop interconnected and can be improved as when using one of the languages, and both. However, to transmit *CALP* competence between two languages, despite the external characteristics, it is necessary to sustain the essence of transmitted information related but separate from the languages.

In accordance with the theory of Cummins (1981b: 35-49), linguistic competence in L2 (*surface fluency*) develops regardless of this indicator in L1. Consequently, bilingual education will be successful with a high level of development of language competence of one or two languages and it helps learners to work in a situation lacking context and requiring solving complex cognitive tasks. Cummins (1981b: 22-23) believes that it takes one to two years to form *BICS*, while *CALP* is formed in the period from five to seven years. The studies of Collier (1992: 187-212) and Shohamy (1999: 216) also prove this fact.

If we apply this hypothesis within the framework of the theory of bilingual education, we see a model in which the main stage of education in an educational institution is in its native language, and the instruction of a second language occurs

when thinking and language skills of students are at a fairly high level of development. Consequently, cognitive structures can be transferred from L1 to L2.

Long (1983: 126-141), Swain (1996: 89-104), Lightbown / Spada (2006: 233) and Krashen (2009: 30-37), think that the process of mastering L2 should occur under the same conditions that existed in the process of mastering L1. The scientists emphasize that students will be able to perceive more information if they learn foreign language in a natural way.

We can conclude that when compiling a bilingual curriculum for a discipline, the following items should be taken into account (see also Robson 1987: 33-36):

- What actions students must carry out in the process of solving a problem;
- choosing educational material; using visibility, demonstration, modeling, ICT application, verbal and written instructions; teacher support;
- the level of language competence of the students;
- background knowledge and educational experience of students; individual characteristics of perception and learning; expectations from learning, confidence and initiative; experience in performing similar tasks;
- criteria for evaluating the success of the training, the competence of students; forms of assessing the results of students.

Cummins (1979b: 222-251) proposes a coordinate system which can be used in developing a strategy for integrated content-language learning. The two-factor model can be used in forming strategies and appropriate methods for knowledge assessment. With the help of this model, we focus on assessment related to the tasks. And this, in turn, is fairer and more acceptable for bilingual children than basic testing. Thus, if teacher needs to evaluate student's knowledge in different areas, they can evaluate several activities (Cummins 1981b: 56-57):

a. Presentation of the material, practical demonstration of solving a task in the process of learning;
b. oral answer;
c. written response; and
d. reasoning on the topic.

The choice of learning strategies may influence the choice of evaluation methods. Thereby, if context-unconditional, cognitive communication are used as a learning strategy, then the evaluation of the results should be appropriate; for example, a discussion of an abstract concept.

The two-factor communication model of Cummins (1981b) is the basis for forming our model of integrated content-language learning in profile school. As it is clear and logical, it allows teachers to choose a strategy for teaching a foreign language taking into consideration the level of student's foreign language communicative competence.

1.3 *Content-Language Integrated Learning* and its Historical Development

Modern educational technologies for the formation of intercultural communicative competence are very effective in terms of creating an educational environment that ensures the interaction of all participants in the educational process. In English there are several directions integrating subject teaching and language learning. Among this diversity, the most effective and appropriate technology to form intercultural communicative competence is the *Content-Language Integrated Learning* (*CLIL*) technology. This technology implies such training in which the study of the subject content and foreign language is simultaneously carried out in the learning process.

It is necessary to consider the history of occurrence and development of educational CLIL technology in order to understand its essence. The historical background of the emergence of *CLIL* technology dates back to the XVI.-XVIII. centuries. According to Yakaeva (2016: 120-123) learning a foreign language through subject-content is mentioned in the writings of the leading teachers of pedagogical science: Czech teacher Jan Amos Comenius and the Slovak teacher

Mattias Bel, who actively used texts with historical content in teaching students foreign languages, focusing on the study of cultural peculiarities of the target language. The idea of learning a foreign language through its integration with the subject-content was further developed in 1960-1970 in Canadian and American schools where bilingual immersion programs were developed for teaching English-speaking schoolchildren a number of subjects in French (Baker / Jones 1998: 496; Marsh 2002: 56).

The term *Content-Language Integrated Learning* was for the first time coined by the researcher in the field of multilingual education, David Marsh in 1994 in the process of coordinating research on the state of language education in Europe. By CLIL, David Marsh suggests understanding the approach to teaching a foreign language in which the language is used to study a specific non-linguistic subject content (Coyle / Hood/ Marsh 2010: 182).

According to Marsh (2002: 15), *CLIL* is considered when the study of subject-content is conducted in a foreign language simultaneously pursuing two objectives: the study of subject content and learning a foreign language at the same time. However, the concept *CLIL* has a broad interpretation and more than forty definitions given only in European scientific and methodical literature. According to the definition given by Marsh (2002), cited above, *CLIL* implies a simultaneous study of both discipline and a foreign language. Thus, Marsh (2002: 15) highlights that the use of *CLIL* technology aims at achieving two goals: learning a foreign language and an academic discipline. This idea enables to learn a foreign language without additional classroom hours dedicated on learning it, as it acts as a means of teaching other subjects.

Graddol (2006: 86) believes that using *CLIL* allows students, first of all, to significantly increase the level of foreign language. According to him, proficiency in foreign language is not necessary for learning a discipline. However, this approach had been vulnerable to criticism. He also considers a foreign language, particularly English as a core skill and possession in high level allows students to develop communication skills.

According to Ball (2009: 32), the idea of language integration has a higher m potential compared to others due to the objective reasons, namely:

- The need to study the subject-content inspires students to enhance their foreign language skills;
- students notice and analyze language structures and lexical units due to used lexical approach; e.g., while reading a text;
- there is an immersion in the language environment, as well as awareness of their own achievements in the learning process; and
- significant importance is given to the content of the academic discipline, whereas in other methods of foreign language teaching it serves as an illustration of the language structures.

Many researchers such as Darn (2006) and Coyle / Hood / Marsh (2010) highlight the following two main approaches in the implementation of *Content-Language Integrated Learning* in the educational process:

- *Content-driven education* in which the focus is given on acquiring the subject-content of the academic discipline; and
- *language-driven education* which focuses on learning a foreign language based on subject-content.

It is worth noting that the division above is conditional, and both approaches are used simultaneously, mutually complementing each other.

According to Ball (2009: 35), one of the main features of *CLIL* is the use of a conceptual sequencing, according to which the topics are in a horizontal (or vertical) sequence and in chronological or thematic dependence.

Darn (2006: 3) highlights the following benefits of *CLIL*:

- Use of widely cultural content;
- preparing students for the internationalization process and globalization;
- expansion of the list of academic disciplines along with the opportunity to receive certificates of training to meet high international standards;
- formation and development of general and special linguistic competence; and

- opportunity to diversify educational and cognitive methods activities.

The author also highlights two main principles of using *CLIL* technology (Darn 2006: 2):

- Foreign language is a means of communication and obtaining knowledge; and
- the subject content determines the necessary structures for learning language.

According to *CLIL*, all types of speech activity are necessary to develop in a foreign language classroom. Darn (2006: 5) believes that foreign language lesson in a *CLIL* class should have following characteristics:

- The formation of both receptive and productive speech skills should be integrated in a lesson; and
- a text or sound representation of the text should be provided in a class.

The use of language structures and units is functional due to the content of the studied discipline. Thus, learning a foreign language is based on a lexical, not grammatical approach. The individual approach is widely used.

Within the framework of higher professional education, the idea of *Content-Language Integrated Learning* (*CLIL*) was spread as *Integration of Content and Language* (*ICL*). The idea of constant interaction and cooperation between teachers of special disciplines and foreign language lies on basis of *ICL*. Such cooperation allows to create interdisciplinary communities whose activities contribute improving the quality of the educational process as a whole. *ICL* represents a pedagogical problem in which solution implies overcoming certain difficulties, primarily organizational structural character, both for teachers and students.

A number of European organizations and educational institutions, such as *UNICOM*, *Euro CLIL*, *TIE-CLIL*, *Content and Language Integrated Project* (*CLIP*), the *University of Nottingham*, the *Norwich Institute for Language Development* that are engaged in research in this field, believe that using the *CLIL* method has great prospects, however, its implementation requires revision of traditional concepts and views on teaching. Presently, there are a number of circumstances that, according to

these organizations (UNICOM, Euro CLIL, TIE-CLIL, Content and Language Integrated Project (CLIP), the University of Nottingham, the Norwich Institute for Language Development) may have a negative impact on the implementation of *CLIL* in the learning process: Subject teachers are not always willing to support innovations, because the use of the technology requires much preparation. It is also important to note that there is a small number of programs and trainings for preparing specialists in the field of *CLIL* and a lack of coordination of foreign language programs in other disciplines. However, the need of reforms in the field of teaching foreign languages in connection with the globalization contributes in the future to the active implementation of *CLIL* technology in the educational systems of most countries.

Integrated content-language learning, i.e. *CLIL*, is not a new phenomenon: Immersion programs are for example the most required program in Canada. According to Swain / Lapkin (1982: 176), Swain (2000: 199-212) training in Canada begins from preschool or junior school age. In Canada the first such kind of programs with studying in a second (here: French) language appeared in the middle of the 1960s. Up to the 1980s, the quality of training was monitored in three main fields: 1) subject-content, 2) development of abilities and skills of native language, as well as 3) to succeed in learning a foreign language. Swain (1996: 89-104) makes the following conclusions about the use of these immersion programs in Canada:

1. Students need to reach skills corresponding to threshold levels of L2 skills to achieve the expected results in subjects taught through a foreign language.

2. The children who studied under the immersion program from the age of 5-6 years, when testing for basic subjects, showed the same results with their peers who studied in English (native language), while their peers who started the immersion program with partial immersion showed lower results.

3. Early full language immersion programs may have the greatest negative impact on the development of native language skills. However, the results of empirical research prove the opposite. For 2-3 years from the beginning of the course, students of this program are behind their peers who have training

in their native language, in the development of certain aspects of the native (here: English) language. In the future, they surpass their peers in terms of all aspects of learning.

4. In general, students in early programs (from 5-6 years old) and late language immersion (11-14 years old) possess approximately the same writing skills in the second language French. In this case, both groups (early and late diving) showed lower results by compared with their francophone peers. A clear flaw of this method is the lack of knowledge of vocabulary and grammar. This group of students has the least developed speaking skills.

In the United States, the development of *bilingual education* (*BE*) based on the integration of language and subject-content has also a long history. *Bilingual education* is defined as "training conducted in whole or in part in a second (foreign) language, aimed at developing both skills and abilities in a second language, as well as at forming and developing linguistic competence of the native language, while getting a full education" (Swain 2000: 200). According to the *National Association for Bilingual Education* (*NABE*) "Bilingual education has been practiced in many forms, in many countries, for thousands of years. Defined broadly, it can mean any use of two languages in school – by teachers or students or both – for a variety of social and pedagogical purposes. In today's context, a period of demographic transformation in United States, bilingual education means something more specific. It refers to approaches in the classroom that use the native languages of English language learners (ELLs) for instruction." (National Association for Bilingual Education 2004: para. 1-2).

Students who study in bilingual programs demonstrate significant academic success in English, sometimes surpassing the achievements of their peers studying in monolingual programs. Exploring the programs of bilingual education, Krashen / Biber (1988: 218) came to the conclusion that the results of students, who participated in the research, were much higher than the results of their peers who were trained on standard programs. The most comprehensive research in this area were carried out by Willig (1985: 269-317) and Wong-Fillmore / Valadez (1986: 648-685) research for example shows that bilingual education programs significantly

increase the students' academic performance compared to programs where language of learning was English (so-called *English Instructional Programs*). Generally, studies conducted in the United States have shown that a proper implementation of bilingual education in the learning process is the most effective way to learn a foreign language and one or more academic discipline/s.

Most programs developed on the basis of language and objective integration, have similar basic characteristics. However, when it comes to the United States, the following two main differences can be noted (Willig 1985: 299):

1. The language of instruction is the native language of students in bilingual education and partial immersion programs. The language of instruction in total early immersion programs is the second language.
2. all students initially speak only their native language in language immersion programs and as they represent the same country or nationality, they speak the same language. Generally, students have a beginning level of second language proficiency. The native languages and the level of English proficiency of students may be different in bilingual education.

In 1999, the *Department of Bilingual Education and Minority Languages Affairs* under the *US Department of Education* provided funds to conduct research to identify ten exemplary bilingual programs in US schools. The work was carried out by the *Intercultural Development Research Association* (*IDRA*), which identified twenty-five characteristics and criteria according to which the effectiveness of training programs was determined (Intercultural Development Research Association 2002: para. 1-2). In this context, Naves / Munoz/ Pavesi (2002: 93-102) divide the criteria of effectiveness of *CLIL* methodology into following aspects:

- Showing respect and interest to the native language and culture of students;
- the presence of teachers who know two or more foreign languages, including the mother tongue of students. Ideally, the teacher and students should belong to the same ethnic group, in this case the teacher can intuitively understand the needs of the students;

- the most effective bilingual and immersion programs have three common characteristics:
  1. both of the programs are facultative;
  2. they are aimed at development of additive bilingualism; and
  3. being optional, they do not separate students from the main stream of students;
- maintaining a permanent composition of teachers;
- mandatory active participation of parents;
- effective collaboration and interaction among all participants in academic process;
- improving the qualifications of teachers;
- motivation of students and assessment of their activities; and
- educational materials.

The processes of globalization in modern society and the need to train specialists who speak English fluently, require collaboration and interaction from teachers of various disciplines. In this regard, Wyrley-Birch (2006: 72), Räisänen (2007: 298-314), Wright (2007: 82-95) and Gustafsson (2011: 101-122) explore the interaction between subject and foreign language teachers within the concept of *ICL*. The studies of Räisänen (2007) and Wright (2007) show that creating productive discursive space transgressing disciplinary boundaries is the basis for successful collaboration between teachers of special subjects and foreign languages. Besides, the research studies of Wyrley-Birch (2006) and Gustafsson (2011) support the transition from a model of learning to a model of critical understanding of the processes of teaching and teaching academic skills and abilities, i.e. competencies, necessary to master a particular discipline (so-called *discipline-specific academic literacies*). In general, this model assumes active cooperation of both teachers of special disciplines and teachers of foreign languages.

The need for the implementation of integrated content-language learning approach in the framework of vocational-oriented education has been raised by many authors in the United States. In particular, Marsh / Marshland / Stenberg (2001: 17)

give six reasons why *CLIL* should be used in academic and professional environment, i.e. in profile education:

1. Acquiring practical knowledge and skills;
2. development of interpersonal skills;
3. implementation of intercultural communication;
4. obtaining quality education in a specific area;
5. competitiveness in the labor market;
6. ability to look at the studied academic disciplines from different points of view.

Constructivism as a theory of knowledge and development is an important element in the context of *CLIL*, as it explains the mechanisms of human perception, i.e. understanding and cognition, which, in turn, are the key issues in the framework of the integration of language and subject content. Within the framework of constructivism, several theories have been developed related to human perception. They are all based on the notion that perception is a creative process. Cognitive psychology, being a branch of constructivism, regards perception as a cognitive process, where knowledge that a person possesses interacts, with external stimuli. The result of this interaction is an individual mental structure that will be stored in the memory of an individual. An incoming stimulus, presented either in the form of a sound wave or in the form of letters, must be transformed into a cognitive, meaningful unit.

Perception is a constructive, creative process with a high degree of activity. Here is the key to understanding the process of learning a language. Language acquisition occurs when a student is involved in a constructive perception process. Mastering a foreign language does not happen if the student does not activate constructivist possibilities, but only picks up at the receptive level external stimuli that recognizes the senses. The similar situation develops at modern methods of training in secondary and high schools, where it is believed that students will learn a foreign language due to a result of the monotonous performance of formal exercises. The active use of a foreign language, integrated with subject content, in a constructive process creates the conditions for mastering a foreign language.

Learning a foreign language in the process of perception happens when students try to understand the meaning of what is read or heard. The process of mastering the language is due to the fact that a semantic unit has been created. It should be noted that this situation is true in case of learning the first and second language.

Perception is a key component in the process of learning a foreign language. However, this fact does not explain why the study of a foreign language in the framework of *CLIL* gives better results than in the format of traditional education. In this case, an important role is given to *content*. In traditional foreign language classes, the content is predefined, simplified and classified. It includes stereotypical situations. Most of the educational materials are not authentic and aimed at achieving communicative or linguistic progress. The integration of content-language learning in this case leads to significant changes. Any academic discipline provides a wide range of topics for study. This content has a high potential, as it is directly related to future professional activities. The content of any discipline studied is 'realities', that is, facts and processes of the real world. They have an academic and scientific orientation, a richer and more complex content than 'pseudoreal' situations in a foreign language. Content, within the framework of *CLIL*, has a higher potential compared to the content of traditional foreign language classes. This is fascinating and informative materials that students learn with great enthusiasm. Thus, training in the integration of the content-language learning passes more intensively and successfully compared to the traditional educational process. Motivation and active participation are the driving forces that activate the mechanisms of perception and increase the efficiency of the integration process of a foreign language and subject content.

In terms of constructivism, the main purpose of the interaction, i.e. communication, is not a discussion of linguistic accuracy and grammatical structures due to which a language is learnt, but a discussion and construction of content, which leads to its transformation and reflection. Acquisition of a foreign language is considered as a side effect. It happens when subject content (and not perception of information) is created, constructed by means of society.

Unlike Hatch (1992: 334) who adheres to *CLIL* models, where one teacher acts as both a subject teacher and foreign language teacher, Willig (1985: 299), Wyrley-Birch (2006: 56), Wright (2007: 86), Jacobs (2008: 256) and Gustafsson (2011: 112) support the idea that the most acceptable is to understand the *ICL* as mutual collaboration between language teachers and special disciplines. In the opinion of these authors, *CLIL* is a general term that is closely related to the European language policy, which implies the mobility of the education system, the labor market, and processes of democratization and partnership. Besides, many other researchers such as Cook (1995: 3-16), Risko / Bromley (2001: 9-19), Jacobs (2008: 247-266) and Mills (2010: 152) emphasize the need of constant, long-term cooperation and partnership between teachers of academic disciplines and foreign languages drawing attention to the fact that a foreign language teacher needs certain time for mastering a new academic discipline.

The *CLIL* method is not new either In Europe. It has been practiced for several decades in different schools of European countries such as Finland, Hungary and the Baltic states. The successful use of *CLIL* in these countries makes us assume that this method is enough potential. One of the advantages of this method is that it has no limitations in improving language skills and subject knowledge. *CLIL* also enables students to develop their intercultural knowledge. This method also helps to utilize other learning strategies, to apply innovative teaching methods and technologies, and to increase motivation of students to study subjects and learn foreign languages. In addition to the benefits already listed, *CLIL* provides an opportunity to strengthen the teaching of a foreign language not requiring additional hours in the curriculum.

According to the report '*White Paper on Education and Training: Teaching and Learning – Towards the Learning Society'* by the European Commission (1995: 47) the knowledge of three European languages is a priority. The authors of the report suggest starting training on bilingual programs at an early and state that the most effective way to successfully learn a foreign language is "the use of a foreign language with a certain purpose. Thus, a foreign language becomes rather a tool, and not the ultimate goal of learning". Since the early 1990s the European Commission has funded a large number of projects dedicated to *CLIL* throughout Europe.

In the Scandinavian countries in particular, a large number of higher education institutions offer students to take courses in English. The *Language Center of the University of Jyväskylä* in Finland for example, enables students of non-linguistic specialties of all faculties to master a foreign language for professional purposes. Similar language centers exist at all higher education institutions in Finland. Selection to these language centers is not carried out, as a foreign language is mandatory to all students. There are different objectives of these language centers (Widdowson 1993: 27-36, Hutchinson 1998: 183). The main purpose is to activate and develop students' linguistic and communicative skills and abilities that are necessary for successful study and further professional life in a multinational European society. Another important task is to form and master students' skills for life-long learning of foreign language/s, that is, the development of metacognitive skills of self-directed learning. Moreover, students should have an adequate idea of how to use various authentic and informal language environments in the process of learning a foreign language.

In 2008, this language center trained 15,000 students with B2 level of English on the European scale at the time of entering a university, which is an average level for all applicants in Finland. Basic English courses for students are not provided. Both native speakers and Finnish teachers work in the language center (Rasanen 2009: 247-267).

In Turkey *CLIL* has started since 1955 with the establishment of *Maarif Schools*. It was first implemented in 1970 at *Anatolian High Schools* where every subject was taught through English. However, some schools offered courses in German and French instead of English. Despite the fact that the *CLIL* method was set aside in primary and secondary education in the 1990s, up-to-date many private primary and secondary schools have adopted *CLIL* in several subjects. Besides being implemented in private schools, *CLIL* is also successfully on the rise in higher education.

The ex-president of Kazakhstan, N.A. Nazarbayev suggested in the year 2007 in his *Strategy 'Kazakhstan – 2050'* starting a phased implementation of the cultural project *Trinity of Languages*: "Kazakhstan should be perceived all over the world as

a highly educated country whose population uses three languages: Kazakh as state language, Russian as a language of international communication and English as the language of successful integration into the global economy" (Nazarbayev 2007: 38). Consequently, a new education system is being established in Kazakhstan currently that is focused on entering the global economy. This process accompanied by significant changes in the theory and practice of the pedagogical process.

More and more attention is paying to the need to master the population of the country in English, as it is a de facto international language of business, science and modern technology. According to the *State Program on the Development and Functioning of Languages in the Republic of Kazakhstan for 2011-2020,* the share of the population in the republic who speaks English should be 20 % by 2020 (Nazarbayev 2011: 8). In the concept of innovative development of the Republic of Kazakhstan until 2020, it is said about the need for language training of a specialist who will be capable to communicate with foreign partners. Consequently, in 2015 the English language received a fundamentally new status in the education system of the Republic of Kazakhstan, becoming not only a compulsory school subject, but also one of the languages of instruction, the use of which is mandatory in secondary, high and postgraduate education.

Consequently, the supposed transition should be gradual and phased, and, at least at its initial stage, an approach should be used which would allow to implement the principle of 'double entry of knowledge'. Besides, the problem of training undergraduates of scientific and pedagogical directions for the implementation of *CLIL* in Kazakhstan have not received consideration yet. Meanwhile, in recent years, the importance of postgraduate education in general and master's programs in particular has been growing in the country. In the future master graduates will form the basis of the teaching staff of the education system of Kazakhstan, and will have to work in new conditions with high demands on the level of English proficiency. Language training is receiving more and more attention, but it is not enough for teaching in English. International experience shows that the implementation of *Content-Language Integrated Learning* requires certain methodological training as the implementation of this approach affects all aspects of the teachers' activities and

requires significant changes in their work compared to teaching in their native language.

1.4 Basic Principles and Key Strategies of *CLIL* Technology

Scientists have not come to a common opinion about *CLIL* teaching models. Nevertheless, during the analysis of the literature devoted to the problems of *CLIL*, two main classifications of *CLIL* models are considered in the research work. One of them is the so-called *Polish CLIL Model*, and the other is the *European CLIL Model*:

The *Polish CLIL* identifies the following four teaching models (Gawlik-Kobylińska / Lewińska 2014: 108-109):

Model A: The lesson is conducted a foreign language, while the native language is used only when introducing terminology:

- *Type 1 (monofocal):* Learning activities of in students aims to study the content of non-linguistic discipline, and an appeal to the linguistic aspects is appropriate only in case of difficulties in pronunciation and spelling of special terminology;
- *Type 2 (bifocal):* Attention is equally paid to subject content of the non-linguistic discipline and linguistic aspects of the language.

1. *Model B:* The lesson is held in a foreign language and the mother tongue. This technique of learning foreign languages has been called *code-switching*. Code-switching implies the alternate use of elements of two languages within the same communicative act. In the classroom, up to 50 % of the time is devoted to the study of linguistic aspects:
   - *Type 1:* The ratio of use of foreign and native language is determined by the needs and capabilities of the teacher and students;
   - *Type 2:* Foreign language prevails in the classroom. However, if it is necessary to remove language and other difficulties, students can rely on their native language.

2. *Model C:* The use of a foreign language is regulated by time and in percentage is not more than 50 % of the entire lesson:

- *Type 1:* More time is spent on learning the foreign or native language than on the subject-content;
- *Type 2:* The main purpose of the lesson is to study the subject content.

3. *Model D:* The use of a foreign language in the classroom occurs only in case of necessity:

- *Type 1:* One part of the lesson is conducted in a foreign language, the other part in the native language;
- *Type 2:* Classes are conducted in the students' native language, but foreign language aids are used;
- *Type 3:* This type of model aims at studying the subject content in the native language, while the foreign language acts as one of the means to achieve this goal.

The *European CLIL*, in turn, offers the following three teaching models (Ball 2009: 37-38):

1. *Soft CLIL*;
2. *language-led CLIL*, when attention is focused on the linguistic features of the special context; and
3. *hard CLIL*, the so-called *subject-led* (or: *subject-oriented*) *CLIL*, when almost 50 % of the curriculum of subjects in the specialty is studied in a foreign language. The third model occupies an intermediate position and is used when some modular programs in the specialty are studied in the partial immersion program.

As shown in chapter 1.3 the *CLIL* technology has widely spread throughout the world due to its versatility and easy adaptation to all foreign languages, age categories of students and the level of their language training.

Mehisto / Marsh / Frigols (2008: 11-12) emphasize, that many researchers of *CLIL* consider the development of cognitive skills among students to be one of the priority tasks of this technology in language learning. The main postulate of this idea

is the language acquisition theory by Krashen (1982). He believes that in a special way, methodically coordinated teaching of subject discipline and foreign language contributes to the successful mastery of both subject and the development of cognitive skills of students through the establishment of a variety of neural connections in the brain (Krashen 1982: 100-118).

CLIL is a fairly broad and flexible approach to teaching a subject and language that meets a wide range of situational, contextual and educational needs and requirements. Despite the fact that this model can be implemented through different types, there are basic elements that are common to all varieties of *CLIL* (Coyle / Hood / Marsh 2010: 41)

1. The curriculum is designed considering the sequence of acquired knowledge, skills and understanding of specific elements of the subject.
2. The program provides an opportunity to study the content through different points of view, which allows a deeper understanding of the subject. Using a foreign language through *CLIL* can help students to understand the subject and its key terminology. Such a focus can prepare students for further study or future careers.
3. A key factor of *CLIL* is the focus on the use of a foreign language, i.e. communication, which generally improves the use of a foreign language and develop oral communication. In fact, this is one of the reasons for implementing *CLIL* and taking advantage of it.
4. Training includes the development of thinking skills, the use of various interactive techniques that lead to an increase of student motivation.
5. Dividing into alternative perspectives helps to build intercultural knowledge, awareness and understanding.
6. *CLIL* prepares students for integration into the global community.

When planning a *CLIL* training program, four key building blocks, known together as *The 4Cs Framework* (see Table 1.1), are usually considered: *content*, *communication*, *cognition* (i.e. mental abilities) and *culture* (i.e. cultural knowledge).

**Table 1.1:** *The 4Cs Framework* (Coyle 2008: 97-111)

Content	Acquisition of knowledge, and the formation of skills within the curriculum, i.e. the process of mastering knowledge, skills and abilities within the subject. The *CLIL* method develops interdisciplinary communication; for example, students can learn history, geography, art within one theme.
Commu-nication	Language as a communication tool develops conscious communication when learning a language through the subject content. *Communication* refers to use language for learning and to learn language for use by decreasing speech time of a teacher and increasing speech time of a student. Students have an opportunity to actively practice in the lesson using a foreign language as a means of communication. It can be a brainstorming which allows students to express ideas and opinions related to the theme. This stimulates the students' verbal thinking activity. Besides, students' participation in discussions, debates or forums increases motivation, requires mental strain and stimulates the students' speech activity during deliberation and discussion problems. The main goal for the students is to develop authentic language, not to memorize grammar rules and repeat mechanically the teacher. In this regard, the teacher only serves as a guide or facilitator.
Culture	Understanding of value and respect for the culture of other nations, is an integral part of the content-language learning technology. *Culture* refers to involving the formation and development of general cultural competence. Cultural awareness is dedicated to comprehend ourselves and other cultures, define one's place and role in them and to form a positive attitude towards other cultures.
Cognition	*CLIL* develops cognitive and thinking skills that form the overall

conception. *Cognition* refers to the development of cognitive skills that act as a link between the ability to formulate abstract or concrete concepts, language and comprehension of information.

The development of thinking is an integral part of the process of mastering the language. Students should be involved in the active process of learning the essence of the phenomena when conditions are created for the realization of personal orientations. For this purpose, tasks for analytical or critical reading and writing such as juxtaposition, guessing, finding links, etc. can be appropriate.

According to Lesca (2012: 4) the following pedagogical principles (Figure 1.2) must be followed to successfully implement the *CLIL* methodology:

Figure 1.2: Principles of *CLIL* (Lesca 2012: 4)
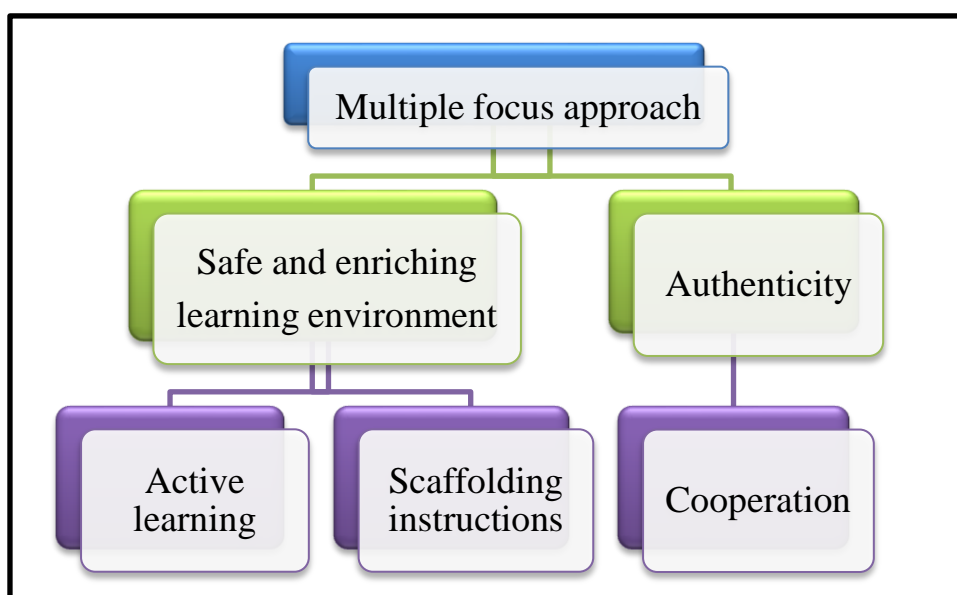
Multiple focus approach means that teaching within the *CLIL* concept is focused on following different areas (Cummins 1976: 2-43; Meyer 2010: 11-29; Lesca 2012: 4):

- Understanding of the subject content;
- development of cognitive skills through the analysis of subject content:

The cognitive development of learners within *CLIL* is based on forming mental operations that are divided into

    a) *low order thinking skills* (*LOTs*), i.e. memorization, classification, object definition, etc.; and

    b) *high order thinking skills* (*HOTs*), i.e. prediction, reasoning, creative thinking, synthesis, evaluation, hypothesis, etc.

The basis of 'navigation' in the development of cognitive skills is Bloom's well-known *Taxonomy of Educational Objectives* (1956). This taxonomy is based on the fact that students are not able to realize the concept without remembering it, just as they cannot apply knowledge if they do not understand what is being said;

- development of presentation skills and discussion;
- development of foreign language skills;
- formation of cooperation between students in the mode of group work, where compliance with the time frame and working with sources of information are essential;
- formation of skills to work with *ICT*.

Authenticity, in turn, implies that within the *CLIL* method authentic materials and learning situations are required. Various interactive materials of English-language sites serve as a rich resource of authentic materials that contribute to maximize the potential. These sources can be used as a basis for creating an authentic foreign language environment. In addition, tasks with a high degree of cognitive load help to develop creative thinking. This kind of tasks teach to predict and simulate situations in the course of role-playing games and discussions. In this context, one of the main strategies for the selection of educational material is the ability to present it using various teaching methods. Thus, the learning process is diversified, and the content is assimilated more meaningfully and deeply. Different ways of processing educational materials (e.g. drawing up a table, a scheme based on a text, etc.) and the use of two languages during the work stimulate the study of both the language and subject content.

For a *safe learning environment*, *CLIL* teachers should provide a friendly environment and equal conditions for all students to freely experiment language with subject-content. Using their simplified language, students acquire 'speech independence' and have the opportunity to practice using subject vocabulary in an environment in which they feel relaxed and confident.

To provide an *enriching learning environment* the principle of *active learning* can be used on the one hand. This principle assumes that students are more active than the teacher when communicating during the course of study. The preference is given to the pair or group work of students in which students actively discuss the subject-content and collaboratively find answers to difficult questions. They also develop criteria for evaluating the participants (so-called *peer assessment*) and evaluate each other. In this context, the teacher only acts as an organizer of the students' work.

On the other hand, *scaffolding instructions* can be used to provide an *enriching learning environment* in order to help students to achieve their learning goals. Scaffolding instructions are based on Vygotsky's (1978) *Zone of Proximal Development* concept and Bruner's idea (1985) who argued that *"learning to use the language"* can be accomplished with the assistance of other factors such as the tutor who helps students to be successful in solving diffficult tasks (Bruner 1985). The students must receive full support from the teacher, who also must be sure that the authentic material is absorbed by the students. Questions and tasks, in turn, should be designed so that students can easily understand the essence of the material. The assessment of students' success plays a significant role in forming positive motivation, which further increases the desire to learn a foreign language and subject-content. There are many different ways of language support for students studying in a non-native language such as (Lightbown 1985: 263-273):

- partial relying on the students' native language;
- visual aids, i.e. sign language;
- selection of synonyms, paraphrases and the use of lexical repetitions; and
- *echo*, i.e. the repetition of the students' answers in the language of instruction.

The active speech interaction between teacher and students happens during the conversation, course and when summing up the results of students' pair or group work. Both the teacher and student change roles in the speech interaction, acting either as a speaker or as a listener. At the same time, in the real conditions of multi-level knowledge of the audience in the language of instruction, the range of *speech strategies* is diverse (Walqui 2006: 159-180). Walqui (2006) considers the main scaffolding strategies:

Speech-stimuli in a typical situation of active interaction are:

- *Strategy 1*: The teacher uses only the language of instruction in speech-stimulus and addresses the same question-stimulus first to students who know the language of study at a high level, then to students who do not fully know the language of instruction.
- *Strategy 2*: The teacher uses merely the language of instruction in speech-stimulus. From time to time, he/she very selectively instructs successful students to translate into their native language certain words and phrases to those who are less successful in the subject.
- *Strategy 3*: The teacher uses predominantly the language of instruction in the classroom. The key or final questions of the lesson after the language of instruction are duplicated in the language/s of the students.

Speech-reactions in a typical situation of active interaction, in turn, are:

- *Strategy 1*: The teacher uses only the language of instruction. The students, in turn, can use their native language when completing assignments and answering the teacher's questions. Answers in the native language do not violate the logic of the conversation. In this case, the conversation is accompanied by a constant 'switching' of the language codes.
- *Strategy 2*: The teacher uses only the language of instruction in the classroom and does not prevent the students from using their mother tongue. However, students' response must be conveyed from the native or 'mixed' language into the language of instruction. This model of teacher's

speech behavior does not create tension in the classroom and does not lead to a conflict with the subject partners.

- *Strategy 3*: If students ask a question in their native language, the teacher answers in the students' language and then duplicates the answer in the language of instruction.

Cooperation, in turn, implies the need of high degree of cooperation among different subject teachers to support each other in the process of implementing *CLIL*. As all the principles of *CLIL* described above, impose new professional duties on the teacher, i.e. to teach in lectures and seminars not only the subject content, but also the language through the subject, and implies a good command of the teacher with the necessary methodological knowledge and skills. It is necessary to organize special training for *CLIL* teachers, to introduce the basic principles and concepts of *Content-Language Integrated Learning* methodology, to teach the basics of creating teaching materials in accordance with the principles of *CLIL*, and to analyze the best European practice in lesson planning, and evaluation of learning outcome for the ensuring the methodological support to them. Furthermore, innovative technologies can be a good resource for *CLIL* teachers, as they provide a variety of teaching materials and the ability to communicate constantly with colleagues regardless of geographic location. One of the problems of *CLIL* teachers is the lack of educational materials. The solution to this problem is to find resources available on the internet; in addition, there are various programs with which teachers can independently create resources for implementing *CLIL*. By constantly informing each other about the implementation process of *CLIL*, teachers get to know what *CLIL* is, how this approach works and how much effort is invested in the implementation. Teachers should also inform students' parents about the process of *CLIL* implementation in order to get positive results and successfully implement *CLIL*. Eventually, teachers have to provide a transitional period for students who have not had the experience of learning *CLIL* so that they are able to adopt to the new approach of learning.

Despite these challenges of implementing *Content-Language Integrated Learning* in the educational process for the teachers, there are many advantages of the use of this methodology for the students: One of the main advantages is to

increase students' motivation to learning a foreign language – it becomes more purposeful because the foreign language is used to solve specific communication tasks. In addition, students have an ability to better know and understand the culture of the foreign language which leads to shaping their sociocultural competence. Eventually, students acquire a considerably large amount of language material, i.e. a full immersion, and the work on various topics allows them to learn specific terms and certain language structures that contribute to their subject terminology vocabulary and prepare them to further study and use of the acquired knowledge and skills.

1.5 *ICC* Formation within the Frame of *CLIL* Technology

The current situation in the global labor market, the possibility of international arena in future professional activities, numerous contacts with speakers of other languages: all these aspects implies the need for a foreign language teaching that must necessarily be based on a profound formation and development of *Intercultural Communicative Competence* (*ICC*). In the modern world, the problem of mutual understanding between nations remains acute, so it is important to teach students to overcome the difficulties that arise when different cultures clash due to different historical, political and cultural developments.

The effect of *ICC* training is greatly enhanced if a foreign language as an academic subject integrates with other subjects, forming with them a common interdisciplinary-didactic space. Such a constellation is provided by the *CLIL* concept. The greatest cultural content is the interdisciplinary block *foreign language, history, geography*, which is able to 'plunge' the students into the space-time analysis of a foreign and their native culture. The formation of *ICC* based on the *CLIL* technology in conjunction with aspects of a foreign culture can have following benefits (Ioannou-Georgiou / Pavlou 2010: 5):

- Deepening of students' knowledge of the foreign language, e.g. by expansion of the vocabulary and increasing the volume of students' speech practice;
- formation of such qualities as tolerance and impartiality to representatives of other countries and cultures; and
- high level of motivation to further master the knowledge through the acquisition of knowledge about the foreign and native culture.

Unfortunately, the implementation of interdisciplinary education is carried out mostly by individual enthusiastic teachers. Lack of research devoted to identifying various integrative interdisciplinary relations leads to the fact that *CLIL* teachers work in a didactic way in isolation from each other, resulting in a loss of the holistic perception of the world picture and reduction of their adaptation to the social conditions of the multicultural community.

In the context of formation of *ICC* based on the *CLIL* technology, it is necessary to determine the level of students' language readiness. Students should speak the foreign language at a level not lower than basic level, i.e. A1/A2, according to the *Common European Framework of Reference for Languages* (*CEFR*). Thus, students should be able to

- understand the speech of the teacher and their classmates in everyday situations;
- represent themselves and others;
- ask and answer questions;
- understand short simple texts, finding specific, easily predictable information in them;
- write simple short notes and messages (Council of Europe 2001: 23-24).

The results of formation of *ICC* based on the *CLIL* technology are manifested in the development of students' thinking. This constellation contributes not only to the intensification, systematization and optimization of the educational process, but also to communicative, cognitive and cultural skills of students, particularly in a linguistic, historical and ethical way.

1.6 Lesson Planning within the Frame of *CLIL* Technology

A lesson using the *CLIL* approach has two main objectives: *subject* and *foreign language*. To reach these objectives, educational materials not only for studying a specific subject, but also for learning a foreign language have to be carefully selected. This requires, on the one hand, a profound collaboration between subject and foreign language teachers. On the other hand, the educational materials have to be based on the *4Cs Framework* (see chapter 1.4., Table 1.1) and have to consider the learning objectives, as well as the level of students' preparedness.

As a *subject content*, any topic can be selected from the school subjects. *Foreign language content* is more difficult to plan. On the one hand, it is interrelated with the subject content, and on the other hand, it has to serve both communicative and cognitive spheres and at the same time enrich students' foreign language knowledge. Besides, lesson planning regarding the foreign language assumes that the teacher must foresee the possible language difficulties of his students in mastering the subject material and provide support for the 'removal' of these difficulties. In regard to the objective *foreign language*, lexical units, grammatical structures and the four speech activities *reading*, *writing*, *listening* and *speaking* have to be integrated in the *CLIL* lesson. Although the *CLIL* approach requires more training time for *reading*, the teacher encourages students to write well-formed paragraphs using a specific vocabulary (*writing*), provides with audio materials (*listening*), and promotes dialogues and conversations (*speaking*).

In the selection of appropriate educational materials, it is necessary to select authentic texts of a variety of styles that meet the age characteristics and level of students' language readiness, as well as contribute to the achievement of the two objectives mentioned above. The work on texts should contain pre-, while- and post-reading steps, which each should be accompanied by different tasks, e.g. making or filling out a chart, table, map, etc.; finding specific information in the text (e.g. date, place or time); placing paragraphs in the correct order; filling in blanks in the text; question-answer; term-definition; part-whole; guessing words; questioning the lass;

or presenting the text in the class. In general, the types of tasks must be selected and developed according to the following requirements (Lesca 2012: 5-9):

- Tasks should be constructed with an emphasis on the subject-content, its understanding, verification and subsequent discussion;
- tasks should stimulate students' oral and written communication in the foreign language and their independent and creative activities.

As these requirements show, the tasks should form not only language and speaking skills, but also cognitive skills. Regarding the latter, it is significant to remember that cognitive skills need to be formed by building up from *recognition*, *identification* and *understanding* to higher forms of thinking, i.e. *analysis*, *synthesis* and *evaluation*. Therefore, texts can for example in a first step be divided into small parts and accompanied by illustrations, diagrams or maps, which contributes to the *recognition*, *identification* and *understanding* of the content. With different tasks, such as entering the material from the text into a table, students can then classify the information, separate the most important from the secondary, deepen their understanding and set the stage for 'knowledge transfer', approaching to the higher forms of *analysis*, *synthesis* and *evaluation*. For this, students should also be introduced to compensatory strategies to address language, content and communication difficulties.

At all stages of working with texts, attention should be focused first on lexical aspects, and then on specific grammatical aspects, because in *CLIL* subject lessons the lexical approach is more important than the grammatical approach. Besides, the teacher should also pay attention to special vocabulary and some language units, e.g. phrasal verbs, stable expressions or degrees of comparison, which will be useful regardless of the subject topic. Nevertheless, it has to be noted that students must be proficient to a certain level in the language in which the subject is explained in order to be able to understand the subject, explain their ideas and communicate. Thus, before introducing the methodological techniques of subject-language teaching, the students' level of the foreign language in which the subject will be explained should be determined. This, again, requires a collaboration between subject and foreign language teachers.

Another important aspect is the mutual lesson attendance of teachers, which directly contributes to the exchange of experience and resources regarding teaching a subject in a foreign language of instruction. First, for this it is necessary to have a 'critical friend', this can be a colleague with whom you work in parallel, or subject teachers can choose language teachers as a 'critical friend' and vice versa. Secondly, it is necessary to coordinate each step in training with each other in advance.

The proper consideration of all the above-mentioned factors of lesson planning within the frame of *CLIL* technology allows to solve the following educational goals and objectives (Wiesemes 2009: 41-59):

- Increase students' motivation to learn a foreign language;
- teach students to consciously and freely use a foreign language to solve everyday communication tasks;
- develop students' knowledge and understanding of other cultures;
- develop linguistic and communicative competences through the use of a foreign language in a natural and modern form.

An example of a profound lesson plan that can solve the above-mentioned educational goals and objectives is given by Lesca (2012: 7) regarding the teaching of *Physics* within the foreign language *English*:

Table 1.2: Lesson Plan ('Physics: The Laws of Optics') (Lesca 2012: 7)

LESSON AIMS – CONTENT
By the end of the lesson the students will have greater understanding of what light is, how different mediums affect the path through which light propagates (laws of refraction and reflection), what total reflection is and what total reflection can be used for.
LESSON AIMS – LANGUAGE

- Students will have expanded their vocabulary in the field related to optical physics and optical fibers.
- Students will have practiced the use of prepositions of space and expressions to locate a path in the space.
- Students will have practiced the impersonal language to speculate about scientific and technological topics.

STAGE	PROCEDURE
STAGE 1: Introduction	Students get information by listening to the teacher.
STAGE 2: Checking previous knowledge	Students read a list of phrases and fill in the matching words.
STAGE 3: Expanding knowledge and specific language	Students expand their knowledge about the creation of light and the law of refraction by looking at diagrams at the black board.
STAGE 4: Practicing functional language and checking the knowledge	Students use their language and special knowledge to find out the right answer for some questions. Students analyze a picture and discuss their opinions.
STAGE 5: Expanding knowledge	Students get information by listening to the teacher and looking at a diagram.
STAGE 6: Developing reading skills	Students read a text and do a true-false and a gap exercise. Students compare their answers with a partner.
STAGE 7: Developing cognitive skills (predicting)	Students guess what might happen when the incidence angle is increased and light encounters the boundary with a lower refraction index. Students work in pairs.
STAGE 8: Developing reading skills and expanding vocabulary (specialist	Students read a text to check if their prediction was right (*scanning*). Students read the rest of the text to find out how total reflection is related to the functioning of optical fibers (*skimming*).

vocabulary)	
STAGE 9: Practicing language	Students look at a list of verbs and a list of prepositions used in the text given at the previous stage and try to match verbs and prepositions according to that text.
STAGE 10: Developing cognitive skills (reasoning)	Students choose from a given list of technological applications which of them might use optical fibers and explain why optical fibers are suitable for that specific purpose. Students work in pairs or groups.

2. PRACTICAL ISSUES
OF TEACHING SUBJECTS THROUGH ENGLISH

2.1 *CLIL* within the *Presentation, Practice, Production-Model*

The effectiveness of the formation of communicative competence depends largely on how the learning process is organized in a foreign language. The use of modern models of creating a lesson in a foreign language greatly contributes to the optimization of the educational process and its transition to a qualitatively new level of development. According to Harmer (2001: 79), the model of making a foreign language lesson is specific sets of procedures or typical sequence of teacher training and student learning actions in the process of mastering foreign language skills and abilities. It is based on a particular method, which the teacher or the author of a textbook choose and the teacher must adhere to in order to make the training to be coherent and systematic.

In this context, following models of the construction of a foreign language lesson can be distinguished (Aslan 2016: 136):

- *PPP* (*presentation*, *practice*, *production*);
- *ESA* (*engage*, *study*, *activate*);
- *OHE* (*observe*, *hypothesis*, *experiment*);
- *ARC* (*authentic*, *restricted*, *clarification*), etc.

The widely used model is the *PPP-Model*, known as *Triple P*, as it is considered to be a well-established pedagogical approach in forming foreign language competence (Shehadeh 2005: 14). The *PPP-Model* is a three-stage learning model: At the first stage *presentation* the forms, values and functions of the target language units are introduced and explained by the teacher. The second stage *practice* is experimental and involves testing and using different methods of memorizing the new subject theme. This stage is controlled by the teacher and strictly manageable (so-called *controlled practice* or *semi-controlled practice*). The third stage *production* brings to speech and to real communication where the whole diversity of the phenomena is introduced. At this stage, the task of the teacher is to

create conditions and opportunities for free communication in the target language (so-called *free practice*) (Criado 2013: 99-100).

Some sample materials for the *PPP-Model* which are prepared for teaching the subjects *Biology* (Table 2.1, 2.2, 2.3), *Literature* (Table 2.4), *Mathematics* (Table 2.5) and *History* (Table 2.6) in the foreign language *English* are given by Sh. Deller / Ch. Price (2007: 30-121) as following:

Table 2.1: Presentation Stage ('Three Things I Know About') (Deller / Price   2007: 110)

Aims	LANGUAGE	defining; asking for and giving information
	OTHER SUBJECT	revising and expanding information; working in a group; note-taking
	ICC	social and communicative competences
Materials	large sheets of paper (one for each topic); sheets of paper (one for every student); a stick-on label for every student	
Demo Subject	BIOLOGY	'The Human Body': skeleton, muscles, air supply, circulatory system, cells, digestive system, reproductive system
Alternative Subjects	SPORT	equipment and rules required for any sport
	HISTORY	'The Renaissance Period': writers, thinkers and artists
	DESIGN AND TECHNOLOGY	'Metals': joining metals, reforming metals, heat treatment, best use of standard components for metal

Preparation:

Write a list of topics for students' revision.

Procedure:

1. Divide the class into groups of three or four. Give each group a topic they have studied recently. Give each student a label. All students write their topic title on a label and stick it on themselves.

2. Ask each group to discuss three things they know about the subject. Give each student a sheet of paper and ask each to write down the three things the group has discussed.

3. Tell the students to find a partner from another group. The pairs take turns to read out their lists and ask their partner for one more piece of information about the topic. They write the extra piece of information about their topic on their own sheet of paper. Then they move on to new partners until they have collected four or five more pieces of information.

4. The students go back to their original group to read and assess all the information they have collected, i.e. they pool it. You check the information.

5. Ask each group to write three or four sentences about their topic.

6. Each group reads their sentences to the rest of the class. The other students make notes.

7. Write one topic title at the top of each large sheet of paper, for example, 'circulatory system'. Pin up the sheets. The groups go around with these topic sheets and write on them any information they can remember. They can use their notes.

8. Take the large sheets and pin them on the board. Read out the information. The students write notes in their exercise books for future reference. This final check helps to fix and anchor the information in their minds (Deller / Price 2007: 110).

Table 2.2: Practice Stage ('Student-Generated Jumbled Words') (Deller / Price 2007: 52-54)

Aims	LANGUAGE	Spelling
	OTHER SUBJECT	labelling key words on a picture; jumbling and reordering words; using the visual / spatial intelligence
	ICC	conceptual and cognitive competences
Materials	picture to be labelled	
Demo Subject	BIOLOGY	bones, joints, muscles
Alternative Subjects	DESIGN AND TECHNOLOGY	different equipment / tools
	MATHEMATICS	geometric shapes
	ART	pictures and artists
	(In general, vocabulary for any subject.)	

Preparation:

1. Find or draw a picture illustrating the words you want to be memorized.
2. Photocopy it for each student.
3. Write a list of the words in random order (see Figure 2.1).

Figure 2.1: Words in Random Order ('Bones') (Deller / Price 2007: 52)
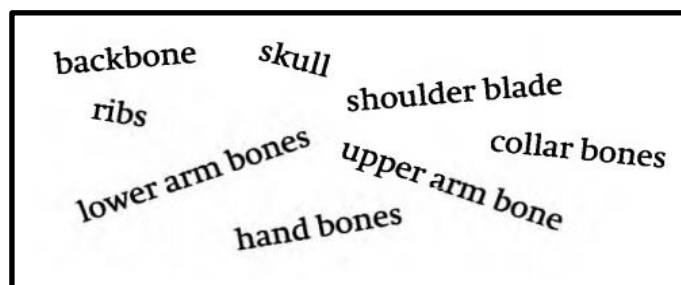
Procedure:

1. Write the words all over the board (not in a vertical list).

2. Students work in pairs. Ask them to make a list of the words from the board in any order they like, and then to number them.

3. Give out a picture of the 'human skeleton' (see Figure 2.2). Now the students match the words to their picture by writing the appropriate numbers on the picture. If they have any problems, they must get you to check.

Figure 2.2:
Picture ('Human Skeleton')
(Deller / Price 2007: 53)

4. Give out a list of jumbled words (see Figure 2.3). Get the students to jumble the letters of each word on the list
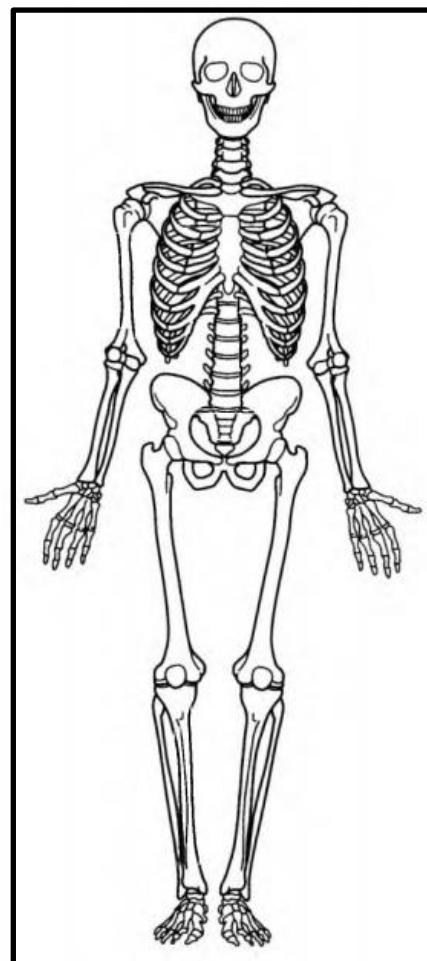
Figure 2.3:
List of Jumbled Words ('Bones')
(Deller / Price 2007: 53)

✓ Luksl
✓ Cbakboney
✓ laoclrbone
✓ lerdoshu blade
✓ sbir
✓ preupmrabone
✓ rwloe mar bones
✓ dnah bones

5. Each pair exchanges their picture and their list of jumbled words with another pair. The pairs re-order the letters and then write the matching number from the picture next to each word.

6. They give back their work to the pair who wrote it for them to check.

The process of jumbling and re-ordering the words is a good way to help students memorize them. In fact, they probably learn as much from creating the

activity as they do from working on the activity they have been given ((Deller / Price 2007: 52-54).

Table 2.3: Production Stage ('Ask Me, Tell Me') (Deller / Price 2007: 61-62)

Aims	LANGUAGE	asking for and giving information
	OTHER SUBJECT	note-taking; using fellow students as a resource; cooperative learning; interpersonal skills; revision
	ICC	linguo-culturological competence
Materials	sheets of paper (one for each student)	
Demo Subject	BIOLOGY	'Humans as Organisms': digestive system, circulation, breathing system, respiration, nervous system
Alternative Subjects	PYSICS	atoms and nuclei
	DESIGN AND TECHNOLOGY	plastics and composite material
	GEOGRAPHY	coastal management
	(In general, any subject you want your students to revise orally.)	

Preparation:

Select the topics or units you want the students to revise. Make a list of useful page references and resource points.

Procedure:

1. Give each student a sheet of paper and tell them to fold it in half horizontally. Get them to write the words 'Ask me about' as a title for the top half, and 'Tell me about' as a title for the bottom half.
2. Write your list of topics on the board (see Figure 2.4). Tell the students they must choose one topic they feel confident about and one they feel

less confident about. They write the first topic under the heading 'Ask me about', and the second one under the heading 'Tell me about'.

Figure 2.4: List of Topics ('Ask Me, Tell Me') (Deller / Price 2007: 62)

Ask me about
The make-up and functions of blood

Tell me about
The human digestive system

3. Give the students time to check their information on the 'Ask me about' topic. They can make brief notes in the 'Ask me about' section on their paper.

4. The students now mix and mingle giving their information about their 'Ask me about' topic and collecting information for their 'Tell me about' topic. They write notes in the 'Tell me about' section if they consider the information is correct and helpful. Explain that they should speak to as many people as possible in the time.

5. Write your list of useful references and sources on the board under the appropriate topic titles. At the end of the time limit ask the students to check their information with the references on the board. They should ask you to clarify and correct any information they are not sure about.

6. Ask for volunteers to read out all the correct information they collected for their 'Tell me about' topics. Check that all the topics have been covered. The students listen and make notes about all the topics. They also write down the reference points from the board.

Follow-up:

1. The students can turn their papers over and reverse the topics, so the 'Ask me about' topic becomes 'Tell me about' and vice versa. Get the students to repeat the speaking activity but without cues, prompts or note taking.

2. As homework the students can write a few sentences about each topic (Deller / Price 2007: 61-62).

Table 2.4: Presentation Stage ('Getting the Right Order') (Deller / Price 2007: 30-31)

Aims	LANGUAGE	adverbs of sequence; e.g. after, before
	OTHER SUBJECT	memorizing a sequence of steps; using the kinesthetic intelligence
Materials	one slip of paper per student	
Demo Subject	LITERATURE	'Periods of Literature'
Alternative Subjects	SCIENCES	steps involved in an experiment
	HISTORY	order of events, monarchs, battles
	MATHEMATICS	steps to solve a specific calculation
	(In general, any subject which involves a sequence or order.)	

Preparation:

Write out the steps of the sequence you want your students to learn.

Procedure:

1. Show on the board the steps you want your students to memorize (see Figure 2.5). Number them. Give the students time to try to memorize the correct order.

Figure 2.5: Steps ('Periods of Literature') (Deller / Price 2007: 30)
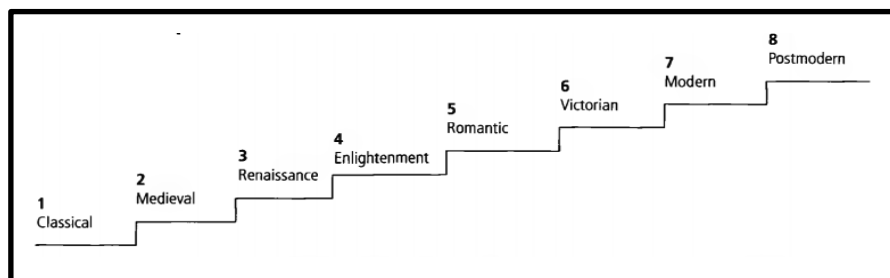
2. Put students into groups of the same number as the steps that you want them to memorize. In this example they will be groups of eight. Number the students 1-8. If you have more than eight students in a group two can share a number. If you have seven students, you can give one student two consecutive numbers.

3. Student l in the group stands and says the name of the first step, student 2 the second and so on. Check each group. If a student makes a mistake, student 1 starts again from the beginning. They continue like this until they have managed to get through the whole sequence at least twice without making a mistake.

4. Ask the students to write the name of their step on a piece of paper. They mix them up and each student in the group takes one.

5. This time they must stand and say the step on their piece of paper at the appropriate time.

6. Repeat step 5 as often as necessary, getting the students to redistribute the slips each time.

7. Ask the students to write the different periods on a staircase in their book (Deller / Price 2007: 30-31).

Table 2.5: Practice Stage ('Student-Generated Word Puzzle') (Deller / Price 2007: 54-56)

Aims	LANGUAGE	giving definitions and descriptions; asking questions and replying them; translating
	OTHER SUBJECT	memorizing key words
Materials	picture to be labelled	
Demo Subject	MATHEMATICS	'Terminology'
Alternative Subjects	BIOLOGY	parts of the body
	PHYSICS	electrical components
	HISTORY	different battles / wars
	(In general, vocabulary for any subject.)	

Preparation:

1. Write down about twelve words on a board to make students concentrate on (for example: area, average, coordinates, graph, hypotenuse, numerator, quotient, intersection, integer, equation, denominator, isosceles).

2. Put them in a chart in any order (see Figure 2.6).

Figure 2.6: Puzzle ('Terminology of Mathematics') (Deller / Price 2007:54)

3. Divide the puzzle into two halves: puzzle A and B (see Figure 2.7).

Figure 2.7: Puzzle A and B ('Terminology of Mathematics')

(Deller / Price 2007: 55)

Procedure:

1. Divide students into two groups. Give the Puzzle A to one group and Puzzle B to another group. Explain them that the task is to define or give a clue for words in their puzzle.
2. Monitor and facilitate the students collaborative work.
3. Tell students to work with their partner and not to let their partner have a look at their blank.
4. Students ask their partner for a clue for any word in their puzzle, for example *please give me the definition for number 6* and fill in the chart.
5. Ask students to give translations of all the key words into their native language (Deller / Price 2007: 54-56).

Table 2.6: Production Stage ('Answer My Picture Questions') (Deller/Price 2007: 119-121)

Aims	LANGUAGE	practising question forms
	OTHER SUBJECT	using different resources; student-student input; getting new information
Materials	copies of the chosen visuals (one per group); texts (one per student); different coloured board pens	
Demo Subject	HISTORY	'Hannibal Crossing the Alps in 218 BC'
Alternative Subjects	PHYSICS	using waves: diagrams and graphs
	ITC	data storage: diagrams
	GEOGRAPHY	climate: graphs and weather charts

Preparation:

1. Find a short text (see Figure 2.8) from the internet, a textbook, or an encyclopedia, and a visual (see Figure 2.9) you could use to go with the text.

Figure 2.8: Text ('Hannibal Crosses the Alps') (Deller / Price 2007: 120)

Hannibal crosses the Alps (218 BC)

Some details of Hannibal's crossing still exist. The first danger came from the Allobroges, who attacked the rear of Hannibal's column of soldiers and animals. Then Hannibal was attacked again by other Celtic groups. These attackers rolled heavy stones down the mountainsides onto the soldiers and animals below. This made the animals and soldiers panic and many of them fell from the narrow, dangerous paths to their deaths. Others were crushed and horribly injured. Hannibal lost many men and animals. There were constant attacks throughout the journey.

Hannibal could not trust his Gallic guides and this made it even more difficult. Hannibal bivouacked on large bare rocks to cover the passage by night of his horses and pack animals in the gorges below. Snow was falling, it was very, very cold, and the soldiers and animals were wet, hungry and frightened. Very often landslides blocked the narrow tracks and a lot of time was lost just trying to clear the paths.

Finally on the 15th day, after a journey of five months from Cartagena, with 20,000 foot soldiers, 6,000 cavalry and only a few of the original 38 elephants, Hannibal arrived in Italy.

Figure 2.9: Picture ('Joseph Turner: *Snow Storm – Hannibal Crossing the Alps'*) (Deller / Price 2007: 119)

2. Make a copy of the text and another of the picture. Remove any labels from the picture. If there is any writing or information such as titles outside the frame, cut it off. Leave just the picture. You may need to simplify the language of the text depending on the level of the class. Write line reference numbers on the text before you photocopy it.

3. You will be dividing the class into A and B groups. The A groups will need a visual per group. The B groups will need copies of the text. Make enough copies of the text for each student in the class.

Procedure:

1. Divide the class into equal-sized A and B groups.

2. Explain the difference between open and closed questions and ask the students to use both kinds of questions: An *open question* is general and can have a variety of answers. Open questions about the picture can include not only what people see in the picture but also what they imagine, feel about or associate with the picture, i.e. thinking outside the frame. An example of an open question is 'What things would make the journey across the Alps so difficult?'. A *closed question*, in turn, can be a 'yes/no'-question and usually has only one answer; for example 'What were the dates of the Second Punic War?'

3. Give the A groups the visuals and the B groups the texts. Tell the B groups to read the text for general understanding, i.e. to get the gist. They do not have to understand all the words.

4. Tell the A groups to study the visuals and write a list of questions they would like answered when looking at the visual. Ask them to use both open and closed questions. Set the same time limit for the reading and question writing.

5. Ask the A groups to pair up with a B group and show and ask them their questions. The B groups scan the text and discuss possible answers for the open questions. The A groups make notes.

6. Display copies of the visual round the room. Let the text group (B) students walk round and look at them. Give them a few minutes to do this before they go back to their groups.

7. As a whole class and taking it in turns, the A groups ask their questions aloud and the B groups respond with answers. Write down a selection of the questions on the board for the students to copy.

8. Give out the rest of the text copies so that each student has a copy. Individually the students scan the text and underline any words or expressions they find difficult. Check and explain.

9. The students copy the questions from the board. As homework they write answers for as many of the questions as they can. (Deller / Price 2007: 119-121).

2.2 Role of Assessment and Challenges of Using *CLIL* Technology

Evaluation within the *CLIL* technology differs from traditional methods: as the *CLIL* lesson has a dual focus, attention needs to be paid to both the students' foreign language achievements and their acquired knowledge of the discipline. This can be undertaken in the form of current and final testing, as well as in the form of oral presentations on the subject. However, there is a risk of unfair and unclear learning outcomes, especially in cases where students have some language difficulties: students may know the subject itself, but may not be able to demonstrate their knowledge in the language of instruction. Evaluation in the native language is possible, but there are some risks associated with it: it casts doubt on the results of the evaluation (since the material was studied in one language and evaluated in another) and undermines the motivation to learn in a foreign language. Thus, just as the specific factors relating to students are taken into account when preparing the *CLIL* curriculum, some of these factors must also be taken into account when preparing the assessment. Consequently, the assessment should include all of the goals and objectives of the *CLIL* lesson, i.e. knowledge, competences, skills,

attitudes and behavior of the students (Massler 2010: 115). In this regard, Massler suggests (2010: 126-127):

- to carry out the assessment several times during the first half of the year;
- to use portfolio to collect completed student tests, assignments, etc.; and
- to use different grading scales.

Besides the above-mentioned challenges regarding the assessment of *CLIL* lessons, the implementation of this approach in the educational process may lead to a number of other challenges: One of the main problems is the lack of sufficient knowledge of foreign language teachers on a particular subject, and vice versa, the imperfect knowledge of a foreign language by subject teachers. Thus, highly qualified teachers, who are able to lecture and conduct practical, seminar and laboratory classes at least in two languages, are necessary to implement such programs. According to Catelly (2011: 127-131), Banegas (2012: 122-126), Roiha (2014: 1-18) and Pladevall-Ballester (2015: 45-49), other problems in implementing the *CLIL* technology in the educational process are:

- Lack of authentic materials in a foreign language;
- low level of interaction between subject and foreign language teachers;
- unwillingness of the teaching staff to master new approaches, methods and technologies;
- in the early stage of *CLIL* implementation, teaching subjects in a foreign language may adversely affect the process of mastering the subject itself;
- low level of proficiency in a foreign language by the students which leads to a number of psychological problems associated with mastering the material in a foreign language.

Highly qualified teachers, who are able to give lectures and conduct practical, seminar and laboratory classes in at least two languages, are required to implement such programs in school.

One of effective solutions that has been successfully implemented is foreign language classes for subject teachers and their consultation in the preparation of lectures and teaching materials with foreign language teachers.

Despite all these difficulties of implementing the *CLIL* technology in the educational process, this approach represents a functional way of teaching a foreign language and allows to solve a wider range of educational tasks. As shown in chapter 1.4, the *CLIL* technology has following main advantages for the educational process: Students learn a sufficiently large amount of language material, which is a complete immersion in the natural language environment. Besides, the work on various topics allows students to learn specific terms and certain language constructs, which contributes to the replenishment of the learners' vocabulary with subject terminology and prepares them for further study and application of acquired knowledge and skills.

2.3 Analysis of Questionnaires:
Teachers' and Students' Attitude to *CLIL* Technology in a Profile School

A research study regarding the use of *CLIL* in lessons on the one hand and the attitudes of teachers and students towards this technology on the other hand, was conducted at a profile school in Kazakhstan, namely at *Aktogai School*. Ten school teachers of different subjects such as biology, physics, English language, geography, chemistry, history, mathematics and 42 school students from 10A , 10B grades, which have classes in English language based on the *CLIL* approach, were involved in the survey.

The research study was based on two parts: The first part was dedicated to a conversation on asking and answering questions in accordance with the *CLIL* technology. The questions were for both teachers and students. The conversation was made to inform and contemplate the *CLIL* technology deeply. In the second part, questionnaires related to the teachers' and students' points of view to the usage of *CLIL* technology in lessons were spread (see Appendix 1, 2). The results of these questionnaires were collected and are presented in following two diagrams.

In a first diagram (Chart 2.1) the results of the questionnaires regarding the teachers' use of *CLIL* and their attitudes towards this technology are represented:

Chart 2.1: Results of Questionnaires - Teachers
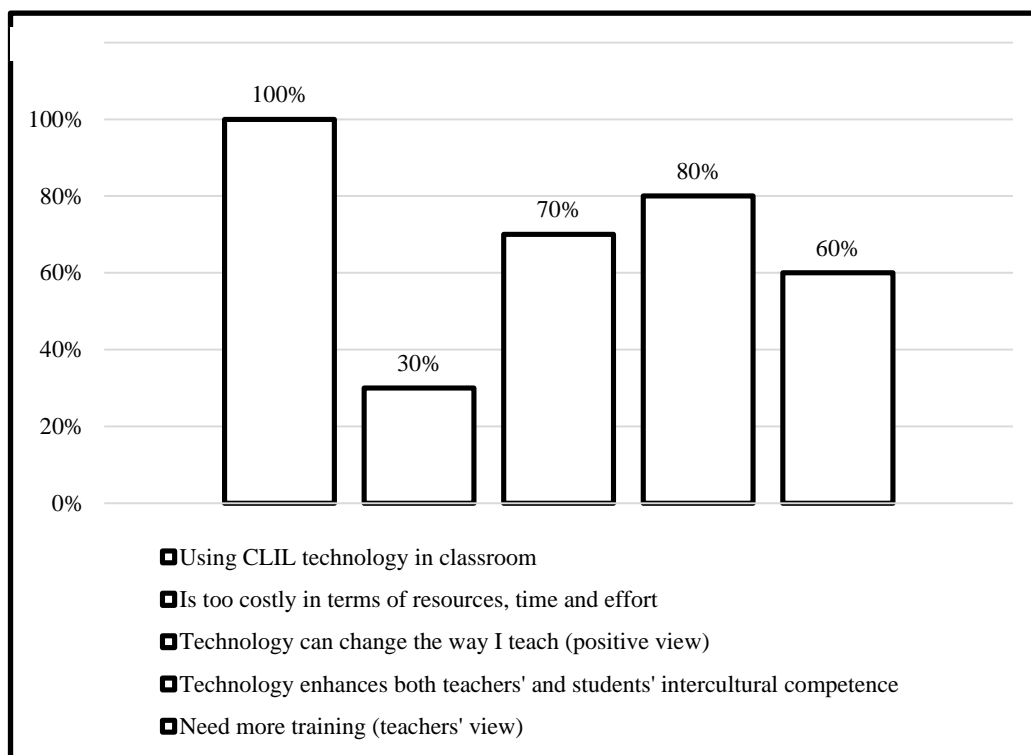
According to this diagram, all teachers who took part in the research study agree to use *CLIL* technology on senior classes of profile school. However, almost 30 % of the teachers complained that this approach is too costly in terms of resources, time and effort. On the contrary, about 70 % of the teachers are of the opinion that the *CLIL* technology supports students' cooperation, increases their motivation, promotes the development of their interpersonal and communicative skills and thus has a positive effect on the teaching in general. At the same time, approximately 80 % of the teachers consider *CLIL* as a new paradigm in education and they firmly believe that this technology can develop both teachers' and students' intercultural competence, as well as their readiness to the today`s world. However, more than half of the teachers acknowledge that they need more training as the *CLIL* technology requires more responsibilities than traditional ways of teaching. In their opinion, the *CLIL* technology can be successful only, if there is an adequate teacher training of the use of this technology in teaching.

A second diagram (Chart 2.2), in turn, shows the results of the questionnaires regarding the students' use of *CLIL* and their attitudes towards this technology:

Chart 2.2: Results of Questionnaires – Students
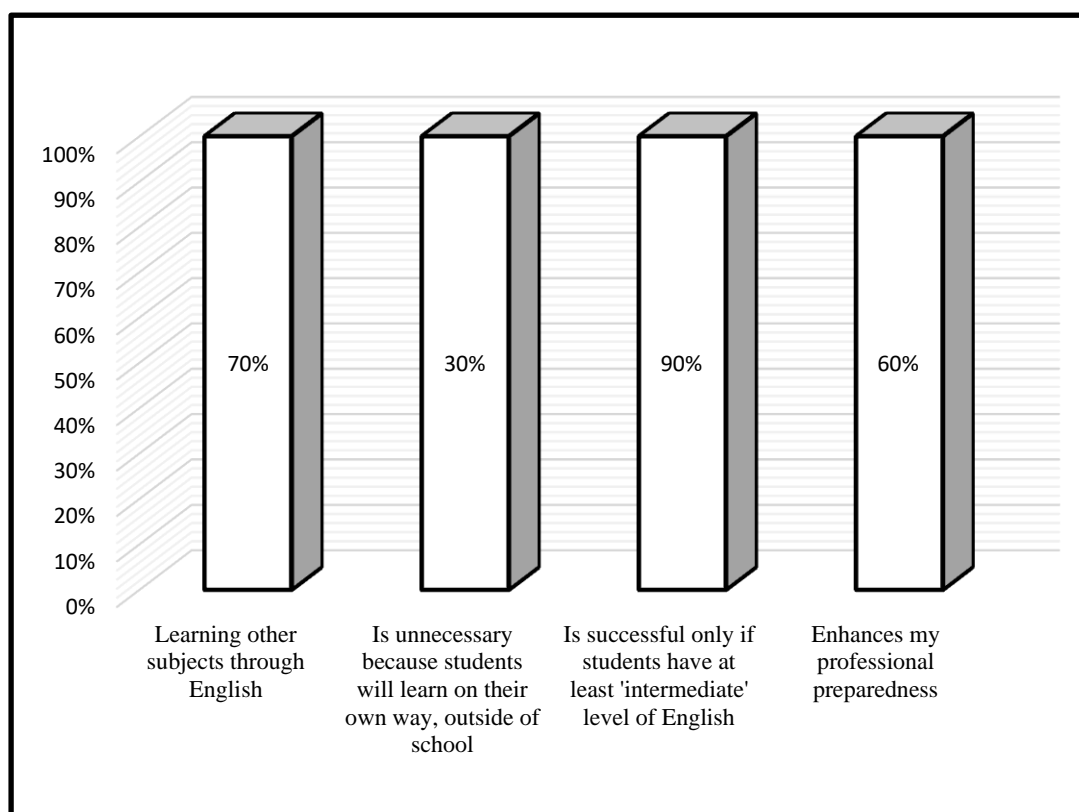
As the diagram shows, about 70 % of the students agree to study other subjects (such as biology and chemistry) through English. They believe that this is the best way to achieve the XXI century education model as *CLIL* instills an inspiration into them and lead to have an equal education system with European countries. Nevertheless, about 30 % of the students consider that it is unnecessary to implement the *CLIL* technology in the learning process, because they will learn on their own, outside of school. Almost all students agree that the *CLIL* approach can be successful only, if students have at least intermediate level of English. Finally, about 60 % of the students firmly believe that the *CLIL* technology will enhance their professional preparedness.

CONCLUSION

In the study of the psycho-pedagogical foundations of teaching a subject content through a foreign language, the problem of studying the relationship between bilingualism and the intellectual development of an individual remains important. The cognitive theories of bilingualism by foreign scientists show that bilingual education can improve and develop cognitive abilities of the individual.

According to *BICS/CALP* language learning theories and *two-factor communication model* by Cummins, it is advisable to have a learning model in which the main learning process is conducted in the native language, and the second language is integrated only when the learner's mental and language skills have reached a high level of development. Thus, cognitive structures are transferred from the first to the second language. Integrated content-language teaching is a means by which students have an opportunity to proceed academic and cognitive development, simultaneously enhancing their academic language competence.

Content-Language Integrated Learning is a relatively new teaching method which can be viewed as a unique way of teaching content through a foreign language, as well as teaching a foreign language through content. The technology *CLIL* is one of the types of bilingual education and has already been successfully used in 20 European countries. Subject teachers are able to teach not only their subject in a foreign language, but also use important means of language teaching: to teach grammar, vocabulary, etc., including elements of the communicative methodology of foreign language teaching in their lessons. It assists to simplify and modernize the curriculum in school.

The *Content-Language Integrated Learning* technology contributes to enhancing the process of mastering foreign language competencies based on the active integration of a foreign language with professionally relevant disciplines. Since it is part of the curriculum, students, already having an idea of the basic concepts of the subject, can easily perceive it in a foreign language. This reduces the uncertainty to transfer content and professional opinion in the use of foreign

language. In addition, students' attention is distracted from the problems associated with the fear of making language mistakes, since their main efforts are focused on the subject-content.

The *CLIL* technology with the established concept *"4C"* and its basic principles provides the formation of linguistic and communicative competences that are necessary for successful personal, intercultural and professional development of students without requiring additional time in the curriculum.

The practical part of the study is the questionnaire on using *CLIL* technology conducted for teachers and senior school students of Aktogai school in Kazakhstan, which shows the effectiveness and positive attitude towards the developed model of teaching subject-content in a foreign language based on a content-language integrated approach.

Obviously, such training cannot completely replace the study of the relevant subject in the native language, but it can significantly complement it. In today's dynamically developing society we can see serious education modernization processes, which entails changes in the requirements for teacher qualifications. This fact requires an updated approach to teacher development. In the updated content of education, teachers need to use various forms of educational material presentation, work organization, and focus on the students' individual, group, and creative activities. This means that the study of basic subjects through foreign language will be much more fascinating and effective for students if it occurs within the framework of an active, collaborative and communicative approach in compliance with the *CLIL* method.

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APPENDIX

APPENDIX 1: Questionnaire to Teachers

1- Strongly disagree

2- Disagree

3- No Response

4- Agree

5- Strongly Agree

Comments	Proficiency
I use *CLIL* technologies in classroom activities.	1 2 3 4 5
I integrate technology into daily lessons.	1 2 3 4 5
CLIL increases academic achievement (e.g. grades).	1 2 3 4 5
CLIL is effective because I believe I can implement it successfully.	1 2 3 4 5
CLIL promotes student collaboration.	1 2 3 4 5
CLIL makes classroom management more difficult.	1 2 3 4 5
CLIL is too costly in terms of resources, time and effort	1 2 3 4 5
CLIL is successful only if teachers have access to a computer at home.	1 2 3 4 5
CLIL makes teachers feel more competent as educators.	1 2 3 4 5
CLIL is successful only if there is adequate teacher training in the uses of technology for learning.	1 2 3 4 5
CLIL gives teachers the opportunity to be learning facilitators instead of information providers.	1 2 3 4 5
CLIL demands too much time spent on adapting problems.	1 2 3 4 5
CLIL is unnecessary because students will learn on their own, outside of school.	1 2 3 4 5
CLIL enhances my professional development.	1 2 3 4 5
CLIL helps accommodate students' personal learning styles.	1 2 3 4 5
CLIL motivates students to get more involved in learning activities.	1 2 3 4 5
CLIL promotes the development of students' interpersonal skills (e.g., ability to relate or work with others).	1 2 3 4 5

CLIL requires extra time to plan learning activities.	1 2 3 4 5

APPENDIX 2: Questionnaire to Students

1- Strongly disagree

2- Disagree

3- No Response

4- Agree

5- Strongly Agree

Comments	Proficiency
I learn other subjects through English.	1 2 3 4 5
CLIL promotes the development of communication skills (e.g., writing and presentation skills).	1 2 3 4 5
CLIL is successful only if students have access to a computer at home.	1 2 3 4 5
CLIL makes students feel more competent as for their future professions.	1 2 3 4 5
CLIL is successful only if students have at least intermediate level of English.	1 2 3 4 5
CLIL is unnecessary because students will learn on their own, outside of school.	1 2 3 4 5
CLIL enhances my professional preparedness.	1 2 3 4 5
CLIL helps accommodate students' personal learning styles.	1 2 3 4 5
CLIL is more interesting than learning only the language.	1 2 3 4 5
CLIL seems to be complicated for the first time.	1 2 3 4 5

LIST OF ABBREVIATIONS

BE   BILINGUAL EDUCATION

BICS   BASIC INTERPERSONAL COMMUNICATIVE SKILLS

CALP   COGNITIVE ACADEMIC LANGUAGE PROFICIENCY

CBI   CONTENT-BASED INSTRUCTION

CLIL   CONTENT-LANGUAGE INTEGRATED LEARNING

CLIP   CONTENT-LANGUAGE INTEGRATED PROJECT

FLT   FOREIGN LANGUAGE TEACHING

ICC   INTERCULTURAL COMMUNICATIVE COMPETENCE

ICL   INTEGRATION OF CONTENT AND LANGUAGE

NABE   NATIONAL ASSOCIATION FOR BILINGUAL EDUCATION

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