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**Թեմա՝** TEACHING BIOLOGY THROUGH CLIL METHOD

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# INTRODUCTION

The main idea of CLIL is the study of a certain subject through language which is not a mothertongue for the learners. In CLIL-based lesson a language teacher also becomes a subject teacher. As a result, we have a lesson which is neither a language lesson nor a subject. Each CLIL lesson should combine the elements of the following progression in knowledge , skills and understanding of the subject under investigation. Subjects may include Maths, Geigraphy, Biology, History, Art etc.

The essence of CLIL it is about teaching and learning content and that the language is the key to a more complete understanding of the subject matter.CLIL is based on the common-sense belief that better learning takes place when learners are stimulated by the subject matter. Both intrinsic and extrinsic motivation should be catered for. The study of natural contextualised language and the principle of language acquisition become central.

**The aim of this paper** is to find out the reasons for using the CLIL method and to reveal its effect in teaching reading.

**The main objectives of the current study are:**

1. to introduce historical background of CLIL method,
2. to identify the importance of using CLIL method in teaching English,
3. to use CLIL's potential in the English language classroom.

The aim and objectives of the research predetermine its structure. It comprises introduction, chapter 1 , chapter 2 and conclusion.

C**hapter 1**entitled “The Main Characteristics of Teaching Biology Through the Clil Method” presents the historical background of the CLIL method, its advantages, benefits and impediments.

**Chapter 2**  entitled “ Applying CLIL toBiology Classes” mainly identifies the methodology and assessment and provides a CLIL lesson plan and activities to conduct a CLIL lesson.

**Conclusion** summerises the main findings of the study.

**References** list the sources of literature used in our research.

# CHAPTER 1

**THE MAIN CHARACTERISTICS OF TEACHING BIOLOGY THROUGH THE CLIL METHOD**

CLIL is an evolving educational approach to teaching and learning where subjects are taught through the medium of a non-native language.

CLIL is an approach or method, which inergrates the teaching of content from the curriculum with the teaching of a non-native language . CLIL refers to situations where subjects, or parts of subjects are taught through a foreign language with dual-focused aims, namely the learning of content and the simultaneous learning of foreign language (Marsh, 2000) .

Although the word CLIL came into existence only recently in 1994, it is not a new educational phenomenon. Some authors even return to the history of the Akadians around 5,000 yeras ago. After conquering the Sumerians (the territory of modern Iraq inhabited), the Akadians started to learn the local Sumerian language by using it as the language of instruction.

Throughout the following centuries, there has been evidence of individuals/ ethnic groups living in multilingual territories. Therefore, these groups – especially rich people in more developed regions- used their bilingualism, or even plurilingualism as a survival method. In the end of the 19th century two ways of learning foreign languages were known to wealthy families. Those who could afford it used to send their children abroad to learn a foreign language directly in the target country. Other families would hire a tutor or a governess. The children learned not only grammar rules, but also the necessary vocabulary. Thus many of them acquired languages not only through language instruction, but also due to daily appearance among the people.

Bilingual education had a long tradition in countries with more official languages. E.g. in Luxemburg children learnt German (in primary schools) and French (in secondary education) long before the law setting the standards of bilingualism was issued in 1843. This new act ordered French to be taught in primary school.

The acronym CLIL was coined by David Marsh, a member of a team working in the area of multilingualism and bilingual education at the Finnish Unversity of Jyväskylá in 1994. In 2005, Marsh suggested CLIL to be ''a general 'umbrella' term to refer to diverse methodologies which lead to dual focussed education where attention is given to both topic and language of instruction'' (Kovács,2014).

In 2006, the Eurydice reported that CLIL was avaliable in the majority of European member states. The way how CLIL worked in 2007 in 20 European countries was presented in ''Windows on CLIL'' (Maljers, Marsh & Wolff D., 2007).

The last decade has witnessed a boom of research in CLIL, although it has focused more on the linguistic than the non-linguistic elements of CLIL. Thanks to multidisciplinary research done by liguists, educators, psychologists, neurologists, etc. the model of dual language and content aims has been gradually supplemented by a third strong research focus and CLIL pillar- emphasis on student's learning strategies and thinking skills (Coyle, 2010).

CLIL has two variations soft CLIL and hard CLIL. It is called soft if topics from the curriculum are taught as part of a language course. On the other hand it is called hard, if school teaches partial immersion programmes, where almost half the curriculum is taught in the target language. There is also a mid-way between these models, some schools teach a modular CLIL programme, where a subject such a science or art is taught for a certain number of hours in the target language.

Table1:

**Types of Clil**

(<https://www.cambridgeenglish.org/Images/22191-tkt-clil-handbook.pdf?fbclid=IwAR1DdCZGVOjSEV4bVSFxaDQIPsX8YZPke2IvChlY7rvqsKW_XZOF20UCCV8>)

The approach is applicable in all sectors of education from Primary to adult and higher education. Teachers involved in CLIL may be either specialists in their own discipline or language teachers working in collaboration with cognitive field experts to design courses in various subjects. On a practical level, course design reflects The 4Cs of CLIL as suggested by Coyle namely: (Coyle, 1999).

*Graphics1*

**The 4Cs**

|  |  |
| --- | --- |
| *Content* | *Intergrating content from across the curriculum through quality language ineraction* |
| *Cognition* | *Engaging learners through higher order thinking and knowledge processing* |
| *Communication* | *Using language to learn and mediate ideas, thoughts and values* |
| *Culture* | *Inerpreting and understanding the significance of content and language and their contribution to identity and citizenship* |

(Coyle, 1999)

CLIL is colesly connected to the student-centered approaches of task-based and project-based language learning, promotes the functional use of language putting fluency before accuracy or meaning before form, leads to learner autonomy, cooperation and collaboration, uses authentic material to develop an understanding and reconstruction of a foreign perspective on a particular topic, allows students to attain a spere of interculturality. Based on Curriculum, every subject or subject area is eligible for CLIL, that is hummanities and social science subjects, natural science subjects, creative subjects.

Learners are genuinely encouraged to go beyond the fictional contents of foreign language teaching and deal cognitively, consciously and emotionally with any given curriculum subject, promoting optimal learning processes. Traditional classroom settings give way to modern forms of joint learning allowing students to acquire, for exmample, autonomy through group and project work. The principles behind Content and Language Integrated Learning include global statements such as “all teachers are teachers of language” to the wide-ranging advantages of cross-curricular bilingual teaching in statements from the **Content and Language Integrated Project** (CLIP). The benefits of CLIL may be seen in terms of cultural awareness, internationalisation, language competence, preparation for both study and working life, and increased motivation (The Bullock Report ,1975).

Advantages of adopting a CLIL approach for learners.

* Increasing motivation as language is used to fulfill real purposes
* introducing learners to the wider cultural context
* developing a positive “can do” attitude towards learning languages
* developing students' multilingual interests and attitudes
* preparing students for further studies and work.

One can say that a CLIL leson is not a language lesson, neither is it a subject lesson transmitted in a foreign language. In fact, it is a lesson where language is used as a medium to broaden one's horizons of knowledge. Students use language to learn about the world around them. It is the topic or task that is a driving force. If the right approaches to teaching and learning are used and if the teacher shows ethusiasm, than CLIL must be a success. CLIL produces life-long learners and students are sent out with real- world skills and enhanced motivation and self-confidence.

# CHAPTER 2

# APPLYING BIOLOGY LESSONS

It is generally accepted that teachers should be aware that students need more visual support when learning a subject in a foreign language, which means it is very usful to use images, videos, diagrams or mind maps. It is also necessary to provide a sustainable scaffold for the use of language. That could be a glossary, sentence structures or the use of a dictionary. Tasks should be varied and appropriate to assimilate both content and language.

CLIL is both a holistic and a dual-focused approach, because students learn both content and language. Besides, it is considered to be student-centred, which means that the teacher is a guide in the process of learning. And students are the main part of the process. Moreover, this process is known to be more important than the result, and this is something to take into account when assessing students.

CLIL is a natural approach, because teachers use real materials and real situations to teach. Furthermore, CLIL involves changing methodology into cooperative learning and task-based learning. And this new methodology also includes using different areas and skills in a cross-curricular teaching.

CLIL teachers should plan the lessons taking into account the different characteristics of their students. This is related to the Multiple Intelligences Theory developed by Gardner, which states that there are different types of intelligences. Gardner believes that different types of intelligences are actually skills that can be trained, developed and improved. According to this, the methodology used in CLIL enables all the students to have the same opportunity to learn (Gardner, 1983).

According to Coyle, Hood and Marsh, it is necessary to intergrate content and thinking skills. In 1956 Benjamin Bloom published his taxonomy outlining six different thinking skills. In this taxonomy, thinking skills are divided into lower-order thinking skills ( remembering, understanding and applying ), and higher-order thinking skills (analysing, evaluating and creating ).

Graphics 2

**The Taxonomy of Six Different Thinking Skills**

(1956 Benjamin Bloom)

The organisation of the teaching process is based on a number of methodological principles:

* **Activating prior knowledge**: the new knowledge will be built on student's previous ideas, using connection to what they already know to restructure their thought patterns and facilitate the construction of new learning.
* **Continuity and progression of contents**: there will be a progress from general concepts to the details and peculiarities, beginning the processes of each new activity at the point the where previous one was left.
* **Interrelation of contents**: there will be an interrelation between contents from Physics and Biollogy and contents from other subjects, such as Chemistry, Geography or Technology. This is called interdisciplinarity.
* **Activity**: each student will be starring in the process of learning, applying knowledge to solve problems.
* **Personalized learning**: enhancing the individal responsibility to work through the assignment of tasks, functions and times, according to the characteristics of each student, covering all areas of the student's personality: different rhythms, abilities, interests, etc.
* **Socilaization**: assessing the importance of teamwork through small group activities with distribution of roles and responsibilities, promoting the exchange of roles between students and enhancing participation in debates.
* **Functionality of learning**: relating the contents to the sudents' closest environment, working with real situations and real materials.
* **Sequencing of the activities and organisation of time**: activities will be undertaken from the simplest to the most complex, giving for each activity enough time to study all relevant aspects and ensuring that the activities will be successfully culminated.
* **The role of the teacher**: guiding the learning process, raising questions and collaborating to strengthen the acquisition of work habits.

CLIL teachers can assess content, language, communication skills, cognitive skills (students think about what they have learnt and how and why they have learnt it), practical skills (carrying out investigations, doing experiments, measuring, drawing ) and attitudes towards learning.

There are two main types of assessment in CLIL: summative and formative. (Coyle, Hood and Marsh, 2010).

* Summative assessment involves doing tests to find out what students have learnt about the content and the language.
* Formative assessment consists of observing students during lessons and questioning what has already been learnt. Other forms of this kind of assessment are peer-to-peer assessment and self-assessment.

**CLIL Science : Water World**

1. **Pre- reading**

Do the quiz. Then check your answers by doing an Internet search for oceans. You can visit these websites to help you:

[www.sciencekids.co.nz/sciencefacts/earth/oceans.html](http://www.sciencekids.co.nz/sciencefacts/earth/oceans.html) [www.worldatlas.com/aatlas/infopage/oceans.htm](http://www.worldatlas.com/aatlas/infopage/oceans.htm) [www.aquaviews.net/10-amazing-facts-oceans](http://www.aquaviews.net/10-amazing-facts-oceans)

Ocean facts quick quiz

1. Most people say there are … oceans on Earth. a) ten b) three c) five
2. The Pacific Ocean is the … ocean. a) largest b) widest c) smallest
3. The Atlantic Ocean is the … largest ocean. a) third b) second c) fourth
4. In … , the Southern Ocean was officially recognized a) 2000 b) 1693 c) 1201
5. The largest tsunami ever recorded was … metres high a) 23 b) 102 c) 64
6. Over … % of the world's population lives within 60 a) 90 b) 50 c) 10

Miles of the coast.

1. **Reading**

Read the text and complete the top five facts.

Water covers more than 70 % of the Earth's surface and our oceans are an important source of protein, minerals and energy. The oceans also provide us with oxygen, regulate the climate and transport water masses that maintain life on our planet. Surprisingly, experts say that less than 5 % of the Earth's oceans have been explored ! Until the year 2000, only four oceans were recognized officially. Nowadays, we talk about five oceans: the Atlantic, Pacific, Arctic, Indian, and Southern Oceans. However, all these oceans flow into each other and are sometimes called a world ocean.

Our oceans are home to ample underwater creatures. Some of these include whales, sharks, sea turtles and a variety of other marine life. Unfortunately, human activity such as industrial fishing has had serious negtive impacts on our oceans and the creatures that live in them. Global warming is also a constant threat to many underwater animals and other life forms.

Without our oceans, life on Earth would be impossible. We must do our best to protect and preserve our oceans and underwater creatures that live in them.

This page has been downloaded from [www.macmillanenglish.com/](http://www.macmillanenglish.com/) inspiration © Macmillan Publishers Limited 2012. This sheet may be photocopied and used within the class.

**TOP FIVE FACTS !**

1. Oceans give us protein, minerals and \_\_\_\_\_\_\_\_\_\_\_\_\_\_ .
2. Nobody has been to \_\_\_\_\_\_\_\_\_\_\_\_\_\_ % of the Earth's oceans.
3. The names of the five oceans are: \_\_\_\_\_\_\_\_\_\_\_\_\_ , \_\_\_\_\_\_\_\_\_\_\_\_\_ , \_\_\_\_\_\_\_\_\_\_\_\_ , \_\_\_\_\_\_\_\_\_\_\_\_\_ , \_\_\_\_\_\_\_\_\_\_\_\_ .
4. Industrial fishing and \_\_\_\_\_\_\_\_\_\_\_\_\_ are very dangerous for underwater creatures.
5. Humans wouldn't be able to survive without our \_\_\_\_\_\_\_\_\_\_\_\_\_\_ .
6. **Vocabulary**

Read the clues and write the words. Find the secret word by putting the grey letters in the right order.

S U

1. Water covers more than 70% of the Earth's …

1. Oceans provide … and regulate the climate.

1. Generally we talk about … oceans.
2. Oceans flow into one another and are sometimes called a … ocean.

**SECRET WORD :**

U T

1. **Reading**

Find out about these underwater creatures by searching for each one onthe Internet**.** Then choose words to compare the facilities. You can visit these websites to help you:

* www.visitsealife.com/London/explore -our-creatures
* animals.nationalgeographic.com/animals/fish/tiger-shark.html
* [www.conserveturtules.org/seaturtuleinformation.php?page=green](http://www.conserveturtules.org/seaturtuleinformation.php?page=green)

Table 2

These and many other exercises can be an integral part of an English lesson. ESP vocabulary is diverse and complex. Tasks are given to be completed with the new words, expressions, fixed and semi-fixed phrases. In CLIL classes learners gain knowledge of the subject while simultaneously using and learning the foreign language. Activities of these kinds help knowledge acquisition and give language support. They are developing, interesting and easy to carry out, if one does some research and finds out the information needed.One of the most obvious benefits of CLIL activities is that students pick up new grammar and vocabulary in context, instead of via rote memorization. By framing foreign language teaching in a context, the teacher may increase students' motivation to learn. *''Two birds with one stone''* is a very appropriate statement for Content and Language Intergrated Learning lessons.

# CONCLUSION

A meaning-focused learning method is learning subject matter together with learning a language. Learners are tend to go beyond the fictional contents of the foreign language teaching and to deal congnitively,consciously and emotionally with any given curriculum subject, promoting optimal learning processes. CLIL approach increases motivation and stimulates students' inner drive. Learning and knowing other languages often promote feelings of trust and helps in better communication. Being content focused, CLIL classes add an extra dimension to the class and engage students, which is especially advantageous in situations where students are unenthusiastic about learning a language.

The peculiarities and usage of the CLIL method are elaborately shown in the term paper. Traditional classroom settings give way to modern forms of joint learning allowing students to acquire a language through subject learning. This is an innovative way in language teaching and learning. This builds confidence and motivation, which makes the learner a more effective user of language.

The results of this study show that this dual-focused approach is highly effective as far as texts are chosen accurately and the teacher's attitudes towards them are conscious. CLIL requires constant and elaborate development.Teachers need to do self-work always improving their language competence, acquiring new skills and developing existed ones. Students are expected to do the same. And due to this collaboration the main goal, that is language competence, can be achieved.The CLIL method provides development of good practices through cooperation with teachers in other departments, schools, etc. and develops students' multilingual interests and attitudes. It is important to note that CLIL is not a means of simplifying content or reteaching something students already know in a new language. CLIL courses should truly intergrate the language and content in order to be successful – and success is determined when both the subject matter and language is learned.

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**Internet Resources**

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