



# REVISTA KRONOS

## “Soft CLIL: How to Effectively Apply Bloom’s Taxonomy to Promote Reading Cognitive Skills in Higher Education”.

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**ABSTRACT** Many approaches such as “Content and Language Integrated Learning.” (CLIL, created by David Marsh, 1994) have emerged as an alternative to improve education. Nevertheless, there is little information about CLIL, its principles, and how to associate it with Bloom’s six levels of cognitive learning to encourage reading in pre-graduate learners into the classroom. The Ecuadorian education field of teaching a second language still has a lot to research on the use of Bloom’s Taxonomy associated with CLIL, thus this literature review aims to cover some aspects of application to language teaching especially reading skills looking to benefit both graduate students and professors. This article derives from the necessity to provide students and teachers a new path for teaching and learning critically and creatively. It mentions how and why CLIL and Bloom’s Taxonomy can complement each other to boost comprehensive reading in universities and benefit academic learners and their personal lives. Bloom’s Taxonomy in the EFL classroom combines content with questioning, to create a relevant, practical and functional class. Critical and creative thinking as well as reading are closely linked, in order to achieve different levels of reflection. Finally, this article clearly shows some examples of how this approach can be implemented and performed easily and frequently by any teacher moving from theory to practice to achieve improvement in their learners’ CCT.

**KEYWORDS** Content, language integrated learning (CLIL); critical and creative thinking (CCT), Bloom’s revised taxonomy, higher order thinking skills (HOT), lower order thinking skills (LOTS), English as a foreign language (EFL)

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### Soft CLIL: Cómo aplicar eficazmente la taxonomía de Bloom para promover las habilidades cognitivas de lectura en la educación superior

**RESUMEN** Muchos enfoques, como el “Aprendizaje Integrado de Contenidos y Lenguas” (CLIL, creado por David Marsh, 1994), han surgido como una alternativa para mejorar la educación. Sin embargo, existe poca información sobre CLIL, sus principios y cómo asociarlo con los seis niveles de aprendizaje cognitivo de Bloom para fomentar la lectura en estudiantes pre graduados en el aula. El campo de la educación ecuatoriana en la enseñanza de una segunda lengua aún tiene mucho que investigar sobre el uso de la Taxonomía de Bloom asociada con CLIL, por lo que esta revisión bibliográfica tiene como objetivo cubrir algunos aspectos de su aplicación a la enseñanza de idiomas, especialmente las habilidades de lectura, con el fin de beneficiar tanto a estudiantes graduados como a profesores. Este artículo se deriva de la necesidad de brindar a estudiantes y docentes una nueva vía para enseñar y aprender de manera crítica y creativa. Menciona cómo y por qué CLIL y la Taxonomía de Bloom pueden complementarse para impulsar la lectura comprensiva en las universidades y beneficiar a los estudiantes académicos y sus vidas personales. La Taxonomía de Bloom en el aula de EFL combina el contenido con el cuestionamiento para crear una clase relevante, práctica y funcional. El pensamiento crítico y creativo, así como la lectura, están estrechamente vinculados para lograr diferentes niveles de reflexión. Finalmente, este artículo muestra claramente algunos ejemplos de cómo este enfoque puede implementarse y realizarse de manera fácil y frecuente por cualquier docente, pasando de la teoría a la práctica para lograr una mejora en las habilidades de pensamiento crítico y creativo (CCT) de sus alumnos.

**PALABRAS CLAVE** Contenido, aprendizaje integrado de contenidos y lenguas (CLIL); pensamiento crítico y creativo (CCT), taxonomía revisada de Bloom, habilidades de pensamiento de orden superior (HOT), habilidades de pensamiento de orden inferior (LOTS), inglés como lengua extranjera (EFL)

## INTRODUCTION

According to Alderson (1984), reading is a receptive skill; it is a process rather than a product, aimed at building significance from the text. This procedure reveals how the reader achieves an individual understanding. Applying the levels of thinking under the Soft CLIL approach, while the product remains the reader's insight. This approach focuses on learning content through language to end with a project based on the CLIL principles, content, communication, cognition, and culture (Coyle, 2005).

It is significant to take actions to reach observable outcomes in the way reading processes are taught, considering mainly higher levels since these learners will be part of the workforce as soon as they become professionals. Consequently, they require being supported in their thinking processes, not only to be able to work efficiently but also to give opinions, justify ideas, and design something new, so that, their contribution will face society's new trends (Khadka, 2014).

In this context, we have to highlight Bloom's Taxonomy and its cognitive levels "higher order thinking skills" (HOTS) and "lower order thinking skills" (LOTS) which deal with learners' diversity, boosting their critical and creative thinking and performing a student-centered class (Churches, 2008).

This study analyzes the primary relevance of critical and creative thinking for college students by the means of the Bloom's Taxonomy which provides students the opportunities to increase cognitive skills through reading in a Soft CLIL atmosphere reaching educational and personal objectives.

### 1. PROMOTING A REFLEXIVE READING.

Asghari's research (2017) highlights a significant correlation between innovative information processing strategies and the successful integration of prior textual comprehension. This synergistic approach empowers learners to navigate complex texts independently, constructing a comprehensive understanding network. By seamlessly integrating previously acquired knowledge learners achieve a holistic comprehension, ultimately leading to a deeper and more meaningful understanding of the material.

Figure 1. Reading process table.



Source: Reading Booklet - to circulate.

Reading builds meaning from a text which is called discourse. This procedure focuses on how the reader reaches critical reading skills. While the product implies what the reader understood.

### 1.1 Why do Soft CLIL and Bloom's Taxonomy Boost Reading Cognitive Skills in College Learners?

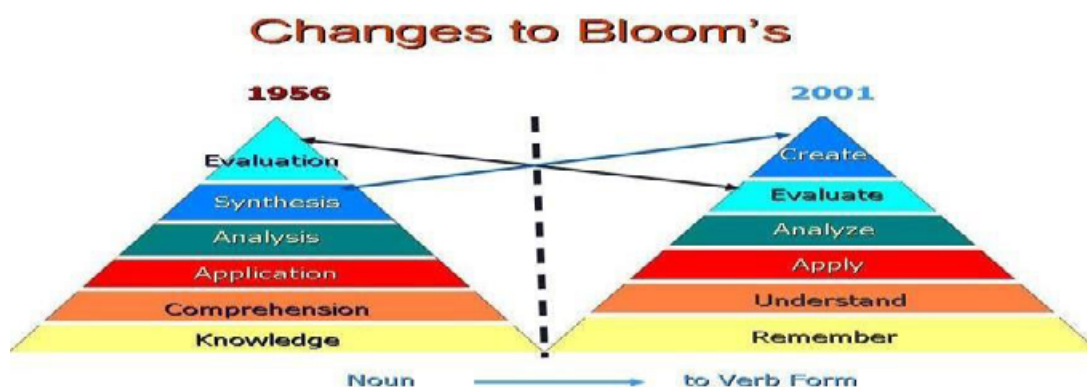
CLIL is a pedagogical approach created by professors David Marsh and Do Coyle, at the Jyväskylä University in Finland in 1994. This term stands for "Content and Language Integrated Learning" used in the content and language teaching and learning process. (Do, Philip, & David, 2010) through collaborative tasks to develop knowledge, skills and achieve meaningful learning among learners, and in this case through the reading dexterity.

Coyle et.al (2010), defines hard CLIL as using a foreign language to teach any subject with content objectives, and content acquisition being central. Conversely, soft CLIL, as described by Kuchynska (2024) focuses on using a foreign language to teach specific language course topics, prioritizing language acquisition. Soft CLIL can be effectively adapted to EFL instruction, allowing for realistic content and language delivery. This adaptation is based on Soft CLIL principles and a final project that results in an output product. Task-based and project-based learning incorporates necessary content and language as input a receptive skill, to enhance learners' understanding, motivation and cognitive processes, as highlighted by García (2017).

Regarding Banegas & Hemmi (2021) cognition is a central part of CLIL. So, it results remarkable to mention Bloom's Taxonomy created by Benjamin Bloom in the 1950s. which emerged from the educators' need to classify students' thinking and learning processes to measure students' abilities. Later, Lorin Anderson and David Krathwohl incorporated a revised Bloom's taxonomy in 2001 making some changes and improvements to reach educational goals more effectively.

In this way, nouns were transformed into action verbs which became objectives that professors need to assist students to reach. Bloom's taxonomy underscores the importance of cultivating both Lower-Order Thinking Skills (LOTS) and Higher-Order Thinking Skills (HOTS) in education. While LOTS involve basic cognitive functions, HOTS demand deeper level of reflection, analysis and evaluation.

Figure 2. Bloom's Taxonomy and Revised Bloom's Taxonomy



Source: (Owen & Leslie, 2020)

## 2. USE OF BLOOM'S TAXONOMY IN EFL CLASSROOM TO PROMOTE CRITICAL READING

English's global significance (Jennifer, 2009) has led to its widespread adoption as a lingua franca, prompting individuals from diverse linguistic and cultural backgrounds to learn it for different purposes. Recognizing the crucial role of critical thinking in 21<sup>st</sup>-century success (Lai, 2001), educators are increasingly emphasizing its integration into English as a Foreign Language (EFL) classrooms (Pollard & Kim, 2017). By fostering a student-centered learning environment, teachers can guide learners in developing both language proficiency and higher-order thinking skills, enabling them to navigate a complex world. Building upon the Socratic method of inquiry, which encourages critical reflection and challenges pre-existing beliefs, (International, 2017). Bloom's Taxonomy categorizes cognitive processes into six levels, each requiring distinct actions and skills. The "remembering" level focuses on recalling and identifying specific information. Learners at this stage utilize verbs like "define," "list," and "name" to answer questions such as "Who," "What," and "Where". This level involves retrieving and identifying information from memory as key historical events or naming components of a scientific theory (Allen, 2013).

Learners advance to the understanding stage, where they interpret and explain information. Key skills include summarizing, classifying, comparing, and inferring. Students should answer questions like "What was the main idea?" "Can you explain the process of...?" (Generoso, 2024).

In the application stage, learners apply their knowledge practically. This involves solving problems, constructing and demonstrating with questions like "How would you solve this problem?" "Can you demonstrate how to...?" (Rutka, 2024).

The analyze stage involves breaking down information to uncover patterns and relationships. It uses verbs like categorize, discover and examine. Questions like "*What are the components of...?*" or "*Why do you think this happens?*" guide learners to critically examine content. For example, analyzing the structure of literary work or identifying the relationships between economic factors fosters analytical thinking (Krathwohl, 2002).

At the evaluate stage, learners judge and justify conclusions based on established criteria or standards. This stage incorporates verbs like assess, value, prioritize and support, prompting questions such as "Do you agree with this?" "Why or why not?", or "How would you prioritize these tasks?" (Melissa, 2024).

The final stage emphasizes synthesizing ideas and produce original outcomes. Verbs like generate, create, build, design, and produce are vital. Questions at this level include "How would you design a solution for this problem?" "*What new ideas can you generate about this topic?*" Tasks may involve designing a new product, developing innovative strategies, or composing original works of art or literature (Independent Learner, 2022).

### 2.1 How can reading development be more appealing through questioning using Soft CLIL handed by LOTS and HOTS?

CLIL is designed for effective teaching skills by integrating its foundations, aligned correctly with Bloom's taxonomy. Soft CLIL focuses on language acquisition through content while also improving reading skills. Structuring lessons into three stages is a clear example to ensure a progressive and absorbing learning process, enhancing overall effectiveness. (Ramírez & Mena, 2021).

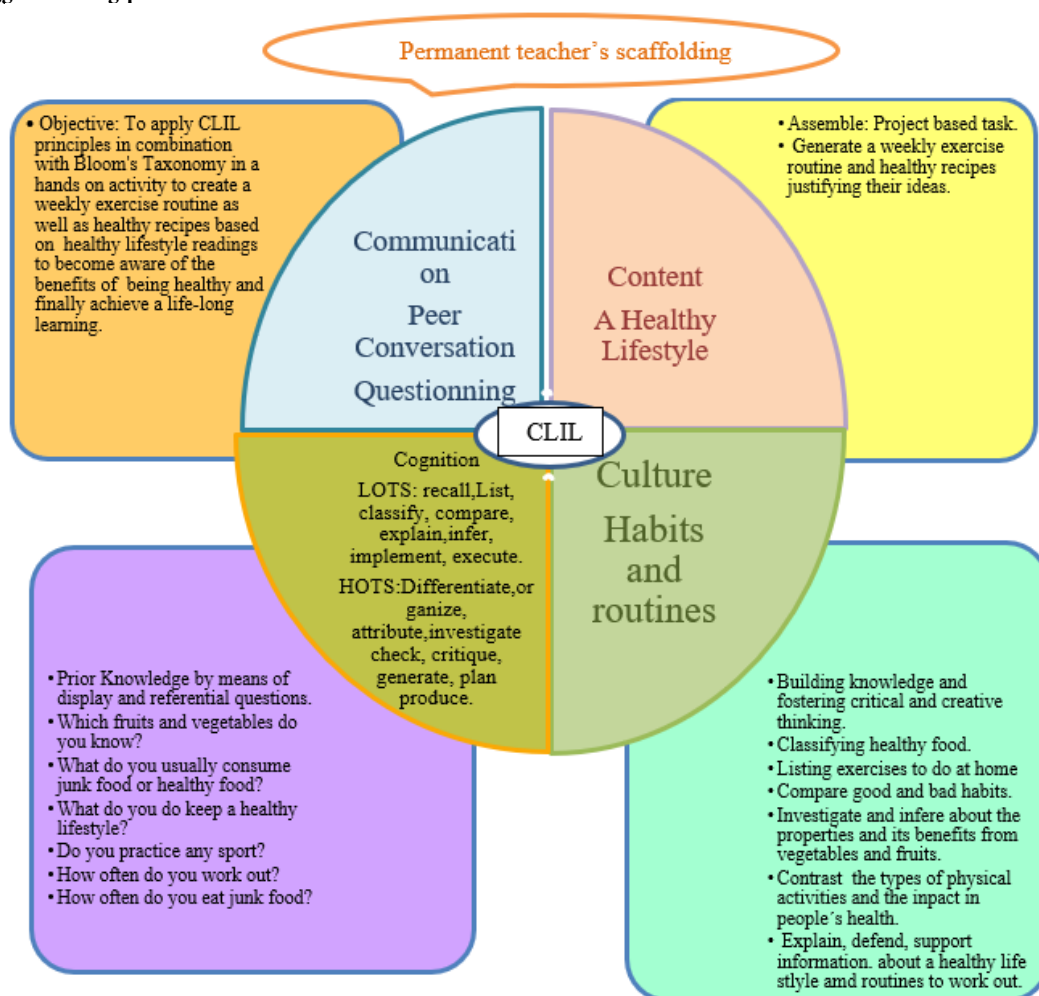
Name these three categories in pairs, knowledge and comprehension; application and analysis, finally synthesis and evaluation, proceed with an accurate explanation about the purpose of each category within Bloom's Taxonomy to ensure learners' understanding and reflection to evoke from LOTS to HOTS highlighting that it is crucial for reading critical-

ly to guarantee a gradual cognitive progress and later for effective communication. First, assign learners, a paragraph or article to read carefully. Afterward, have them formulate a question based on the reading and encouraging students go from the lowest to the highest order thinking skills aligned with every Bloom's category. Later participants will work in pairs or small groups to reinforce reading understanding by exchanging partners' answers to promote question-answering skills and critical thinking through active commitment. Finally, students will work in a thoughtful group discussion, exploring the nuances of each question and sharing several perspectives on the subject matter (Gershon, 2013).

Other strategies as task-based learning offers a robust framework for enhancing reading comprehension through content and interactive and meaningful tasks integrating questions that stimulate cognitive development, culture and communication. This approach emphasizes the importance of scaffolding and feedback in achieving reading outcomes and lifelong learning. (Priyana & Tri, 2020). Moreover, project-based learning complements task-based learning by promoting skills such as skimming, scanning, gathering information and identifying outstanding ideas regarding the undertaken project by questions and answers. It allows learners to activate schemata and explore new information thereby enriching their project work (Maya & Prasetyo, 2021).

### 3. Mind Map of how to apply Bloom's Taxonomy to Promote Reading Cognitive Skills in Higher Education Based on Soft CLIL.

Figure 3. Example of how teachers may use LOTS and HOTS in conjunction with the soft CLIL principles to trigger reading prowess



Source: (Pizarro & Suing, 2018)

The above figure is an example of how teachers may use LOTS and HOTS in conjunction with the soft CLIL principles to trigger reading prowess.

This table has been constructed in accordance with CLIL principles focusing on a curricular subject. It emphasizes communication through engaging topics that foster student interaction while learning English. Cognition is connected to Bloom's Taxonomy, which involves various levels of thinking, while Culture pertains to the customs and practices of specific groups, including aspects like food and traditions. The table effectively demonstrates Bloom's Taxonomy, beginning with Lower Order Thinking Skills that support the initial stages of learning through referential questions related to the content. As students progress, the emphasis shifts to language development and the promotion of critical and creative thinking, with tasks becoming increasingly challenging to align with cognitive levels. Reading comprehension is essential for enhancing higher level of cognition, enabling deeper engagement with materials. Ultimately, the educational process culminates in Higher Order Thinking Skills through project-based tasks that demand advanced cognitive abilities. Throughout this journey, the teacher's scaffolding is crucial for guiding students to successfully achieve their learning objectives.

## CONCLUSION

CLIL's principles and Bloom's Taxonomy can be applied together not only to foster cognitive levels but also to boost reading comprehension activities in college learners.

The importance of critical and creative thinking, shows outstanding and meaningful concern for students of all ages around the world. Cognition is not only to think but it also involves the development, and application of varied skills such as reflection, judgment, evaluation, creation, analysis, synthesis, problem-solving with the proper, deep understanding and justification to know what to do and why to do it in the context of studies and life. Critical and creative thinking for college students is more demanding and imperative, because it is supposed that all of these skills have been nurtured since primary and they must flourish and cherish at the tertiary level to be employed in the labor force and personal life.

According to Bloom's Taxonomy and its application in different subjects, it is possible to make students become great critical and creative thinkers guided by LOTS and HOTS. These are categories of cognition level that must be implemented in the teaching and learning process to obtain a student-centered education and life lasting-learning. Only in this way, educative centers and education itself will accomplish one of their main objectives to product philanthropists, savvy decision-makers, and happier individuals.

Once the learners start to develop, increase and apply the high order critical dexterities, these would be noticed in every aspect of their lives, as Powel (2015) suggests "the ability to think critically can have a direct impact on academic, work and personal lives". In a blatant manner in their spoken sentences especially for decision-making situations, the individuals will achieve better goals, become wiser and more prosperous citizens, in other words, happier and more productive human beings which are the ones, if not the main, objective of a successful education.

## CONTRIBUTOR ROLES

Angel Modesto Suing Nagua: Introduction, graph analysis, results, original draft writing, revision, and editing.

Verónica de Lourdes Pizarro Aguirre: Conceptualization, conclusions, formal analysis, writing, review, and editing.

## ETHICAL IMPLICATIONS

The authors state that there are no ethical implications.

## CONFLICTS OF INTEREST

The authors declare that there are no financial and non-financial conflicts of interest that could have influenced the work presented.

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