

Review research paper

CLIL AS THE VEHICLE OF TRANSITION FROM MONO- TO BILINGUAL INSTRUCTION AT SLOVAK UNIVERSITIES

Elena Kováčiková¹, Jana Luprichová²

¹Department of English Language and Culture, Faculty of Education, Constantine the Philosopher University in Nitra, Slovakia

²Department of British and American Studies, Faculty of Arts, University of Ss. Cyril and Methodius, Trnava, Slovakia

Abstract. *Content and Language Integrated Learning (CLIL) has demonstrated notable success in lower secondary and secondary levels of education, thus warranting consideration for its potential effectiveness in higher education. This scholarly exposition endeavours to delineate CLIL as a viable conduit for the gradual and voluntary transition from delivering specialized courses in the native language to conducting them in a foreign language, thereby facilitating bilingual instruction. Supported by empirical findings derived from ongoing Erasmus +, Visegrad Fund Project, KEGA (Slovak Cultural and Educational Grant Agency) initiatives, as well as research outcomes, the authors proffer a compendium of strategic recommendations designed to augment or inaugurate CLIL endeavours at the university level, particularly within non-philological study programs. Notably, integrating CLIL courses into teacher training programs across four faculties in Slovakia, which are responsible for preparing future English educators, offers promise for the widespread cultivation of CLIL-trained instructors and, consequently, a broader implementation of CLIL in higher education.*

Key words: *CLIL, higher education, monolingual instruction, bilingual instruction*

1. CURRENT STATE

CLIL, as an acronym for Content and Language Integrated Learning, represents a paradigm shift in language education. It goes beyond the traditional boundaries of language instruction by integrating subject content and language learning. In this synergistic approach, CLIL proffers an influential pedagogical framework that enriches students' educational experiences, develops their language proficiency, and enhances their understanding of various subjects (Mehisto et al., 2008). In today's globalized world, proficiency in multiple languages and a deep understanding of different subjects are becoming increasingly vital because they enable students to acquire the skills and knowledge of specific subjects and the ability to communicate effectively in a second or foreign language.

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Corresponding author: Elena Kováčiková, Faculty of Education, Constantine the Philosopher University in Nitra, Slovakia

E-mail: ekovacikova@ukf.sk

Across Europe, CLIL has been widely embraced, predominantly within primary and secondary education settings. A wealth of research endeavours have been undertaken to scrutinize its impact on linguistic competence, as evidenced by the works of Dalton-Puffer (2008), Pokrivčáková (2013), and Roquet and Pérez-Vidal (2017). Researchers have furnished partial findings that underscore the adaptability of the CLIL approach, with applicability spanning from primary to higher education, as exemplified by the work of Satayev et al. (2022) and Kováčiková and Luprichová (2018).

The initial substantial proof of CLIL's integration into the European educational landscape, encompassing primary and secondary institutions, can be traced to the publication "Content and Language Integrated Learning at Schools in Europe" by Eurydice in 2006. This report offers insights into the prevalence of CLIL in thirty European nations, revealing that most of these countries incorporate CLIL either as a fundamental component of mainstream education or as part of pilot initiatives. It is noteworthy that only six out of all surveyed countries—Cyprus, Denmark, Greece, Iceland, Liechtenstein, and Portugal—do not implement CLIL in any form (Eurydice, 2006).

Subsequently, the 2012 publication from Germany, "Primary CLIL around Europe: Learning in Two Languages in Primary Education," provides a multifaceted panorama of CLIL practices across Europe. This comprehensive examination encompasses classroom-level methodologies, teacher training programs, academic research, and European language policy, as elucidated by Coyle (2007). Additionally, Coyle identifies 216 distinct categories of CLIL programs, stratified by variables such as compulsory status, age of commencement, initial linguistic proficiency, intensity, and duration. Furthermore, Pérez-Cañado, drawing on Lasagabaster's insights, underscores the unique contextual factors influencing language instruction in various European nations, cautioning against the direct transposition of CLIL implementation from one country to another (Pérez-Cañado, 2012, p. 319).

2. CLIL IN PRIMARY AND SECONDARY SCHOOLS

Researchers in Estonia have conducted studies focused on stakeholder perspectives in CLIL programs, employing questionnaires, semi-structured interviews, and lesson observations involving principals, teachers (both experienced and inexperienced), and parents. Their findings indicate the success of CLIL programs, with only parents suggesting a need for increased communication between teachers and parents (*ibid*).

In contrast, researchers in the United Kingdom have interviewed pupils aged 9 to 11 who participated in French CLIL programs at state comprehensive schools. These students reported improved concentration, enhanced subject matter learning, and a preference for taking exams in French. Similarly, researchers from the University of Nottingham observed and interviewed students and teachers in eight successful secondary schools where certain subjects were taught in French, German, or Spanish. They concluded that CLIL exemplifies effective teaching and learning practices, boosting motivation for both students and teachers and prompting a reimagining of classroom pedagogy (*ibid*).

The Netherlands has been at the forefront of CLIL research in recent years. Scholars from the University of Utrecht, including Admiraal, Westhoff, and De Graaff, conducted robust empirical studies. They conducted a longitudinal study involving secondary education students enrolled in English-medium CLIL programs in Dutch schools for four years. The study aimed to measure receptive vocabulary

knowledge, reading comprehension, and oral proficiency. The results indicated higher scores for the experimental groups in reading and oral components, with no significant differences in receptive word knowledge. Importantly, there were no confirmed negative effects on subject matter achievement (*ibid*).

Research in Switzerland primarily relies on lesson excerpts, observations, and the analysis of narratives through questionnaires and classroom observations. Findings reveal that teachers often incorporate English implicitly in CLIL sequences, providing limited opportunities for productive classroom discourse. Additionally, outcomes related to language production and interaction remain inconclusive (*ibid*).

Current data gathered by the European Education and Culture Executive Agency published in the report titled “Key data on teaching languages at school in Europe” (2023) demonstrate that CLIL programs are provided in many primary and general secondary education types of schools in the European Union where some subjects or subject areas are delivered through a foreign language. Based on this report, CLIL programs are not offered in Greece, Bosnia and Herzegovina, Iceland and Türkiye.

Education systems throughout Europe prefer the most widespread type of CLIL program which involves learning a subject/subject area in three different language combinations – either state language and English, or state language and French, or state language and German. Then there are education systems that prefer the implementation of the CLIL program in a state language together with a regional or minority language. Finally, countries with several state languages (e.g., Belgium, Ireland, Luxembourg, Malta, Finland and Switzerland) apply another type of the CLIL program where different subjects are delivered in two state languages.

All mentioned studies carried out in these European countries prove the importance and efficiency of implementing CLIL in the educational process.

As for CLIL in primary and secondary education in Slovakia, a summary of the key findings is covered by two major projects. Pokrivčáková (2012) mentions the project focused on primary education found that CLIL lessons had a positive impact on the development of communication skills in a foreign language. However, the impact of CLIL on overall knowledge in non-language subjects was not investigated. CLIL was primarily applied in subjects like mathematics, natural science, national studies, and education (e.g., Arts, Physical Education, Music Education).

The project organized by the National Institute for Education in Slovakia (ŠPÚ, 2013) informs about the involvement of 11 primary schools implementing CLIL in various subjects in lower secondary education, including Biology, Geography, Mathematics, ICT, History, Music Education, and Religious Education. The primary aim was to verify the improvement of communication skills in the target language. The project compared an experimental group with a control group. The conclusions indicated an average improvement in communication skills, including listening, reading comprehension, and writing. Neither of these projects examined the impact of CLIL on the increase of knowledge in the content of education or the development of critical thinking. The projects noted that one challenge was the insufficient training of teachers for the preparation, planning, and implementation of CLIL lessons.

Štefková, Kordíková and Kováčiková (2023) mention that CLIL in secondary schools highlights several important points in the Slovak context. There is a lack of statistical data or a comprehensive summary of schools in Slovakia that have successfully introduced or implemented CLIL classes. This makes it difficult to assess the extent of CLIL adoption across the country. The implementation of CLIL appears to be more common in certain types

of secondary schools, such as secondary grammar schools, business academies, and technical vocational schools. These schools may have a particular focus on bilingual education or internationalization. The principles of introducing CLIL in secondary schools seem to be flexible, with decisions about the ratio of foreign and native languages, teaching methods, and assessment left to the discretion of school management. This flexibility allows schools to tailor CLIL programs to their specific needs and resources. CLIL implementation often works on a project-based model, and schools may engage in international cooperation with foreign schools as part of their CLIL initiatives. These projects may be initiated and driven by enthusiastic teachers rather than mandated by educational institutions or national policies.

There appears to be a lack of systemic support and strategic guidance from educational institutions and national educational policies for the widespread adoption of CLIL. As a result, the success of CLIL programs in schools can depend heavily on the dedication and initiative of individual teachers.

Moreover, teachers who wish to implement CLIL often need to seek additional training and resources independently. This may include participating in CLIL courses for teachers, obtaining funding through initiatives like the Erasmus project, or even covering some costs out of their own pockets.

In summary, while CLIL has found its way into certain types of primary and secondary schools in Slovakia, its implementation appears to be largely driven by individual initiatives and projects rather than being part of a systematic, nationwide approach to bilingual education. The success of CLIL programs in these schools relies on the motivation and dedication of teachers, as well as their ability to secure necessary resources and training. A more coordinated and supportive approach from educational authorities could potentially lead to more widespread and standardized adoption of CLIL in Slovak secondary education. Further research may be needed to explore the broader educational outcomes and long-term effects of CLIL instruction.

3. CLIL AT TERTIARY LEVEL

Universities worldwide are actively embracing the process of internationalization, offering a range of initiatives to facilitate this endeavour. In addition to short courses catering to mobility students and teachers, universities are increasingly introducing entire study programs conducted in foreign languages. Among these languages, English has emerged as the dominant choice for universities offering predominantly English-medium instruction study programs.

The situation at Slovak universities, particularly in non-philological faculties, revealed a notably low number of universities offering study programs in languages other than the native tongue. Nevertheless, the governing bodies of these universities acknowledge that foreign language proficiency is not only indicative of an individual's educational attainment but also a vital skill for effective communication in various contexts, whether in the physical or digital realms. Consequently, Slovak universities have integrated English for Specific Purposes (ESP) into their curriculum, a facet of education that holds a paramount position (Chmelíková, 2022). ESP is predominantly implemented in non-philological faculties, particularly in fields requiring specialized linguistic competency. These include medical English, Business English, Legal English, and Technical English, among others. The primary objective is twofold: to impart professional vocabulary and to

cultivate communicative competence across all four language skills—reading, listening, speaking, and writing (Kováčiková, 2020). ESP instructors are university-educated language professionals, entrusted with enhancing learners' communicative abilities and equipping them with subject-specific knowledge relevant to their respective disciplines. However, it is essential to acknowledge that ESP teachers may not fully bridge the knowledge gap in specialized fields taught at technical and non-philological universities when delivering instruction in a foreign language.

This presents an opportunity to redefine the role of ESP teachers within non-philological faculties. The English Education Environment (EEE) within higher education, especially in non-philological universities with predominantly non-English-speaking stakeholders, poses a formidable challenge for both subject-matter instructors and students. It may not always adequately address students' needs in acquiring academic skills and mastering subject-specific language. Therefore, it becomes imperative to explore ways to enhance this setting, ensuring that it aligns more closely with learners' requirements and specialized communication practices (Hurajová, Luprichová, Chmelíková, 2022).

Language for specific purposes (ESP) that has an irreplaceable place (Chmelíková, 2022). ESP is predominantly applied in non-philological faculties, in the fields that require special linguistic competency such as medical English, English for business, Legal English, technical English, etc. with the goal of acquiring professional vocabulary as well as developing communicative competence with a focus on all four skills – reading, listening, speaking, and writing (Kováčiková, 2020). ESP teachers are university-educated teachers of foreign languages, and their task is to improve learners' communicative competencies and acquire specific content regarding the disciplinary field of the university.

This opens space for changing the role of the ESP teacher in non-philological faculties. The English Education Environment (EEE) setting in higher education, mainly at non-philological universities with non-English speaking stakeholders is a demanding challenge for both disciplinary/subject teachers and students because it may not adequately provide the students' needs to acquire academic skills and subject-disciplinary language. Therefore, it is crucial to find out the ways how this setting can be made even more valuable to students and reconsider them so that they are more closely organised with learners' requirements and specialised communication practices (Hurajová, Luprichová, Chmelíková, 2022).

3.1. CLIL-HET project at the Slovak University of Technology in Bratislava, Slovakia

The aim of the project carried out within the Visegrad+ Fund framework focused on developing a professional platform to share good practice, experience, and the latest research findings leading to enhancing the internationalisation process in HEIs in the V4 and Western Balkan region represented by Slovakia, the Czech Republic, Hungary, Poland, Serbia and Albania. The objectives of the project, in addition, included studying the CLIL approach as a potential way of setting EEE in HEIs, assessing the level of English of disciplinary teachers and their readiness/willingness to build EEE within their courses and comparing the data gained from the project member countries. The research project part was carried out using qualitative research in which three methods were employed to collect data: a questionnaire, an interview and an observation.

The project partners decided to pilot the CLIL approach to education in HEIs. The CLIL application into disciplinary courses requires close cooperation with subject teachers in HEIs, as ESP/CLIL experts cannot cover professional fields as deeply as subject teachers can. However, the disciplinary teachers can get lost without any didactical and linguistic assistance of ESP/CLIL experts in delivering an English education environment effectively. Using the CLIL approach means having essential knowledge of how to implement its main dual principle – teaching and developing the content and language at the same time. It seems that subject teachers and ESP/CLIL experts are entirely dependent on close cooperation (Hurajová, Luprichová, Chmelíková, 2022).

Combining the data obtained within the research part of the project CLIL-HET, we got a picture of what the role of English teachers is in fostering the internationalisation process in higher education. Findings revealed that an effective EEE at non-philological universities with a prevalence of non-native English speakers requires both the linguistic readiness of students and subject teachers. Additionally, subject teachers should be aware of English Didactic and in case applying the CLIL approach, they should be trained in this method. The outcomes suggest that the English teachers are requested to be active supervisors, and facilitators of students' and subject teachers' language competence to eliminate their natural fears of setting the EEE. Moreover, ESP teachers should constantly improve their own language competence as most of them are non-natives. Close cooperation between ESP–subject teachers might enhance the building of the effective EEE, in other words, accelerate IoH (Internationalisation of Home). This can lead to a stronger international education environment.

Summing up, considering all findings, the main role of English teachers in higher education is building, developing, and keeping professional networks/communities to foster interdisciplinary and cross-border cooperation to enhance the internationalisation process at non-philological universities.

3.2. CLIL at Technical University in Zvolen, Slovakia

Support of university education in a world language using the fusion of professional and linguistic content at non-philological universities" (Cf. project KEGA 003TU Z-4/2020) is another beneficial project in the framework of the introduction of CLIL into professional subjects in the university context, which was conducted in 2020 – 2022 at the Technical University in Zvolen. The CLIL methodology is analysed from the point of view of subject teachers conducting CLIL lessons and students at a non-philology university.

To gain deeper insights into educators' perspectives on CLIL, structured interviews within a focus group setting were carried out. Responses were categorized into three distinct areas: perceptions of Classroom-based CLIL, computer-assisted (CA) CLIL activities, and the advantages they perceived that CA-CLIL brought to both students and teachers. The consensus among teachers was that incorporating these applications was not only enjoyable for students but also highly engaging, benefiting both educators and learners alike. Some teachers even expanded their professional vocabulary concurrently with their students. Remarkably, educators whose English proficiency fell below the B2 level were still able to develop and implement activities in English. This not only broke down the psychological barrier associated with using English in teaching but also empowered teachers to embrace it as an attainable and competent means of instruction. Although further study and refinement of their English language skills were acknowledged as

necessary, these teachers unanimously reported growth in their digital and methodological skills, venturing into novel teaching methods and techniques. Furthermore, all teachers expressed a strong desire to enhance their communicative fluency. Given limited opportunities for such practice in addition to teaching professional subjects, they recognized the value of refining their conversational skills. Additionally, many teachers expressed a need for support in managing and maintaining the applications, as well as assistance in crafting activities that effectively utilize these tools. In response to these needs, all teachers requested comprehensive training in digital skills as a prerequisite for effectively integrating various applications into their teaching methodologies.

The final session of the focus group, consisting of educators who had participated in the introduction of CLIL in their teaching, yielded several noteworthy connections and revelations, shedding light on the evolving landscape of their teaching practices.

Several key conclusions from the research include:

- **The need for continuous teacher education:** The foremost conclusion underscores the necessity for ongoing education among instructors of professional subjects, particularly in the realm of foreign languages. Emphasis should be placed on enhancing communication skills and providing targeted methodological training with the integration of digital technologies in higher education. This commitment to teacher development is pivotal for successful foreign language implementation in university education, using CLIL or any other methodology.
- **Increased Teacher Motivation:** Elevating teacher motivation emerges as a critical factor. Motivated educators play a pivotal role in the successful implementation of foreign languages in the classroom. Encouraging and fostering their enthusiasm for language instruction can significantly impact the learning experience.
- **Institutional Support:** Beyond individual teacher development, the active involvement and support of school management are imperative for driving the desired changes. To facilitate the effective adoption of foreign languages, whether through CLIL or alternative methods, the school's leadership must engage and invest in these transformative efforts.

In addition to these qualitative findings, the quantitative research has yielded insights into students' readiness and attitudes towards using a foreign language in the teaching of professional subjects:

- **Linguistic Readiness:** the research demonstrates, with a 95% reliability, that students are linguistically prepared to utilize the English language in the instruction of professional subjects.
- **Digital Applications:** The use of digital applications and a group work has garnered a positive reception among students. It fosters a conducive atmosphere for collaborative learning, induces positive emotions, and contributes to stress-free engagement, which is conducive to active learning and the retention of new knowledge.
- **Perception of CLIL Tasks:** Students perceive CLIL tasks as inspiring, collaborative, joyful, and energizing. These positive emotions foster a conducive and stress-free atmosphere, facilitating active learning and the effective retention of new knowledge.

In summary, the research underscores the critical role of continuous teacher education, increased teacher motivation, and institutional support in the successful implementation of foreign languages, particularly through the CLIL methodology, in higher education. Additionally, our quantitative findings affirm students' readiness and enthusiasm for language

use in professional subject instruction, their positive response to digital applications, and the favourable perception of CLIL tasks (Štefková, Kováčiková, Kordíková, 2023).

4. CLIL IN TEACHER TRAINING FACULTIES

CLIL (Content and Language Integrated Learning) is gradually making its way into the training of future teachers in Slovakia, with a more pronounced presence in the education of prospective foreign language teachers. As per the research conducted by Kováčiková (2021), the CLIL methodology has become a central component of the training for future English language educators across twelve Slovak faculties that prepare students to become English language teachers, either as their sole specialization or in conjunction with another subject.

The initiative to incorporate CLIL methodology into the education of prospective teachers in non-language fields of study commenced in 2019 at the Faculty of Natural Sciences at Comenius University in Bratislava. The collaboration between the Department of Didactics of Natural Sciences, Psychology, and Pedagogy, and the Department of Languages led to the introduction of a new two-semester CLIL elective for first-year master's students specializing in teaching. This innovative subject naturally evolved from research conducted between 2017 and 2018, which encompassed both teachers from bilingual grammar schools and future science teachers. The objective was to assess the landscape of bilingual education, identify the needs and challenges faced by these groups when teaching science subjects in foreign languages, and subsequently enhance the training of future educators in alignment with the contemporary demands of bilingual education in Slovakia (Kordíková, Brestenská, 2020).

In this newly introduced subject, students acquire essential linguistic and didactic competencies, equipping them to seamlessly integrate their professional content with foreign languages. This not only enhances their versatility in their chosen profession but also prepares them to effectively apply CLIL principles in their teaching. (For more information, please visit <https://fns.uniba.sk/cliil/>.) The approach employed in this subject prioritizes student-centred learning, emphasizing their active participation rather than relying on passive information transfer from the teacher. Upon completion of the course, students who are aspiring biology, chemistry, and geography teachers can make informed decisions about incorporating CLIL into their future teaching practices.

5. CLIL OPPORTUNITIES AND CHALLENGES

The findings stated in the paper clearly indicate that CLIL is becoming an established and recognized term in primary and secondary education, and it is poised for further growth in the future. The success and sustainability of CLIL in education depend on the active collaboration between language and content teachers. This collaboration is essential in the planning, execution, and evaluation of CLIL teaching processes, with crucial support from school management and the parent community.

However, there are notable opportunities and challenges in the CLIL landscape:

- **Lack of National Studies:** Despite its growth, there remains a shortage of national studies that comprehensively analyse the real establishment and potential of CLIL in order to provide a solid scientific foundation. Research in this area is needed to better understand its benefits and limitations.

- **Implementation in Schools:** In school settings, there is a need to find the most suitable methods for implementing CLIL. Practical issues, such as tandem teaching (where a language teacher and a content teacher teach together), require solutions for factors like allocating teaching hours, motivating teachers, providing financial incentives, and more.
- **Higher Education Impact:** CLIL has the potential to enrich or even replace ESP lessons, especially in non-philological universities. This transition relies on active collaboration between ESP teachers and content teachers (Cf. the case of Technical University in Zvolen and in Trnava described above in the paper). Tandem teaching is seen as a viable approach, where language teachers focus on developing communicative skills, and content teachers provide expertise in the subject matter. However, universities need to establish evaluation and motivation mechanisms to support this transition effectively.
- **Expanding Roles for ESP Teachers:** ESP teachers at non-philological faculties are expected to take on new roles. Their responsibilities will extend beyond teaching students in a foreign professional language to include training teachers of professional subjects in language methodology bringing to technologies effectively to the classrooms. This prepares them to deliver their content in a language other than their mother tongue, fostering inclusivity for foreign students and aligning with the internationalization goals of higher education (Dashestani&Stojkovic, 2015; Chmelíková&Hurajová, 2019).
- **Teacher Preparation:** The preparation of foreign language teachers should align with the needs of society. ESP and CLIL methodologies are increasingly integral to foreign language teaching. Universities can capitalize on student teachers pursuing double majors, combining a foreign language with another subject (e.g., Mathematics, Biology). Several faculties in Slovakia have already integrated CLIL methodology into teacher preparation programs, and this trend is expected to grow.

In summary, CLIL is on a trajectory of growth and acceptance in Slovakian education, promising improved language proficiency and subject knowledge integration. However, addressing practical challenges, conducting more research, and adapting teacher preparation programs are essential steps in maximizing its benefits for both students and educators.

Both authors completed their PhD theses on the implementation of CLIL in Slovakia. This paper draws from their research and their experiences in an international project aimed at identifying effective CLIL practices across European Educational Institutions. The project focused on assessing CLIL implementation in primary, lower secondary, and secondary schools in Italy, Latvia, Lithuania, Sweden, and Slovakia. The research findings highlighted the diverse interpretations and applications of CLIL, influenced by each country's unique educational and intercultural context. This discovery motivated the authors to delve deeper into the Slovak context, where CLIL has gained traction, particularly in primary and secondary schools.

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