

## THE USE OF ICT IN CLIL-BASED TEACHING OF PEDAGOGY AND METHODOLOGY IN HIGHER EDUCATION

**Gunay Shiraliyeva**

*Associate Professor*

*Azerbaijan University of Languages*

*Department of English Language Teaching Methodology*

*orcid.org/0009-0003-1075-2273*

**Annotation.** *This article examines the specifics of teaching pedagogical subjects in English using CLIL and ICT. It also analyzes the impact of digital technologies on the development of students' professional and communicative competencies in higher education.*

**Keywords:** *CLIL, ICT, digital technologies, higher education, pedagogical disciplines, English-medium instruction, communicative competence, blended learning*

### **Introduction**

In recent decades, content-language integrated learning (CLIL) has become widespread in higher education, driven by the growing need for universities to internationalize the educational process and use English as a medium of instruction. Recent research shows that CLIL is a two-pronged educational approach in which subject content is mastered through a foreign language, ensuring the simultaneous development of linguistic and professional competencies. In today's higher education environment, integrating students' language and professional training is becoming increasingly important, driven by the need to develop specialists capable of functioning effectively in an international environment. In this regard, content-language integrated learning (CLIL) is considered one of the most promising approaches for synthesising language and subject content (Coyle, Hood, & Marsh, 2010). The term CLIL (Content and Language Integrated Learning) was introduced by D. Marsh to describe educational situations in which subject matter is taught in a foreign language, with language serving not only as an object of study but also as a tool for learning (Marsh, 1994, as cited in Coyle et al., 2010). This approach aims to simultaneously develop students' linguistic, cognitive, and professional competencies.

### **Main part**

The theoretical basis of CLIL is the "4C" model, which includes content, communication, cognition, and culture. This model ensures a comprehensive learning experience and promotes students' ability to interact interculturally (Coyle et al., 2010). This model places particular emphasis on developing critical thinking and the ability to apply knowledge in a professional context.

Contemporary research shows that CLIL is not a single method, but a set of pedagogical approaches that vary in the degree of integration of language and subject content (Dalton-Puffer, 2011). Specifically, various CLIL models have been identified, including "soft" CLIL and "hard" CLIL, each with its own didactic characteristics and applied depending on the students' level of preparation (Grigorieva, 2016). CLIL is particularly important in teaching pedagogical disciplines such as methodology and pedagogy, as this approach helps develop students' professionally oriented linguistic

competence. During their studies, students master specialized terminology, analyze pedagogical situations, and participate in professional discussions in a foreign language, thereby preparing them for work in an international educational environment (Popova et al., 2020).

It should be noted that the introduction of CLIL in university classrooms is associated with a shift from traditional foreign language teaching to its functional use in the acquisition of academic disciplines. In this context, language ceases to be viewed solely as an object of study and becomes a learning tool, providing access to specialized knowledge and scientific information (Fajardo Dack, Argudo, & Abad, 2020). Research shows that CLIL is being actively implemented in educational systems across various regions of the world, including Europe, Asia, and Latin America, demonstrating its versatility and effectiveness in diverse educational contexts. Particular attention is paid to the use of English as the language of instruction, owing to its status as a global medium of academic and professional communication (McDougald, 2015; Wolff, 2009). Unlike traditional approaches such as Content-Based Instruction (CBI) or English for Academic Purposes (EAP), CLIL emphasizes both language and subject matter. While CBI may emphasize content, and EAP may emphasize language, CLIL integrates them, creating conditions for students' holistic development (Ball, Kelly, & Clegg, 2015; Stoller, 2008). A distinctive feature of CLIL is its interdisciplinary nature, based on a combination of various theoretical approaches, including theories of second language acquisition, cognitive psychology, and constructivist learning models. This approach emphasizes students' active involvement in the learning process, developing their analytical and critical skills, and fostering independent learning skills (Marsh & Frigols Martín, 2013). In addition, an analysis of existing research shows that most studies on CLIL in higher education rely on qualitative research methods, driven by the need for a thorough understanding of the interactions between teachers and students in integrated learning settings. This approach allows for the identification of specific characteristics of the learning process and the evaluation of the effectiveness of various methodological solutions (Norris & Ortega, 2006).

Information and communication technologies (ICT) play a key role in implementing CLIL, significantly expanding the possibilities for organizing the educational process. The use of digital technologies provides access to authentic materials, including scientific articles, video lectures, and professional resources, which helps students develop skills in working with information in a foreign language (Zakharova, 2021). Furthermore, the use of ICT helps increase student motivation through the use of interactive and multimedia learning tools. Digital tools create a more visual and dynamic learning environment, facilitating the acquisition of complex subject material and promoting student engagement in the learning process (Gulaya & Romanova, 2016).

Another significant advantage of ICT is the ability to visualize educational material, which facilitates deeper understanding and knowledge acquisition. The use of infographics, diagrams, and presentations helps structure information and develop students' cognitive skills (Kuznetsova, 2020). Moreover, digital technologies provide the conditions for individualized learning, allowing students to independently regulate their learning pace and receive immediate feedback. This is especially important in CLIL settings, where students' language proficiency levels can vary significantly (Malinin, 2019).

Despite numerous benefits, the implementation of CLIL and ICT in the educational process faces a number of challenges, including insufficient teacher training, a shortage of teaching materials, and the need to adapt curricula (Popova, Kogan, & Vdovina, 2018). Research places particular emphasis on the role of the teacher in the CLIL context, as they act not only as a bearer of subject-matter knowledge but also as a facilitator in the language learning process. Teachers are often required to use a foreign language in their professional activities, which requires a high level of linguistic and methodological training (Fajardo Dack et al., 2020). Another important aspect is interaction between teachers and students, which is considered a key factor in the successful implementation of CLIL. The use of a foreign language in the learning process fosters a communicative environment in which students actively participate in discussions, analysis, and problem-solving. However, these challenges can be overcome with a systematic approach to organizing learning.

The practical implementation of CLIL in teaching pedagogical subjects requires a systematic approach, including the development of a methodological model, the adaptation of curriculum content, and the active use of digital technologies. In particular, the use of CLIL in teaching subjects such as Pedagogy and Teaching Methodology enables the integration of theoretical knowledge with the development of students' foreign language communicative competence. This study examines the implementation of the CLIL model using information and communication technologies, using the example of the "English Language Teaching Methodology" course. This model is based on a step-by-step organization of the learning process, including the initial, presentation, analytical, interactive, and reflective stages. During the orientation phase, students refresh their previously acquired knowledge and introduce new professionally relevant vocabulary. The use of digital tools, such as interactive whiteboards and online platforms (e.g., Padlet or Mentimeter), facilitates group discussions and stimulates students' cognitive activity. Furthermore, the use of visual aids promotes better understanding and retention of terminology.

During the presentation phase, students are exposed to authentic materials in English, including research articles, video lectures, and methodological guidelines. The use of learning management systems (LMS) such as Moodle allows for the structure of the learning material and ensures its accessibility at any time. An important element of this phase is assessing students' understanding of the material through online tests and assignments (Malinin, 2019).

The analytical stage involves deep processing of the material learned, including its analysis, interpretation, and application. Students complete tasks aimed at developing critical thinking, such as creating mind maps, writing annotations, and preparing presentations. The use of digital visualization tools (Canva, MindMeister) facilitates the structuring of information and the development of cognitive skills (Kuznetsova, 2020).

The interactive stage is key within CLIL, as it is here that language is actively used for communicative purposes. Students participate in discussions, debates, and role-plays that simulate professional situations. For example, when studying the topic "Teaching Methods," students can develop and present their own methodological solutions in English. The use of video conferencing and online platforms facilitates effective interaction between participants in the educational process. The reflective stage involves assessing learning outcomes and analyzing the achieved goals. The use of digital

technologies allows for both self-assessment and peer assessment. Online surveys, forums, and tests help teachers track student progress and adjust the learning process.

### **Conclusion**

An analysis of the results of implementing CLIL using ICT shows that this approach significantly improves students' foreign language communicative competence. Specifically, improvements in oral and written communication skills, as well as the development of the ability to use a foreign language in a professional context, are noted. Moreover, the use of digital technologies helps increase student motivation by making the learning process more interactive and focused on the practical application of knowledge. Students are more interested in completing assignments related to real-world professional situations.

It should also be noted that the integration of CLIL and ICT promotes the development of so-called "soft skills," including critical thinking, collaboration, and independent work. These skills are an important component of the professional training of modern specialists. At the same time, the study's findings confirm certain challenges associated with implementing this approach. These include teachers' insufficient training in CLIL and the need to develop specialized teaching materials. However, these challenges can be addressed by organizing professional development courses and developing methodological recommendations.

Thus, the practical implementation of CLIL using information and communication technologies in teaching pedagogical subjects demonstrates high effectiveness and contributes to the development of comprehensive professional and linguistic competencies in students. The integration of digital tools allows for the creation of a modern educational environment focused on active student participation and the development of their independence.

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