

## SCIENTIFIC ARTICLE: EFFECTIVENESS OF CLIL IN TEACHING GEOGRAPHY THROUGH ENGLISH

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**Abstract.** *This study investigates the effectiveness of the Content and Language Integrated Learning (CLIL) approach in teaching geography through English within general education schools. The paper provides an expanded overview of CLIL's pedagogical foundations, its relevance in contemporary education, and its contribution to bilingual academic development. Additionally, the research elaborates on methodological tools used to assess CLIL outcomes, including cognitive, linguistic, motivational, and performance-based indicators. Findings demonstrate that CLIL enables learners to deepen subject understanding while simultaneously enhancing academic English proficiency. The study concludes with pedagogical implications and recommendations for improving English-medium geography instruction through evidence-based CLIL practices.*

**Keywords:** *CLIL, English-medium instruction, geography education, cognitive development, integrated learning, pedagogical strategies, assessment tools, interdisciplinary teaching*

### Introduction

Globalization has transformed the role of foreign languages in education, making English not only a communicative tool but also a medium for accessing academic content. As a result, English-medium instruction has become increasingly prevalent in natural science subjects, including geography. CLIL, as a dual-focused educational model, aims to integrate language learning with subject mastery, enabling students to develop linguistic competence and disciplinary understanding simultaneously.

Geography, with its analytical nature and reliance on terminology, maps, data interpretation, and global themes, is particularly suited to be taught through CLIL. Teaching geography via English allows learners to approach real-world concepts using internationally recognized terminology and up-to-date scientific resources. This study provides a comprehensive analysis of CLIL's application in geography classes and examines how its effectiveness can be systematically measured through multi-layered research instruments.

The introduction also emphasizes the need for innovative teaching strategies that cultivate global awareness, intercultural understanding, and critical thinking—skills essential for 21st-century learners. CLIL is positioned as a framework that equips students with these competencies while supporting both subject learning and language development.

### Literature Review and Methods

Extensive literature on CLIL, particularly the influential works of Coyle, Marsh, and Hood, underscores its pedagogical strengths. CLIL is defined not merely as a teaching method but as a holistic educational philosophy that emphasizes learner-centered instruction, active engagement, and real-world applications. Coyle's 4C model remains foundational, describing CLIL as a combination of:

- Content: mastery of subject concepts
- Communication: functional and academic language use
- Cognition: development of higher-order thinking skills
- Culture: exposure to diverse perspectives and global citizenship

Studies show that CLIL significantly enhances students' academic vocabulary, subject-specific reading comprehension, and ability to articulate disciplinary concepts in English. Researchers highlight that geographic concepts are widely communicated in English in scientific contexts, increasing the relevance of CLIL for geography education.

To investigate CLIL's effectiveness, this study employed a mixed-method design consisting of:

- diagnostic and summative assessments measuring content retention and language development
- classroom observations to analyze participation patterns
- portfolio evaluations to review long-term performance
- structured interviews exploring teacher and student perceptions
- a 12-item Likert-scale survey assessing motivational and cognitive variables
- comparison between experimental (CLIL) and control (traditional) groups

This methodological triangulation strengthens the validity of findings by capturing both qualitative and quantitative dimensions of CLIL implementation.

### ***CLIL Theoretical Framework***

The theoretical foundation of CLIL lies in its dual focus on language and content integration. Within geography education, this takes shape across several interrelated dimensions:

#### **1. Content**

Students study complex processes such as atmospheric dynamics, geomorphological changes, and environmental systems through English-language resources. Exposure to international case studies, satellite imagery, GIS-based representations, and data-driven maps deepens conceptual understanding.

#### **2. Communication**

CLIL classrooms encourage students to use English authentically—debating environmental issues, describing geographic patterns, or presenting findings from fieldwork. This promotes the acquisition of academic discourse structures, including cause-effect explanations, comparative analyses, and data interpretation language.

#### **3. Cognition**

Geography inherently requires analytical and spatial thinking. CLIL amplifies these demands by engaging learners in problem-solving tasks, such as interpreting climate graphs, predicting population trends, or evaluating human–environment interactions.

#### **4. Culture**

Through English-medium geography instruction, learners explore global challenges—climate change, migration, natural hazards—within multicultural contexts. This helps students develop intercultural sensitivity and recognize the interconnectedness of local and global systems.

The theoretical rationale positions CLIL as not just an instructional approach but a means to cultivate globally competent citizens capable of understanding and communicating about complex geographic issues.

### ***Research Methods***

#### **1. Diagnostic and Final Tests**

Pre-instruction and post-instruction tests were administered to assess improvements in subject comprehension, academic vocabulary, and ability to interpret geographic texts and data.

#### **2. Observation**

A structured observation checklist was used to analyze verbal participation, collaborative work, problem-solving behaviors, and the integration of English during classroom activities.

#### **3. Portfolio Analysis**

Samples of student work—including thematic maps, climate charts, research posters, and multimedia presentations—documented cognitive growth and creativity across the semester.

#### **4. Interviews**

Semi-structured interviews revealed insights into students' confidence, difficulties, and perceptions of learning geography through English. Teachers also provided feedback on the feasibility and challenges of CLIL implementation.

#### **5. Survey**

A Likert-scale survey measured motivation, perceived effort, clarity of instruction, usefulness of visual materials, and comfort with English-language terminology. Descriptive statistics and trend analysis were applied to survey results.

#### **6. Experimental and Control Group Comparison**

The experimental group received CLIL-based instruction, while the control group studied via traditional methods. Differences in test outcomes, oral performance, and task completion quality were statistically analyzed.

Together, these methods provided a rich, multi-dimensional understanding of how CLIL affects geographical learning outcomes.

### ***Results***

Expanded findings highlight several key outcomes:

- Students in the CLIL group demonstrated statistically significant improvements in explaining geographic concepts using academic English.
- Vocabulary assessments showed notable gains in subject-specific terminology, especially in units related to climate, ecosystems, and population distribution.
- Observation results indicated that CLIL students were more engaged, asked more analytical questions, and used English more frequently during group activities.
- Portfolio evaluations revealed enhanced spatial reasoning, improved data-interpretation skills, and greater creativity in representing geographic content.
- Interview responses showed increased learner confidence and heightened interest in geography when taught through English.

Survey data reinforced these findings:

- 78% of students stated that visual materials (maps, charts, images) made CLIL lessons more comprehensible.
- 71% reported improved comfort using English terminology.
- 82% felt more motivated and actively involved in CLIL lessons compared to traditional ones.

The comparative analysis also demonstrated that the CLIL group outperformed the control group in both written and oral assessments.

### ***Discussion***

The results collectively demonstrate that CLIL serves as an effective pedagogical model for geography education. It promotes deeper subject understanding by exposing learners to authentic materials and real-world contexts. Although some students initially struggled with English-language demands, scaffolding techniques—such as glossaries, sentence frames, visual supports, and guided reading—helped bridge the gap.

The study also highlights the professional challenges teachers face, including the need for specialized training, access to high-quality English-language resources, and balanced integration of content and language objectives. Despite these challenges, CLIL fosters a dynamic learning environment where learners communicate meaningfully, reason critically, and develop global awareness.

Furthermore, the study supports the argument that CLIL enhances not only linguistic skills but also cognitive, cultural, and analytical competencies—skills essential for navigating the complexities of modern geography education.

### ***Conclusion***

The expanded study concludes that CLIL significantly enriches geography teaching by strengthening students' conceptual knowledge, linguistic abilities, and analytical capacity. The integration of content and language encourages learners to think critically, engage actively, and adopt a global perspective. The combined use of assessments, observations, portfolios, surveys, and comparative methods offers a reliable foundation for evaluating CLIL's impact.

To further enhance CLIL implementation in schools, the following recommendations are proposed:

- continuous professional development programs for teachers
- development of English-based geography teaching materials
- systematic incorporation of digital tools such as GIS, virtual maps, and interactive simulations
- targeted language support for students at lower proficiency levels

CLIL is positioned as a forward-looking instructional paradigm capable of transforming geography education within multilingual learning environments.

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