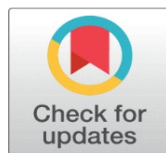
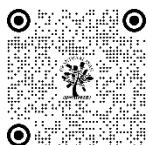


# IMPLEMENTING CLIL AT THE TECHNICAL DIPLOMA LEVEL: CHALLENGES AND ADAPTATIONS IN A KERALA CONTEXT

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## ABSTRACT

Content and Language Integrated Learning (CLIL) method presents a compelling approach to addressing deficiencies in both content mastery and language proficiency, particularly in contexts where communication skills impact subject learning. The research conducted in the Technical Diploma stream in Kerala provides insightful observations into the practical implementation of CLIL in a challenging educational environment. The researcher faced difficulties in aligning CLIL strategies with the existing curriculum and managing rigid, overcrowded classrooms, which hampered interactive and communicative teaching methods. While theoretical aspects of CLIL provided a solid foundation, practical implementation revealed gaps between theory and the realities of the local educational environment. The successful adaptation of CLIL required modifications to the traditional Preparation, Activity, and Revision (PAR) sessions, effectively balancing content and language acquisition despite the constraints. This approach led to noticeable improvements in student engagement and learning outcomes, demonstrating that CLIL can be effective when tailored to meet the specific needs of the educational setting.

**Keywords:** Content and Language Integrated Learning (CLIL), Content Based Language Teaching (CBLT), Team Teaching, Immersion



## 1. INTRODUCTION

This paper reviews the difficulties encountered by the researcher in applying the Content and Language Integrated Learning (CLIL) methodology within an Engineering Diploma class in Kerala. The researcher navigated the common challenges associated with CLIL, such as adapting the methodology to local teaching and learning paradigms and addressing classroom limitations. The experiment underscored the necessity of developing a CLIL approach tailored to the specific realities of the region, emphasizing that effective implementation requires consideration of both educational constraints and regional educational practices.

In the Polytechnic Colleges of Kerala, where English is intended as the medium for delivering core technical content, there is a paradoxical shortfall in achieving the educational aims. Despite the favourable conditions for using English academically, many technical students find themselves employed in roles where their subject matter expertise and technical skills are significantly underutilized. This disconnect arises because, although core subjects are designed to be taught in English using an immersion model, they are frequently delivered in the mother tongue, with teachers acting primarily as translators. Consequently, this practice results in a dual inadequacy: students struggle with both content comprehension and proficiency in English, undermining their effectiveness in both areas.

Content and Language Integrated Learning (CLIL), which involves using 'an additional language for the learning and teaching of both content and language' (Coyle, Hood, & Marsh, 2010, p.1), offers a viable solution to the issues of inadequacy in content learning and language acquisition. By incorporating the language aspects proposed by Cummins (2000), such as Basic Interpersonal Communication Skills (BICS) and Cognitive Academic Language Proficiency (CALP), CLIL can enhance both dimensions of learning. As noted by Dale and Tanner (2012), 'Effective CLIL teachers help to bridge the gap between BICS and CALP' (p. 35), indicating that CLIL methodology can address the dual challenges of improving technical content understanding and second language proficiency.

The CLIL experiment was conducted at Government Polytechnic College Adoor by a content teacher and this researcher, involving a series of 18 hours of CLIL classes from January to March 2016. The target group comprised a second-semester Diploma class in Mechanical Engineering, consisting of 61 students. The paper selected for the experiment was titled "Basic Mechanical Engineering," which included four modules, with the first module chosen for the trial. The topics covered in this module were the properties of engineering materials and their testing. The CLIL sequence implemented for this experiment followed Dale and Tanner's (2012) framework, which included Activating, Guiding Understanding, Focus on Language, Focus on Speaking, Focus on Writing, and Assessment, Review, and Feedback.

## **2. CHALLENGES**

The challenges faced during the experiment could be classified under three headings: initial challenges, preparatory challenges and transactional challenges

### **INITIAL CHALLENGES**

#### **a) IDEOLOGICAL CHALLENGES**

At the outset, numerous factors needed careful consideration, especially since no prior experiments of this nature had been conducted in the region. It was essential to shift from the conventional view of the teacher as the ultimate source of knowledge to a more progressive model, where the teacher assumes the role of a facilitator, supporting a learner-centred approach. Both the authorities and students were provided with a detailed explanation of the experiment's purpose and methodology.

#### **b) TIME CONSTRAINTS**

An ideal teaching method could not meet the demands of the system, as only three months were available for a semester that ideally required five months. The level of content delivery, the students' understanding, their interest in the material and English, along with their prior knowledge, had to be addressed at every stage. This made progress in learning slow. Most of the students, coming from rural backgrounds, lacked intrinsic motivation. Initially, the investigators prioritized the quality of content delivery over time constraints, but eventually adopted a more balanced approach. Despite these efforts, the time limitations imposed by the research could not be entirely resolved. Additionally, before the experiment, the entire schedule had to be adjusted to allow both the content and language teachers to collaborate through team teaching.

### **PREPARATORY CHALLENGES**

#### **a) ADAPTING THE TEXT**

The decision was made for the language teacher to prepare a CLIL-adapted text based on the topics from various recommended books outlined in the syllabus. At the start of the experiment, there was no single book available that covered all the necessary topics. (Later, a book emerged, though it was more of a study guide than a textbook, appearing around the middle of the experiment.) The CLIL-adapted text was thus developed, integrating content explanations, diagrams, and examples drawn from the students' own experiences. A key challenge was generating a wealth of input that explored Gardner's (1983) theory of multiple intelligences and Higher Order Thinking Skills (HOTS). The text was designed with several workspaces to engage students actively, marking a significant shift toward student-centred learning. This task was especially demanding due to the careful consideration required for each word and expression within the content's context. For example, distinguishing between terms like strength, hardness, toughness, and resilience in the discussion of the mechanical properties of metals. Additional challenges included sourcing supplementary materials for content delivery and assessing the viability of various activities.

#### **b) TASK OF COLLECTING AUDIO-VISUAL AND OTHER TEACHING AIDS**

When the teacher takes on the role of a facilitator, the use of audio and visual aids becomes crucial. However, selecting appropriate YouTube clips posed a significant challenge. This difficulty, while specific to the context, cannot be generalized. There were few clips that matched the grade level of the diploma syllabus, highlighting an area that offers great potential for further research. Despite this, the clips used in class proved to be helpful. Alongside the audio-visual aids, various models and gadgets were brought into the classroom for demonstration, enhancing the overall learning experience.

## **CHALLENGES DURING THE TRANSACTIONAL PHASE**

### **A) LEARNER CENTRED APPROACH AND OVERCROWDED CLASSROOM: TEETHING PROBLEMS**

The shift from the traditional, teacher-led "banking model" of education (as critiqued by Freire in 1970) to a learner-centred approach marks a significant evolution in educational practices. In this context, CLIL represents an innovative pedagogical framework where subject content becomes the vehicle for language acquisition, and learning is driven by interaction and communication. The classroom no longer revolves around the mere transmission of knowledge, but becomes a dynamic space where learners construct their own understanding through active engagement. The challenging aspect of this is the functional part of this in classrooms.

A class of 61 students, unfamiliar with a learner-centred approach, crowded into a room with desks and benches, presented a significant challenge. Engaging the students in activities became the first major hurdle during the transaction phase. The activities were designed to accommodate a large group, but strategies like bigger group discussions and rapid group formations were minimized. Over time, the experimenters realized that the instructions given in class lacked clarity, contributing to the students' difficulties in comprehending the content. It also became evident that teacher-led explanations still had a vital role in the learning process. However, there was a noticeable improvement in the learning environment once students began engaging in self-directed, pair, and group learning activities.

### **B) AFFECTIVE AND LINGUISTIC CHALLENGES**

The group selected for the experiment lacked many of the language skills expected at their level of learning. The transition from Malayalam (L1) to English in the classroom was slow, influenced by factors such as affective or emotional challenges (Dale and Tanner, 2012) and limited content knowledge and vocabulary. Initially, the students relied on their mother tongue during classroom interactions, and the teachers had to continuously encourage them to communicate in English. Overcoming their inhibition to use L2 took time. However, within a short period, most students began using English more frequently, despite numerous inaccuracies and the effort required. The linguistic challenges they faced—ranging from word-level to sentence and discourse-level difficulties—were largely addressed through scaffolding (Wood, Bruner, and Ross, 1976; Vygotsky, 1978) and, in many instances, through direct teacher support.

### **c) LANGUAGE AND CONTENT TEACHER COLLABORATION**

The role of the teacher in CLIL is to guide learners through the learning process, preparing them for the dual challenge of acquiring both content knowledge and language skills. Teachers intervene when necessary, offering **scaffolding**—a structured support system that helps learners progressively achieve higher levels of understanding. In CLIL, the evaluation process reflects this integration, with assessments covering not only content knowledge but also language proficiency.

A key element in CLIL is the **collaboration between language and content teachers**, ensuring that both domains complement each other throughout the learning journey. This collaboration is not intended to undermine the role of English language teachers but rather to explore how integrating content learning with language acquisition can push language learning beyond basic communication skills. By maintaining the distinct nature of language and content domains, CLIL opens up new possibilities for language development, helping students gain a deeper mastery of the language in academic and practical contexts.

The collaboration between the content and language teachers was established during the preparation phase and continued into the team-teaching phase of the experiment. Although the initial framework was set early on, a clear approach to these aspects only fully emerged as the process unfolded. Discussions focused on the fundamental principles of CLIL, its value and utility, and the topics to be covered. However, some discussions did not go as smoothly as planned, which impacted the effectiveness of the transaction phase. From the outset, it was essential to have a comprehensive understanding of the content, aligned with the available time, as well as a solid grasp of the adapted material, teaching aids, and resources required for each session. During the transactional phase, the language teacher took on the role of encouraging speaking, working as part of the team, and assessing activities, while the content teacher focused on facilitating content learning and evaluating student progress.

CLIL (Content and Language Integrated Learning) blends content and language learning, particularly valuable in contexts where classroom interaction is the primary opportunity for language exposure (Dalton-Puffer, 2011). This approach creates a balance between individual and social learning environments, promoting subconscious language acquisition through interactive content learning (Coyle et al.). While the integration of content enriches the language learning process, allowing learners to acquire language naturally, a key challenge lies in teaching complex subject matter in a language unfamiliar to learners, requiring thoughtful pedagogical strategies to ensure both content and language development. This integration is a challenge for CLIL teachers.

### **3. DIFFICULTIES FACED DURING VARIOUS TRANSACTION PHASES**

Activating students' prior knowledge relied on intuitive assumptions about their previous understanding, as it was not feasible to identify their individual levels of knowledge specifically during this experiment. Instead, engaging activities related to the topic were used to stimulate prior knowledge. The challenge of effectively applying Vygotsky's (1978) Zone of Proximal Development (ZPD) and properly identifying it remained unresolved, though addressing it could have enhanced the activation of prior knowledge. The most challenging and time-consuming aspect of the experiment was guiding understanding during content transactions. Initially, small chunks of information-based activities were provided to the whole class. Later, with the publication of the guide-cum-text, jigsaw reading was introduced, followed by individual reading, pair work, and group work involving information gap exercises, which helped save time. While content vocabulary exercises and complex language structures were incorporated, the time allocated to these aspects was not proportionate. Although self-evaluation and peer evaluation were planned as part of the assessment, they were not implemented in the class.

### **4. FINDING A BALANCED APPROACH IN THE CLASSROOM ACTIVITIES**

Initially, there were challenges with adapting activities to fit the constraints of a crowded classroom, leading to a reduction in the variety and effectiveness of CLIL methodology. Many activities were limited to paper-based tasks, such as reading passages and answering comprehension questions, which constrained the potential of this methodology. The first four classes focused on basic content definitions, which hindered progress. To address this, applications and equations were simplified for self-study, with necessary explanations provided. Complex topics were broken down into simpler components, supplemented with pictures and diagrams. This approach aimed to provide students with opportunities for meaningful interaction, fostering the development and construction of their knowledge.

### **5. CONCLUSION**

This approach could be effective if carefully planned with considerations for limitations such as time constraints and overcrowded classrooms. A significant finding from the experiment was the potential and success of a learner-centred approach, which notably boosted learners' confidence. However, an eighteen-hour experiment is not sufficient to draw definitive conclusions about the success of CLIL. Many factors specific to this institution and the results observed may not serve as a benchmark for CLIL experiments in Kerala. Nonetheless, there remains hope for the successful adaptation of CLIL methodology tailored to the context in Kerala.

### **CONFLICT OF INTERESTS**

None

### **ACKNOWLEDGMENTS**

None

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