

The Potentials and Limitations of Applying Content and Language Integrated Learning (CLIL) Approach to English Teaching for Medical Students

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Abstract

The Faculty of Medicine, the University of Mataram, Indonesia, renewed its curriculum to teach English to aid Indonesian university graduates to enter the competitive international job markets. Adopting this new curriculum will affect the provision of teaching and learning activities. This paper attempts to justify whether the use of Content and Language Integrated Learning (CLIL) would fit within the current English curriculum. A comprehensive review of a literature was conducted to identify barriers and facilitators for the implementation of CLIL in higher education settings. Results of the literature review were then used to evaluate the potential strengths and limitations of the recently renewed curriculum when implemented at the Faculty of Medicine. Availing of curriculum and learning materials has the potential to sustain CLIL implementation in the Faculty of Medicine. However, factors that may impinge the successful implementation include: lecturers' language, content pedagogical competences and the need to employ differentiated instructional modules. An ongoing professional development for lecturers prior to curriculum implementation could address these limitations.

Keywords: CLIL, English, medicine

1. Introduction

Most Indonesian universities produce several graduates every year to compete at both national and international levels. Regardless of such ambitious goals, many of those graduates are not adequately equipped with language abilities to work in competitive international job markets. This situation becomes a bottleneck in the development of internationally competitive graduates in Indonesia. This limitation also applies to graduates of Medicine from the Mataram University.

Sujana et al., (2020) developed a renewed English Curriculum under the auspices of the Indonesian National Research Grant to provide students the opportunities to improve their English learning proficiency in response to various local, national, and global challenges. Thus, faculty graduates would learn English as a means of communication to meet the demand of global job markets. Curriculum development is an important step in preparing competitive graduates to ultimately compete for job opportunities at the international level.

The newly established curriculum is comprised of 6 strands ranging from General Academic Reading to English for Communication in the Workplace. Each strand represents a level of language proficiency to be acquired by a student. We prepared teaching syllabus and learning materials to complement the newly developed curriculum. Also, we set out to describe whether the CLIL approach is suitable for implementing the newly developed English curriculum and identify models for CLIL implementations for the practical classroom. Our review was prompted by the limited information on CLIL implementation in higher education as it is still at its' early stages.

The term CLIL was first coined by Marsh (1994) to refer to teaching and learning situations in which subjects (contents), or parts of contents, are taught through a foreign language. CLIL has dual-focused goals, which are the simultaneously acquisition of subject matter (content) and the target language. In Ball's term (2002), CLIL is likened to 'killing two birds with one stone.' However, during its development, CLIL has been variously defined and applied depending on contexts and focuses. Out of the various definitions available in literature, Coyle, D, Hood, P, Marsh (2010 p.1) provided a vivid CLIL definition, i.e., "A dual-focused educational approach in which an additional language is used in the teaching and learning process of both content and language;" a definition widely agreed upon by several CLIL research studies.

From the onset, CLIL's adoption by many countries in Europe was driven by political and educational motives. Meanwhile, political issues related to the needs of high levels of language competence for community mobility in a global competition and educational issues are related to the needs to design language teaching for higher level of competence (Marsh, 2012). Several theories underlying the CLIL application are bilingualism, SLA, constructivism, cognitive learning, authenticity of contexts and purposes as well as intercultural understanding (Awan & Sipra, 2018).

The common framework used to design teaching units in the CLIL approach is known as Coyle's 4C Framework, comprising of (1) content, related to subject matter/unit being taught, (2) communication related to appropriate language development and use, (3) cognition,

i.e., thinking process, and (4) culture, i.e., awareness of perspective. An integration to accord students significant and meaningful learning experiences (McDougald, 2016). Therefore, CLIL application contributes to the improvement of content knowledge, and facilitates appropriate language use, communication strategies, and cognitive development.

Using the theoretical framework above, this paper reviews in detail relevant studies to provide evidence from other countries regarding the best practices pertaining to CLIL application in tertiary educational level. In particular, this review attempts to answer the following questions:

- What factors facilitate implementation of the CLIL Approach at the Department of Medicine, in the University of Mataram?
- What implications of the results of the current literature review on the CLIL approach implemented at the Department of Medicine, the University of Mataram?
- What are the potential strengths and limitations of applying the CLIL approach at the Department of Medicine, the University of Mataram?

Given the three questions above, the aims of this paper are were to describe: (1) facilitators for sustainable implementation of the CLIL approach in higher education; (2) implications of the results of the current review on the application of the CLIL approach and (3) the prospects and pitfalls of applying the CLIL approach.

2. Discussion

This section begins with a synthesis of facilitators of sustainably applying the CLIL approach in the higher education, and also describes gaps and problems in the CLIL approach implementation. Furthermore, implications of the findings are drawn to frame what the faculty needs to implement the CLIL Approach. Finally, potential strengths and/or limitations of CLIL application to English classes are presented.

Facilitators for sustainable CLIL approach application in higher education

CLIL application in higher education results from internationalization and human beings' high mobility (Carloni, 2018); a trend that has encouraged several universities in both developing and developed countries to adopt CLIL Approach (Khalyapina et al., 2017). Numerous research reports show that different universities in many countries have undertaken various initiatives in CLIL implementation in the past few years. Some of these studies have shown that many higher educational institutions have succeeded in implementing the CLIL approach in teaching the English language whereas other institutions have not succeeded.

The aforementioned studies documented 5 categories of facilitators of sustainable CLIL approach including: (1) a specified curriculum, (2) lecturers' language and content competencies, (3) differentiated mode of instructions, (4) content-based learning materials and (5) institutional support.

As regards a specified curriculum, a number of research studies such as Czura & Papaja (2013), Esteben (2015) and Rostekova & Palova (2020), reported that the success of CLIL implementation is to a large extent determined by the university readiness to develop specified curriculum that blends the target language and content of the subject. Such a curriculum can guarantee the development of learners' cognitive and communicative competencies (Esteban, 2015; Mammadova, 2016). A specified curriculum can help lecturers plan sequences of students' learning experiences. Ultimately, through the use of CLIL-based curriculum, students can acquire and use the desired language competencies akin to subject experts (Pokrivčáková & Pokrivčáková, 2015; van Kampen et al., 2017).

A sound CLIL-based curriculum should therefore incorporate two fundamental concepts namely, language and content (Cimermanov á 2017). While the language learning develops students' communicative competencies in the target language, content learning develops cognitive functions. In a quantitative study on CLIL implementation in a state university in East Java, Fitriani (2016) reported that CLIL implementation in Indonesia was failing due to: (1) classes being taught by only content lecturers, (2) lecturers with varying language proficiency and (3) learning activities heavily emphasizing on lecturing the content rather than practicing the language. Therefore, a poorly-designed CLIL curriculum affects students' language inputs and learning success.

Lecturers' competencies are important developing CLIL classes. Sylvén (2013) and del Carmen Arau Ribeiro et al. (2019) reported that lecturers' competencies in both language and subject content positively contributed to the successful implementation of CLIL. In fact, several studies evaluating CLIL implementation in some European Universities concur with these findings. Conversely, a number of reports illustrated that teachers' lack of pedagogical competencies hindered the successful implementation of the CLIL approach (Candela et al., 2018). Therefore, authors like Czura & Papaja (2013) Khalyapina et al.(2017) Pérez-Cañado (2016), suggested that on-going professional training be provided for both content and language lecturers before embarking on developing CLIL classes to strengthen their pedagogical competencies. Such training activities can be collaboratively provided through team teaching and resources' sharing.

As regards differentiated modes of instruction, several authors, (e.g, Halbach, 2018; Yang, 2017) state that they play an important role in catering for students with varying entry levels language proficiency (Kang et al., 2010). Czura & Papaja (2013) suggested four possible modes of instruction for CLIL to address such discrepancies namely, (1) extensive L2 medium instruction, (2) partial L2 medium instruction, (3) limited L2 medium instruction and (4) specific L2 medium instruction. The first instruction model is used to cater for content-oriented classes where language and content materials are simultaneously in the target language and no native speaking is allowed. The second model employs both the target and native language to teach the subject content. The native language is frequently used to

explain difficult concepts in the target language. The third model caters for classes with limited language proficiency by using mainly the native language to teach content materials written in the target language. The fourth model uses the native language to teach students all the content lessons. After a series of lessons, students will then be instructed to write summary of the content materials in the target language. These differentiated models of instructions have been proven to cater for students' diverse learning needs and experiences (van Kampen et al., 2017).

The availability of content-based teaching-learning materials: Generally, when CLIL is introduced in tertiary education, lecturers or instructors often face difficulties in providing quality content-based teaching and learning materials (Fitria & Susilawati, 2019). Thus they are usually unprepared to teach CLIL classes (Ball, 2018). This problem is often worsened by the absence of standard content delivery and learning assessment (Vilkancienė & Rozgienė, 2018) and therefore impedes the attainment of learning goals. Teachers should find ways of embedding authentic language use within the subject content. Suitably-designed teaching-learning materials that integrate content and language will allow lecturers to support students' academic language proficiency and promote their critical and creative thinking skills.

The use of teaching materials: Wilson (2018) stated that for lecturers or instructors to measure their teaching outcomes, they need to prepare well-designed performance-based assessment and evaluation framework prior to teaching. Such a framework will help lecturers gather evidence regarding their positive and productive engagement and their students' actual performance. Evidence-based assessment and evaluation will also guide the lecturers to attain the targeted cognitive and linguistic competencies. Clear, well-organized teaching materials, task-based assessment, and continuous assessment contribute to the successful implementation of the CLIL approach, as stated by Massler et.al, (2014).

The fifth factor, i.e. institutional support: Alejo & Piquer-Pérez (2016) state that the successful realization of CLIL to a large extent is determined by institutional support and involvement. Several authors, such as Muszynska et al. (2015), Sauzier-Uchida (2017), Pappa et al. (2019), Gallagher & Haan (2020) concur with this proposition. These authors state that institutional management ought to scrutinize what support services its lecturers need to employ CLIL as a sole teaching approach in the university. These support services may include budgets and expenditures, provision of learning materials, and access to the library, computer and language centers among other things.

The current review yielded crucial factors that contribute to the successful implementation of the CLIL approach in both developed and developing countries as confirmed by research studies from a many universities in developed and developing countries.

Implications of the results of the current literature review on teaching of English using the CLIL Approach in the Faculty of Medicine, the University of Mataram

Firstly, the faculty of Medicine should design a specified curriculum, develop content-based learning materials and provide differentiated learning activities that cater to the demands of CLIL approach. Furthermore, a product-based assessment and evaluation for both teachers and students are required to implement the CLIL approach. Prior to implementing the current CLIL-based curriculum, lecturers should adjust the present syllabi and the learning materials to the students' present situation to address the students' learning needs. This flexibility allows the lecturers to redesign their learning materials and activities to maximize lecturer-student engagement. Well-sequenced integration of content and language matters guides lecturers to help students attain specific learning standards and provide a holistic picture of learners' performance in different language aspects. The sequence of learning materials and modes of instruction described by Czura & Papaja (2013) could be utilised.

Secondly, some empirical evidence showed that human resource competencies were responsible for success or failure of implementing the CLIL approach. There is an indispensable need for the faculty to assist lecturers to attain adequate language and content competencies when a CLIL approach is selected possibly on-going professional development training. The faculty needs to devise well-designed professional development opportunities that integrate what the lecturers learn from the training sessions with what they need to teach in the CLIL classroom to ensure the lecturers are committed to professional development.

Institutional support is vital in implementing a CLIL approach in higher education. Lack of support from the university will obviously affect the lecturers' job performance and motivation to implement CLIL. Therefore, availing professional development for the lectures should not be overlooked when planning CLIL implementation in the future.

The potential strengths and limitations of CLIL application in English classes in the Faculty of Medicine, University of Mataram

Firstly, the research and development (R&D) study by Sujana et.al (2020) generated a CLIL-based English curriculum for the Faculty of Medicine that has been translated into 8 sequential syllabus documents based on students' levels of language proficiency. These documents were supplied with elaborate teachable units, teaching procedures, task-based activities, method of assessment and evaluation. Therefore, the end users of the curriculum completed these documents and obtained clear guidance on how to run CLIL-based English classes.

Secondly, the availability of content-based learning materials developed through consulting learning modules and content experts — such as specialist doctors — and language experts maximizes the quality of deliverable. The materials underwent substantial revisions in response to the inputs given by experts. The ultimate product of learning materials was therefore available to use in teaching and learning. Also, it is worth noting that the production of these learning materials received in-kind supports from the Language Center and the Faculty of Medicine at the University of Mataram.

CLIL approach implementation still had some limitations. At the moment, both content and language lecturers do not have sufficient background knowledge in using CLIL approach to teach English due to the inadequate preparation. Until the time of conducting this study, little induction or professional development had been provided to enhance lecturers' pedagogical content knowledge. In addition, lecturers' limited knowledge and skills in CLIL teaching methodology probably hinders them from maximally delivering the learning materials to their students.

3. Conclusion

Factors that contributed to the successful implementation of CLIL approach in higher education include: (1) a specified curriculum, (2) lecturers' language and content competencies, (3) differentiated mode of instructions, (4) content-based learning materials and (5) institutional support. These factors, which may hinder lecturers' teaching performance, could help identify areas that need intervention. Furthermore, the sustainable implementation of CLIL in higher education requires (1) institutional support, (2) the improvements of lecturers' teaching competencies using CLIL and (3) provision of on-going professional development.

4. Recommendation

- The development of curriculum and learning materials should be congruent with lecturers' pedagogical knowledge. Lecturers should undergo on-going professional development to meet the curriculum demands and acquire the necessary pedagogical knowledge and teaching skills to provide better services. Furthermore, curriculum and learning materials' development may provide a necessary conduit for learning between content lecturers and their fellow English lecturers. Therefore, lecturers participating in CLIL classes should be given enough opportunities to take part in language teaching workshops and academic seminars to broaden their perspectives in CLIL.
- English teaching through CLIL will remain problematic in the absence of institutional support from the university. The Faculty of Medicine at the University of Mataram should develop a sound institutional support mechanism for CLIL implementation to enhance the quality of its educational services.

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