The Effect of CLIL on Vocabulary Development by Iranian Secondary School EFL Learners

Neda Zarepour Moghadam\textsuperscript{a}, Hamidreza Fatemipour\textsuperscript{b, *}

\textsuperscript{a}Islamic Azad University, Tehran South Branch, Tehran, Iran
\textsuperscript{b}Islamic Azad University, Roudehen Branch, Roudehen, Iran

Abstract

Integrating content and language is not a new idea but one that is becoming increasingly more practiced in language classrooms around the world and one that is continuously evolving. According to the Eurydice European Unit (2006), one of the goals for using this approach besides the obvious objective of mastering a language as well as learning subject matter, is to prepare for life in a more internationalized society. The purpose of the present research is to identify the relationship between learning and developing vocabulary and learning English in CLIL classes among Iranian EFL learners of SAMA schools. In SAMA schools all subjects are taught in Persian except mathematics and science, which are taught in English. The research method was quantitative, and the research sample was all the students of SAMA school in Tabriz city (40 students) and students of an ordinary school (40 students). Data were gathered through a researcher-made tool which consisted of 50 items. Results showed that the students of SAMA school have the ability to develop and retain vocabulary better than ordinary school students because of the Content and Language Integrated Learning (CLIL) method and textbooks which they are taught for science and mathematics subjects.

© 2014 The Authors. Published by Elsevier Ltd. Open access under CC BY-NC-ND license.
Selection and peer-review under responsibility of Urmia University, Iran.

Keywords: CLIL; SAMA; Vocabulary development; EFL

1. Introduction

English Language Teaching (ELT) has tremendously changed over the last decade. Language teaching underwent numerous changes and innovation during these years. In the past ten years the crucial factors have been combined to

* Corresponding author. Tel.:00989126238753
E-mail address: neda.zarepour@gmail.com
affect current perspectives on the teaching of English: (A) The decline of methods, (B) A growing emphasis on both bottom-up and top-down skills, (C) The creation of new knowledge about English and, (D) Integrated and contextualized teaching of multiple language skills. TESOL has been and continues to be a dynamic field, in which new venues and perspectives are described (Cook, 2008).

The term ‘Content and Language Integrated Learning’ (CLIL) was adopted in 1994 (Marash, Maljers & Hartiala, 2001) within the European context to describe and further design good practice achieved in different types of school environment where teaching and learning take place in an additional language. CLIL is a dual-focused educational approach in which an additional language is used for the learning and teaching of both content and language. That is, in the teaching and learning process, there is a focus not only on content, but also on language.

Students cannot develop academic knowledge and skills without access to the language in which that knowledge is embedded, discussed, constructed, or evaluated. Nor can they acquire academic language skills in a context devoid of academic content (Marash, Maljers & Hartiala, 2001).

CLIL has a significant contribution to make not only to providing learners of all ages with motivating experiences which are appropriate for knowledge and sharing, but also, fundamentally, to cultivating the cosmopolitan identity advocated by Hargreaves - where learning and using languages for different purposes generates tolerance, curiosity and responsibility as global citizens (Marsh, 2000).

2. Theories behind CLIL

CLIL is based on theories assuming that language is acquired implicitly (Krashen, 1982), in interaction with the social environment and through the scaffolding of facilitative language learning (Vygotsky, 1978). Knowledge is constructed when linked with prior knowledge (Piaget, 1963), and both the academic and social aspects of language can be acquired simultaneously (Cummins, 1981).

Content and language integrated instruction was influenced by Krashen’s theory of second language acquisition (1982). Krashen argued that acquisition takes place when the language skills are developed through use in a way similar to how native speakers learn grammatical rules. Otherwise, when language ability is developed through formal instruction, this conscious knowledge is called learning. Krashen held that only meaning-focused instruction can meet the first condition. These suggestions imply that second language instruction primarily needs to be based on meaningful material, just as natural language is always learned in meaningful situations (De Graaff, Koopman, Anikina & Westhoff, 2007). CLIL is a meaning focused learning method, where language knowledge is not the ultimate aim but rather a vehicle for instruction (Van de Craen & Mondt, 2003).

Vygotsky’s (1978) social constructivist theory emphasizes the importance of constructing mediation. It is assumed that language is the tool which mediates mental functioning. In this regard, learning is facilitated by teacher and peers who help the individual reach the zone of proximal development (ZPD), that is, the area between the person’s actual developmental level and the level of their potential development. Van de Craen and Mondt (2003) assert that a CLIL class is an ideal environment for scaffolding to occur. Teacher and learners interact in their effort to make sense of activities and get messages across.

A cognitive constructivist theory of learning postulates that learning involves the individual construction of knowledge which builds on prior learning (Piaget, 1963). Constructivist theory suggests that meaningful contexts are a prerequisite for learning to occur, providing a rationale for the CLIL approach. In this perspective, learning is more powerful when many strong connections are created. New material which is linked to prior knowledge is likely to be better retained, as knowledge is interconnected.
In CLIL classes, content acts as the driving force for students making connections between new and prior knowledge. The more the number of connections relate to prior knowledge, the greater learning is enhanced. In contrast, facts and language skills taught in isolation need much more practice and rehearsal before they can be internalized.

Another hypothesis providing support for content enriched language learning is the belief that humans develop two different kinds of language proficiency: social and academic languages (Cummins, 1981). Social language is informal and cognitively less demanding as a result of being contextualized. Academic language is more formal and cognitively demanding. CLIL instruction seems to promote both sides of the target language simultaneously. By using content-area texts and tasks as a vehicle for strengthening L2 proficiency, educators may facilitate the development of both academic concepts and target language skills.

The common factor stressed by all the above mentioned theories is that learners require substantial and meaningful contextualized language input. This idea meets the requirements of the European Council (2001) as described in the Common European Framework, that the “most important thing a teacher can do is to provide the richest possible linguistic environment in which learning can take place without formal teaching” (p. 139). This rich linguistic environment may require increased exposure to L2 in a content-oriented, discourse-based language teaching environment such as CLIL. In this framework, students can be exposed to contextualized language learning.

CLIL approach is a fast expanding phenomenon in Europe as in the rest of the world. School systems over Europe have adopted some form of CLIL, following the European recommendation (Van de Craen, Ceuleers & Mondt 2007). The Eurydice survey (2005) reveals that “the initiatives in the field of CLIL have increased in recent years” (p. 55). CLIL type provision is part of mainstream school education in most countries at primary and secondary levels.

Evidence suggests that CLIL can be an effective approach for language teaching at all stages of instruction, from primary school to university level in both second and foreign language teaching settings. Short (1994) and Stoller (2004) report that students involved in such courses finish them with improved language abilities and the retention of content area knowledge.

Collectively, the results of studies suggest that CLIL may have positive outcomes on learners’ L2 development. However, scientific research regarding CLIL implementation is still at an embryonic stage. Gramkow (2001) notes that more investigations into the effects of CLIL teaching are needed, i.e., more dissemination of experiences and results. Similarly, Wesche (1993) stresses the need for carrying out more longitudinal studies related to content-based learning in language in order “to confirm linguistic, academic and attitudinal outcomes of content-based approaches” (p. 74).

CLIL not only promotes linguistic competence, but also has an impact on conceptualization, literally how we think, because of the different ‘thinking horizons’ which result from working in another language. Being able to think about something in different languages can enrich our understanding of concepts, and help broaden our conceptual mapping resources. This allows better association of different concepts and helps the learner go towards a more sophisticated level of learning in general.

CLIL offers us all an opportunity to dismantle such legacies of the past. It provides all youngsters, regardless of social and economic positioning, the opportunity to acquire and learn additional languages in a meaningful way.
Vocabulary development is arguably central to language acquisition and use (Zimmerman 1997), so educators need to use an effective approach in promoting L2 vocabulary development. Searching for the prospect of an effective approach to vocabulary learning, a deeper knowledge about how people learn words needs to be sought.

Evidence suggests that CLIL can be an effective approach for language teaching at all stages of instruction, from primary school to university level in both second and foreign language teaching settings. Collectively, the results of research findings suggest that CLIL may have positive outcomes on learners’ L2 development. However, scientific research regarding CLIL implementation is still at an embryonic stage.

The aim of this study is to investigate the following research question:

Is there any significant relationship between CLIL (Content and Language Integrated Learning) and vocabulary development?

3. Methodology

3.1. Participants

In order to conduct the research, the researchers studied students in two groups, the first group consisted of the ordinary school students, and the other group consisted of SAMA students. The first group (Control Group) included 63 male students of Public school between the ages of 13 and 14 years, all of whom were Iranian, and permanent residents of Iran, and lived in Tehran. The second group (Experimental Group) included 60 male students of SAMA school between the ages of 13 to 14 years, all of whom were Iranian, and permanent residents of Iran, and lived in Tabriz.

Both groups had never been to other countries. Their education level was secondary school. In other words, they had at least 7 years of education.

Regarding the subjects’ level of language knowledge, a homogenizing test, that is, the KET Test (Flyers Level) was administered to both groups. In order to discard the subjects with extreme marks, those subjects whose marks were between minus and plus one standard deviation from the mean of the distribution were selected as research subjects.

3.2. Instrumentation

The materials used in this research and the tasks that learners engaged in are indicated below. Public school students studied the English books which are distributed and published by the Ministry of Education. SAMA school students studied the ordinary English books as Public school students, plus books which were designed specially for those schools. They studied mathematics and science in English through these books.

In order to measure and determine the participants’ level of general English proficiency and ensure their homogeneity, they were required to do the standard KET Test. This test battery consists of 50 items in the forms of multiple choice, writing, and matching items. The required time to complete the test was 40 minutes.

The second test was the vocabulary test which was designed by the researcher. This test was written based on the words that had a high frequency in the books and of course it was first piloted by comparing with different samples with the same features of English knowledge as well as calculating the indexes of item analysis and test reliability.
After passing the procedure of standardization, the test consisting of multiple choice items was administered to the subjects. The allotted time was 35 minutes.

4. Data analysis

Following data collection, the participants’ performance on the standard vocabulary test was measured with respect to vocabulary development. To answer the research question the data were then submitted to statistical analysis which included independent sample t-test to compare the effect of CLIL on vocabulary development.

Table 1. Descriptive statistics of two groups

<table>
<thead>
<tr>
<th>School</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Median</th>
<th>Sum</th>
<th>Range</th>
<th>Kurtosis</th>
<th>Skewness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public</td>
<td>17.41</td>
<td>6.29</td>
<td>5</td>
<td>37</td>
<td>16</td>
<td>1097</td>
<td>32</td>
<td>0.25</td>
<td>0.54</td>
</tr>
<tr>
<td>SAMA</td>
<td>21.80</td>
<td>9.09</td>
<td>6</td>
<td>38</td>
<td>22</td>
<td>1308</td>
<td>32</td>
<td>-1.09</td>
<td>0.25</td>
</tr>
</tbody>
</table>

As the descriptive data in table 1 show, the mean score of the participants in SAMA is 21.80, and the mean score of the participants in public school is 17.41. The difference appears to be statistically significant as table 2 shows it.

Table 2. Independent sample t-test for the average comparison of correct responses between two groups

<table>
<thead>
<tr>
<th>Groups</th>
<th>Public school 63 people</th>
<th>SAMA school 60 people</th>
<th>Independent T test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variable</td>
<td>Correct responses to vocabulary test</td>
<td>17.41</td>
<td>6.28</td>
</tr>
</tbody>
</table>

As shown in Table 2, the resulting t for correct responses to questions is equal to 3.1 which is higher than the t of Students’ critical table (1.96) with the degrees of freedom 121, and is in the meaningful level. So the average difference of correct responses between public and SAMA school is meaningful. It can be concluded that applying CLIL has resulted in better retention of vocabulary among students of SAMA school.

5. Discussion

As it was discussed, the aim of the research was to study the effect of CLIL on vocabulary development by Iranian secondary school EFL learners of SAMA. Public schools use the traditional approach with the books which are distributed by Ministry of Education. Students learn vocabulary by memorizing them as word lists and try to use them in sentences and make an oral or written interaction. On the other hand, SAMA schools use CLIL method with the special books which are written in English for mathematics and science subjects. Students learn these subjects while the medium of instruction is English.

As it was shown, there is a significant difference in the number of correct responses to vocabulary test between SAMA and public school students. So it can be concluded that there is a relationship between CLIL and vocabulary development. Furthermore the relationship is positive, the CLIL improves the vocabulary development among SAMA students.
This study portrays a preliminary effort to empirically examine the efficacy of CLIL on the vocabulary learning and retention of EFL learners. More research is needed related to this study for a thorough understanding of this issue and for confirmation of the findings stated in this research. This is particularly true when considering that there might be additional variables that would add different intrapersonal effects based on learning styles preferences which were not included in this study.

The findings of this study were obtained under certain limitations. Had the researchers been able to alleviate these restrictions, other results could have been obtained. First of all, it should be mentioned that the conducted research was devoted only to vocabulary knowledge of the two groups. The small sample employed in the study imposes limitations on the interpretations. Both space and time triangulations are required to ensure the validity of this study. The current research raises a number of issues requiring further investigation. Variables such as habits, student motivation and personal exposure to other language learning environments were not controlled in the present study. Certainly, more rigorous research in the area of CLIL is required to corroborate and enhance the present findings and to fill in gaps.

References