Using Content and Language Integrated Learning (CLIL) to Develop EFL Reading Comprehension Skills, Vocabulary Skills and Retention among College Students

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ABSTRACT*:*

The purpose of this study was to examine the effectiveness of content and language integrated learning (CLIL) in developing EFL reading comprehension skills, vocabulary skills and retention among college students. Participants were 10 students majoring in English language, Alghat college of Sciences and Humanities, Majmaah University, KSA. To collect data, the researchers prepared and used two tools; EFL reading comprehension skills pre-posttest and EFL vocabulary pre-posttest which was used as delayed test too. Having administered the pre-post tests and the delayed test, data were analyzed quantatively. The findings revealed that the use of the CLIL in developing EFL reading and vocabulary skills and retention among college students was effective.

> *Index terms: CLIL, Reading comprehension, Vocabulary skills, Retention*

INTRODUCTION

Learning English as a foreign language depends on learning the four language skills and also the learning of vocabulary in context. In addition, students who aim to learn subject content in different majors need to be competent in language skills in order

to be able to understand what is to be read. Thus, learning both language and subject content is relatively connected together. We can say they must be integrated for better results. In literature, the term CLIL refers to the process of integrating both language and content and in some countries, teachers are required to use CLIL in their classrooms. It is beneficial that students learn the language before they study the subjects in English, but in most cases, students face a situation where they must study the subject matter in English using the language skills at the same time.

Actually, learning a foreign language out of context is useless and demotivated for learners. It is an old-fashioned way of teaching to use topic-based textbooks with topics that are not related to students' interests, needs, and their everyday life. Therefore, new trends of EFL emerged to attract students' attention, interests and cater for their needs. ESP (English for Special Purposes), CBI (Content Based Instruction), programs or methodologies and others were designed to satisfy the needs of businessmen, engineers, flight crew members, lawyers, sale managers, tour guides ……….etc. This developed the need for learning the language that is related to a real context and satisfies the learners' needs and interests.

Definition and rationale

CLIL integrates both Content Learning and Language Learning. It helps in bringing innovative practices into the curriculum. Through using CLIL, students learn one or more of their school subjects in a targeted language, often English, but sometimes in another second language. Students are not expected to be proficient in the new language before they begin studying. When they learn the language topics that they are interested in, they learn the language at the same time. Learning such topics and subject matters stimulates learning the targeted language. They learn the language they need for studying at the same time as they learn the subject. Both English language teachers and teachers of subject can use the CLIL approach in their teaching. Both methods, whether using English to develop

subject learning or using content to develop English language skills, will result in the simultaneous learning of content and English.

As mentioned in Wikipedia, the free encyclopedia, Content and language integrated learning (CLIL) is a term created in 1994 by David Marsh and Anne Maljers as a methodology similar to but distinct from language immersion and content-based instruction. It is an approach for learning content through an additional language (foreign or second), thus teaching both the subject and the language. The using language is not necessarily to be English. Most important was to create an "umbrella term" which employs different forms of using language as the medium of instruction, (Dalton-Puffer, 2011).

Using CLIL as a tool in subject content learning includes activities, which give relevant roles of both language and subject (Marsh, 2002:58). They are developed and integrated slowly but steadily. Meyer (2010, p.12) also calls it ''an approach that is mutually beneficial for both content and language subjects''.

A study agreed with Meyer's (2010) view was conducted three years later. It was the study of Drew (2013). In his study, Drew (2013) traced the benefits of using this project with history students. The project focused on meaning as opposed to form. Results showed that CLIL project helped learners develop their language skills in a meaningful context. The experience was generally motivating and educational for the pupils and rewarding, but demanding, for the teacher.

Lyster (2007) agrees with Coyle et al. (2010) that CLIL provides learners with a richer, more naturalistic environment that are essential for language learning, and proficiency. The process of integration between language and content achieves learning that occurs beyond each element in separation.

Chostelidoua and Grivab (2014) presented a paper to provide insights into experimental research on a CLIL project for reading skills development in the context of Greek tertiary education. The researchers designed involved conducting

interviews and administered a CLIL test with a focus on reading skills and the content of the target discipline. The data provided supported for the efficacy of implementing CLIL in higher education as the experimental group outperformed the control group in terms of both reading skills and content knowledge and showed a considerably higher positive attitude towards the CLIL course than their peers in the control group.

Aims of CLIL

In order to overcome problems students face while learning a subject content in English, teachers should be aware of using effective strategies that help achieve their goal and make input comprehensible. CLIL aims at facilitating the difficulties learners may face in getting the meaning from content, because CLIL is task- based, add to being an accessible meaningful input. Scott and Shane (2014), and Bentley (2010; 6) summarized the overall goals of CLIL should include:

1. Providing opportunities to study content through different perspective.
2. Accessing subject-specific target language terminology.
3. Improving overall target language competence and the learners' performance in both curricular subjects and the target language.
4. Developing oral communication skills.
5. Diversifying methods and forms of classroom practice.
6. Increasing learners' motivation through increasing learners' confidence in the target language.

In an attempt to uncover business students' problems with EFL skills, Pengnate (2013) implemented CLIL approach that is applied on the students themselves. Results revealed problems with the four skills especially listening. He used a project-based activity applied by CLIL which demonstrated a high level of students' satisfaction, as the students were able to gain various types of knowledge and skills.

Features of CLIL

Ioannou Georgiou, S. and Pavlou, P. (2011) say that CLIL has three main characteristics:

- The integration of language and content subjects. Thus, language is learned while content is facilitated.
- CLIL can be used and applied at any educational level from primary to professional.
- Facilitating achievement in academic, cultural and social skills results in   facilitating achievements in both content and language, (Mehisto, et al. 2008:11-12).

According to Mehisto, et al. (2008, p.29), five important core features of CLIL can be listed as follows: multiple focuses, safe and enriching learning environment, authenticity, active learning and scaffolding. These core features suggest that the teacher just directs students and the main load in learning is put on them. They are involved in active learning through learner-centered approach and teachers act as facilitators.

It is important for learners to succeed in learning, especially a foreign language if they feel confidence and trust their abilities of understanding and achieving. Thus learning through CLIL support students. Through integrating the targeted language with the subject which is considered a comprehensible content, students feel secure. In addition, learning through CLIL involves learners in various learning tasks, while the teacher guides their performance and facilitates learning.

The benefits of using CLIL in the classroom

According to Article 5 of Volume 1 (4) (Apsel, 2012) of the International CLIL Research Journal 'Coping with CLIL: Dropouts from CLIL Streams in Germany', CLIL as a method has the following benefits:

- Motivating students to learn
- Dealing with content from a different perspective (Wolff, 2003)
- Developing accurate academic concepts (Lamsfuss-Schenk, 2002).

- Employing tasks related to intercultural learning (Christ, 2000).

In an interview with Marsh (2012), he supported that the main advantages of CLIL include "positive attitude changes in learners towards learning a language, and towards themselves as language learners". Moreover, CLIL provides many benefits to students in the context of language learning intensification:

1. Language is taught through diverse perspectives; different subjects are integrated and complement each other.
2. CLIL enlarges students' motivation in both the target language and a professional subject.
3. CLIL improves language skills and enlarges linguistic competence, since it allows students more contact with the target language.
4. CLIL helps developing intercultural communication skills and multilingual attitudes, which is vital in the context of the global job market.
5. Teachers are encouraged to change teaching practice and employ a variety of advanced instructional tools.

In their study on CLIL compatibility with the modern Greek educational system Georgopoulou-Theodosiou, and Maria Rangous (2015), concluded that CLIL emerges as a practical and sustainable solution with additional social, psychological and economic benefits. Moreover, it is a solution compatible with the European policy and its goals. For these reasons, the introduction of the CLIL method merits serious consideration in the context of both (foreign) language teaching reform and the country's more general planning and development policies.

Coyle (2006) illustrated CLIL potential as follows:

1. Raising linguistic competence and confidence. for example on the topic of environment, where students use the language to learn as well as learn to use the language in a

variety of situations, can lead to an increase in linguistic competence.

2. Developing a wider range of skills involving problem solving, risk-taking, confidence building, and communication skills, extending vocabulary, self-expression and spontaneous talk .

3. Motivating teachers and learners.

Theoretical framework: A CLIL topic or project planning framework: (4Cs curriculum)

(Coyle et al 2010) suggested a model for CLIL. The model consisted of four integrated processes; content, communication, cognition and culture. These are often expressed as the '4Cs'.
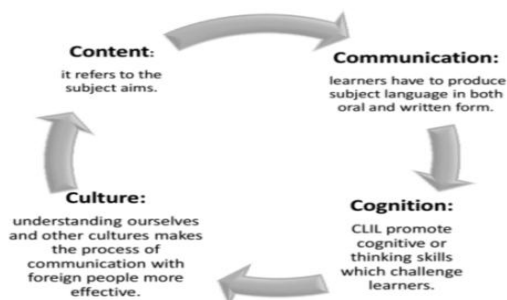

Figure (1). CLIL 4 Cs, from Lesca (2012)

- **Content** matter is not only about acquiring knowledge and skills, it is about the learners creating their own knowledge and understanding and developing skills (personalized learning);

- **Cognition**: To enable the learners to create their own interpretation of content, it must be analyzed for its linguistic demands; thinking processes (cognition) need to be analyzed in terms of their linguistic demands;

- Language needs to be learned through communication, reconstructing the content and its related cognitive processes. This language needs to be transparent and accessible; interaction in the learning context is fundamental to learning. This has implications when the

learning context operates through the medium of a foreign language;

- The relationship between culture and languages is complex.

In practice, the CLIL approach to teaching takes many forms, from teaching of the whole curriculum in the new language to adapting language courses to include a focus on subject content. Chostelidoua and Griva, (2014) commented that CLIL methodology includes: a) its multiple focus (on language learning and cognition); b) the construction of safe and enriching learning environments; c) the use of authentic materials and interactions; d) the promotion of active learning; e) the use of macro- and micro- scaffolding in students' learning so as to enhance their autonomy; and f) the promotion of co-operation among students and teachers (Hammond, 2001).

Implicit acquisition of language

Although the focus is on understanding the content, The CLIL teacher can aid the teaching of language by:

1. Highlighting vocabulary and chunks of vocabulary used in CLIL subjects.
2. Modeling sentences to help learners see examples of language they need to produce.
3. Allowing learners to be more relaxed about using the target language because the focus is on the meaning of curricular concepts.
4. Correcting learners immediately after they make mistakes.
5. Analyzing errors to identify difficulties learners have when producing English. (Bentley, 2001;14)

Theoretical groundings of CLIL

Many theories and hypotheses provided rationale for CLIL. Krashen's (1982) theory of second language learning argues that language is acquired implicitly when interaction happens with social environment. Krashen argued that acquisition depends on

development of language skills in the same way native speakers learn grammatical rules naturally. In CLIL, language is a vehicle for instruction rather than an aim. Another hypothesis is that of (Piaget, 1963). He argues that prior knowledge should be linked with new learning for constructing knowledge. In this vein, he points out to the positive effect of language on the learning of the content and vice versa. Moreover, Vygotsky's (1978) social constructivist theory 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.   Constructivist theory suggests that meaningful contexts are prerequisite for learning to occur, providing a rationale for the CLIL approach. Van de Craen and Mondt (2003) & Vázquez and Ellison (2013) 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. 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.

Another hypothesis providing support for CLIL is the belief that humans develop two different kinds of language proficiency: social and academic language.   CLIL instruction seems to promote both sides of the target language. By using content-area texts and tasks as a vehicle for strengthening L2 proficiency, educators may enable the development of both academic concepts and target language skills.

Different roles of the teacher

Marsh et al., (2010: 5) summarized new roles of the teacher using CLIL. He focused on the prior preparation that helps promote multiple types of expertise in teaching both language and subject in "best practice in teaching and learning; in the integration of the previous three; and, in the integration of CLIL within an educational institution."

A problem that may face teachers in using the subject matter is that they lack the knowledge of how to use different

methodology for perfect results. So, pedagogical qualification of the teacher is of great importance. CLIL has received a considerable amount of interest manipulating its impact on developing aspects of language and content, Coyle (2005) and Costa, and D'Angelo, (2011).

Vocabulary

According to Shejbalová (2006), learning vocabulary's main aim is to develop students' ability to recall the word and to recognize it in its spoken and written forms. In deeper aspects, knowing a word involves the abilities to know its Meaning, Usage, Word formation and Grammar, (Harmer 1993). It is a challenging task for students when the teacher asks them to recognize certain vocabulary such as words, collocations, idioms, etc., because of the variety of vocabulary students learn.

Bromley (2002) guided us on how to present vocabulary instruction effectively. He focused on showing positive attitude towards language and assessing importance of words before presenting them to students. He also recommended that students' metacognition should be activated and that the different aspects of learning the words should be followed. These aspects include presenting different meanings of the words, teaching word structure and different meanings in contexts, modeling and interacting using the new words learnt.

Vocabulary retention

Mohammed (2009, p.16) asserts on, not only the learning of vocabulary, but also on the retention of it. He defined vocabulary retention as "the ability to keep the acquired vocabulary and retrieve it after a period of time to use it in different language contexts." He focused on retrieving vocabulary from the long term memory rather than the short term memory as an effective strategy of learning and retaining words. In order to be able to retrieve new words from long term memory, students should have passed by main stages such as noticing, intake, and storage in the short term memory first, (Alzaharani; 2011). "Remembering new words is often not an easy job for learners.

That is why teachers try to utilize various techniques to present new words to them", (Baleghizadeh and Yousefpoori-Naeim, 2011). They added that not only do learners need to know the meaning of a word, but they should also know how and when to use it. All this makes vocabulary instruction a demanding task. Marzona (2004) assures the same view of the importance of storing new words in the long term memory in order to be part of students' academic background knowledge.

Vocabulary retention Linguists have contrasting views on how many times learners need to be exposed to a lexical item before they can commit it to memory. According to Wei (2007), learning vocabulary should be combined with retrieving the words learned. This is achieved when vocabulary is integrated with context in a reading comprehension context.

A considerable number of studies were conducted to examine different variables with vocabulary retention such as Zeller (2011), Al-Zahrani's (2011), Folse's (2006) and Jenpattarakul's (2012).

Different techniques have been utilized throughout the history of TEFL to help learners remember words more efficiently, such as extensive reading (Chun et al., 2012), Web-Based Language Learning (WBLL) and the Paper-based (conventional) approaches (Gorjian, 2012), topic familiarity and passage sight Vocabulary (Pulido, 2007), vocabulary notebooks (D'Onoferio, 2009) and key word- based instruction (Alzahrani, 2011).

Al-Hadlaq (2003) investigated the effectiveness of vocabulary learning tasks on Saudi learners' retention of previously learned vocabulary items. These tasks included writing original sentences, writing a composition, filling in-the-blank of single sentences and filling-in-the blank of a text. The researcher observed that the most helpful task for vocabulary retention was using the learned words in composing paragraphs.

Pulido's (2007) research examined the impact of topic familiarity and passage sight vocabulary on lexical inferencing

and retention. Students read stories containing nonsense words. They guessed meanings of target words and rated degree of difficulty in guessing. After reading all stories, all participants completed an inference verification task to confirm or correct guesses, and to encourage deeper processing of target words. This was followed by two measures of retention: (a) translation production, and (b) translation recognition. Analyses reveal (a) robust effects of topic familiarity and passage sight vocabulary on lexical inferencing, (b) a significant interaction between topic familiarity and passage sight vocabulary on difficulty in lexical inferencing, and (c) robust effects of passage sight vocabulary on lexical retention and a significant effect of topic familiarity on lexical retention–translation recognition measure. The discussion concerns the significance of findings for lexical inferencing, processing, and retention through strategic reading tasks.

Nemati (2009) examined the effect of using memory strategies in teaching on students' vocabulary retention. The results indicated that the students of experimental group outperformed both in short-term and long-term scores and portrayed the superiority of memory strategies in short-term and long-term retention.

Al-Zahrani's (2011) study examined the effectiveness of keyword based instruction in enhancing English vocabulary achievement and retention of intermediate stage pupils with different working memory capacities. Results revealed that keyword method had a positive effect on the learners' vocabulary achievement and retention.

Reading comprehension

"Reading in a foreign or second language is often a laborious process, often caused by underdeveloped word recognition skills, among other things, of second and foreign language readers", (Gorsuch & Taguchi; 2008). Reading comprehension is the process of making meaning from text. Reading is an activity with a purpose. The purposes for reading guide the readers' selection of texts. The purpose for reading

also determines the appropriate strategies to reading comprehension approach, (NCLRC, 2004).

Moreover, comprehension is an active and complex process that involves interaction between the text and the reader, (Kucer, 2001). Developed and mastered, effective reading skills give people the opportunity to learn new information about the world, people, events and places, enrich vocabulary and improve their writing skills. Manson et al. (2006) stated that reading is a complex process that requires students to be engaged, they assure that good reading relies on a familiarity with text structure, background knowledge, motivation for reading, and adequate vocabulary. Woolley (2011) agrees with this view focussing on the importance of learning words in context rather than in isolation. The importance of reading comprehension lies in many reasons:

- The large amounts of text students must read in content-area classes.
- Textbook-based instruction assumes that students can read and derive meaning from the text.
- Text comprehension means that the reader is able to understand how the reading material is structured, that is, the way ideas are interrelated and the subordination of some ideas to others to convey meaning to readers.
- Text may be organized by a narrative (story) or expository (informational) structure.

Thus, developing reading comprehension and vocabulary of different passages whether in history, geography, business or any other field of study requires integrating both language skills and the content or context of language in which we use these words. This leads to both understanding the content area of texts and the vocabulary used in texts. When learners are familiar with the content, they are ready to receive the meaning easily. Even if they encounter some new words - while the content is familiar to them- they can use their strategies, such as guessing to understand the meaning.

Problem of the study

One main problem that faces both teachers and students studying subject content in English is the inability of students to use English as a means of communication or a means of comprehending the material presented in English. This is due to students' lack of English language skills, especially vocabulary and reading comprehension. In some colleges, English is taught separately in the form of grammar, reading, listening and speaking. Then when they finish these courses, they forget about applying what has been learned in their courses. Researchers and teachers find it more beneficial when both language skills and content are integrated together to achieve the highest achievement.

Aim of the study

The present study aims at developing reading comprehension skills, and vocabulary skills and retention of students enrolled in the eighth level at the College of Sciences and Humanities in Alghatt, Majmaah University, KSA, through using (CLIL) content and language integrated learning.

Questions of the study:

The study attempted to find answers to the following main question:

"What is the effectiveness of using CLIL in developing reading comprehension skills, vocabulary skills and retention among EFL college students?"

From this question, the following sub-questions emerged:

1. How far is the CLIL effective in developing EFL reading comprehension skills among college students?
2. How far is the CLIL effective in developing EFL vocabulary skills among college students?
3. How far is the CLIL effective in developing EFL vocabulary retention among college students?

Hypotheses of the study:

1. There is a statistical significant difference between the mean scores of the pretest and posttest in the reading comprehension skills test in favor of the posttest.
2. There is a statistical significant difference between the mean scores of the pretest and posttest in the vocabulary skills test in favor of the posttest
3. There is not any statistical significant difference between the mean scores of the vocabulary posttest and the delayed vocabulary skills test.

Method

Participants

Participants of the study consisted of a group of 10 students enrolled in the eighth level at the College of Sciences and Humanities in Alghatt, Majmaah University, KSA. This sample represented a single selected group under experimentation as a control and experimental. It was submitted to pre reading comprehension test and pre vocabulary test. Then it received the experimental treatment through teaching a module of (CLIL) content and language integrated learning. Post reading comprehension test and post vocabulary test were delivered to the participants to measure the effectiveness of the suggested program in developing EFL reading comprehension skills and vocabulary skills among college students. A delayed vocabulary skills test was delivered to measure the effectiveness of the suggested program in developing EFL vocabulary retention.

Instruments

EFL Pre-post reading comprehension skills test (RCST)

Test description:

The (RCST) contains a reading comprehension passage, followed by six main questions. They cover three levels of reading comprehension skills: literal, inferential and critical level. The literal sub skills include, identifying the main idea,

determining the meaning of words by context, categorizing, summarizing, and using context clues to supply meaning. The inferential sub skills include inferring the main idea, inferring cause-and-effect relationships, distinguishing between facts and opinions, and drawing logical inferences. The critical sub skills include recognizing the author's purpose and opinion, expressing personal's point of view, distinguishing between facts and opinions, and recognizing valid arguments. Total score was out of fifty marks. Time of the exam was forty-five minutes.

Validity:

The RCST test was given to a number of specialized jury members. After giving their comments and modifications, the test was administered and applied.

Reliability:

Test reliability was measured and analyzed using SPSS. Correlation coefficient was .991 which means the test has high reliability.

EFL Pre-post Vocabulary skills test (VST)

Test description

The VST consists of three main parts: word recognition, word meaning and word usage. Word recognition sub skills include; using antonyms, using synonyms, using word part, context clues to determine meaning of words, identifying root words and affixes. Word meaning sub skills include, identifying the meanings of words, identifying words in different situations, and identifying collocations. Word usage sub skills include, finding the omitted words in a context, using words in different situations being able to form a verb according to its tense, and using expressions in context. Total score was out of fifty marks. Time of the exam was forty-five minutes.

Validity:

The test was given to a group of specialized jury members. They agreed on it.

Reliability

The test reliability was measured and analyzed using SPSS. Correlation coefficient was .982 which means the test has high reliability

EFL Vocabulary delayed test

The same VST was used as a delayed test.

Material of the study:

The researchers developed a module that consisted of 10 lessons of different contents. Contents ranged from science to history, biology, literature, computer science, geography, communication, politics, environment and business. Lesson plan for CLIL consisted of stages specifically designed to perform the following activities: checking previous knowledge; practicing content language;   expanding vocabulary; consolidating knowledge; summarizing skills; applying the new knowledge; checking and correcting errors. Lesson planning depended on the 4Cs-Framework (Coyle, 2006), which offers a sound theoretical and methodological foundation for planning CLIL lessons. The 4 Cs are content, cognition, communication and culture.

Results and discussion

The overall purpose of the present study was to examine the effectiveness of using CLIL in developing reading comprehension skills and vocabulary and retention among college students.

Findings of hypothesis one:

The first hypothesis states that, ''There is a statistical significant difference between the mean scores of the pretest and posttest in the reading comprehension skills test in favor of the posttest''.

To test this hypothesis, t-test analysis was conducted to investigate the effect of the CLIL on reading comprehension skills. Results are shown in table (1).

Table (1) T-value for paired sample t-test in the reading comprehension skills

Skill	Test	N	Mean	SD	T-value	D-F	sig
Reading comprehension	Pretest	10	20.5	5.7	20.3	9	.000
	Posttest		47.7	1.9			

Table (1) shows that the mean scores of the samples in the posttest (47.7) is higher than pretest scores (20.5). T-value is (20.299) which is significant at .01 level .this means that there is a statistical significant difference between the mean scores of the pretest and posttest in the reading comprehension skills test in favor of the posttest". Thus, the first hypothesis is accepted.

These results are consistent with those of Chostelidoua and Eleni (2014), who proved positive effects of the CLIL on students' reading comprehension skills.

Figure (2) shows that scores of the posttest in reading comprehension skills outweigh those of the pretest. This result may account for the effect of the CLIL module, which integrated both language and content.
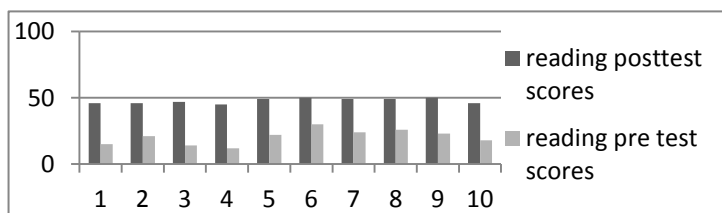

Figure (2). Mean scores between the pre and post-assessment of reading comprehension skills

Findings of hypothesis two:

The second hypothesis states that, "There is a statistical difference between the mean scores of the pre and posttest in the vocabulary skills test in favor of the posttest".

To test this hypothesis, paired sample t-test analysis was conducted to investigate the effect of the CLIL on EFLvocabulary skills. Results are shown in table (2).

Table (2) T-value for paired sample t-test in the vocabulary skills

Skill	Test	N	Mean	SD	T-value	DF	sig
Vocabulary skills	Pretest	10	21	6.5	17.27	9	.000
	posttest		48	1.6			

Table 2 shows that the mean scores of the samples in the post test (48) is higher than pretest scores (21). T-value is (17.27) which is significant at .01 level .This means that there is a statistical significant difference between the mean scores of the pretest and posttest in the reading vocabulary skills test in favor of the posttest". Thus, the second hypothesis is accepted.

These results are consistent with those of Linares and Amanda (2013), who proved positive effects of the CLIL on students' vocabulary skills.

Figure (3) shows that the scores of vocabulary posttest outweigh the scores of the pretest. This result may be due to the impact of the CLIL module in developing vocabulary skills.
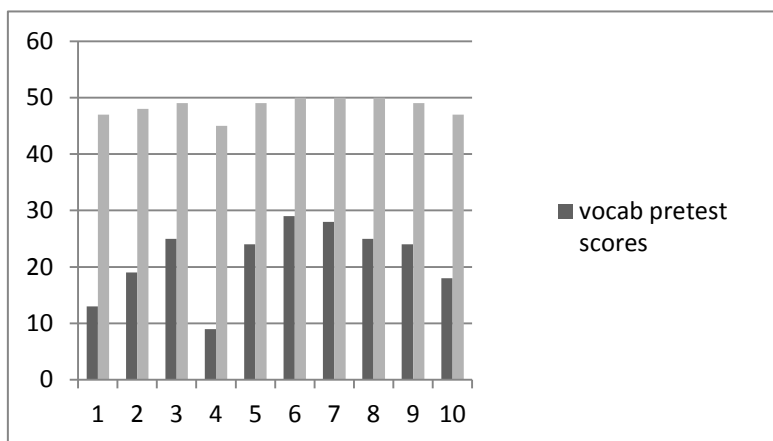

Figure (3). Mean scores between the pre and post-assessment of vocabulary skills

Paired sample t-test showed that the use of CLIL exhibited a significant increase in the reading and vocabulary skills.

Findings of Hypothesis three:

The third hypothesis states that, "There is no statistical significant difference between the mean scores of the vocabulary posttest and the delayed vocabulary skills test ". The following table shows the mean scores between the posttest (immediate) and delayed test in vocabulary retention.

These results are consistent with those of Cheng & Good (2009), though they provided two delayed vocabulary tests.

Table (3) t-value for paired sample t-test in vocabulary retention

Skill	Test	N	Mean	SD	T-value	D-F	sig
Vocabulary skills	Posttest		48.40	1.646	1.627	9	.138
	Delayed test	10	48.15	1.6.16			

Table (3) shows that the mean scores of the posttest scores (48.40) is slightly higher than that of the delayed test scores (48.15). T-value is (1.627) which is not significant. This means that there is no significant difference between the posttest mean scores and the delayed test mean scores in the overall vocabulary test in the delayed test. Thus the null hypothesis is accepted.

The following figure shows a qualitative description for immediate test and delayed test scores for study sample.
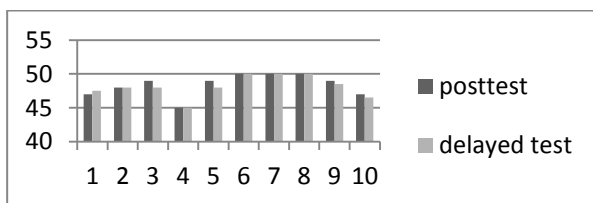

Figure (4). Mean scores between the posttest and delayed vocabulary skills test

Figure (4) indicates that the mean score of the post and delayed tests does not differ very much and there is no significant difference between the scores of the two tests. This result suggests that the study sample subjects performed the same in the immediate and delayed post-tests.

Discussion:

The present study aimed at examining the effectiveness of using content and language integrated learning (CLIL) in developing EFL reading comprehension skills, vocabulary skills and retention among college students. A CLIL module was prepared by the researchers and was administered to the treatment group. Data was collected using pre post reading

comprehension test and pre post vocabulary test which was used as a delayed test too. Results showed that there are significant differences between the pre posttests in both vocabulary and reading comprehension skills in favor of the posttests. Also, there was no significant difference between scores of the vocabulary posttest and the delayed test. This means that students retained vocabulary easily as a result of integrating content and language.

During treatment, the researchers have noticed remarkable improvement in students' reading comprehension skills and vocabulary skills. However, learners encountered some difficulties in conveying and constructing some content related meanings at the beginning of the implementation. They also showed some problems in understanding, pronouncing and recognizing some specified terminology, especially scientific and technological terms. By the end of the treatment, learners acquired confidence in the target language. Content of the program attracted their attention. They liked content subjects such as science, history or geography. Moreover, they discussed other topics and liked to know their specific terms in English, especially topics about fashion, and makeup and hairstyles, as they are female students. They were engaged and motivated to use the language as a means to learn the content. The researchers have also noticed students' interest and eagerness to use certain words and terminology even outside class. They began to use these words in their speeches, chats, and messages. Hence, it was easy for them to remember and retain such vocabulary.

Comparing students' scores of the pre post vocabulary skills test and theirs in the delayed vocabulary skills test; it was found that students proved high improvement in their vocabulary skills in the posttest than theirs in the pretest due to the effectiveness of the suggested program in developing EFL vocabulary skills. Whereas students' marks did not differ greatly in the delayed vocabulary skills test. This showed that they still remember and can retain vocabulary studied in CLIL, which in

turn showed the effectiveness of the suggested program in developing EFL vocabulary retention.

Improvement in students' reading comprehension skills and vocabulary skills may due, not only to integrating content and language, but also to the careful selection of content that is related to students attentions and preferences. The researchers have noticed that there are some topics that attract students attentions more than other ones. Their performance and desire to learn increase when they learn and read certain topics, such as topics about fitness and following diet, healthy food, travelling and adventure, etc…. Therefore, it is important for program designers to select topics carefully taking into consideration the learners' age, level, sex, culture, society, interests and other factors. As a result, the posttest scores outperformed the pretest scores in terms of both reading skills and vocabulary skills and retention. Integrating both content to language helped learners get knowledge about language and at the same time perceive the use of language learned in contexts of different natures. This was apparent while implementation and increased by students' motivation and engagement.

As discussed by (Chostelidoua and Grivab, 2014), implementation of CLIL took account of the students' different learning styles and levels of competence by encouraging diversified methods of teaching and learning. Linguistic level and content complexity were considered to increase their autonomy in a context of active learning, (Wolff, 2003). Thus, in dealing with CLIL teacher's role should change from source of knowledge to a monitor and facilitators of knowledge. Discovering language through contents helped very much in engaging students in learning the content and acquiring the linguistic skills specially vocabulary.

CLIL, based on the integration of developing content and language and communication and cultural awareness, proved to be one of the contemporary learning techniques that have a great effect on developing both language and content among students, (Marsh, 2009 and Pengnate, 2013). In addition, when the input,

i.e. the content is related to students' interests, and satisfies their needs, it attracts their attentions and increases the desire to learn. Therefore, learning the language became comprehensible and enjoyable as well.

It is the teacher's role to determine his/her students' needs and interests. Ever if the curriculum does not cater for his /her students' needs. He/she can enrich their minds and thinking with topics that suit their ages, sex and academic levels. He/she can discuss different topics and ideas, such as the current events surrounding them, the environmental phenomena, which may occur around them, football matches, fashions or any other topics that satisfy their interests. Teaching and engaging students in such topics that attract their attention and interest improve language skills and enhance using and remembering EFL vocabulary. This in turn, gives learners motivation and the desire to learn, because they comprehend the material presented in English.

Results of the present study were consistent with previous studies' that supported the use of CLIL in developing language skills such as Chostelidoua and Grivab (2014); Pengnate (2013); Jenpattarakul (2012); Papaja, (2012); Jawhar (2012) ; Xanthou (2011) ;(Zeller (2011); Al-Zahrani (2011); Soesbergen (2011) ; Pirskanen (2009) and Folse's (2006).

Finally, findings seem to support the positive impact of using CLIL on developing reading comprehension skills and vocabulary skills, in addition to vocabulary retention among college students.

Conclusion

Based on the results of the present study, the CLIL can be used to promote content and linguistic competence among EFL learners as well as ESP learners. Effective results depend on variation in the roles of the teacher as well as the use of different methodologies that match different learning styles and

individual differences. Teachers should have the initiative and interest in the topic. They should also be qualified in teaching the content supplied to learners.

Recommendations

Based on the attained results, the following recommendations are suggested:

1. Instructors of content for ESP should be competent in English language skills that is to be able to develop students' EFL skills as well as content.
2. CLIL should be applied among EFL learners as well as ESP learners.
3. Content should be used to develop EFL skills and vice versa.
4. CLIL teachers should pay attention to vary their roles in order to attain the desired results.
5. EFL curricula designers have to select the content that suits the learners and that is related to what they study in other subject matters.

Suggestions for further research

The following ideas are suggested for further research:

1. Replicating the present study with different sample of learners.
2. Examining the effect of CLIL on developing English language skills among ESP students.
3. Using CLIL to develop EFL writing skills.
4. Using CLIL for teaching technical and vocational learning.
5. Using CLIL to design ongoing programs for adult learners.

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