ENHANCING RECEPTIVE SKILLS IN FOREIGN LANGUAGE COURSES THROUGH CBLI APPLICATIONS WITH SPECIFIC REFERENCE TO ENGINEERING*

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Abstract

This study aims to find out whether content-based language instruction improves students' foreign language receptive skills at the engineering faculty. The study was conducted with 50 students from the department of Mechanical Engineering during the fall term of 2012/2013 academic year. Participants consisted of two groups, one target group and one control group. Pretests were applied to both groups at the beginning of the term. Content-based language instruction was implemented to the target group while traditional foreign language courses were implemented to the control group. At the end of the term both groups were given the posttests. The data obtained from the study were evaluated by using SPSS (Statistical Package for Social Sciences) for Windows 20.0 program. In the comparison of quantitative data of the study, descriptive statistical methods (Mean, Standard Deviation) as well as Independent Samples Test were used. The results point out that the use of content-based language instruction significantly develops students' receptive skills in the foreign language courses at the engineering faculty.

Keywords: Content-based Language Instruction, Foreign Language, Receptive Skills, Faculty of Engineering.

1. INTRODUCTION

Foreign language courses (mostly English Language) are compulsory parts of the curriculum at the first year of university education in our country. Students who enroll a university program have to take foreign language courses in the first year of their university education. After completing the requirements of the foreign language courses in the first year, students are supposed to take language courses, so called Occupational English (ESP), related to their own subject area. Within this framework, foreign language courses are conducted by language instructors and Occupational English courses are conducted by subject area specialists. Traditional language teaching methods are generally used by language instructors and language is used just for the sake of language teaching.

The situation naturally is the same for the students in engineering faculties, especially of the state universities, except in some universities in which the whole curriculum is given in a foreign language. However, it is not wise to claim that the traditional language teaching

methods can comply with the needs of the students and the ever-changing demands of the new technological and social developments. In order to cope with these requirements, it is really important to make the teaching-learning process fruitful and meaningful. Therefore, this study is designed and conducted in order to examine and to increase the effectiveness of foreign language courses in relation to students' foreign language receptive skills by implementing content-based instruction which is supposed to provide prolific and far-reaching context for the students of the engineering faculties.

In its most general term, the content-based language instruction is an approach which incorporates content and language learning. That is, content-based instruction has widely been defined as a language teaching approach by many scientists. According to Kranke (1987) it is 'the teaching of content or information in the target language without the effort of teaching language itself.' Similarly Brinton, Snow and Wesche (1989) refer to it as "an approach to integrate content and language learning" while Richards and Rodgers (2001:204) enlarge the definition by indicating that language teaching environment is organized around the content or information, rather than around a linguistic or other types of syllabuses.

It is repeatedly underlined by many scholars that cognitive and educational factors of language education promote the development of content-based instruction approach. Researches dealing with optimal experiences, depth of processing, learner interests, cognitive process of learning, discourse comprehension processing, expertise, motivation, attribution are conducted and highly supported by classroom training studies which are incorporated within CBI such as on cooperative learning, meta-cognitive and learning strategy instruction, and extensive reading (Stoller, 2008).As a result, many models of CBI have been developed over the years according to the changing and developing language teaching and learning environments, among which theme-based model, sheltered model, adjunct model, team teach approach, and skills-based approach are the most popular ones sharing some common features such as using authentic tasks and materials.

Within this coverage, this study focuses on the receptive skills, reading and listening, of the students by leaving the perceptive skills as the main theme of another study. Reading is often referred as the most important skill in foreign language teaching. Donough et al (2003:89) argue that 'reading is the most important foreign language skill, particularly in cases where students have to read English material for their own specialist subject'. In the same way, Narayanaswamy (1972:301) says that 'some define it as a process of transfer from auditory signs to their equivalent visual signs and of establishing the necessary recognition habits'. So it is not unwise to take the improvement of reading skills as the beginning step of the study. The aim of the improvement of the listening skills, aptly, is to be able to comprehend the speech at normal speed in everyday situations. Training students to understand and respond relatively to the language what they hear in a normal way should be considered as the objective of the language skill. The components of listening skill can be sequenced as distinguishing all the sounds, intonation patterns, voice qualities, perception of an entire message produced by the speaker, holding the message in the auditory memory, comprehension of the message and the ability to use the message are sequenced as components of listening skill (Demirel,2007:53).Hence, this study takes the receptive skills, reading and listening, as the first stepping stones in investigating the contribution of CBLI to the improvement of foreign language skills of the students of engineering faculties.

Thus, the study centers on two basic questions; firstly, can the implementation of CBLI in foreign language courses improve students' foreign language reading skills at engineering faculty? Secondly, can the implementation of CBLI in foreign language courses improve students' foreign language listening skills at engineering faculty?

It is assumed throughout the study that the participants the engineering faculty answer pre-tests, post-tests sincerely, and that the participants' learning and intelligence levels are almost equal as put by their university entrance exam (ÖSS) results. The CBLI implementation

part of this study is just limited to the students of the department of Mechanical Engineering of Engineering Faculty, Tunceli University. The implementation period is 12 weeks (3 months) during the fall term of 2012-2013 academic year. The courses are 3 hours a week and each lesson lasts 45 minutes.

It should also be noted as a limitation of the study here that foreign language lecturers who design CBI language courses need more time to prepare the courses than the traditional language courses. Because, the lecturers may not know contexts and the language used in that contexts. This necessitates extra time for searching and lecturer may be discouraged by thinking it as time consuming.

2. REVIEW OF LITERATURE

The results of recent empirical studies documented from different parts of the world at different times indicate that content-based instruction not only provides a meaningful language learning classroom but it also helps to improve students' foreign language skills. The growing interest in CBI has, thus, naturally led to many studies globally. Conferences and courses have been held in different parts of the world in order to reveal the challenges, practices, and innovative ways in language teaching settings. As Stoller (2004) also aptly observes, many empirical studies documented over the years to support the outcomes of the CBI.

Tsai (2010) investigates the effect of CBLI on the improvement of EFL students' reading comprehension through the design and implementation of a content-based literature curriculum. T-tests, ANOVA, and semi-structured interview techniques were used in the study to examine the students' attitudes and effect of CBLI on reading performance. Results of the study indicate that implementation of the CBLI in literature classes enhances both reading comprehension and critical thinking ability.

Herrero (2005) likewise carries out a study with a group of second-year English students in the School of Modern Languages in the University of Costa Rica. He aims to determine if the recycling of content through the use of a variety of authentic informational sources contributes to the improvement of the students' oral production skills, to decide the tasks that promote the oral participation of the students, and to integrate teaching pronunciation into classroom activities. At the end of the research, it has been found that linguistic needs vary from group to group and second year students may not acquire certain grammar points and they need reinforcement.

Chapple and Curtis (2000) integrate movies as a source of content into language courses. Responses of the students suggest that English level of the students have increased, especially when speaking and listening skills are concerned. It has also been found out that students acquire higher self-confidence in using English. Furthermore, analytical /critical thinking skills, different perspectives, broadened understanding and content/technical film knowledge are given as the by-products of the study.

Wei (2006) also investigates how CBI can be implemented in the Japanese classroom for American college students. The example of a classroom in which learners study Japanese business and current affairs through instruction in Japanese are presented. The data obtained from the questionnaires show that the implementation of CBI positively influence the students' motivation to study Japanese as well as and broadening their understanding of the Japanese business community. It also provides solid training in language skills while at the same time improving students' Japanese proficiency significantly.

Puffer and Nikula (2006) examine how directives are performed by teachers and students in Finnish and Austrian classrooms in which foreign language is used as the medium of instruction in non-language subjects such as history or chemistry. They explore how interpersonal aspects of communication get realized in the performance of directives, and the way contextual factors affect speakers' directness choices. It is found that both of these contextual factors interact systematically with speakers' use of directives. The results present how the specific conditions of classroom discourse affect the language environment in CLIL classrooms.

Spencer and Guillaume (2006) also emphasize the importance of vocabulary development to literacy and put emphasis on the content areas which provide context for developing vocabulary. They suggest that an effective lesson model that can be used systematically helps to develop vocabulary significantly.

The number of sample studies can be multiplied, still all the studies point out the positive influence of the implementation of CBL in language classes.

3. METHOD

3.1. The Goals of the Program

This study aims to investigate the effect of CBLI on EFL students' foreign language receptive skills at the engineering faculty. There are two goals of the study which can be sequenced as:

- To improve students' foreign language reading skills at the engineering faculty

- To improve students' foreign language listening skills at the engineering faculty

3.2. Participants

The participants of the research are 50 students of the department of Mechanical Engineering in the Faculty of Engineering, Tunceli University. The students are chosen randomly from the freshman during the fall term of 2012-2013 academic year. 25 students are used as the target group while the other 25 students are used as the control group in the study. The number of the males exceeded the number of the females in the study as the department is a male dominated department so there were 40 males and 10 females in the study. There were 12 students aged between 18 and 21, 20 students aged between 21 and 23, 12 students aged 23 and 25 and 6 students aged between 25 and more.

3.3. Data collection procedure and instrument

In order to carry out the research, descriptive statistical methods (Mean, Standard Deviation) as well as Independent Samples Test were used in the comparison of quantitative data of the study. The pretest and posttest developed for this study include four parts in which each part stands for a language skill. Activities were prepared in an integrated way and each activity has its own grading. Choosing the characters from the list, filling the missing parts, choosing the appropriate title, matching the subtitles with the paragraphs, true-false questions and answering the questions were used in the tests and the researcher gave one point for each correct answer.

Firstly, the researcher implemented pretest to both target and control groups to determine the foreign language levels of the students. After implementing the pretest, the researcher started the ten weeks of CBLI courses with the target group and traditional language courses with the control group.

After conducting the courses for ten weeks, the researcher prepared a posttest both for the target and control groups. The posttest was conducted with both groups at the same period of duration. Then, the results of the target group were compared with the results of control group. Finally, the results obtained from the study were reported.

Still, the study has its limitations as well. At the beginning of the research it was assumed that 25 students for each group and 50 students in total would participate to the pretests and posttests. The researcher could reach 22 students for each group for pretests as it was the beginning of the academic year but at the end of the term the number of the students for posttests exceeded the number the expected before as all students were at the university.

4. DATA ANALYSIS

This study used descriptive statistical methods (Mean, Standard Deviation) as well as Independent Samples Test in the comparison of quantitative data and SPSS (Statistical Package for Social Sciences) for Windows 20.0 program in evaluating the data obtained from the study.

4.1. Pretest and Posttest Statistics for Reading

There is an increase in the positive direction in the mean values from pretests to posttests observed in both control group and target group in terms of reading skills when we look at the following table (Table 1).

Table 1: *Pretest and Posttest Statistics for Reading*

	PRETEST		POSTTEST	
	Mean	Stdev.	Mean	Stdev.
CONTROL GROUP	5,50	2,40	6,82	2,26
TARGET GROUP	4,50	1,94	8,64	1,83**

**p<0.01

According to the Table 1, the observed means of the pretests and posttests are slightly different from each other. While the observed mean of the pretest for control group is 5,5 at the beginning of the application, it increases to 6,8 at the end of the application for reading skill as the posttest shows. Similarly, the mean of the pretest for the target group is 4,5 at the beginning of the application, but it increases to 8,6 at the end of the application for reading skill as the posttest indicates. The standard deviation of the posttest result observed in the target group shows that the value obtained from the study has a statistical importance because it is smaller than 0.01 (**p < 0.01). In other words, the mean of the pretest for reading skill obtained in the traditional language classroom is 5,5 at the beginning of the application and it increases to 6,8 at the end of the application . The mean of the pretest for reading skill obtained in the content-based language instruction classroom is 4,5 at the beginning of the application and it increases to 8,6 at the end of the application. The following graphic (Graphic 1) clearly shows the variations observed in both groups from pretests to posttests for reading skills.

Graphic 1: *Percentages of Variation for Reading*
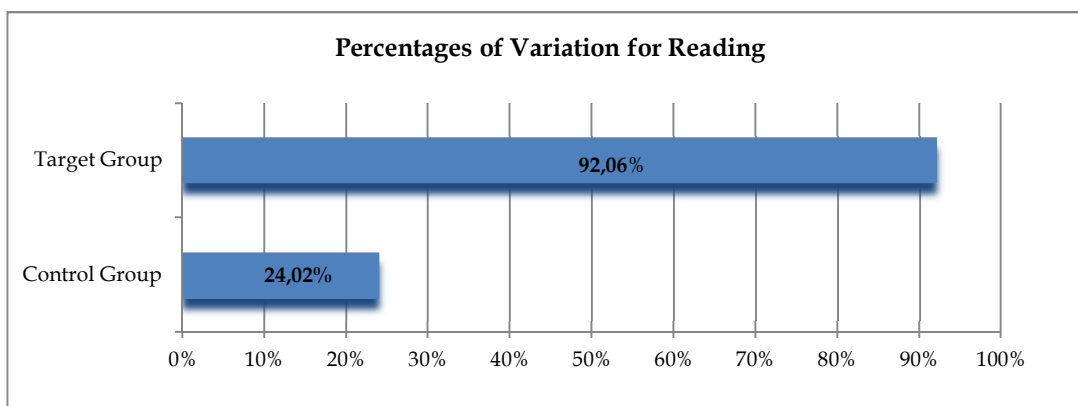
According to the graphic (Graphic 1), while there is an increase of 24,02% in the positive direction from pretest to posttest observed in the control group, there is an increase of 92,06 % in the positive direction from pretest to posttest observed in the target group. When we compare the content-based language instruction courses and traditional language courses in terms of reading skill, the effect of content-based language instruction courses is nearly four times higher than the effect of traditional language courses.

### 4.2. Pretest and Posttest Statistics for Listening

When we look at the following table (Table 2), it is apparent that there is a positive increase in the mean values from pretests to posttests observed in both control group and target group in terms of listening skills.

Table 2: Pretest and Posttest Results for Listening

	PRETEST		POSTTEST	
	Mean	Stdev.	Mean	Stdev.
CONTROL GROUP	1,72	1,20	2,78	1,70
TARGET GROUP	1,68	,99	3,39	1,77

According to the Table 2, while the observed mean of the pretest for control group is 1,7 at the beginning of the application, it increases to 2,7 at the end of the application for listening skill as the posttest indicates. Similarly, the mean of the pretest for the target group is 1,6 at the beginning of the application, it increases to 3,3 at the end of the application for listening skill as the posttest indicates. In other words, the mean of the pretest for listening skill obtained in the traditional language classroom is 1,7 at the beginning of the application and it increases to 2,7 at the end of the application . The mean of the pretest for listening skill obtained in the content-based language instruction classroom is 1,6 at the beginning of the application and it increases to 3,3 at the end of the application. The following graphic (Graphic 2) shows the variations from the pretests to the posttests in terms of listening skills observed in both control group and target group.

Graphic 2 : Percentage of Variation for Listening

Percentages of Variation for Listening

Target Group: 101,74%
Control Group: 61,27%
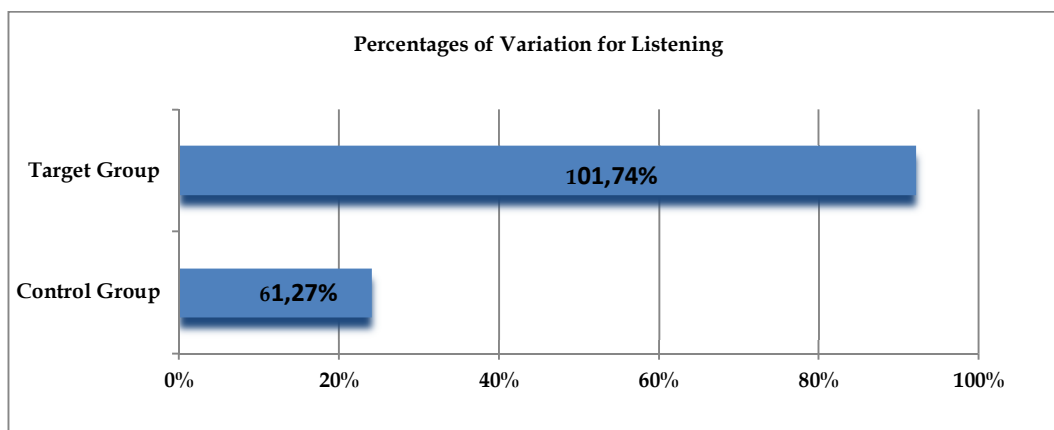
According to the graphic (Graphic 2), while there is an increase of 61,27% in the positive direction from pretest to posttest observed in the control group, there is an increase of 101 % in the positive direction from pretest to posttest observed in the target group. When we compare the content-based language instruction courses and traditional language courses in terms of listening skills, the effect of content-based language instruction courses is higher than the effect of traditional language courses.

5. CONCLUSION

This study incorporates with the study of Tsai (2010) who found that the implementing of CBLI enhances both reading comprehension and critical thinking ability in literature classes.

Our study supported it by showing that implementation of the CBI at the engineering faculty highly develops students' reading skills. The results of the study also incorporate with the results of the study of Chapple and Curtis (2000) who integrated film as a source of content in language courses and found that English levels of the students increased, especially when speaking and listening skills are considered. Our study supported the findings by showing clearly that CBI increases students' reading and listening skills at the engineering faculty.

Content-based language instruction develops students' reading skills in the foreign language at the engineering faculty by presenting proper reading passages and activities to be used in the courses which provide an insight and access into their subject area in terms of innovations in their own fields. The reading passages and activities help them to learn the necessary vocabulary which they can make use of in their future career so the students pay more attention and effort to understand the content-based reading passages which support to activate their reading skills.

Content-based language instruction also develops students' listening skills in the foreign language at the engineering faculty. Videos which inform the students about things related to the recent and changing developments in technology to their field lead students to watch and listen to the material more carefully as well as motivating them to learn the pronunciation and the usage of the words in the target language. Authentic conversations and presentations in the videos used in the courses are very effective for students to make them aware of what they are listening while promoting their listening skills.

To conclude, content-based language instruction is supposed to motivate the students to learn a foreign language in order to follow the developments related to their subjects in the engineering. It helps students to keep pace with the ever-developing technology which necessitates a good command of foreign language. By providing interesting and new topics, additionally CBI helps students to gain an insight what is going on around them and it gives them a real and realistic reason to learn a foreign language.

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