

ENGLISH-MEDIUM INSTRUCTION: DOES IT WORK?¹

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ÖZET

Her ne kadar her yüksek öğretim kurumunun eğitimden almayı istediği sonuç tüm Avrupa’da ve hatta dünyada farklılıklar gösterse de, sonuçta her kurumun hedefi diğer yüksek öğretim kurumlarından ve/ya da ülkelerden mezun olmuş öğrencilerle yarışabilen mezunlar vermektir. Bu yüzden, dünyanın bazı ülkelerinde yüksek öğretim kurumları mezunlarının sürekli gelişen pazarda yer alabilmesi için derslerinin tamamını İngilizce vermeye başlamışlardır. Tam da bu aşamada sorulması gereken soru, bu anlayışın dil öğrenme etkinliğini artırıp artırmadığıdır. Diğer bir deyişle, acaba ders içeriğinin anadilden başka bir ikinci dilde verilmesi zaten zor bir süreç olan dil edinimini daha da zorlaştırmaktadır? Bunun için belirlenen ‘İkinci dilde hazırlanmış içeriğe dayalı dil öğretimi öğrencilerin bölümlerine karşı olan algılamalarını etkiler mi?’ araştırma sorusuna cevap bulmak adına birbirinden sadece eğitim dili açısından farklılık gösteren üç değişik bölümde okuyan iki devlet üniversitesinin 40 öğrencisine anket verilmiştir. Analiz sonuçları bu iki farklı üniversite öğrencilerinin okudukları aynı alana dair görüşleri arasında istatistiksel bir farklılık göstermemektedir. Diğer bir deyişle, içeriğin ikinci dilde veriliyor olması bu çalışmaya katılan öğrencilerin bölümleriyle ilgili görüşlerini etkilememiştir. Çalışma için kullanılan tüm analizler SPSS 1,3 sürümünü kullanılarak yapılmıştır.

ABSTRACT

Even though the conceptions of what higher education institutions expect to gain from education differ across Europe, it is very much clear that the ultimate goal of an educational institution is to graduate students who are ready to compete with other graduates from other institutions and/or countries. Therefore, different institutions in some countries have begun to offer courses in the medium of English to be able to get an edge in the growing market. The question that should be asked at that point is whether this approach increases the efficiency of language learning. In other words, the goal of the study in hand is to test whether teaching a content through a foreign language can be regarded as an approach to rise the already challenging process of learning a second language. In order to answer the research question “Does content-based language instruction affect the learners’ perception of their study field?” 40 students from three different departments of two state universities were given questionnaires. The universities differed from each other in terms of the medium of

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instruction. The results reveal no statistically significant difference between the two groups. In other words, all the analyses for the study were calculated on SPSS 1, 3 version for Windows.

INTRODUCTION

Under the umbrella of applied linguistics, research in language teaching, language learning, and teacher education is now placing considerable emphasis on notions of language awareness, attention and learning, ‘focus on forms’ for language learning from dialogic interactions, patterns of teacher-student interaction, task-based learning, content-based learning, and teacher as researcher through action research (Grabe, 2002).

Among those mentioned above, content-based language instruction refers to the integration of school or academic content with language teaching objectives. David (2001) defines Content-based instruction as an educational approach in which non-language subjects are taught through a foreign, second or other additional language. In other words, it is the use of languages learnt in the learning of other subjects (Lang, 2002). Darn (2006), on the other hand, defines Content and Language Integrated Learning (CLIL) to be the umbrella term describing both learning another (content) subject such as physics or geography through the medium of a foreign language and learning a foreign language by studying a content-based subject. In English Language Teaching, forms of CLIL have previously been known as ‘Content-Based Instruction’, ‘English Across the Curriculum’ and ‘Bilingual Education’. Not to confuse the reader with all these different terms used in the literature for the same concept, the researcher will use the term content-based teaching from now on.

Content-based learning involves imbedding vocational content into language teaching and/or including language learning elements in the teaching of vocational content. Learning is facilitated by the pedagogical elements of both language and substance. This is what distinguishes CBT (Content-Based Teaching) from content learning based on teaching delivered in another language. Within CBT, language is used as a medium for learning content, and the content is used in turn as a resource for learning languages. Students can put the language they are learning into practice instantaneously – a powerful motivation factor.

Wesche and Shekan (2002: 221) list contextual and pedagogical features shared by different forms of CBT as follows:

1. *The premise that learners in some sense receive ‘two for one’ that is, content knowledge and increased language proficiency.* Motivation to understand and learn is promoted through the social environment of the school, which provides learners with opportunities for consequential engagement with both interlocutors and significant texts. The learning of both content and language rests on the premise that learners will be able successfully to access and learn subject matter texts and concepts through their L2.
2. *A language curriculum in which expository texts and discourse are central.* Most often these are ‘authentic’ written texts for native speakers with a purpose other than teaching language, which represent L1 norms of usage. For nonnative speakers, these texts, instructor explanations, and attendant activities and assignments are the main source not only for content knowledge but of

new language forms, patterns, functions, and meanings to be understood and internalized.

3. *Orientation into a new culture or 'discourse community'* (Kramsch, 2003). The instructional situation itself may require considerable socialization, even for native speakers (e.g., into school roles and routines in early immersion, kindergarten, or into academic life and a specialized discipline for postsecondary students), but the gap will be greatly compounded for L2 speakers by a learning context and discourse that represent assumptions, roles and customs very different from those they know.
4. *Adaptation of language input, interactional moves, and context to accommodate learners' limited language proficiency.* The linguistic and conceptual complexity and the novelty of texts and learning activities largely determine their difficulty for L2 learners and likewise, the support learners will need. This can be provided through modifications to L2 students' workload, adapted language use in instruction and evaluation, greater contextual support, and increased time or modifications to L2 students' work-load, adapted language use in instruction and evaluation, greater contextual support, and increased time or modifications to the amount, form, or complexity of the content presented. Support can also be provided through explicit language instruction related to the content being learned.
5. *Focus on academic language proficiency.* The second language abilities emphasized in CBI –in contrast to most other Communicative Language Teaching- are primarily those needed for dealing with instructional discourse: that is, what Cummins (1984) has characterized as 'context reduced' dimensions of language use. These contrast with context-embedded, cognitively undemanding dimensions, such as conversations with intimates about familiar events.

Why Content-Based Teaching?

Imagine learning to play a musical instrument such as a piano without being able to touch the keyboard. Consider learning football without the opportunity to kick a ball yourself. To learn how to master a musical instrument, or football requires that we gain both knowledge and skill simultaneously. In other words, we learn effectively by experiencing both learning about the instrument, and having hands-on practice at using the instrument, at the same time. This is as true of music and football as of language. In the evening, or at school, a learner may be given time to practice music by playing the piano, but do you have the opportunity to practice playing language during or after school? If not, then what is learnt in the language lessons may be wasted to some extent. In CBT, we have an opportunity to try to prevent this from happening by giving opportunities to learners to practice what they learn whilst they learn (<http://www.clilcompendium.com/luk.pdf>)

The main advantage of CBT seems to be the fact that the target language is acquired in a rather effortless way. Learners, today, fully realize the importance of English as the language of a global world. The mastery of English strengthens their confidence that they are the members of the international community, and this means

not knowing English just to get by, but to achieve mastery of their profession in English.

Another noticeable gain is the fact that language acquisition affects identification with the target language culture to a greater extent than when the language is formally studied in school, thus enhancing international understanding and tolerance. The latter is also due to the fact that when learning a new language in this way, people tend to look at their own language and culture with more objective eyes; they realize that there are different ways of understanding the world and of tackling life than the limited experience found in one language within one culture.

Darn (2006) lists the advantages of CBT as follows. For him CBT helps to;

- introduce the wider cultural context,
- prepare for internationalisation,
- access International Certification and enhance the school profile,
- improve overall and specific language competence,
- prepare for future studies and / or working life,
- develop multilingual interests and attitudes,
- diversify methods & forms of classroom teaching and learning,
- increase learner motivation.

Why Not Content-Based Teaching?

Although mentioned above as a strong form of Communicative Language Teaching, Content-Based Teaching has been stated to have some weak forms. Weaker forms include language courses whose main aim is to develop learners' communicative proficiency in the second language through a curriculum organized around the learning of substantive information and skills.

Also, in an article which was published in *The Guardian* (Wilkinson, 2003) the student after the course which was given in CBT approaches the teacher and says: "Thank you for the course. I wish it had been given in my own language because I know I have lost out on much information during the course, and you, the teacher, did not have the opportunity to get to know the real me, what I am able to do, what I know, what I think and who I am."

There is evidence that when the content of the course is the main objective, e.g. mathematics or psychology, and not the language, the understanding of the course content is severely hampered due to language problems. It is as if studying the content takes place in misty rather than in clear weather. The content is tough enough to understand in itself, and the foreign language medium makes it worse. Also, teachers on CBT courses experience a constant tension between content and language not only in terms of what and how to teach, but also in terms of assessment. When assessing student assignments, should they focus on language or on content? Are they to disregard language mistakes when, after all, the main purpose is to teach the specific subject?

Finally, do teachers of mathematics, history or whatever subject chosen master the target language to such a degree that they can teach freely, give extended explanations, respond to unexpected questions, and even serve as language teachers, to

teach in CBT in programs? According to the students, this is not always the case, and it all becomes very artificial when a Turkish teacher teaches Turkish children the course The World History in English, for the sake of making the unnatural natural.

Even though the above mentioned studies contribute to the field's understanding of how presenting the input in a second language affect learners' comprehension and production of L2 target forms and structures, what has not been explored to any great extent is the perceptions of the learners who go through that kind of an education.

In sum, empirical evidence from studies investigating the effects content-based teaching (Darn, 2006, Jappinen, 2005, Ute, 2007 & Oruç, 2007) lends at least some support to the notion that content-based teaching might have beneficial effects on linguistic development. These studies, taken in conjunction with more qualitative work by Wesche (Wesche, 2000), motivate further research into the role of content-based teaching in SLA.

THE STUDY

The present study is a further analysis of the paper presented at Curriculum Linguae: Linguistic Diversity Through Integration, Innovation and Exchange held in Tampere, Finland by Oruç (2007). The researcher's aim is to investigate the possible effects of content-based teaching on the perceptions of the study field of university students. The study is an attempt to compare the perceptions of the 40 students from two state universities that differ from each other only in terms of the medium of instruction they have. By doing this, the researcher aims to find out if taking courses in their field study in a foreign language affects the perceptions of the students towards their study field.

Objectives and Significance of the Study

Following the idea that using the subject matter as the content for language learning maximizes learner's exposure to the second language and that this exposure is to a highly contextualized and particularly relevant subset of the language, many studies (Genesee, 1987; Artigal, 1997; Chapel & DeCourcy, 1993) have attempted to test the effect and the degree of it on the acquisition of both second language and content learning. However, there are still unanswered questions in the literature in terms of the effects of content-based teaching and learning on the students' view of their study field.

The study may make some contributions to the field of second language learning and teaching in the sense that the possible effect found for the content-based teaching on the students' perceptions can change the understanding of second language teaching. Besides, the study might motivate further research investigating the possible effects of the same teaching approach on other disciplines.

Research Question

The research question posed for the study is based on the results of the prior empirical research. The main research question posed for the study is as follows:

1. "Does content and language integrated learning, education in the medium of a foreign language, affect the learners' perception of their study field?"

Participants

In order to answer the research question stated above, the researcher decided to choose two universities where the medium of instruction differed. To serve the purpose, the researcher first decided to give the questionnaire to the students of three different departments of Dokuz Eylul University where she worked. The second university, on the other hand, was chosen among the universities in which Turkish –native language of the learners- was used as the medium of instruction.

In total 40 students from two different state universities were chosen. 20 Dokuz Eylul University (İzmir) students where the medium of instruction is English and 20 Dicle University (Diyarbakır) students where courses are given in native language. The students though came from three different study fields. Because in Dokuz Eylul University the researcher would give the questionnaire to the students studying in Physics, Chemistry and Mathematics, it was decided to give the questionnaire to the students of the same departments in Dicle University. The students who participated aged between 17 to 23 and all were native speakers of Turkish Language. The participants of the study were in the Fall Term of 2006-2007 academic year. At the time of data collection, all students were in the mids of the first semester.

Instrument

The questionnaire designed for the study (See Appendix A) has been developed by the researcher. The statements used on the questionnaire were based on the results of the prior empirical research. The questionnaire was a five-item-Likert Type scale with 14 statements. The participants were told to choose only one of the five choices listed as: Strongly Agree, Agree, Undecided, Disagree, and Strongly Disagree. Below is an example of the statements listed on the questionnaire:

Example:I love my field.

A very important consideration of the researcher was the reliability of the instrument developed. Reliability is the extent to which a measurement instrument produces consistent results when administered under similar conditions. However, there are some factors such as measurement error, student fatigue, test setting problems that may contribute to unreliability (Ekmekçi, 1999).

There are some factors affecting reliability:

- length of the test: the longer the test, the more reliable it is
- homogeneity of items: if the test items are testing the same traits
- discriminatory power of items: items which discriminate well among students
- sufficient test taking time (Ekmekçi, 1999:37).

When preparing the instrument, the researcher has considered the list above. Besides, the comments received from the experts in the field were towards increasing not only the number but also the variety of the statements which contributed to the increased reliability.

Other than the valuable comments of the experts, three university students from Dokuz Eylul University were used for the pilot study. They were asked to take the questionnaire in order to increase the validity and the reliability of the questionnaire.

They were also observed for the test time. According to the time they have spent on the test, test-taking time has been decided to be 15 minutes for the 14 items of the questionnaire.

Data Analysis

For the study, all 40 students from two different state universities were given a questionnaire, the results of which were used to decide on the participants' perceptions of their field of study. All of the questionnaire data were scored by giving points from five to zero depending on the choice of the participant.

The analysis of the data started by the grading of the questionnaire items. Twice the researcher herself, to account for the intra-rater reliability (at one week intervals), did the analysis for each of the statements on the instrument. The results of these two analyses indicated no change.

The only research question of the study asked for the effect of the content and language integrated learning on the learners' perception of their field of study. In order to answer the research question, t-Test was used to compare the mean scores of two groups (universities). All the analyses were calculated with SPSS version 13, 0 for Windows.

Results

The present study investigated the effect of content-based teaching on 40 students' perceptions of their departments. These students were in two different teaching contexts in one of which the content was presented in the native language of the learners (Dicle University context) and in the other the medium of instruction was a foreign language – English- (Dokuz Eylul University context).

Table-1 Descriptive Statistics of the 14 Items on the Questionnaire

	Minimum	Maximum	Mean	Std. Dev
Q1	3	5	3,95	,71
Q2	1	5	3,25	,92
Q3	1	4	2,70	,88
Q4	1	5	3,35	,97
Q5	2	4	3,10	,70
Q6	1	3	2,13	,82
Q7	2	5	3,43	,67
Q8	3	5	3,78	,57
Q9	3	5	4,30	,60
Q10	2	5	3,53	,78
Q11	2	4	2,95	,78
Q12	3	5	4,03	,57
Q13	1	4	2,75	,95
Q14	1	5	3,18	1,33

n: 40

Table-1 above presents the descriptive statistics of the 14 items on the questionnaire. As can be seen, the mean scores of the items varies between 2, 13 to 4, 30. The difference between the highest and the lowest mean score is only 2, 17. However, when the difference between the minimum and maximum choices are considered, it is possible to see the wide range between 1 to 5, which means between Strongly Disagree to Strongly Agree.

Another table (Table-2 below) gives us a more detailed analysis of the questionnaire items. In this table, it is possible to see the difference between the two universities. The participating universities are labeled as 1 and 2.

Table-2 Group Statistics of the Two Universities.

	Groups	Mean	Std. Deviation	Std. Error Mean
Q1	G1	4,00	,72	,16
	G2	3,90	,71	,16
Q2	G1	3,15	,58	,13
	G2	3,35	1,18	,26
Q3	G1	3,30	,57	,12
	G2	2,10	,71	,16
Q4	G1	3,45	1,14	,25
	G2	3,25	,78	,17
Q5	G1	3,20	,69	,15
	G2	3,00	,72	,16
Q6	G1	1,80	,83	,18
	G2	2,45	,68	,15
Q7	G1	3,55	,68	,15
	G2	3,30	,65	,14
Q8	G1	3,80	,52	,11
	G2	3,75	,63	,14
Q9	G1	4,15	,67	,15
	G2	4,45	,51	,11
Q10	G1	3,85	,67	,15
	G2	3,20	,76	,17
Q11	G1	2,65	,74	,16
	G2	3,25	,71	,16
Q12	G1	4,00	,45	,10
	G2	4,05	,68	,15
Q13	G1	2,05	,75	,17
	G2	3,45	,51	,11
Q14	G1	4,30	,57	,12
	G2	2,05	,82	,18

n: 40

(G1) Dicle University (G2) Dokuz Eylul University

A more detailed analysis could have been done to analyze each item on the questionnaire separately. However, it was not possible to analyze each in detail, the researcher chose two items from the questionnaire. These two items were item number 2 and item number 14. Item number 2 found worth analysing because among the fourteen statements on the questionnaire, only this item was statistically significant. Here, there is a statistical difference ($p \leq, 004$), which shows that the two groups statistically differed from each other in terms of the degree of dealing with their field of study for a life time.

Table-3 Results of the Item 'I can deal with my field for a life time'

N	Min	Max	Mean	Std. Deviation	Sig.
Q2					
40	1	5	3,25	,927	,004

Another statement that was analyzed in detail was statement number 14. When we have a look at the table below in detail, we see that even the range is between 1 to 5 which means from strongly agree to strongly disagree, there is not a statistically significant difference ($p \leq,154$). Not being statistically significant means the two participant groups are not different from each other.

Table-4 Results of the Item 'It is not important for me in which language I learn about my field.'

N	Min	Max	Mean	Std. Deviation	Sig.
Q14					
40	1	5	3,18	1,38	,154

The last analysis which actually showed if these two groups of participants differ from each other in terms of their perspectives of their study fields is t-test. Below, we see the independent samples test. The significance level between the two groups is 1,000 which is not statistically significant. In other words, it means that these two groups are not different from each other in terms of the mean scores of their answers to the items on the questionnaire.

Table-5 Independent Samples Test

F	Sig	t	df
,000	1,000	-10,690	38
		-10,690	38,000

Conclusions

This study investigates the possible effects of the content-based teaching on the perceptions of the two groups of students who differed from each other in terms of studying the same subjects in their mother tongue and in a second language. A comparison of the mean scores of the two groups reveals that these two groups' opinions about the field they are studying are not statistically different from each other except for the 2nd question (I can deal with my field for a life time). As a conclusion, it can be said that with this group of participants, in this context, studying in English or native language does not affect the perceptions of the learners towards their field of study.

From the results we have gathered we can say that there is little evidence to suggest that understanding of content is not reduced by lack of language competence. Current opinion seems to be that language ability can only be increased by content-based learning after a certain stage.

However, one thing should be made clear. The lack of CBT teacher-training programs suggest that the majority of teachers working on bilingual programs may be ill-equipped to perform their profession adequately. Some aspects of CBT are unnatural; such as, the appreciation of the literature and culture of the learner's own country through a foreign language.

Limitations of the Study

It has to be stated that the study has some limitations, too. One of the first to be mentioned is the number of the participants who took part in the study. Giving the questionnaire only to 40 students makes it harder for the researcher to generalize the results. The second to be stated is that the Dicle University students were given the questionnaire on the phone. Because the researcher did not have the chance to go the Diyarbakır, a student was contacted first. Later, the other students were contacted and were given the questionnaires on the phone. The researcher translated the items into Turkish before giving them to this group. This might have affected the results.

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<http://www.clilcompendium.com/luk.pdf>

APPENDIX A

THE QUESTIONNAIRE

1. I love my field.
2. I can deal with my field for a life time.
3. I enjoy participating in activities related to my field.
4. If I were given the chance I would without hesitation choose the same field.
5. I am working hard in order to be successful in the future.
6. I do not see my field as an occupation.
7. I understand the importance of my field the more I learn about it.
8. The more I learn about my field the more I like it
9. Loving is not enough in order to be good in this field.
10. This field requires both talent and knowledge.
11. If I find a better job I can quit.
12. I chose this field on purpose.
13. I regret for choosing this field.
14. It is not important for me in which language I learn about my field.