

Program Evaluation for English for academic purposes at the medical faculty of an EFL context

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Abstract

This small scale study reveals the findings of the medical students' perceptions regarding the curriculum at a state university in Turkey. 53 students, 28 female and 25 male, completed the questionnaires designed to investigate the data for the purpose of the study. The results revealed some neutral and positive opinions of the students regarding the objectives and necessary recommendations have been provided accordingly.

I. Introduction:

Needs analysis is the first and crucial stage of curriculum development to identify the students' unique needs in unique contexts and to develop goals and objectives should be tailor made to meet these needs. Especially in ESP, it is regarded as it the cornerstone of ESP courses. According to Hutchinson and Waters (1987) ESP should be seen as an approach which gives importance to the learners' needs, attempting to provide them with the language they need for their academic and occupational requirements. Learners' specific needs are the starting point for the decisions to be taken for an effective ESP course. After that the other elements of a sound curriculum as goals and objectives, tests, materials and evaluation should be considered (Brown, 1995).

Dudley-Evans and St. John (1998) believe that ESP usually has a different methodology from that of general English. As the learners bring with them to the ESP classroom their specialist knowledge and the cognitive and learning processes that they are accustomed to in their specialist fields, there should be a distinguishable ESP methodology. Beginning with a needs analysis we can better build a sound curriculum, as "Curriculum development includes understanding the

context of teaching, the needs of teachers and learners, the careful planning of courses and materials, as well as the monitoring of teaching and learning” (Richards, 2003). Considering this, a needs analysis study was conducted at the medical faculty of PAU (Taşçı, 2007) as the first step of curriculum for medical students who have specifiable needs, and need a different methodology to meet these needs. The main findings of it were that students need prioritized skills for their future studies, and the integration of authentic materials is necessary for these students’ both academic and professional real world tasks. In 2008, to identify these students’ perceptions in terms of the materials used, 10 students from the first, second and third years who had studied English for academic purposes were interviewed and the positive perceptions of these students’ were obtained considering the materials in the program but negative and neutral perceptions with regards to the speaking activities and class hours. Especially, in terms of the authentic materials used such as slides, medical texts and research articles used in the program was found beneficial by the students as well as the course books used in the program (Taşçı, 2008). However, students’ perceptions after they take English courses in four years have not been investigated so far. Intended as a formative way of evaluation of the materials used in the program, the previous study via interviews revealed some perceptions of these students. However, there has been a necessity to identify to what extent the program meets the goals and objectives and what the students’ perceptions towards the materials which is to meet the goals and objectives in the program.

As Brown (1995) states one way to view program evaluation might be that it is a never ending needs analysis, the goal of which is to constantly refine the ideas gathered in the initial needs analysis, such that the program can do an even better job of meeting those needs. The main contributions of evaluation into a program were cited as follows:

- (a) to contribute to decisions about program installation;
- (b) to contribute to decisions about program continuation, expansion, or "certification";
- (c) to contribute to decisions about program modifications;
- (d) to obtain evidence to rally support for a program;
- (e) to obtain evidence to rally opposition to a program;
- (f) to contribute to the understanding of basic psychological, social, and other processes (Anderson and Ball 1978 cited in Worthen 1990).

Thus, with the data gathered by the help of program evaluation, course designers, curriculum developers of this program can make necessary changes and contributions to teaching programs. The current study aim as a summative way of evaluating the curriculum as it is “the systematic collection and analysis of all relevant information necessary to promote the improvement of a curriculum, and assess its effectiveness and efficiency, as well as the participants’ attitudes within the context of the particular institutions involved” (Brown 1989, p.223). The purpose of this research is to collect information for the development of the program by informing the results of it to the course designers and administrators for a more effective curriculum development. For this aim, students’ perceptions about the program have been considered an important feedback to this current program.

For the purpose of the study, the attempts to design curriculum or investigate several elements of the curriculum have been found. In the literature of curriculum development, there are many research studies to evaluate the materials (Subaşı 2002, Gökçen, 2005; Zohrabi, 2011) or

more specifically textbooks (Arıkan, 2008; Litz, 2001), tests (Cesur, 2008), goals and objectives, teaching or overall curriculum in the literature both in general purposes (Erdoğan, 2005), or specific purposes (Demirbulak, 1992) or needs assessment based evaluations on medical students' English language needs in EFL contexts (Taşçı 2007; Chia, et al. 1999; Huang & Lin, 2010) reports of needs analyses in ESL contexts (Bosher & Smalkoski, 2002; Lepetit & Cichocki, 2002) and program evaluation of a content based instruction at medical faculty (Corrales, K. & Maloof, C., 2009).

More current studies are analyses of communication patterns in medicine (Breugelmans & Barron, 2008; Ferguson, 2001; Goldszmidt, Kostas & Meehan, 2007; Hoekje, 2007; Ibrahim, 2001; Rebek-Nagy et al, 2008; Skelton, Kay & Loudon, 2001; Webber, 2005). The genre analyses of medical research articles have also been given attention (Chen & Ge, 2008; El Malik & Nesi, 2008; Li-Juan & Guang-Chun, 2009; Marco, 2000; Williams, 1999).

In the literature mentioned above there is one report of evaluation of content based instruction on Medical Students by Corrales, K. & Maloof, C. (2009) on 16 medical students to evaluate program developed to enhance language proficiency and increase content-knowledge. Out of 16 students 4 students were selected for the aim of the study. The data were triangulated via classroom observations, four learning journals (responses written in a mixture of English and Spanish), four semi-structured interviews (conducted in Spanish). For the data analysis, transcripts of the observations and interviews were made and categories were devised to gain insight into the students' language development. The data revealed that students gain lexical and content knowledge and become more proficient users of English and more autonomous. The program with the use of CBI approach and relevant content based materials, textbook chapters and tasks in which students present and discuss medical topics have proved efficient in the light of the data analysis and researchers concluded that the program developed based on CBI approach was an effective model.

The current research aimed at evaluating the program of English for academic purposes for Medical students from the perspectives of them in Turkey as there is no recent report of program evaluation neither at the present context of the study or in other medical faculties in Turkey. It is intended that this study can constitute a sample of evaluation of a program for medical purposes for other contexts.

For the purpose of the study these two main research questions were investigated:

1. What are the medical students' perceptions concerning to the extent to which the program for English for academic purposes meet its intended goals and objectives for the program?
2. To what extent are the materials used in the program appropriate to meet the goals and objectives?

III. Methodology

III. 1. Setting and participants:

At the Pamukkale University (PAU), after one year preparatory class, students take English for academic purposes courses in the first three years for two hours at the medical faculty. The following three years they don't have any English classes only continuing their medical problem based learning modules and having practicum at the various wards of PAU hospital. Therefore, the data were collected via questionnaires to identify the perceptions of the fourth year students

concerning the goals and objectives and the materials used for the program as they already finished the current program.

53 students, 28 female and 25 male, completed the questionnaires. The students' average age was 23 (ranges between 21 and 25). Except for three students, they were graduates of the high schools which provide intensive English education.

III. 2. Instruments and data collection procedure:

The questionnaire was created to gather students' perceptions based on the goals and objectives and the materials used in the program. They were piloted on five medical students to see if there is misunderstanding in the questions or not. The questionnaires were piloted with third year students who volunteered for the completion of the questionnaires. They were asked what they understood from the questions and the researcher found all the questions had intended function; that is there was not any misunderstanding. Then, the required permission for distributing the questionnaires was obtained from the medical faculty on 5th December 2011. As the students are at various wards at for their practicum at the PAU hospital, students were visited by the researcher and requested to complete the questionnaires. After the analysis of the questionnaires, it was found necessary to have interview with some students to gain better insight into the questions and to interpret the quantitative data better. Therefore, students at PAU hospital at the 6th floor were visited by the researcher again for this purpose. Five students from the fifth year program were visited and asked whether they would like to participate in the study, and upon their approval to have the interview as a group, they were asked the questions about the goals and objectives, and materials to obtain their perceptions during their break time as group discussion. It was seen more time efficient and productive as a group meeting to obtain their opinions by both the researcher and students themselves. The interview was recorded during the group discussions via researchers' camera. Then, several other students from the 4th year class volunteered to participate in the study individually, so these interviews could be held individually. The interviews took place in Turkish and translated by the researcher.

The questionnaires were analyzed via SPSS (version 16). The mean scores of the questions were considered to investigate students' perceptions of them. The first 13 questions and the 20th question were related to the goals and objectives of the program, and the rest of the questions were related to the textbooks and other materials used in the program. In the current program students use textbooks called "Professional English in Use" in the first three years and "English in Medicine" in the following third year. Also in the syllabus, they are supported by various videos (videos supported by the faculty such as dialogues between doctors and patients and YouTube videos related to the units in the book) and various reading texts related to the topics in the books or research articles.

The questionnaires were analyzed via SPSS (version 16) quantitatively by the researcher. Interpretations of the means on the Likert-scale questions were made according to scale used by Taşçı (2007):

- 1) Strongly disagree: mean values between 1.00 and 1.80
- 2) Disagree: mean values between 1.81 and 2.60
- 3) Not sure: mean values between 2.61 and 3.40
- 4) Agree: mean values between 3.41 and 4.20
- 5) Strongly agree: mean values between 4.21 and 5.00

The data collected via interviews with students were analyzed by one other researcher from PAU in order to ensure inter-rater reliability. In the next section, the SPSS descriptive results with means and standard deviations and the interview data analyzed qualitatively related to the questions have been provided with the SPSS results to shed light on the mean scores.

IV. The Results

The questions in the table (Table 1) were related to students' perceptions with regards to the goals and objectives of the program more specifically focusing on reading objectives

Questions concerning reading objectives	Mean	SD
1. The content of the program is sufficient to improve our reading skill for Problem based learning modules	3.50	.89
2. The program improved my knowledge of medical English vocabulary	3.23	1.06
3. The program enabled me to read various medical articles	3.15	1.12
4. The program enabled me to analyze the language use in various medical texts.	3.19	1.14
5. The program enabled me to guess the meaning of unknown words from context.	3.09	1.00
6. The program enabled me to understand the main idea of English medical texts.	3.23	1.12
7. The program enabled me to understand the specific information in the medical texts.	3.26	1.07
9. The program enabled me to analyze the research articles in English.	3.41	1.09

In general the questions related to the perceptions were neutral, however, students agree with the 1st question concerning the reading skill for their PBL modules (Q1 M=3.50, SD=.89) with a comparatively low standard deviation. For the second question (Q 2 M=3.23, SD=1.06), the students are unsure whether the program enabled them to improve their vocabulary. They may have attached importance of this skill for their professional and academic career appreciating the emphasis of the program.

For the 3rd question again students are unsure in terms of reading various medical articles (Q 3 M=3.15, SD 1.12), which is contradictory to the first question. While students in general agree that they can read for their PBL modules, they are not sure when it comes to the medical articles. Again in terms of reading sub-skills, analyzing the language use in medical texts and guessing the meaning of unknown words, students have neutral attitude towards them. Again in terms of reading skills, students have neutral attitude to analyze the language in various texts (Q 4 M=3.19) and so for guessing the meaning of unknown words from context (Q 5 M=3.19) with a comparatively low standard deviation (1.00). For the questions understanding the main idea and specific idea of the texts, the 6th and 7th questions, students again have neutral attitude (Q 6 M=3.23, SD 1.12, Q 7 M=3.26, SD. 1.07). These findings considering the reading sub-skills, students have neutral attitude when compared to the first question asking the reading skills for PBL modules. Overall, students

agree that they can read for their PBL modules but when it comes to sub-skills, they were a bit hesitant.

During the individual interviews, two students stated that they could read various articles for their PBL modules. The other two students who were interviewed individually stated that they understood texts by giving some ratios (to be discussed in the part where students' perceptions about sub-skills are mentioned below). During the group interview, two of them stated that they needed dictionary help and the others agreed with them but overall they pointed out the program enabled them to read texts related to the medicine. During the group interview with fifth year students, two students stated that they prefer reading from Turkish resources rather than English. The interview with individual students provided further insight into these questions, when asked these questions four of the students agreed that they can understand the texts and efficient in sub-skills. However, they all said some texts are too complicated to understand fully or getting the specific ideas or guessing the meaning of unknown word is difficult so they have to look up the dictionary, they stated the difficulty of the texts may explain the neutral attitude in the questionnaire data. If the students' vocabulary coverage rate to understand the medical texts, they may be hesitant when answering these questions. One student specifically stated as follows;

“Medicine is a broad field and many new findings and discoveries have taken place and many articles have been published in English, in order to keep up with them, we need to read alot and read regularly to understand them.”

It can be said that students appreciate the intensive reading activities in the class but they need to read extensively more to improve their terminology knowledge and reading skills. They appreciate the importance of following the medical literature in English.

Two students during the group interview gave some ratios as to what extent they understand the medical articles:

“I understand the 80% percent of it and occasionally I refer to dictionaries and try to understand the whole.

“I also understand 70 to 80%, I do look up the dictionary and write down medical terms and other academic vocabulary to refer back to them during reading the rest of the article.”

One of the fifth year students who prefer Turkish sources stated:

“We have to work at various wards for practicum so we have limited time to study for our modules. Therefore, I personally prefer reading Turkish ones.”

During the interview, the rest of them (n=3) agreed with them and stated they experienced the same issue. One student said he couldn't make any guesses when he encountered too many unknown words in a text.

For the interviews, the students had been visited at the sixth floor of PAU hospital where they have some of their classes during the break time. The researcher found that there was a slide of internal organs in English although the medium of instruction at PAU is Turkish. The fourth year students stated that it was medical lesson and their professor occasionally brings some slides in English and get them to study those slides. The researcher asked them if they had trouble in understanding those slides, they stated that they hadn't had any problem so far and added that it was beneficial for them to practice English in this way in their medical courses.

In the table 2 below, students' perceptions concerning the other goals and objectives in the program have been provided.

Questions concerning other objectives	Mean	SD
8. The program enabled me to apply translation techniques on various texts.	3.41	1.27
10. The program enabled me to write medical articles.	3.34	1.07
11. The program enabled me to understand various videos in English.	3.45	1.07
19. The program enabled me to discuss medical topics in English.	3.04	1.31

Students have positive attitudes concerning the question about translation (Q 8, M=3.41, SD 1.27). During the interviews they (n=4) stated that they benefitted the translation activities in the class but two of them stated that they sometimes found it difficult to translate if the sentences were too long in the articles. During the group interview, also, translation was one of the most agreed need and goal of the program after improving reading and medical terminology.

When it comes to the goal of writing research articles (Q-10, M=3.34), students have again neutral attitude and for the final goal of the program, discussing the medical topics. As the PAU is a Turkish medium university, students have neutral attitude towards it but in the future when they attend international conferences and seminars or go abroad to study or work they need it so this goal has been reflected in the current program. During the interviews, group of five students stated that they don't need this skill frequently only when assigned to translate medical articles' abstracts and similarly, the fourth year students all said that they were occasionally assigned to write articles in Turkish and write abstracts both in Turkish and its translation in English. They said they needed to apply both their translation and writing skill. One student added if the medium of instruction were in English, they would probably need this skill more and better understand if they can manage to write in English about their subject efficiently or not.

For the aim to understand videos about medical topics as a listening skill, students have positive attitudes (Q 11, M=3.45). During the interviews, they all stated that videos had been beneficial but some of them didn't have good sound quality which occasionally impeded comprehension. More specifically, two students from fourth year stated that the videos, specifically, which display doctor-patient dialogues and examination had been very helpful not only for English listening comprehension but also to view how to examine a patient. Two of the fourth year students added that it was motivating for them to be tested for listening skill in the exams as well as other skills. They stated that they watched some series such as "Grey's Anatomy" and "House" to practice medical English outside the class. One of them said she tried to understand them without subtitles.

The last item for this section was discussing medical topics in English (Q, 19). Although PAU is a Turkish medium university, considering students' future professional needs, discussing medical topics in English was added in the goal and objectives by material office. Academicians at the faculty need to attend international seminars or conferences. Students had neutral attitude towards this and during the interview students stated that in English classes they didn't have much discussions in English, however, three of them stated that the previous year a student had come from Poland as an exchange student to PAU and they didn't have any difficulty communicating with him and they had visited some wards at the hospital and also in the classroom they occasionally discussed medical topics in English for him to understand. They all agreed that it had

been a good chance for them to practice English. For this question, all five year students agreed they could not communicate medical topics in English well, but one of them said if the medium of instruction at PAU were in English they could do it very well. The others also agreed with him, one other student stated that he is not sure and it depends on the subject matter. He stated

“If I get prepared for one specific subject to present and discuss in English I suppose I can handle it, but I haven’t experienced it so far, so I am not sure.”

These students’ perceptions were neutral due to the fact that they don’t have much opportunity to practice medical topics in English. At least one of them stated that if he practiced it, he could do it well. On the other hand, for the fourth year students who have more opportunity to practice them in English with foreign students or their professors’ slides, they had more positive attitude during the interviews. Also, in terms of the goals and objectives they sounded more motivated and eager when responding the questions. This may be because they have recently finished English lessons compared to the fifth year students. Also one last goal of the program, communicating with patients in English was only measured during the interviews to see if they had any chance to deal with foreign patients. As in a foreign language context, none of the students reported having examined and talked to a foreign patient. However, the videos and dialogues in their books enabled them to practice doctor-patient dialogues.

In the table below, students’ perceptions related to the materials used in the program have been provided.

Questions concerning perceptions for other materials	Mean	SD
12. The project based assignments enabled us to read outside the English classes.	3.17	1.89
13. It is beneficial to analyze texts in medical field in the class	3.58	.97
14. Technological equipment in the class is used efficiently in the classes by the English language teacher.	3.74	1.02
15. In the program materials enabled me to learn medical terminology.	3.53	.91
16. The coursebook selected for the program (Vocational English) is appropriate for our English language learning needs.	3.64	.96
17. In the program, apart from the coursebooks, reading materials have been provided in line with the reading texts which I can encounter in the real life.	3.55	1.17
18. The project work in groups enabled me to read and do research in English	3.13	1.31
20. Videos and fill in the blanks activities enabled me to improve listening skills.	3.28	.98
21. The coursebook selected enabled me to improve my knowledge of medical terminology	3.49	.95

Students have more positive attitudes towards the materials used in the program. However, for the first item of this section investigating the project work (Q 12) students have neutral attitude towards it and again on the issue of project work students have neutral attitude (Q 18, $M=3.13$). Although preparing projects related to the medical field is the one of the stated outcome of the program, students have responded to it neutrally with a wide standard deviation ($M=3.17$, $SD 1.89$). During the interviews also they stated that they didn't do any project work but they suggested it could be beneficial for them ($N=3$). They added they were given assignments in the book and texts to read and translate ($n=4$).

Students, on the other hand, regard analyzing texts in medical field in the class as a beneficial activity for their studies with low standard deviation ($M=3.58$ $SD.97$). During the interview, they stated that text analyses were helpful for their reading skill and it was beneficial for them to translate them partially or all of them. Still students put emphasis on the effect of translation for their better understanding texts. Also all students pointed out the importance of getting familiar with medical research articles through English lessons.

Also, they find the use of technology efficient with a considerably higher mean score than the other questions ($M=3.74$). They also agree materials enabled them to learn medical terminology ($M=3.53$) with a low standard deviation (.91). They also agree that the coursebooks selected was beneficial for them (Q 16 $M=3.64$, $SD .96$). Some of the five year students in the group interview ($n=3$) and all the other fourth year students ($n=4$) specifically stated that they benefitted from the selected textbook and learnt a lot of vocabulary and terminology from it.

In terms of the usage of the authentic materials, they agree that program supported them materials they might encounter in their real life (Q, 18 $M=3.55$). Both the instructors and the students interviewed pointed out the motivational aspect of using the authentic materials in the class. During the informal interviews, instructors teaching at the faculty pointed out that they don't want to teach to textbook and search for authentic videos and texts on the internet and used them in line with the units in the textbook. It has been appreciated by all the students interviewed.

For the video activities they have neutral attitudes with a low standard deviation (Q 20, $M=3.28$, $SD 98$). This is contradictory to the question regarding the objective of understanding videos about medicine (Q=11) which received positive attitude in the questionnaire data. When asked students about the reason of it they predicted that some videos had low voice quality but in general they could understand them ($N=8$).

While students agree that the coursebook selected for the first and second years enabled them to improve their medical terminology with low standard deviation (Q 21, $M=3.45$, $SD .98$, Q 22 $M=3.49$, $SD .95$).

Discussion of the findings:

The descriptive statistics revealed that students have neutral attitude towards most of the outcomes of the program while they have positive attitude towards the materials used in the program. While students have positive perception of the reading skill for their PBL modules, translation skills they have more neutral attitudes towards writing. In the needs analysis the writing skill was considered as an important skill by the academicians at the medical faculty but students have neutral attitude towards it as the medical faculty is not English medium. The least appreciated goal of the program was writing medical articles or texts, as they don't actually need them mostly due to the fact that PAU is a Turkish medium university. For the outcome, as they don't actually

write them, so they have neutral attitudes. They may better assess their skill when they pursue their specialization as they will need to write medical articles in English to publish international journals. However, some students added that writing is also important for them as they need to write some articles in Turkish but they need to write abstracts for them in English. They stated that they both used their translation skill and writing skill for them. They also stated during the interviews that most needed skill now for them is reading and vocabulary knowledge and they can read extensively for their studies, which means that the program achieved its main intended goal. In the needs analysis reading and medical terminology and vocabulary knowledge have been regarded as the most important needs of those students in the current context.

Students' comments about reading and percentages they gave in understanding the medical articles are in line with the literature in vocabulary acquisition and learning. For learners to be able to understand the whole text, they need to understand at least 80% of the vocabulary in it. Furthermore, for successful guesses from the context, they need to know at least 98% of the vocabulary in a text (Hu & Nation, 2000). According to Waring and Nation (2004:13), if a text contains excessive number of unknown words, the reader must process the text intensively and slowly. If a text is too difficult for the learner, it will make the guessing of unknown words and the overall comprehension of it harder.

Huckin & Coady (1999) suggest that learners should have a well-developed basic vocabulary, reading strategies, also some familiarity with the subject matter. In this case students may find it difficult to read authentic research articles in variety of subjects in medicine. Waring and Nation (2004) discussed that the number of words needed for the reading of technical texts such as science texts, or newspapers is larger than for less formal texts. They further explained the reasons as follows: Firstly, there are higher proportions of academic and technical words in formal informative texts. They based this on the findings of Chung & Nation (2003 in Waring and Nation) who found that 38% of the running words in an anatomy text and 17% of the words in an applied linguistics text were technical words. Some of these words were drawn from the high frequency and academic vocabulary, but more were from what would in other texts be considered low frequency words. Secondly, because the formal texts have heavier cognitive demands, a higher text coverage is likely to be needed. Thirdly, if formal reading is for academic purposes, then several subject areas and topics are likely to be covered. It is understandable that without adequate coverage vocabulary, it turns out to be study activity as Waring and Nation (2004) suggest "reading very intensively and slowly changes reading into a study activity rather than a fluency building one" (p.13). When students need to get the important information in their limited time, they may not be tolerant to too many unknown words in their English sources. This is also the case in medicine which has broad range of branches.

In the case of medical terms are categorized as "specialized words" in by Nation (2001). students also have to deal with academic words or sub-technical words. Sub-technical vocabulary consists of a range of registers or topic areas in academic and technical language. (e.g. analyze, context, valid, react, function) (Nation, 2001). Academic and sub-technical vocabulary is suggested to be the most problematic area in the academic writing for science students (Thurstun & Candlin, 1998). According to Chen and Ge (2007) the use of academic words is important to realize certain rhetorical functions in academic texts so they recommend that while using/learning academic vocabulary both learners and users should pay special attention to rhetorical functions of this set of words.

Students should also acquire broad range of medical terminology which is also demanding for them. The literature emphasized the importance of becoming familiar with these Greek and Latin terms and identifying word parts. In this way they can also recognize unknown words by analyzing the word parts. For this purpose the manual prepared for the Claretian Medical Center Worker Education Program of Northeastern Illinois University's Chicago Teachers' Center in Partnership with the Union of Needletrades, Industrial, and Textile Employers can be benefitted (See for it at the reference section). The instructors at the faculty had pointed them out from time to time while introducing the medical terminology they pointed out the word parts and they can include that manual prepared as part of the syllabus.

Reading English sources takes on added significance when it comes to the field of medicine as the literature revealed that most of the sources are in English. With the most updated and important research generally being made available in English, ensuring doctors and medical experts' ability to access these documents is of utmost importance. Although students have positive attitude towards reading skill for their PBL modules, they have neutral attitudes towards the sub-skills such as guessing the meaning of the words in context, but strongly agree that they understand the main and specific ideas in a text or analyzing the language use in them. During the interview they stated that they feel themselves efficient in understanding the text in general and specific information in texts. However, two of the student from 5th year stated that they don't trust their reading abilities so they prefer reading Turkish articles and from translated sources. at least one study, in which articles from the medical journal Medline were reviewed in comparison with their Turkish translations, found that there were often serious mistakes, causing distortions in meaning (Sezer, 2000). Obviously, in the case of medical literature, such translation errors could have serious consequences. Instead, students need to be encouraged to read extensively for their PBL modules during the first three years when they take English courses. After that they can continue reading them as they have gained autonomy.

The book selected for the first and second years are more related to the medical terminology and vocabulary and supplemented by some medical texts by their teacher. At the medical faculty, English lessons are limited to two hours. During the informal interviews with the instructor, she stated that the classes are too crowded and two hours is limited for some activities in the classroom. Students, during the interviews, also pointed out the limited class hours and crowded classes. So, some students may not benefit from the program and appreciate the achievement of some goals and objectives but they appreciate the activities and materials used for them. While some students stated trust their reading and vocabulary skills, some others don't and prefer reading only Turkish materials related to their field. This may explain the standard deviation in the questionnaires in terms of the items related to the goals and objectives while they have positive attitude towards the materials.

When asked whether to increase the class hours for English they all replied that they are too busy at the PAU hospital to attend extra lessons at the medical faculty. Some students during the group interview (n=3) also pointed out that after preparatory class and three year medical English, they don't need tutoring in English anymore and stated that they should themselves practice English themselves, by reading medical articles or watching some TV series such as "Grey's Anatomy" and "House". This can be interpreted as they are willing to study by themselves as autonomous learners of English which is an intended goal of English lessons and regarded as one important principle of second language acquisition suggested by Brown (2001). In general all the

students responded to the goals of learning reading and Medical vocabulary and terminology and related activities very positively and added that they appreciate the efficiency of the lessons in such limited time frame (N=7). As those students have already studied English for general purposes at either high schools which provide intensive English education or at the preparatory class of the PAU, they may not feel it necessary to have more intensive English education in the following years. The ESP program at the medical faculty in general was regarded as adequate for their academic studies. However, one student during individual interview and three students during the group interview suggested that they could have been provided some materials related to medical field at the preparatory class. Their desire to study medical English can be reflected in the preparatory class. Those students from medical faculty can be provided with medical texts or vocabulary exercises.

Again on the issue of the materials, both the interview and the questionnaire data revealed that students are satisfied with the materials and their use by the instructor. During the group interview they also stated that they were glad that they didn't study grammar rules but got opportunity to practice vocabulary, translation and listening skills. Some of the five year students in the group interview (n=3) and all the other fourth year students (n=4) emphasized that they benefitted from the selected textbook and learnt a lot of vocabulary and terminology from it. The others had again neutral attitude. Also they stated (n=2 of the fourth years) videos provided them real life experience of doctor patient dialogues and examination procedures. Especially, it has been confirmed by the majority of the students that technological materials used in the program were efficient (N=8). It can be interpreted that students and instructors at the medical faculty are all aware of the communicative approach and the importance of English for academic and medical purposes.

It can be concluded that the students all agree they can read, understand videos and translate texts related to medical field. When it comes to discussing medical topics or doing projects about them, they have neutral attitudes. These findings are mainly related to the materials used in the classroom. As projects or discussions haven't been emphasized in the current program, students have low attitude towards them. For example, considering the technological equipment, textbooks used both the questionnaire and interview data have revealed the positive attitudes of the students in the context of the study. For the rest of the activities and materials which are more emphasized in the program, they all have more positive attitudes and this also reflects to their attitudes towards outcomes.

Evaluating the evaluation:

This study has been efficient to identify the students' perceptions towards the goals and objectives and materials used in the program. Since the beginning of the program, there hasn't been a summative evaluation study conducted in the current program. One formative study was conducted by the same researcher in July, 2008. Students' perceptions towards the activities and materials used in the program were positive. However, there was a need for summative way of evaluation of the program.

As the fourth year students already finished the program, they were asked about their opinions about the related goals and objectives, and materials. This year the same questionnaires can be distributed to the third year students who will complete the program. Their perceptions can also provide valuable data as they have just experienced the program this year.

Interviews with the students provided further data of their perceptions. They provide insight into the possible reasons for low mean scores (neutral) and high standard deviation in the questionnaire data. Reflecting the situation in the questionnaires, some students stated that they are efficient in reading and vocabulary and prefer English texts and watch some series related to the medical field while some others stated that they find it difficult to understand the articles and prefer translated versions or the Turkish ones written by Turkish authors in Turkey.

Testing could have been also evaluated in the study. At the current institutions, tests are also prepared in line with the goals and objectives. For example, during the interviews, some students stated that listening section was included in the test so it motivated them to listen to the videos more attentively and practice it through some series outside the classroom. Also, as the other component the teaching hasn't been evaluated but students provided some implications of the efficiency of the teaching at the current institution. Some classroom observation can be conducted in the future to have more insight into the ESP lessons.

For the purpose of the study, the literature on medical genre, terminology and academic vocabulary have also been reviewed and some important insights have been gained into this peculiar genre. The suggestions and findings of the current literature can also be benefited by curriculum developers who teach at the medical faculty.

Overall, this study is important as an attempt to raise awareness of the importance of the program evaluation in an ESP course. Especially in ESP courses, students' needs should be tailor made with matching goals and objectives and only evaluation study can reveal to what extent the ESP program has served this function. As students are the real source of the data as they experience them so in this study, students' perceptions have been revealed in this study and necessary implications for the improvement of the program can be drawn from it. So the next section will provide some implications.

Pedagogical implications and recommendations:

In this study it can be suggested that students should be better trained in reading skill as it is one of the most needed skill considering their academic studies. Especially they can be trained for the sub-skills as the questionnaire data revealed neutral attitude towards it. This study took place in academic year 2011-2012 and the content of the article was related to the year when the data were collected. The instructor who taught at the medical faculty assigns reading research articles from time to time for intensive reading, but they can be assigned more research articles and texts to read extensively at the second and third years. In the following years, these readings can be selected in a more structural way in line with their medical modules.

The literature in vocabulary acquisition also emphasized the importance of extensive reading in vocabulary acquisition. Through extensive reading they can not only broaden their medical terminology but also have more insight into medical discourse and genre of published texts. Not only the learners but also the language instructors should be aware of the fact that words can not be acquired at first sight but there is a need for more in depth processing by learners through various encounters in different contexts (Rott, 1999; Nation, 2001, Sökmen, 1997; Schmitt, 2000; Zahar, Cobb & Spada, 2001; Wang & Ge, 2008). For explicit learning, repetition and multiple exposure to words in various contexts have been found very important (Schmitt, 2000; Nation, 2001; Sökmen, 1997). "Well-timed and repeated exposure to the word families of medical academic vocabulary list in a variety of context may significantly contribute to the acquisition of

the deep-going properties of this important set of medical academic words” (Wang, Liang & Ge, 2008, p. 451). As Schmitt suggests recycling of words should be part of any study program. In addition, in order to enhance vocabulary acquisition there is a need for incidental learning during reading, watching films or hearing native language speakers.

The medical academic word list (MAWL) based on a medical research articles corpus with 1093011 running words from 288 written texts (research articles) covering almost all fields of medical science was compiled for more efficient learning of medical academic words in the medical science and suggested to be used for this aim (Wang, Liang & Ge, 2008). Therefore, the MAWL created by them constitute valid data for English for medical purposes learners and instructors to teach medical academic English as they should be more emphasized than other vocabulary. Also, as the genre analysis of medical research articles or spoken discourse revealed that some structures, tenses or clauses are more emphasized to indicate various rhetorical functions. Ferguson (2001) suggests that

“the framework of course-of-event, hypothetical and pragmatic conditionals with their respective common uses in making generic statements, in argumentation and in achieving politeness in speech, may be helpful for teachers wishing to devise pedagogic activities for teaching some of the principal uses and forms of the conditional construction in a medical context.”(p.81)

In addition, learners should be encouraged to read extensively self selected books, their medical textbooks and articles and to watch movies or TV series such as Grey’s Anatomy as some of the students emphasized in this study. (For more detailed discussion of teaching and learning medical terminology see Taşçı, 2007, 2011 and for *Medical Academic Word list*, Wang, Liang & Ge, 2008).

When it comes to other skills reflected in the program, some students (n=3) stated that they needed to practice more speaking. Considering the limited time of the lesson, this skill may not be practiced efficiently. Students can be given role play activities or simulations of doctor-patient dialogues. Moreover, although one of the goals of the program is preparing projects related to medical topics, the data collected revealed that this is not much reflected in the current program. In an ESP program students should be encouraged to do project based tasks doing research (Dudley Evans & St Jones, 1998). So, teachers teaching at that faculty can give presentation assignments or some projects related to their PBL modules. For example, they can do research on some medical subjects and present them in the classroom and have discussions on them or write some reviews on medical topics related to their medical modules and in this way ESP courses can support their academic studies more efficiently.

Moreover, some professors teaching at the faculty can be invited to give lectures in English to English courses. Students stated that their professors already use some slides in English in their modules. It could enrich both the content of the English courses and their academic medical knowledge. An adjunct model of content-based instruction can be successfully applied at the medical faculty communicating with some professors who are willing to attend. Such presentations take place at the School of foreign languages and students who attend them have reported their positive attitude.

Some longitudinal studies can take place having students do project work or getting some groups of students keep vocabulary notebooks or study corpus created by Wang, Liang and Ge (2008) or the students who were explicitly instructed word parts and who weren't. Students can be instructed to use concordance program http://www.lex tutor.ca/concordancers/concord_e.html which provides BNC Med Corpus having medical abstracts. Such activities can better enhance their performances but there is a need to see the results with experimental studies in the future.

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