Needs Analysis of English for Medical Purposes: A Student Perspective

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Abstract

English has been integrated into medical curriculum in higher education in countries where English is not the official language of instruction. For medical students—non-English department students—English has been taught to meet specified academic and professional needs of learners in so-called English for specific purposes (ESP). To ensure that English program is relevant to the learner's needs, a need analysis is required. This study aimed to investigate the English needs of the first-year medical students taking a compulsory program of English for academic purposes at Faculty of Medicine, Sultan Agung Islamic University. The data were collected using a questionnaire to assess the medical students' purpose of learning English, the importance of learning English, language learning needs of major language skills (reading, writing, listening, speaking) and their preference of assessment type. The data were descriptively analyzed. Forty-five students consisting of 67 % female and 33% male completed the questionnaire. Most students (76%) used English when studying. All students agreed on the importance of English. The most important sub skill included reading technical article in medicine, listening to audio and listening oral presentation, giving spoken presentation, writing medical prescription. Individual achievement was the most preferred type of assessment. The medical students agreed on the importance of English specific purposes. The interpretation of findings will be useful for the design of English for specific purposes in the study setting.

Keywords: EMP, ESP, needs analysis

INTRODUCTION

English proficiency is fundamental in the globalized world due to the fact that English is the dominant global language (Jiajing, 2007). As the lingua franca for business, communication, science, technology, and also education, English plays a major role. The necessity to use English among professionals, academics, and students has led to the rapid increase in the teaching and learning English for specific purposes (ESP)

(Dudley-Evans & St. John, 1998; Mayo, 2000; Johns, 2013).

Due to its significance as a global language, English has been integrated in the curriculum of tertiary education in countries where English is not the official language of instruction or non-English speaking countries all over the worlds. In Brazil, a federal regulation–the National Curricular Guidelines requires the medicine undergraduate to be proficient in at least one foreign language, preferably English. (Gutierres,

2020) In China, the necessity for effective communication in English and the recommendation to teaching it in medical education has been established as one of the goals of its curriculum (Ling & Fu, 2007). In the 1990's, the Dental English course started to be part of the curriculum in Japan aiming at familiarizing common English terminologies used in clinical and practical dentistry (Rodis, 2011). In Iranian tertiary education, English for Specific Purposes (ESP) are offered as compulsory courses focusing for medical science students on reading comprehension, grammar, and vocabulary (Alavi, Kaivanpanah, & Taase, 2018; Nezakatgoo & Behzadpoor, 2017). The objective of ESP programs was to provide students with the specific English skills required to function in different professions. Besides being regarded as the revolutions in language teaching, it concentrates on learners.

The curriculum design of a language teaching program requires a proper needs analysis also known as needs assessment) (Juan, 2014) to assess the learner's need (Hyland, 2002); identify the language skills used in determining and selecting materials based on ESP and to evaluate learners and the learning process (Basturkmen,2010); to describe the learners' needs in learning ESP (Ellis and Johnson, 1994); and to set the learning outcomes (Ahmed, 2014). In discovering students' needs, needs analysis is part of decision making in designing a course. As Basturkmen (2010) puts it "needs analysis process is an attempt to answer questions regarding when, where, and why language learners need target language."

Richards and Platt (1992) suggest to arrange the needs according to priorities. Graves (2000) mentions that need analysis is not only a systematic but also ongoing process. He also states that it is not merely gathering information about student's needs but also interpret the information in order to develops an effective course.

Despite its importance, ESP courses, the evaluation of English language need for this specific program have rarely been done. (Poedjiastutie, 2017; Kusni, 2013;). In addition, most of the needs analysis for ESP merely describe their finding. This study was aimed at investigating the language needs of the medical students of first year medical students attending ESP course at the Faculty of Medicine of Sultan Agung Islamic University in Indonesia. In this present study, an attempt was also made to provide an interpretation on the findings to inform the respective ESP design.

METHODOLOGY

This research was conducted among the students of the Faculty of Medicine, Sultan Agung Islamic University (UNISSULA)

Research Instruments

The structured questionnaire was adapted from a questionnaire developed by Gessesse (2009). The questionnaire was prepared based on the opinion expert in the field of teaching English as a foreign language after conducting a comprehensive literature review on related topics. The questionnaire covered different themes namely the goals of medical students learning English, the significance of learning English, student preferences towards learning environments, the order of significance of key language skills, language learning needs related to primary language skills (reading, writing, speaking, listening), their preferences of the type of assessment.

Based on the feedback and the experts' opinion, it was corrected and reorganized. The latest version of structured questionnaire included six different themes with number of items as follows: on medical students' purposes of learning English (7 items), significance of learning English (3 items), their preference of learning environment (5 items), significance order of major language skills (4 items), language learning needs regarding major language skills (reading-7 items, writing-8 items, speaking-6 items, listening-6 items), their preference of assessment type. The part of language learning needs regarding major language skills was adapted from a similar study by Gessesse (2009). Except for a multiple-choice question on the participants' preference of assessment type and a rank order scaling type of question on analysis of medical students' English

Language Needs. The significance order of major language skills, the entire questionnaire employed five-point Likert scale format.

Research Procedure Data Collection Procedure

To conduct a comprehensive needs analysis, there are many instruments and sources of data collection from which data are collected in the related literature. The data needed during the needs analysis process can be collected through several data collection instruments including questionnaires, authentic oral and written text analysis, discussions, structured interviews, observations and assessments including formal or informal assessments (Dudley-Evans and John, 1998).

In this present study, the data were collected using a questionnaire (in form of a google form) distributed to 45 medical faculty students who voluntarily participated in this research. a comprehensive literature review was carried out before preparing data collection instruments. Participants were informed of the research objectives and processes before the data collection process.

Data Analysis

In line the objectives of the study, the data were analyzed quantitatively. Descriptive statistics were mainly done. Because of the nature of the questionnaire items the section on participant preferences of the type of assessment was analyzed with frequency and percentage,

RESULT AND DISCUSSION

Forty-five students in study completed the questionnaire. The students' responses to personal information about the learners included their background information, their purposes of learning English, their learning preferences, their attitude towards the English language, their preferences were both quantitative and qualitative described.

Students' purposes of learning and language use The most

The students were asked to express their degrees of agreement on importance to purposes of learnings. Adjectives that signify agreement and disagreement were given weights 1(not important) to 4 (most important). Details regarding the student's purposes of learning English. The descriptive values gained through the analysis of the purpose of reading, are provided below (see Table 1).

Table1. Students' purposes of learning English

Purposes of Learning English	mean
I learn English to:	
Study other subjects	3.34
Interact with people	3.27
Read medical articles	3.18
Perform activities in my study	3.09
Write medical reports	2.79
Use in my future career	3.34

The most important purpose of learning English as perceived by the students was to study other subjects (3.34) and use in their future career (3.34). the purpose of studying other subjects was due to the fact that they were non-English Major.

It is interesting that they have responded "studying other subject" and "using English in future career" options with the same degree of importance. The former and the later choice implied the academic and professional purpose of learning English, respectively. Both awareness of

goals confirmed their belief that English learning is of importance for their vital skills, lifelong learning, instead of short-term objectives. In their future career, they are expected to engage in an Evidence based Practice (EBM) which is defined as "*conscientious, explicit, and judicious use of current best evidence in making decisions about* the *care of individual patient*s." (Sackett, 1996). Therefore, during their pre-clinical and clinical education the students are exposed to EBM that requires medical students to understand the scientific basis of clinical practice by reading primary scientific literature including critically appraise research articles which is mostly published in English. To remove the language barrier especially for students from non-English speaking countries, Bitran (2012) suggested an explicit teaching of reading strategies for research papers by including activities to understand the structural characteristics of scientific texts, to develop an inquiry-based reading approach and to understand the student's metacognitive strategies to assist the students to become competent life-long learner. This finding is similar to that of by Mona Faisal Al-Qahtani (2013) investigating motivation towards studying English among the first year of applied medical sciences students (Female section) at the University of Dammam in Saudi Arabia.

Students attitude towards the English courses
Students were asked to express their opinion on the importance of the English courses in section of the questionnaire. the question item to assess their perception on the importance of English courses. Based on the students' responses, all students (100%) thought that English course is important. This showed a positive attitude to the English courses.

Table 2 presents that all-medical student perceived that English course are important with two different degrees of importance (important and very important). The students' reflections

showed that they were aware the significance of the English course to improve their English to facilitate them in achieving their learning goals-the foreign language acquisition.

Numerous studies have already been carried out on the subject attitude and its impact on the acquisition of a foreign language showing that attitudes play an effective and important role in learning and teaching process. Attitude has been shown to be one of the main reasons, if not the single most significant factor in language learning (Sauvignon, 1976:295) which discourage Zainol Abidin, et al. (2012) learning. In other words, positive relationship exists between students' attitude and their English language achievement (Fakeye, 2010) meaning that positive attitudes facilitate language learning and are associated with language success. This explains why negative attitudes hinder language acquisition that Krashen (2006: 15) referred to as "psychological barriers" that block students' affective filter leading to the failure in language learning.

To conclude, this positive attitude is an advantage to the teachers and to all other stakeholders to provide the students with English program to meet their specific needs. This positive attitude possibly motivates to learn for they have also instrumental purposes of their own in learning English.

The students' macro skills choices
In following section of the questionnaire, the students were also expressed their best choices of macro and micro skills.

Students were asked to identify the most important macro skill in learning English. The results were expressed in frequency.

As for the learners' language needs in speaking skills, the student's response regarding each and every item within the macro skill area are presented in the table below (see Fig2).
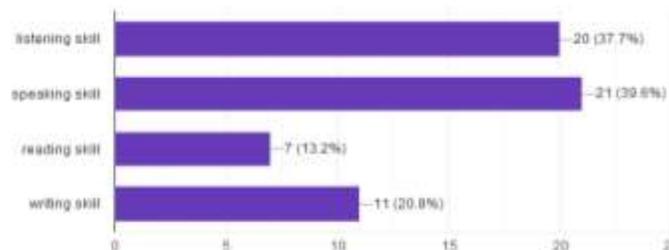
Fig 1. Students' macro skills choices

Table 1 shows the most important English language skills for the medical students. They considered speaking as the most significant skills for them. The results are in line with some other studies conducted in Turkish context (see Taşçı 2007: Ayas and Kırkgöz 2014), and revealed that learners wanted to improve their speaking skills.

Master (2015) mentioned that there are at least three speaking situations in which English is needed including intra-professional communication, spoken interactions in conferences or medical discourse communities

Moreover, Rahman (2015) stated that the main cause of creating such ESP courses is to establish communicative environments.

In addition, this finding supports that of Kayaoglu & Dagakbas' (2016) concluding that speaking was perceived as the most important skills to acquire for medical students at Karadeniz Technical University in Turkey. This finding is different from that of a case study among medical students in Indonesian university showing that reading skills are the most important language skills. (Khrismawan, 2019). This suggest that the syllabus design need to accommodate this as it was proposed by Schleppegrell & Bowman (1986) that medical students are required to make presentations.

The students' micro skills choices

Details regarding what micro skills perceived as essential within each and every macro skill are presented in table 2.

Regarding reading skill, reading medical books and technical papers reading medical books has been found the top two macro skills. This finding is in line with that of study by Çelik, H. (2018).

This finding confirmed that English is important for medical professionals because most medical information-like books, articles, documents and journals for medical professionals is available in English (Kang,2004); Kurfurst ,2004).

Furthermore, due to the exponential rate of the number of published articles in Medline, it is estimated that a dedicated doctor would need to read about 17 articles a day every day of the year to keep up to date with current knowledge.

According to Sackett (1981) and Durbin (2009), clinicians, researchers and medical students read journal articles read the technical papers like medical journal articles for various reasons including but not limited to the following:

"To update oneself with progress in a particular specialty/field of study, to find out a solution for a specific problem-could be diagnostic (tests/methods) or therapeutic (medical/surgical), to know about causation, clinical features, and course of a disorder/disease, to understand certain fundamental aspects like pathophysiology, to get an idea for carrying out a research work, to find support for one's views"

Among the technical (scientific) paper in the field of medicine, reports of original research falling into the category of the primary literature has been the "core" of scientific publication (Hersh, 2008).

This suggests to include authentic reading materials taken from the medical books and medical journals in the syllabus of ESP for medical students. In addition, it is important to teach the students the respective reading strategies as it was proposed by Paltridge & Starfield (2004).

In term of writing skills, the students perceived that writing assignment was the most important micro skill. This finding might be in line with the need to reading books and technical articles in medicals. Most of the time the students' needs to read references in completing their assignment such as making lab reports.

The last item in the questionnaire was in the micro skills of speaking. It was also found that the students perceived that a spoken presentation has been the most important micro skill.

Table 2 The student's perception on the English macro skill

Reading (N= 45)	
Reading technical articles in medical fields	3.06
Reading manuals in my study	2.70
Reading course handouts in my field	2.84
Reading instructions of assignments and projects	2.86
Reading laboratory instructions	2.84
Reading study notes of the courses	2.93
Reading medical books	3.15
Reading general books	2.77
Writing (N= 45)	
Writing prescriptions	2.80
Writing lab reports	2.80
Writing projects	2.80
Note taking from lecture and other spoken sources	2.77
Note making from written sources	2.79
Writing apprenticeships reports	2.75
Writing assignments	2.88
Listening (N= 45)	
Answering comprehension questions	2.82
Listening to lecture and other spoken sources	3.00
Listening to oral presentations	3.08
Listening to instructions for assignments	2.93
Listening to audio video sources	3.04
Listening to drama, role play, etc.	2.93
Speaking (N= 45)	
Asking questions in the class	2.82
Giving spoken presentation	2.93
Talking with a friend	2.75

Table 3. Students' choices of evaluation systems

Ways of Testing.	
I want to be tested through:	**Mean**
Mid and final semester examinations	2.95
Pair works	3.06
Individual achievements	3.04
A series of tests, quizzes, assignments, class works, homework etc.	3.04
Group and class performance	3.04

Students' evaluation system preference

Students also suggested also the best evaluation method they want. A pair work has been the most preferred assessment system followed by individual assessment group and class performances as a third entry.

The assessment plays an importance in student academic achievement (Herman (2013). Umar (2013) suggested that assessment is not intended to judge what the student have learned instead an "aid to learning' and provides learners "a sense of accomplishment" (Dudley-Evans and St. John ,1998; Douglas,2000).

This is especially important in case of ESP assessment as it was proposed by assessment enhances the learning process and serve as a learning device. (Dudley-Evans and St. John, 1998: 212).

CONCLUSION

This study has investigated the English language needs of medical students to inform and help course designers and stakeholders to develop effective English for Medical Purposes courses to fulfill the needs of medical learners. The findings of the present showed that the medical students agreed on the importance of English specific purposes had a positive attitude on the English courses. The findings present that student perceive that 'reading medical textbook and technical papers to be the most important reading sub-skill, 'writing assignment ' to be the most significant writing subskill, 'listening to oral presentations' to be the most crucial listening sub-skill, and finally 'asking questions in class' to be the most fundamental speaking sub-skill., grammar, vocabulary, speaking and finally writing. proficient reading sub-skills and 'reading medical articles in journals' to be the least. The In reading, findings showed that students needed to get training mostly in 'reading medical textbooks' followed by 'reading instructions for assignments/ projects. In writing, the result presented that student requested training mostly in 'writing research papers' followed by 'answering exams'. In listening, the findings showed that students

needed training mostly in ' following and understanding lectures' followed by following questions/ answer sessions in class. And finally in speaking, the results revealed that students needed training mostly in 'giving oral presentations' followed by 'participating in seminars' The findings will be useful for the design of English for specific purposes in the study setting. The findings could also be used to inform the planning especially the contents to be included in ESP courses for medical purposes.

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