Original Research

A target English needs analysis on ESP course: Exploring medical students' perceptions of necessities at a Yemeni university

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This research focuses on the needs analysis and perspectives in evaluating English for Specific Purposes (ESP) courses designed for medical students. The study intends to identify the medical students' perceptions of the frequency and importance of using English language skills. Two different instruments, questionnaires and semi-structured interviews, were used to collect data. Respondents included 186 medical students, 4 ESP lecturers, and 10 Department of Medicine (DM) Subject Matter lecturers at Ibb University in Yemen. In this study, quantitative data were collected from three different subject groups (n=200) by means of three versions of the questionnaire. Correspondingly, some follow-up interviews, which were organised with a group of these three informants (n=29), complemented the data collection procedure. The collected data was analysed via the SPSS software package, followed by a qualitative data thematic analysis of semi-structured interviews. The findings showed some differences in which medical students believed the most frequent skills used are Listening and Reading, while their ESP and DM Subject Matter lecturers believed that medical students use Writing and Listening. The results revealed that although most of the English language skills and sub-skills in target needs were considered important or very important by all the participants, there were discrepancies in the preferences and priorities. The findings of this study are expected to be used as reference material for further research and give valuable considerations which may provide useful information for the ESP course designers to meet the target English needs of medical students in Yemen.

KEYWORDS: *ESP, needs analysis, medical students, English skills, inferential statistics*

1. INTRODUCTION

English has been a common *lingua franca* in the global scientific community for many decades, enabling millions of professionals to deal with their routine activities (Mauranen et al., 2016; Millot, 2015; Tardy, 2004). English has become mandatory and used as the medium of instruction in most Faculties of Languages, Science, Engineering, Technology, Medical and Health Sciences. It is commonly used in commercial, education, and other technical domains. It has been broadly concurred that the English language is important for undergraduate students to empower them to work effectively in their academic and related subjects (Basturkmen, 2014; Grynyuk, 2016; Sidek et al., 2006). Consequently, learning English is required to meet two kinds of needs: current and future needs. The former is related to the English requirements for students to succeed academically. The latter is the needs of the students who require the language in their day-to-day situations and perform professional activities such as writing lab reports or business letters (Basturkmen, 2014).

The rapid growth in science, technology and economic activities has made ESP a better approach to English language teaching at the university level to meet the specific needs of the

learners (Bracaj, 2014; Salmani-Nodoushan, 2020). ESP is an evolving division of English as a Foreign Language instruction in higher education worldwide. The ESP is recognised as a technique that provides significance to the learners' needs, giving them the language they require for their educational and professional needs (Agustina, 2014). In this regard, Niţu (2002) points out that *'ESP (English for Specific/Special Purposes) has witnessed rapid and steady development, becoming today one of the most important branches of English Language Teaching (ELT)'* (Niţu, 2002, p. 155). Therefore, ESP courses intend to develop four language skills (reading, writing, listening, and speaking) with training and teaching networks. English can lead to outstanding jobs in advanced education worldwide (Binti Ramsa, 2014; Chalikandy, 2013; Jordan, 1997). Al-Fadly (2004) stated that the ESP courses aim to *'develop and improve students' communication competence in the four language skills'* (Al-Fadly, 2004, p. 18). Hence, it was confirmed that if the ESP course is not designed to fulfil the goals of learners and the needs of society, it is valueless and used randomly without purpose (Alduais, 2012).

The ESP lecturers have faced many challenges, such as controlling and motivating the classrooms, difficulties in English communication with students, lack of vocabulary, and learning and teaching strategies for developing ESP courses for medical students and other divisions. These courses should follow not only the learners' needs and perspectives but also contributions to the classrooms (Deocampo, 2020; Pritchard & Nasr, 2004). The value of appropriate context and expertise is identified by Nunan (1987): *'If teachers are to be the ones responsible for developing the curriculum, they need the time, the skills, and the support to do so. Support may include curriculum models and guidelines and may include support from individuals acting in a curriculum advisory position. The provision of such support cannot be removed and must not be seen in isolation from the curriculum'* (Nunan, 1987, p. 75).

2. THEORETICAL BACKGROUND

2.1. Needs analysis development

Needs analysis (NA) is a vital asset in evaluating ESP courses and helps teachers to identify learners' needs (Sari et al., 2020). NA's origin can be drawn back to 1952 (Moore & Dutton, 1978). Due to the ongoing demands of public and private sector organisations to improve efficiency and productivity, the emphasis has been placed on defining the needs of target groups. Watkins et al. (1998) stated that *'meeting the many requirements of clients, fellow associates, and society has become a requirement for organisational success'* (Watkins et al., 1998, p. 40). NA has been rooted in continuous improvement and production since these needs were detected. A recent analysis reveals that NA has been involved in numerous organisations. NA is a helpful platform for generating data recommending options for tackling the target stakeholders' performance problems in the private and government sectors. Therefore, NA flourished in social, education, and health services activities between 1966 and 1981. Salas and Cannon-Bowers (2001) observed that NA's significant role in the organisational field change and development had guided the development of different approaches/models to NA (Berwick, 1989; Hutchinson & Waters, 1987; Long, 2005; Munby, 1978). The present study uses a NA model based on Hutchinson and Waters' (1987) framework. Hutchinson and Waters (1987) recommended emphasising the learning process rather than relying solely on language needs. The *learning-centred approach* combines both target and learning needs. Figure 1 demonstrates Hutchinson and Waters' (1987) taxonomy of target language needs.

2.2. Needs analysis and ESP

The importance of NA has consensually been emphasised in the literature on ESP. Several scholars such as Hutchinson and Waters (1987), Nunan (1988), Brindley (1989), Robinson

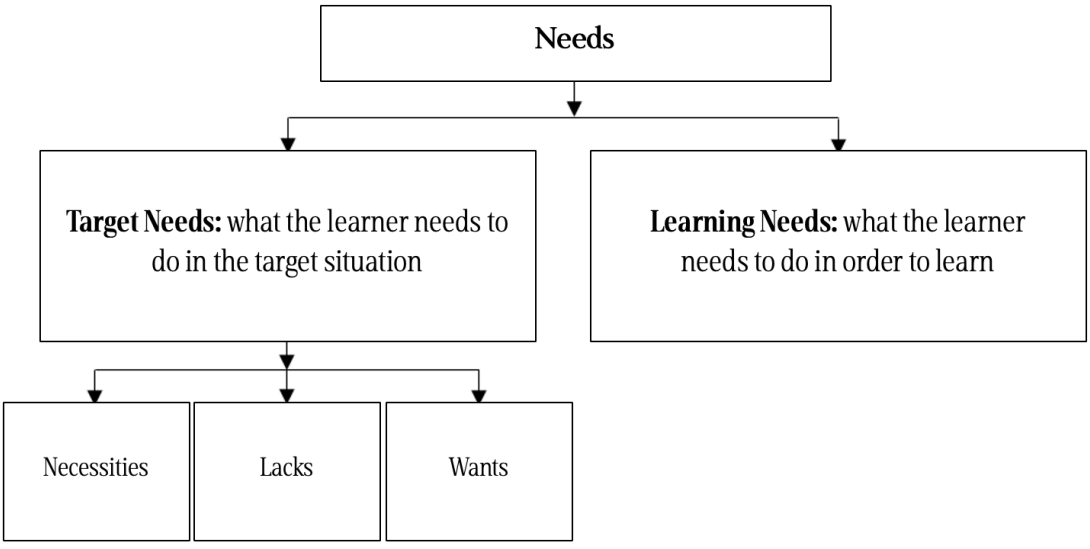

Figure 1. Hutchinson and Waters' (1987) taxonomy of target language needs

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'ESP is an evolving division of English as a Foreign Language instruction in higher education worldwide. The ESP is recognised as a technique that provides significance to the learners' needs, giving them the language they require for their educational and professional needs'

(1991), Brown (1995, 2009), Seedhouse (1995), West (1997), Graves (2000), Richards (2001), and Long (2005), support that NA has a significant role in distinguishing between General English (GE) and ESP design. Developing an ESP course to evaluate the fundamental reasons for learning the language is essential. Therefore, as Belcher (2009) and Lesiak-Bielawska (2015) indicated, NA is the key aspect of ESP design. As cited in Chostelidou (2010), Dudley-Evans and St John (1998) stated that NA is the cornerstone of ESP and a particular specific language item of grammar and vocabulary.

Songhori (2008) highlighted that the NA's purpose in any ESP course is mainly concerned with linguistics and analysis in the earlier periods. Furthermore, Basturkmen and Elder (2004) regarded NA and the description of language use in target situations as the two central aspects and critical features of Languages for Specific Purposes (LSP) courses. It is indicated that learner information, language analysis, knowledge of the learning process, or a combination of these items are the main step in the course design (Nunan, 1988, 1996). Astika (1999) mentions that NA is the starting point for materials development and regulates content selection, classroom activities, and assessment. Richards (2001) further outlines that ESP starts with student needs evaluation. Different students' demands enforce some limitations on ESP courses and ESP lecturers. NA restricts ESP courses to material encompassing various vocabularies, grammar, necessary language skills and concepts, subjects or topics, and communicative requirements.

2.3. Needs analysis of medical studies

Medical students and graduates in the Arab World in general and in the Yemeni setting specifically are found to have numerous issues in utilising the English language, such as communicating freely, writing and even dealing with standard and specific vocabulary, pronunciation during speaking, and lacking much practice in and outside the classroom (Abuklaish, 2014; Al-Nasser, 2015; Al-Saidat, 2010; Anajar, 2017; Hamza, 2018; Bobr & Migdal, 2023). An overview of studies indicates that it is challenging to recognise broad similarities concerning language requirements in medicine since some students perceive they need to improve their speaking skills (Faraj, 2015; Iravani & Saber, 2013). Javid (2011) reported that students needed writing more than other skills. Other studies offered considerable insights into choosing appropriate courses to educate first-year medical students and required reading and speaking skills (Iravani & Saber, 2013; Javid & Umer, 2013). Other studies revealed that reading skills are the most prioritised, followed by writing, listening, and speaking skills (Abugohar et al., 2019; Vahdany & Gerivani, 2016).

3. METHODOLOGY

3.1. Research design

This approach identifies the target needs as '*what the learner needs to do in the target situation*' (Hutchinson & Waters, 1987, p. 54) and classifies them into three categories: (i) necessities – '*what the learner has to know in order to function effectively in the target situation*' (Hutchinson & Waters, 1987, p. 55); (ii) lacks – '*the gaps between what the learner knows and the necessities*' (Hutchinson & Waters, 1987, p. 56); and (iii) wants – '*what the learners think they need*' (Nation, 2000, p. 5), which are the learners' perspectives of their needs. This study aims to investigate the English language target needs of the first, second, third, fourth, and fifth-year of medical students who studied in the academic year 2020-2021 in the Faculty of Medicine and Health Sciences (FMHS) at Ibb University (IU) in Yemen from the perspectives of the students, ESP lecturers and DM Subject Matter lecturers. The main objective is to determine the English Language skills that medical students at IU have to acquire to function effectively in the target situation.

To gain a deeper insight into the issue, an explanatory sequential mixed methods design is employed in this study to collect data in two phases: quantitative and qualitative, analyse them separately, merge data, and use the outcomes to comprehend a study problem.

This mixed-method design starts with the quantitative phase since there are challenges in explaining the quantitative findings to help investigate the unequal sample sizes for each study phase, as shown in Figure 2 (Creswell, 2014; Creswell & Creswell, 2018).

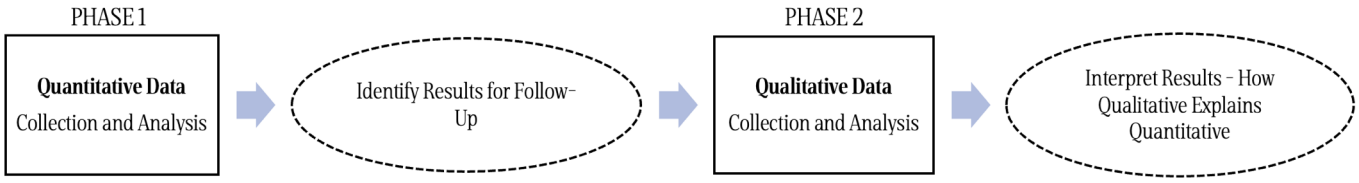

Figure 2. Research process in explanatory sequential mixed methods design (Creswell & Creswell, 2018)

3.2. Participants and sampling

Sampling indicates selecting many individual cases from a larger population to generate the data (Leavy, 2017). It is used to *'gain insight into a larger population without studying each member of the population'*, according to Adler and Clark (2014, p. 96). The study consists of three categories of participants: the enrolled medical students, ESP lecturers, and the Subject Matter lecturers of the DM at IU. Krejcie and Morgan's (1970) sample size table was exploited to determine the ideal sample size of the medical students. The purposive sampling strategy is employed in the current study to select a representative sampling of the subjects. This type of sampling allows the researcher to select the best respondents to contribute their experience and knowledge and achieve a deep understanding of the research phenomenon (Cohen et al., 2017). Therefore, a total of 186 students, including first (n=37), second (n=35), third (n=38), fourth (n=35), and fifth (n=41) -year medical students involved in the NA questionnaire, studied English courses for at least two semesters. A total of 15 students, including first (n=1), second (n=3), third (n=2), fourth (n=3), and fifth (n=6) -year medical students, participated in the interview in the main study. On the other hand, the 4 ESP lecturers and 10 DM Subject Matter lecturers, who participated in the NA questionnaire and interviewed, were selected from IU's corresponding English and medical departments via convenience sampling, followed by Nazari and Zaroori (2021).

3.3. Data collection instruments

Two different research instruments were used for collecting quantitative and qualitative data: a set of questionnaires for three participants (medical students, ESP and DM Subject Matter lecturers) and semi-structured interviews. Many researchers (Cowling, 2007; Jasso-Aguilar, 2005; Park, 2021; Schoonenboom & Johnson, 2017) reported that using a different source/method approach could help triangulate the outcomes that expanded the data reliability and validity in the field of NA research. The researcher ensured that the data collection instruments used in this study addressed all the English language target needs of the medical students.

Cohen et al. (2007) define triangulation as an *'attempt to map out, or explain more fully, the richness and complexity of human behaviour by studying it from more than one standpoint'* (Cohen et al., 2007, p. 141). The need for triangulation stems from the ethical need to enhance the validity and reliability of the research findings by combining at least two methods, theories, and information sources (Jonsen & Jehn, 2009; Noble & Heale, 2019). Thus, structuration and constructivism are the two leading educational approaches that underpin this process (Akyel & Ozek, 2010; Noble & Heale, 2019; Santos et al., 2020).

Although the final drafts of the questionnaires and interviews for the various groups of respondents were adapted from previous studies, according to Marek and Wu (2019), to test a research instrument, *'it is common to do a pilot test of a survey questionnaire, to determine any problems'* (Marek & Wu, 2019, p. 771). Connelly (2008) mentioned that experts advise that a pilot study sample size should be 10% of the sample estimated for the main study to achieve possible objectives. Hence, a Cronbach's alpha value greater than 0.90 indicates the high reliability of the questions (Alkutbi, 2018).

The questionnaire and semi-structured interviews used in the current study were derived from previous studies (Al-Tamimi, 2010; Alqurashi, 2016; Faraj, 2015). The questionnaires were printed, distributed and collected from the first- to fifth-year medical students, ESP lecturers and DM Subject Matter lecturers at the end of second-semester exams during June of the academic year 2020/2021 in order to explore their views regarding their target language needs. A copy of the questionnaire is provided in the Appendix. The contributors responded to the following two research questions: 1. How frequently do medical students use English language skills/sub-skills? 2. How important are the English language skills/sub-skills to medical students?

The quantitative data is initially collected, analysed, and reported in an explanatory sequential design followed by qualitative data (Creswell & Hirose, 2019). Morgan and Hoffman (2021) recently mentioned that in this design (QUAN → qual), which consists of two distinct phases, *'the follow-up study uses qualitative methods to help to understand how and why the quantitative results came out the way they did'.* Thus, the quantitative data involved the administration of the questionnaires to the three enrolled respondents, medical students, ESP lecturers and DM Subject Matter Lecturers at IU. The qualitative data were then followed and assembled from the three groups through semi-structured interviews with a limited number of interviewees who voluntarily came across this study by convenience sampling.

A detailed description of the questionnaire for medical students is shown in Table 1. The questionnaire was divided into three sections. Section 1 sought to collect demographic information about the participants (items 1–5). Section 2 collected information about the frequency of using English language skills/sub-skills (items 6–27). Section 3 focused on the importance of English language skills/sub-skills where items (28–31) asked students to rate their main English language skills, and items 32–53 sought to identify the importance of English sub-skills in learning English.

The questionnaire versions for ESP and DM Subject Matter lecturers were parallel to those in the version given to the medical students, except in terms of demographic information. The ESP lecturers' questionnaire asked about their age, gender, academic title, experience in teaching, and whether they attended any ESP teaching and learning workshops. Part 1 of the DM Subject Matter lecturers' questionnaire started with their demographic information (age, gender, academic title, experience in teaching, and language they use in teaching).

AbdelWahab (2013) mentioned that quantitative scales' value objectively assesses a particular ESP course using Likert-style rating scales. On the other hand, qualitative assessments use open-ended questions and interviews to collect personal in-

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Table 1
Description of data collection inventory

PART	PART NAME	DESCRIPTION OF PARTS	SCALE
1	Demographic information	In this part, the researcher asked five questions about age, gender, year of study, score in the English language course 101 in the first term and score in the English language course 102 in the second term of the first year of the medical students.	No scale was used for this part
2	Frequency of English Language Skills/Sub-Skills	This part consisted of the frequency of using the English language. In this part, twenty-two points were designed to ask how frequently medical students use English to perform the English sub-skills in their educational setting.	Five points Likert scale of frequency
3	Importance of English Language Skills/Sub-Skills	This part consisted of the importance of the English language. In this part, two sub-items were designed, asked to rank the main English skills and asked about the importance of English sub-skills in their educational setting.	Five points Likert scale of importance

formation on the quality of ESP courses. Although qualitative assessments can review the curriculum in detail, quantitative evaluations are more accurate tools and are easier to deal with, especially where team assessments are involved. As per Brown (2016), individual interviews enable researchers to obtain accurate data regarding the perspectives and experiences of the research respondents. Thus, it is expected in this study that any variations among the participants' perspectives might help English language course development. A coding scheme was developed to code the three contributors in qualitative data. The medical students (n=15) who participated in the interviews were coded with a number provided to each respondent and a letter used to identify their year of study. For instance, a respondent who responded in the one-to-one interview session from the first year of study is coded as ***MS1A***. The symbols ***MS*** represent the medical student respondent, ***1*** represents the respondent's number, and ***A*** represents the year of study. The 4 ESP lecturers who participated in the one-to-one interview were coded with a number provided to each lecturer. For instance, the ESP lecturer interviewed coded as ***EL1***. ***EL*** represents the English lecturer, and ***1*** represents the lecturer's number. The 10 DM Subject Matter lecturers who took part in the one-to-one interview were coded with a number provided to each respondent. For instance, the first DM Subject Matter lecturer is coded as ***SML1***. ***SML*** represents the Subject Matter lecturer, and ***1*** represents the lecturer's number.

3.4. Data collection analysis

The data analysis was conducted to interpret the findings from the explanatory sequential design of data collection. This study used both quantitative and qualitative research approaches. The quantitative method used a questionnaire consisting of demographic information and Likert scale questions with different multiple-choice answers. The semi-structured interviews were used to collect the qualitative data. The quantitative data were derived from the questionnaires, originally written in English, and distributed to the medical students, the ESP lecturers and the DM Subject Matter lecturers. Quantitative data of the methods were analysed via the Statistical Package for Social Sciences (SPSS 24), which is usually used in applied linguistics and education research. Descriptive statistics analysis involving means, percentages and frequencies was used to summarise the findings. The means and standard deviations for the demographic information and Likert scale items were initially calculated and analysed. Then, the overall means for the multiple-response questions were calculated (Dörnyei, 2007, p. 213). The question for ranking the language skills' priority order was also analysed with descriptive statistics displaying means and standard deviations (Sönmez, 2019).

Inferential statistical procedures were used to determine any significant differences in the current study. A non-parametric Kruskal-Wallis (K-W) test for making multiple comparisons and a Mann-Whitney U test for making dual comparisons were employed to assess the statistical differences. These two tests were used among the three respondents not equivalent in number (186 medical students, 4 ESP lecturers and 10 DM Subject Matter lecturers) regarding their perspectives on English language needs and the content of the ESP course (Alfehaid, 2011; Riazi, 2016). *'Non-parametric data are those which make no assumptions about the population'* (Cohen et al., 2017, p. 727). Cohen et al. (2018, p. 797) also recommend using the K-W test to determine any significant difference *"for three or more related samples'*. The K-W test is recommended in many needs analysis studies to find any significant differences if the probability value (*p*-value) is less than 0.05 and identify discrepancies between the groups on a rating scale (Hekmati et al., 2020; İlgör, 2019).

In addition, the qualitative data were collected from the interviews to clarify better or build upon initial quantitative results to investigate the learners' target needs (Castleberry & Nolen, 2018). It might be worth indicating that a thematic analysis framework that includes classifying, organising data according to key themes, concepts and emergent categories (Ritchie et

al., 2013) was used to analyse the data collected from the recorded semi-structured interviews with selected participants. Regarding the interview results obtained from the 15 medical students, the 4 ESP lecturers and the 10 DM Subject Matter lecturers, the researcher presents them qualitatively based on what is found on the checklists, recordings, and notes obtained. The interviews were audio-recorded and then manually transcribed. Then, the interview transcripts were coded and thematically analysed to create the themes and discuss the findings in a systematic analysis as highlighted by Alsamadani (2017). The questions of the interviews were assembled under the same categories as the questionnaires to determine whether the findings were consistent.

4. STUDY RESULTS

4.1. Participants' personal information

From the questionnaire, as shown in Table 2, most students (36%) were in the 23-24 age group. Of all 186 medical students, 102 were females and 84 males, 37 were in the first year, 35 were in the second year, 38 were in the third year, 35 were in the fourth year, and 41 were fifth-year students in the academic year 2020-2021. It is revealed that 41.40% (77 students) and 42.47% (79 students) scored excellent and very good in the first semester of their first year of study. Similarly, 46.24% and 38.71% of the students achieve excellent and very good in the second semester. Conversely, only 4.30% and 4.84% of the students passed between 50% and 64% in both semesters.

Table 2
The demographic background of the medical students

DEMOGRAPHIC INFORMATION		ITEMS	TOTAL (N= 186)	%
Age		19-20 years old	24	12.90
		21-22 years old	56	30.10
		23-24 years old	67	36.00
		25-26 years old	39	21.00
		27-28 years old	–	–
Gender		Male	102	54.8
		Female	84	45.2
Year		1st	37	19.90
		2nd	35	18.80
		3rd	38	20.40
		4th	35	18.80
		5th	41	22.00
English Score	1st semester	90% – 100% Excellent	77	41.40
		80% – 89% Very good	79	42.47
		65% – 79% Good	22	11.83
		50% – 64% Pass	8	4.30
	2nd semester	90% – 100% Excellent	86	46.24
		80% – 89% Very good	72	38.71
		65% – 79% Good	19	10.22
		50% – 64% Pass	9	4.84

As detailed in Table 3, all four male ESP lecturers are between 31 and 60 years old. Two (50%) are Professors, an Assistant Professor and one Lecturer. In terms of work experience, one lecturer has an experience of more than ten years, another one between 2 to 5 years and two less than two years. Two ESP lecturers only have attended training courses or professional development workshops on ESP teaching and learning.

Table 4 shows ten DM Subject Matter lecturers who participated in this study, with one female and nine male lecturers. They teach different subjects to medical students in the medical faculties at Ibb University. Their ages range from 31 to 50 years old. Three (30%) are Associate Professors, five (50%) are Assistant Professors, and two (20%) are Professors. The results revealed that two (20%) of them have been working for more than ten years, four (40%) between five to ten years, three (30%) between two to five years and only one (10%) for less than two years.

The results also showed that four lecturers use English in their teaching style, while the remaining lecturers use Arabic and English.

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Table 3
The demographic background of the ESP lecturers

DEMOGRAPHIC INFORMATION	ITEMS	TOTAL (N= 4)	%
Age	20–30 years old	–	–
	31–40 years old	1	25.00
	41–50 years old	2	50.00
	51–60 years old	1	25.00
Gender	Male	4	100.00
	Female	–	–
Title	Professor	2	50.00
	Associate Professor	–	–
	Assistant Professor	1	25.00
	Lecturer	1	25.00
Teaching English language to medical students for	more than 10	1	25.00
	between 5 to 10	–	–
	between 2 to 5	1	25.00
	less than 2	2	50.00
Attended workshops on ESP teaching and learning	Yes	2	50.00
	No	2	50.00

Table 4
The demographic background of the DM Subject Matter lecturers

DEMOGRAPHIC INFORMATION	ITEMS	TOTAL (N= 10)	%
Age	20–30 years old	–	–
	31–40 years old	1	10.00
	41–50 years old	8	80.00
	51–60 years old	1	10.00
Gender	Male	9	90.00
	Female	1	10.00
Title	Professor	2	20.00
	Associate Professor	3	30.00
	Assistant Professor	5	50.00
	Lecturer	–	–
Teaching medical students for	more than 10	2	20.00
	between 5 to 10	4	40.00
	between 2 to 5	3	30.00
	less than 2	1	10.00
The language they use in their teaching	Arabic	–	–
	English	4	40.00
	Arabic & English	6	60.00

4.2. Frequency of English language skills/sub-skills use

In this section, the results cover how frequently medical students use the four main skills/sub-skills of the English language and their important needs. Likert on a five-point scale (1 = Never, 2 = Rarely, 3 = Sometimes, 4 = Often, and 5 = Always) were used to allow the respondents to express their responses. Table 5 shows the mean and overall mean scores for the English language sub-skills for the medical students in the analysis procedures. The overall mean of the medical students takes into account the frequency of using English language skills. The most

Table 5
Medical students' responses regarding the frequency of using English skills/sub-skills

	ENGLISH LANGUAGE SUB-SKILLS	NO.	MEAN	SD	OVERALL MEAN	OVERALL SD
Reading	Reading textbooks	186	4.26	0.98	3.96	0.21
	Reading medical articles in journals	186	3.69	1.00		
	Reading medical manuals	186	3.97	1.02		
	Reading course handouts	186	4.10	1.01		
	Reading texts on the computer	186	3.76	1.20		
	Reading instructions for assignments/projects	186	3.82	1.09		
	Reading instructions for labs	186	3.88	1.10		
	Reading study notes	186	4.18	0.92		
Writing	Writing lab reports	186	3.96	1.00	3.94	0.23
	Writing assignments	186	4.02	1.11		
	Writing field-trip reports	186	3.55	1.20		
	Writing short projects	186	3.83	1.14		
	Taking notes in lectures	186	4.16	0.97		
	Writing test/exam answers	186	4.12	0.98		
Listening	Following lectures	186	4.09	1.01	4.00	0.10
	Following question/answer sessions in class	186	4.05	0.93		
	Listening to spoken presentations	186	4.06	0.93		
	Listening to instructions	186	3.96	0.96		
	Listening to instructions for assignments	186	3.84	1.08		
Speaking	Participating in discussions	186	3.90	0.98	3.77	0.13
	Asking questions in class	186	3.63	1.20		
	Giving spoken presentations	186	3.76	1.11		

frequent skill used is Listening (overall mean = 4.00), followed by Reading (overall mean = 3.96) and Writing (overall mean = 3.94). On the other hand, medical students considered Speaking the least frequent use of English language skills with a mean score (overall mean = 3.77).

More specifically, as shown in Tables 6 and 7, ESP and DM Subject Matter lecturers rated similarly across the four main skills of the English language. The overall mean of the most frequent English skills used by medical students has initially listed Writing with an overall mean of 3.92 and then followed by Listening (overall mean = 3.85 and 3.88), Reading (overall mean = 3.66 and 3.74), and Speaking (overall mean = 2.67 and 3.30). In addition, the findings showed similarities between medical students' perspectives and their ESP and DM Subject Matter lecturers regarding the frequency medical students use the English language sub-skills. A total of 10 sub-skills *reading textbooks*, *reading course handouts*, *reading study notes*, *writing lab reports*, *writing assignments*, *writing field-trip reports*, *writing short projects*, *taking notes in lectures*, *writing test/exam answers*, and *listening to instructions* were used mainly by medical students. The Kruskal-Wallis (K-W) test indicated no significant differences among the three groups of participants on the frequency of using the English language by medical students, except in speaking sub-skills such as *participating in discussions* (x^2 = 10.530; *df* = 2; p = 0.005) and *giving spoken presentations* (x^2 = 8.399; *df* = 2; p = 0.015). In addition, the Mann-Whitney U test also showed only a statistically significant between medical students and their ESP lecturers in speaking sub-skills such as *participating in discussions* (u = 92.000; z = -2.701; p = 0.007) and *giving spoken presentations* (u = 123.000; z = -2.382; p = 0.017).

The interview questions were employed in this study to seek evidence of English language target needs, including the frequency and importance of medical students. Accordingly, medical students' interview responses show that English sub-skills were used differently. Some students showed limitations between sometimes and rarely in using English sub-skills. However, medical students assumed that frequent English use could improve their necessities or weakness, such as performing better presentations and seminars. In addition, all ESP and DM Subject Matter lecturers highlighted that medical students should always use English sub-skills to perform better. The candidate's comments are summarised in the quotations below:

I sometimes use English to present and perform better presentations. [MS3E]

It is very important for me to use English because I have to do better scientific seminars. [MS1D]

I rarely use English to perform the English subskills because I don't understand how important it is. [MS1C]

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Table 6
ESP lecturers' responses regarding the frequency of using English skills/sub-skills

	ENGLISH LANGUAGE SUB-SKILLS	NO.	MEAN	SD	OVERALL MEAN	OVERALL SD
Reading	Reading textbooks	4	4.00	0.82	3.66	0.30
	Reading medical articles in journals	4	3.75	0.96		
	Reading medical manuals	4	3.50	1.73		
	Reading course handouts	4	4.00	0.00		
	Reading texts on the computer	4	3.25	0.50		
	Reading instructions for assignments/projects	4	3.75	0.50		
	Reading instructions for labs	4	3.25	0.96		
	Reading study notes	4	3.75	0.50		
Writing	Writing lab reports	4	3.75	0.96	3.92	0.40
	Writing assignments	4	4.50	0.58		
	Writing field-trip reports	4	3.25	1.26		
	Writing short projects	4	3.75	1.26		
	Taking notes in lectures	4	4.00	1.15		
	Writing test/exam answers	4	4.25	0.96		
Listening	Following lectures	4	3.75	0.50	3.85	0.29
	Following question/answer sessions in class	4	4.00	0.00		
	Listening to spoken presentations	4	3.50	1.29		
	Listening to instructions	4	3.75	0.96		
	Listening to instructions for assignments	4	4.25	0.50		
Speaking	Participating in discussions	4	2.50	0.58	2.67	0.38
	Asking questions in class	4	3.00	0.82		
	Giving spoken presentations	4	2.50	0.58		

Table 7
DM Subject Matter lecturers' responses regarding the frequency of using skills/sub-skills

	ENGLISH LANGUAGE SUB-SKILLS	NO.	MEAN	SD	OVERALL MEAN	OVERALL SD
Reading	Reading textbooks	10	4.10	0.54	3.74	0.32
	Reading medical articles in journals	10	3.10	0.94		
	Reading medical manuals	10	4.00	0.77		
	Reading course handouts	10	3.80	0.75		
	Reading texts on the computer	10	3.60	0.49		
	Reading instructions for assignments/projects	10	3.50	0.81		
	Reading instructions for labs	10	3.90	0.70		
	Reading study notes	10	3.90	0.70		
Writing	Writing lab reports	10	3.90	0.83	3.90	0.29
	Writing assignments	10	4.20	0.75		
	Writing field-trip reports	10	3.50	0.92		
	Writing short projects	10	3.60	0.92		
	Taking notes in lectures	10	4.10	0.83		
	Writing test/exam answers	10	4.10	0.94		
Listening	Following lectures	10	3.70	1.10	3.88	0.26
	Following question/answer sessions in class	10	3.60	0.80		
	Listening to spoken presentations	10	4.10	0.94		
	Listening to instructions	10	3.80	0.75		
	Listening to instructions for assignments	10	4.20	0.60		
Speaking	Participating in discussions	10	3.30	1.00	3.30	0.40
	Asking questions in class	10	3.70	0.90		
	Giving spoken presentations	10	2.90	1.51		

I always use English to perform English skills to fulfil better results. [MS2B]

For me, I often use English to perform most subskills. [MS1A]

Medical students most often use English to perform the best English sub-skills. [EL1]

Some English sub-skills are more important than others, so medical students must use English to improve these subskills for the best performance. [EL2]

I think that medical students should always use English for performing all the sub-skills because that would help to improve their main skills. [SML1]

As a medical student, he has to often practice more and more English sub-skills to perform a better presentation. [SML2]

I think that all English subskills are related so medical students must sometimes use English to perform them. [SML3]

4.3. Importance of English language skills/sub-skills

As shown in Figure 3, the participants ranked the English language skills according to their importance to medical students. The findings showed some differences in ranking the most important English language skills. The medical students ranked Reading (overall mean = 3.25) and Listening (overall mean = 3.17) as the most important, whereas the ESP and DM Subject Matter lecturers ranked Writing (overall mean = 3.25 and 3.10) and Speaking (overall mean = 3.00 and 3.70), respectively, as the most important skill to medical students from their point of view.

Accordingly, the K-W test showed a statistically significant difference among the perspectives of the three respondents about the medical students' four main English language skills ranking in Listening (x^2 = 25.544; *df* = 2; p = 0.000), Speaking (x^2 = 17.628; *df* = 2; p = 0.000), Reading (x^2 = 31.065; *df* = 2; p = 0.000) and Writing (x^2 = 63.018; *df* = 2; p = 0.000). In regard to rating the importance of Listening and Writing, there were only statistically significant differences between medical students and their ESP lecturers (u = 86.500; z = -2.907; p = 0.004) and (u = 45.500; z = -4.443; p = 0.000), respectively. Additionally, as analysed by the Mann-Whitney test, there were statistically significant differences between the medical students and their DM Subject Matter lecturers in rating the main English language skills such as Listening (u = 251.500; z = -4.273; p = 0.000), Speaking (u = 363.000; z = -3.933; p = 0.000), Reading (u = 98.000; z = -5.360; p = 0.000) and Writing (u = 47.500; z = -7.111; p = 0.000).

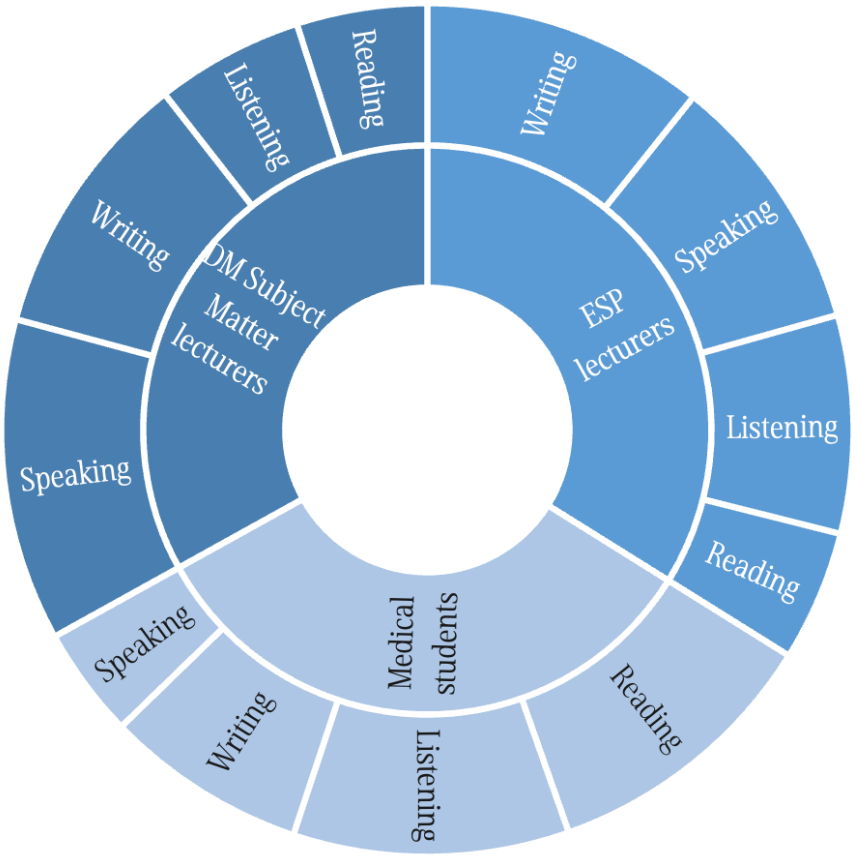

Figure 2. Medical students', ESP lecturers' and DM Subject Matter lecturers' responses regarding the ranking of English language main skills

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Table 8
Medical students', ESP lecturers and DM Subject Matter lecturers' responses regarding the ranking of English language main skills

	ENGLISH LANGUAGE SUB-SKILLS	NO.	MEAN	SD	OVERALL MEAN	OVERALL SD
Reading	Reading textbooks	186	4.51	0.72	4.14	0.22
	Reading medical articles in journals	186	4.04	0.87		
	Reading medical manuals	186	4.10	0.88		
	Reading course handouts	186	4.25	0.88		
	Reading texts on the computer	186	3.80	1.07		
	Reading instructions for assignments/projects	186	4.04	0.89		
	Reading instructions for labs	186	4.05	0.97		
	Reading study notes	186	4.32	0.84		
Writing	Writing lab reports	186	4.05	1.00	4.08	0.14
	Writing assignments	186	4.08	0.96		
	Writing field-trip reports	186	3.88	1.01		
	Writing short projects	186	3.99	0.94		
	Taking notes in lectures	186	4.19	0.95		
	Writing test/exam answers	186	4.26	0.84		
Listening	Following lectures	186	4.25	0.86	4.13	0.11
	Following question/answer sessions in class	186	4.22	0.92		
	Listening to spoken presentations	186	4.11	1.00		
	Listening to instructions	186	4.09	0.86		
	Listening to instructions for assignments	186	3.98	0.92		
Speaking	Participating in discussions	186	4.10	0.97	4.06	0.09
	Asking questions in class	186	3.96	0.97		
	Giving spoken presentations	186	4.13	0.94		

Table 9
ESP lecturers' responses regarding the importance of English language skills/sub-skills for medical students

	ENGLISH LANGUAGE SUB-SKILLS	NO.	MEAN	SD	OVERALL MEAN	OVERALL SD
Reading	Reading textbooks	4	4.50	0.58	4.47	0.28
	Reading medical articles in journals	4	4.25	0.96		
	Reading medical manuals	4	4.00	0.00		
	Reading course handouts	4	4.25	0.96		
	Reading texts on the computer	4	4.50	0.58		
	Reading instructions for assignments/projects	4	4.75	0.50		
	Reading instructions for labs	4	4.75	0.50		
	Reading study notes	4	4.75	0.50		
Writing	Writing lab reports	4	4.50	1.00	4.38	0.21
	Writing assignments	4	4.00	1.15		
	Writing field-trip reports	4	4.50	0.58		
	Writing short projects	4	4.25	0.96		
	Taking notes in lectures	4	4.50	0.58		
	Writing test/exam answers	4	4.50	1.00		
Listening	Following lectures	4	4.25	0.50	4.20	0.33
	Following question/answer sessions in class	4	4.50	0.58		
	Listening to spoken presentations	4	4.50	0.58		
	Listening to instructions	4	4.00	1.41		
	Listening to instructions for assignments	4	3.75	1.26		
Speaking	Participating in discussions	4	4.00	1.15	4.08	0.14
	Asking questions in class	4	4.25	0.50		
	Giving spoken presentations	4	4.00	1.15		

Besides, all participants were involved in rating the importance of 22 items of English language sub-skills to medical students. The Likert scale used in this section of the questionnaire rates from 5 *very important*, 4 *important*, 3 *somewhat important*, 2 *important*, to 1 *not important*. The medical students' mean and overall mean scores regarding the importance of English language sub-skills are shown in Table 8. For instance, the medical students' results concerning the importance of Reading sub-skills showed that the very important sub-skill was *reading textbooks* (mean = 4.51), whereas *reading texts on the computer* (mean = 3.80) was found to be somewhat important.

The findings presented in Table 9 showed that the ESP lecturers perceived that all skills are very important. In particular, the overall mean of the most frequently used skills was listed, respectively, Reading (overall mean = 4.47), Writing (overall mean = 4.38), Listening (overall mean= 4.20), and Speaking (overall mean = 4.08). The findings explicitly demonstrated that the ESP lecturers perceived Reading sub-skills (i.e., *reading instructions for assignments/projects, reading instructions for labs,* and *reading study notes*) to be very important sub-skills with the same mean score of 4.75.

Table 10 showed that the DM Subject Matter lecturers perceived the importance of English language sub-skills to medical students. The overall means differed from the findings obtained from medical students and ESP lecturers. Listening skills (overall mean = 4.46) received the highest score, while Reading skills (overall mean = 4.31) scored the least. Speaking and Writing skills scored in the middle, and the overall means were 4.37 and 4.32, respectively.

The findings on the importance of English Language sub-skills showed the same agreement between medical students' perspectives and their ESP and DM Subject Matter lecturers, such as *reading textbooks, reading course handouts, reading study notes, taking notes in lectures, writing test/exam answers, following lectures, following question/answer sessions in class, listening to spoken presentations, participating in discussions* and *giving spoken presentations*. Almost all English four sub-skills have shown high importance for medical students, except *reading texts on the computer, writing field trip reports,* and *listening to instructions for assignments*, which students may rarely use. In addition, there were differences in the importance of the four main English language skills between medical students and their ESP and DM lecturers. Reading was the most important while Speaking was the least perceived by medical students and their ESP lecturers. In contrast, the DM Subject Matter lecturers perceived Listening as the most important skill for medical students, and the other skills come next in the order of Speaking, Writing, and Reading.

Table 10
DM Subject Matter lecturers' responses regarding the importance of English language skills/sub-skills for medical students

	ENGLISH LANGUAGE SUB-SKILLS	NO.	MEAN	SD	OVERALL MEAN	OVERALL SD
Reading	Reading textbooks	10	4.80	0.40	4.31	0.27
	Reading medical articles in journals	10	4.30	0.78		
	Reading medical manuals	10	4.50	0.50		
	Reading course handouts	10	4.20	0.75		
	Reading texts on the computer	10	3.90	0.83		
	Reading instructions for assignments/projects	10	4.30	0.78		
	Reading instructions for labs	10	4.10	0.70		
	Reading study notes	10	4.40	0.66		
Writing	Writing lab reports	10	4.10	0.70	4.32	0.21
	Writing assignments	10	4.20	0.75		
	Writing field-trip reports	10	4.10	0.54		
	Writing short projects	10	4.50	0.50		
	Taking notes in lectures	10	4.40	0.49		
	Writing test/exam answers	10	4.60	0.49		
Listening	Following lectures	10	4.40	0.49	4.46	0.05
	Following question/answer sessions in class	10	4.40	0.49		
	Listening to spoken presentations	10	4.50	0.50		
	Listening to instructions	10	4.50	0.67		
	Listening to instructions for assignments	10	4.50	0.50		
Speaking	Participating in discussions	10	4.30	0.78	4.37	0.06
	Asking questions in class	10	4.40	0.66		
	Giving spoken presentations	10	4.40	0.49		

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Moreover, most participants emphasised the importance of English in meeting the student's demands. Apart from the requirement of English for academics, numerous interview respondents stated that English is increasingly important in various sectors. Initially, the medical students' responses during the interviews show that most medical students presume that the English language course helps them to improve their necessities in English language skills up to some limit. However, throughout the interview sessions, the interviewees assessed the priorities among the language skills differently. In addition, most medical students, for example, ranked the importance of language skills in the following order of Reading and Listening followed by Speaking and Writing, whereas the ESP and Subject Matter lecturers considered Writing and Speaking are the most important skills. Some of their comments are shown in the quotations below:

I think all English language skills are very important to medical students, but ... can be ranked as reading, listening, speaking and writing. [MS5E]

I believe that Writing and Speaking are more important skills for medical students in order to pass their exams with good marks, listening and reading come next. [EL1]

Speaking is more important, and writing is important too. [SML4]

Consistent with the results of the questionnaires, the respondents again emphasised the important role of English language sub-skills differently. The following quotations highlight some of their responses:

Well, I think the sub-skills in English medical materials are the main important things that reflect the English language need in human medicine majors. For example, reading textbooks, articles, and updates in medical fields is important. This is regarding reading. Also, writing, study notes for assignment tests and exams, participating in medical discussions and seminars, and asking questions regarding speaking. Also, listening to spoking presentation and instructions. Listening to instructions for assignments, listening to medical professors, taking experience notes from them, and so on. [MS2E]

It is very important especially since medical students perform scientific seminars during the study, so they must be able to master the sub-skills to present a complete and wonderful presentation. [MS1D]

In my opinion, medical students must read textbooks and course handouts, lab instructions, and exam questions, usually written in English. They are also obliged to take notes in their lectures, write their assignments, and answer exams in English. Also, I think students must improve their listening and speaking skills to communicate easily with their lecturers. [EL1]

See, when it comes to language, you cannot be professional if you are not practising every day. So, medical students must listen to scientific videos, watch movies, listen to songs, and read more and more books. To write you have to read; to speak you have to listen. So, these sub-skills are very important for any language. [SML1]

The questionnaires and interviews indicated a match and mismatch of responses for the most important skills between medical students and their ESP, mainly in Reading and Speaking skills, as well as with the DM Subject Matter lecturers who emphasised and agreed with medical students that the least important of Writing skills.

5. DISCUSSION

This study examined the appropriacy of the current ESP course to the English target needs of the medical students at Ibb University in Yemen using a triangulated mixed method needs analysis approach. In other words, medical students at IU have to acquire the four English skills/sub-skills to function effectively in the target situation. The ESP courses are only designed based on accessible materials. The needs analysis is not practised, and the students' needs are neglected, as Al-Kadi (2018) mentioned. Al-Kadi (2018) also indicated that ESP is based on general purposes but not specific needs. Grammar, vocabulary, reading comprehension, and note memorisation are the core of these programmes. Current studies in Indonesia and Hong Kong indicated that medical students desire for ESP courses to focus on the target needs of their academic and professional lives with emphasis on four language skills (Sikumbang & Dalimunte, 2021; Pun & Onder-Ozdemir, 2023). In addition, Trujeque-Moreno et. al (2021) stated that revising ESP programmes in Mexican context is crucial to improve student motivation to use English in their professional lives. Thus, developing an ESP course without considering the students' needs is probably doomed to failure. Consequently, learners struggle to meet the profession's expectations in the target situation. The inappropriate ESP curriculum primarily affects students' academic preparation, thereby affecting their workplace success. However, the current ESP courses at the Yemeni universities should improve to meet the students' English language needs and perspectives.

The findings on the frequency of English language use and the importance of English skills to the students are analysed to define the medical students' English language necessities. The findings showed some differences in which medical students believed the most frequent skills used are Listening and Reading, while their ESP and DM Subject Matter lecturers believed that medical students use Writing and Listening. In this regard, a similar agreement finding was found in research studies of Kavaliauskienė and Užpalienė (2003) on a tertiary level and Liu et al. (2011) on EFL college students. Thus, it is important to mention the difference between how students use a language in a specific situation (internal needs) and how they study the language for a short time and pass exams (external needs) to recognise how various internal and external factors complicate the issue of interrelated necessities, lacks and wants.

Alsamadani (2017) uses the same framework, which could analyse students' needs from the first step to the target situation. The priority given to Listening appears to be mainly associated with the context that these medical students study, where English is the medium of instruction. Thus, the medical students'

viewpoint needs for Listening skills is meaningful in that they need to listen to more other professionals at meetings, conferences, or training courses, in which active and effective listening has a significant role. Several research studies conducted in similar contexts also show that faculty members considered Listening as one of the most important skills having a role and importance in medical education (Hwang, 2011; Hwang & Lin, 2010; Kayaoğlu & Akbaş, 2016).

Medical students must be furnished with knowledge and information on their major and increase their competitive job search ability Çelik (2017). According to Wahi et al. (2013), *'prospective employers expect fresh graduates to be competent in their disciplines area in all modes of the English language as well as socially and professionally competent in speaking and listening*' (Wahi et al., 2013, p. 109). Students must improve their communicative speaking skills for everyday situations and many professions in future (Luana et al., 2021). This was also supported by a study on medical students in Sudan that emphasised on speaking and listening skills (Ibrahim, 2020). Sattarpour and Khalili (2019) were also of consensus that improvement should be based on cooperation between English language instructors and medical content instructors in the context of Iran.

A recent study by Al-Hassaani and Qaid (2021) added to the Yemeni EFL learners of the second-year level at Aden University to identify a classroom speaking problem. The findings concluded that students need enough practice time for speaking skills. The study could help ESP designers define educational tools to be implemented to match the learners' needs in the future. However, the findings also mismatch with other studies, e.g., Faraj (2015) and Mohammed and Nur (2018) that reported that speaking skills are the most significant for medical students and are used as criteria for evaluating language proficiency. Therefore, contextual factors such as the gap between two languages, the proficiency level of a student's native dialect, the knowledge of a second language, and the dialect of the native language spoken by the students, the relative status of the students' language in the community, and societal attitudes toward the students' native language, all these factors may affect students to speak English actively and frequently (Henter, 2014).

The findings of this study are in harmony with previous studies done by Moiinvaziri (2014), Akbari (2016), Vahdany and Gerivani (2016), Çelik and Topkaya (2018), and Karimnia and Khodashenas (2018) that giving reading the most important English language skills/sub-skills in terms of use, context and ability by medical students.

As conceived in Giddens's theory of structuration, social practices improve, expand and eventually die away over time concerning the learners' needs and the demands of their day-to-day existence (Basturkmen, 2014). The current study only considers structuration and constructivism theories which were in line with Basturkmen's (2010) view.

The theory of structuration could be useful to explain the skills that medical students need to function effectively in their target societies, academically and in future job fields. The ESP world might be viewed as a social group. It is formed and maintained by various recognised and repeated practices in designing courses and learning content.

Social constructivism has been regarded as a dominant language learning theory; as stated by Hyland (2019, p. 345), social constructivism is *'the mainstream theoretical perspective in ESP and EAP research today*'. Thus, constructivism is the educational approach underpinning the methodology in exploring the English language needs analysis (Akyel & Ozek, 2010). The questionnaires and interviews in this study addressed the importance and effective use of learning strategies related to English language skills. The active involvement of medical students in giving their perspectives on the English language input they receive and the tasks offered to them is another implication of taking a constructivist perspective on the English language needs analysis research.

Hutchinson and Waters (1987) mentioned that the purpose of an ESP course is to facilitate students to perform effectively in a target situation in which they will use the English language they are learning. If learning the English language is to improve communication, servicing, and writing papers, then sufficient training classes to meet such needs should serve the purpose. The power of needs analysis is collecting and exploiting data from different perspectives (Belcher, 2009; Frendo, 2005). The needs analysis of English language skills can include three main types of need assessment: target needs, current needs, and future needs (Czabanowska et al., 2007). However, the value of needs analysis is in designing and developing suitable ESP curriculums to meet the student's academic requirements (Mehrdad, 2012; Romanowski, 2017). Therefore, the needs analysis is a crucial step to collect and examine information about the current situation to understand the gap in the learners' existing knowledge and skills, contributing to the ESP course development.

6. CONCLUSION

The current English course offered to medical students at IU does not meet their English language target needs. However, the study revealed that medical students at IU are not qualified enough to use the English language in their major courses, presentations and practices. The current NA research was done to produce information that might be used to build an effective English language course (ESP course) that would suit the needs of medical students. Therefore, a match or mismatch between the perspectives of medical students and their ESP and DM Subject Matter lecturers on one side and between the medical students' needs and the skills promoted or developed by the current ESP course on the other side about the medical students' lack of using the English language should urgently need addressing to fill the gap in this research.

The current ESP course should be improved based on the student's English language target needs identified by this study. This will fulfil students' needs and wants as the current ESP course does not meet their needs and does not enable them to

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use English listening, speaking, reading and writing skills effectively. Next, Task-Based Language Teaching (TBLT) and Problem-Based Learning (PBL) within the ESP teaching approach should be incorporated to design speaking and writing activities with a communicative purpose to support student learning. In addition, Communicative Language Teaching (CLT) method that is student-centred could be considered to improve listening and reading skills and successfully fulfil their academic and professional lives' needs. Finally, a major curriculum restructuring can involve introducing EGP courses for the first-year medical students and ESP/EMP courses for seniors.

This research focused only on needs analysis in evaluating ESP course designed for medical students with a small group of samples. Similar research should be carried out at more research sites involving a bigger pool of sample size. Further research, especially needs analysis, should be considered every two to three years to investigate graduate medical students' needs after graduation. This will allow universities to review their ESP curriculum and align it to the needs of the workplace. In addition, research can consider experimental design to examine the revised ESP curriculum focusing on individual language skills. Furthermore, the learning needs of the graduates should be the core of the investigation in identifying student motivation, attitude, suitability of teaching methods, as well as teaching and learning styles and strategies.

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