

## English for Medical Purposes: An Investigation into Medical Students' English Language Needs

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### Abstract

This study aims at investigating the Medical students' English language needs as the first step for designing an alternative curriculum for teaching English for Medical Purposes (EMP). It also tries to examine if the needs of medical students are perceived differently by stakeholders in medical sciences. For so doing, a structured questionnaire was developed and distributed among 282 Medical Students, 12 instructors, and 15 practitioners studying and working at Birjand University of Medical Sciences, Iran. The collected data were analyzed by SPSS using statistical tests of Mann-Whitney U and Kruskal-Wallis. The findings indicated that medical students need to be competent enough in all four language skills, considering the demanding nature of their profession in the future. They ranked the importance of language skills like reading, writing, speaking, and listening, respectively. Besides, the results of four Kruskal-Wallis tests indicated a statistically significant difference among the responses of the three groups regarding the importance of the subcomponents of speaking and listening skills. Six follow-up post hoc analyses showed that the differences lay between medical students and practitioners. The *findings are discussed and the implications for policy and practice are made.*

**Keywords:** English for specific purposes, English for medical purposes, needs analysis, medical students

## 1. Introduction

English for Specific Purposes (ESP) emerged in the late 1960s (Hutchinson & Waters, 1987). It is mainly about learning and teaching English as an additional language in special fields and domains (Paltridge & Starfield, 2013). The main reason for the emergence of ESP was the recognition that learners have different needs that should be satisfied through a meticulous analysis of these needs and then designing teaching materials. Talking about the trends causing the emergence of ESP, Hutchinson, and Waters (1987) mentioned: “the demands of a Brave New World”, “a revolution in linguistics”, and “focus on the learner” as the three main developments underlying the emergence of ESP. As they put it, after the Second World War, there was an expansion in the areas of science, technology, and economy worldwide in which the United States had a pivotal role. This necessitated learning English for people not for fun or pleasure, but to satisfy their needs (Hutchinson & Waters, 1987).

The second development stimulating the emergence of ESP was the change of focus in linguistics from studying the ‘language usage’ or teaching grammar to ‘language use’ which means how language is actually used in real communication. This development, according to Hutchinson and Waters (1987) made awareness of the differences in the English language needed for different fields of study. Therefore, “Tell me what you need English for and I will tell you the English that you need” became the bottom line of ESP (Hutchinson & Waters, 1987, p. 8). The third factor influencing the development of ESP was the changes in Educational Psychology which resulted in the replacement of the teacher-centered approach by learner-centered approach (Hutchinson & Waters, 1987). As a result, more attention is expected to be paid to students’

needs and interests because this can increase their motivation to learn the language.

While at the beginning ESP was mostly concerned with technology and commerce (Benesch, 2001), it has been gradually expanded to include other areas such as English for occupational purposes (EOP), English for academic purposes (EAP), English for vocational purposes (EVP), English for business purposes (EBP), English for legal purposes (ELP), English for sociocultural purposes (ESCP), and English for medical purposes (EMP) (Belcher, 2009).

Although learning English as the international language is significant for all areas of science and technology, it seems it is more important for students majoring in medical sciences not only because almost all of their sources are in English, but also because the sources are changing very fast and students should update their knowledge very soon so that they can be more effective practitioners in the future. Therefore, due attention should be paid to make EMP courses at medical universities as effective as possible.

However, ESP courses offered in Iranian universities were perceived not to be very effective (Atai & Nazari, 2011). One of the main reasons for the ineffectiveness is that these courses “are not designed systematically and coherently as they are not research-based” (Atai & Nazari, 2011, p. 38). Furthermore, the courses are not based on clearly identifying students’ needs, and designing the teaching materials accordingly (Atai & Nazari, 2011). Therefore, identifying students’ needs, as one of the main steps in designing the course syllabus and determining the teaching materials, is of paramount importance. Moreover, as mentioned by Malmir and Bagheri (2019) we have both ESP instructors’ and learners’ attitudes about English for specific purposes and the learning and target needs of students, a research gap that still is comparatively under-researched.

## 2. Review of Literature

The most significant feature of ESP is that the courses should be designed in a way that they can meet students' needs, and therefore, the issue of learners' needs is at the heart of ESP (Paltridge & Starfield, 2013). Many researchers have referred to the significance of needs analysis in designing ESP courses (Bachman & Palmer, 1996; Dudley-Evans & St John, 1998; Hyland, 2006; Long, 2005; Richards, 1990, 2001). Even some scholars such as McDonough (1984) believe that "The idea of analyzing the language needs of the learner as a basis for course development has become almost synonymous with ESP" (p. 29). Similarly, Strevens (1977) maintains that ESP courses are those in which the "content and aims of the teaching are determined by the requirements of the learner rather than by external factors such as general educational criteria" (p. 146).

Dudley-Evans and St John (1998) defined needs analysis as "professional information about the learners: The tasks and activities learners are/will be using English for [...] target situation analysis and objective needs" (p. 125). Similarly, Richards, Platt, and Platt (1992), defined needs analysis as "the process of determining the needs for which a learner or group of learners requires a language" (p. 242). In a more comprehensive definition, Hyland (2006) defined needs as "actually an umbrella term that embraces many aspects, incorporating learners' goals and backgrounds, their language proficiencies, their reasons for taking the course, their teaching and learning preferences, and the situations they will need to communicate in" (p. 76).

Learners' needs can be divided into "target needs" and "learning needs" (Hutchinson & Waters, 1987; Robinson, 1991). Target needs refer to what the learners are expected to do in the target situation after the end of their course. Learning needs are defined as "...what the learner needs to do to actually acquire the language" (Robinson, 1991, p. 7). Therefore, ESP teachers should

not only pay attention to what the learners should be able to do after the course but also they should be aware of the learners' styles and strategies and the effective ways that they can learn the language.

The previous studies have tried to identify students' needs in different branches of science such as Business Administration (Mahdavi Zafarghandi et al., 2014), Economics (Lombardo, 1988), Law (Esfandiari, 2015), Civil Engineering (Kaewpet, 2009), Mechanical Engineering (Malmir & Bagheri, 2019), and Computer Engineering (Shoja, 2008). Although lagging behind other disciplines, the review of literature for this study indicates some studies that addressed students' needs in medical contexts (Atai & Nazari, 2011; Chia et al., 1998; Javid, 2011; Mazdayasna & Tharirian, 2008; Shi et al., 2001; Vahdany & Gerivani, 2016).

For example, Atai and Nazari (2011) investigated the reading comprehension needs of EAP students majoring in Health Information Management (HIM). The participants were 15 content area teachers, 10 EAP teachers, 15 graduate students, and 180 undergraduate students from 3 Iranian universities. Using different instruments for data collection including four questionnaires, semi-structured interviews, and observations, the researchers concluded that some features such as 'skimming texts', 'using bilingual general dictionaries', 'scanning texts', 'knowledge of HIM terminologies', 'guessing meanings of words', and 'understanding main ideas' were considered by the participants to be significant in students' success.

Furthermore, Mazdayasna and Tharirian (2008) investigated the language needs of students majoring in nursing and midwifery in Iran. The participants were 681 undergraduate students, 168 subject matter instructors, and 6 EFL teachers. The findings indicated that over one-third of the students were not satisfied with the number of students in each class, the textbook content, and the

method of teaching and evaluation used. Also, the subject matter teachers were not satisfied with the students' language skills. The authors concluded that the ESP course cannot completely prepare the students to begin their studies mainly because it does not take into consideration the learners' language needs and their level of language proficiency adequately.

In another study, Vahdany and Gerivani (2016) tried to identify the language needs of medical students and general practitioners at Guilan University of Medical Sciences. The participants were 110 students, 40 general practitioners, 3 EFL instructors, and 12 subject-matter instructors. The findings indicated that the participants ranked reading as the most important skill followed by writing, listening, and speaking skills respectively.

Furthermore, Chia et al. (1998) examined the perception of 394 medical college students and 20 faculty members toward the English language needs of medical students in Taiwan. The participants' opinions were asked about the significance of the English language in students' studies and their future careers, basic English language skills needed in the freshman English course, and suggestions for developing an English language curriculum. The findings indicated that the participants believed that the English language is an important need for academic life and future career of medical students. Besides, the students asked for a basic English language course at the freshman level with a focus on improving students' listening which was perceived as the most important language skill. Furthermore, the students and faculty members wanted more than one year of English language study.

In another study in the context of Saudi Arabia, Javid (2011) tried to explore the linguistic needs of undergraduate students studying at the College of Medicine and Medical Sciences of Taif University. The researcher used multiple methods for data collection such as questionnaires, interviews, and observation.

The findings indicated that the students did not have the required English language proficiency, and among the language skills, they needed reading and speaking more.

In addition, Staples (2015) examined the linguistic needs of internationally educated nurses (IENs) working in the USA by comparing their interactions with patients with those of the USA nurses (USNs) who were born and raised in the USA. One hundred and two nurse-patient interactions (52 IENs and 50 USNs) were collected and analyzed for lexico-grammatical features. The findings indicated that USNs used particular lexico-grammatical features such as past tense and different stance features (e.g., certainty adverbs such as maybe and kind of) more frequently which can play an important role in creating rapport with patients and in providing more patient-centered interactions.

Finally, Çelik (2017) examined the language needs of undergraduate medical students in Turkey. For so doing, the researcher asked 88 undergraduate students to complete a questionnaire that aimed to assess the students' needs for four macro language skills; listening, speaking, reading, and writing. Results indicated that the participants believed that reading skill is the most important and needed language skill for them followed by speaking, writing, and listening skills. The author concluded by saying that the overemphasis on the reading skill is because the learners are at the stage that they need to acquire more knowledge about their major.

However, despite these studies that have been conducted, one can notice that the EMP courses in many universities in Iran are not still very effective. One reason is that the courses are not based on a comprehensive needs analysis. Having taught English for more than 5 years to the students of Medical Sciences in Birjand University of Medical Sciences by the first author of this paper, we aim to meticulously explore the medical students' English language needs. The

paper is part of a Ph.D. dissertation project, and the results will form a basis for designing an alternative curriculum for teaching English for Medical Purposes aiming to increase the teaching effectiveness and to satisfy the medical students' English language needs. Therefore, the following questions will guide this study:

- 1) What are the medical students' English language needs?
- 2) Are there any significant differences among the perceptions of medical students, instructors, and practitioners about the medical students' English language needs?

### 3. Method

#### 3.1. Participants

The sample of the study included 282 medical students, 15 medical practitioners (physicians working in the hospitals), and 12 Medical instructors from the Birjand University of Medical Sciences. The participants were selected based on convenience sampling. Table 1 shows the profile of the participants.

**Table 1**

*The Profile of the Study Participants*

	N	Gender		Age Mean
		Male	Female	
Medical students	282	121	161	23
Medical instructors	12	8	4	41
Medical practitioners	15	11	4	45



### ***3.2. Design of the Study***

In this study, two types of triangulation were used. Method triangulation was done for developing the questionnaire by doing content analysis, classroom observation, and interviews. Participant triangulation was done by including three groups of participants namely, medical students, instructors, and practitioners in the study.

### ***3.2. Instrumentation***

To develop the questionnaire, firstly, the contents of the EMP needs analysis scales, which were developed and used in the previous studies, were carefully studied. Secondly, 12 Medical practitioners, 8 Medical instructors, and 22 students were interviewed to know about their perceptions of the medical students' English language needs. Furthermore, 7 EMP classes were observed and recorded. Banking on these resources, the first draft of the questionnaire was developed by juxtaposing the information gathered from the sources and removing the redundant items. The questionnaire had 4 main sections. The first sections asked the participants' demographic information. The second section, including four items, aimed to explore the participants' opinions regarding the importance of major language skills, namely speaking, writing, reading, and listening for medical students. The third section asked the participants' opinions about 32 items about the importance of each language skill for medical students. Most of the items listed in this section of the questionnaire were adapted and modified from a questionnaire developed by Mazdayasna and Tahririan (2008) in their study on ESP needs of nursing and midwifery students. The participants were asked to rate their perceptions about the importance of the listed English language needs on a Likert Scale of 6 from "Not at all" to "To a very great extent".

### ***3.3. Reliability and Validity of the Questionnaire***

For content validity, the questionnaire was given to 10 content instructors and 5 English instructors to check the content, clarity, format, and relevance of the items. Accordingly, some modifications were made. To obtain the reliability of the questionnaire, a pilot study was done by administering the questionnaire to 78 medical students studying at the Birjand University of Medical Sciences. The Cronbach's alpha reliability of the 36-item questionnaire was .79.

### ***3.4. Data Analysis Procedure***

The results of the questionnaire were analyzed quantitatively using descriptive statistics for the first research question. To answer the second research question, the Kruskal-Wallis Test and Mann-Whitney U Test were used.

## **4. Results**

### ***4.1. Medical Students' English Language Needs***

As indicated in Table 2, all four language skills were perceived by the participants as important. Based on the means, all three groups of participants rated Reading (students 5.15, instructors 5.66, practitioners 5.46) as the most important language skill followed by Writing (students 4.85, instructors 4.50, practitioners 4.53), Speaking (students 4.71, instructors 4.33, practitioners 4.13) and Listening (students 4.51, instructors 4.25, practitioners 4.06).

**Table 2***Significance of Each Major Language Skill*

Language Skills	Participants	Mean	SD	N
1. Speaking	Students	4.71	1.37	282
	Instructors	4.33	1.07	12
	Practitioners	4.13	1.18	15
2. Listening	Students	4.51	1.47	282
	Instructors	4.25	1.13	12
	Practitioners	4.06	1.09	15
3. Writing	Students	4.85	1.47	282
	Instructors	4.50	1.16	12
	Practitioners	4.53	1.24	15
4. Reading	Students	5.15	1.15	282
	Instructors	5.66	.49	12
	Practitioners	5.46	.51	15

In the next part of the questionnaire, the participants were asked to rate the 32 items about the English language needs of medical students in the four language skills. The results are presented in Tables 4, 5, 6, and 7. As indicated in Table 3, the means for all items about listening skill were more than 3.50 which means the participants consider them as important. However, listening to 'medical lectures' and 'multimedia resources' were perceived to be more important.

**Table 3***Listening Skills Needs*

Listening Skill Sub-components	Participants	Mean	SD	N
1. listening to conversations on general topics	Students	4.43	1.53	282
	Instructors	4.00	.96	12
	Practitioners	3.60	1.29	15
2. listening to medical lectures	Students	4.49	1.42	282
	Instructors	4.25	1.28	12
	Practitioners	3.80	1.14	15
3. listening to presentations in class	Students	4.26	1.66	282
	Instructors	3.83	1.19	12
	Practitioners	3.53	1.06	15
4. listening to medical multimedia resources	Students	4.70	1.35	282
	Instructors	4.35	1.07	12
	Practitioners	4.26	.96	15
5. listening to instructions in real situations (hospitals, exams, etc.)	Students	4.41	1.56	282
	Instructors	3.91	1.31	12
	Practitioners	3.86	1.24	15
6. listening to students, colleagues, and patients	Students	4.34	1.51	282
	Instructors	4.16	1.02	12
	Practitioners	3.60	1.24	15

As indicated in Table 4, 'speaking at seminars, meetings, and class presentations' was perceived by the participants to be the most important skill for Medical students to possess in this domain.

**Table 4***Speaking Skills Needs*

Speaking Skill Sub-components	Participants	Mean	SD	N
7. participating in academic discussions	Students	4.70	1.54	282
	Instructors	4.08	1.24	12
	Practitioners	3.73	1.38	15
8. speaking at seminars, meetings, and class presentations	Students	4.87	1.25	282
	Instructors	4.91	.79	12
	Practitioners	4.53	.91	15
9. asking and answering questions in the class	Students	4.30	1.69	282
	Instructors	3.41	.90	12
	Practitioners	3.26	.70	15
10. asking and answering questions in seminars	Students	4.59	1.51	282
	Instructors	4.08	1.37	12
	Practitioners	4.06	1.16	15
11. talking with professionals in real situations	Students	4.78	1.29	282
	Instructors	4.41	.90	12
	Practitioners	4.13	1.06	15
12. talking with lecturers, students, and patients	Students	4.63	1.38	282
	Instructors	3.83	1.33	12
	Practitioners	3.66	1.17	15
13. Carrying out general conversation (phone call, invitation, greetings, etc.)	Students	4.50	2.14	282
	Instructors	4.75	1.13	12
	Practitioners	3.86	.74	15

Table 5 summarized the participants' answers to the items about the reading skill. As shown, 'reading medical textbooks' was perceived as the most important item followed by 'reading articles in professional journals'.

**Table 5***Reading Skills Needs*

Reading Skill Sub-components	Participants	Mean	SD	N
14. reading medical textbooks	Students	5.11	1.09	282
	Instructors	5.58	.52	12
	Practitioners	5.46	.63	15
15. reading articles in professional journals	Students	4.48	1.23	282
	Instructors	4.58	1.44	12
	Practitioners	4.93	.96	15
16. reading medical reports	Students	4.58	1.50	282
	Instructors	4.25	1.20	12
	Practitioners	4.40	1.35	15
17. reading English newspapers and magazines	Students	4.12	1.43	282
	Instructors	3.41	.90	12
	Practitioners	3.66	.81	15
18. reading texts on the Internet	Students	4.45	1.48	282
	Instructors	4.00	1.20	12
	Practitioners	4.13	.91	15
19. reading clinical laboratory reports	Students	4.31	1.41	282
	Instructors	3.91	.99	12
	Practitioners	4.06	.88	15
20. reading instructions for patient care	Students	4.29	1.40	282
	Instructors	3.83	.93	12
	Practitioners	3.86	1.18	15
21. reading doctor's prescriptions	Students	4.36	1.45	282
	Instructors	4.00	1.04	12
	Practitioners	4.13	1.06	15
22. reading general books	Students	4.28	1.41	282
	Instructors	3.66	.88	12
	Practitioners	3.86	.83	15

The participants' answers about the subcomponents of the writing skill are shown in Table 6. As indicated in the Table, the means for all items were more than 3 meaning that the participants perceived them as important. However,

item 27, 'writing articles for medical journals' was perceived to be the most important skill in this domain.

**Table 6**

*Writing Skills Needs*

Writing Skill Sub-components	Participants	Mean	SD	N
23. taking lecture notes	Students	4.03	1.42	282
	Instructors	3.33	.98	12
	Practitioners	3.13	.99	15
24. taking notes from textbooks	Students	4.07	1.41	282
	Instructors	3.91	.79	12
	Practitioners	3.55	.83	15
25. writing a paper for oral presentation	Students	4.23	1.38	282
	Instructors	4.16	.83	12
	Practitioners	4.06	.70	15
26. writing term papers	Students	4.18	1.37	282
	Instructors	4.00	.73	12
	Practitioners	3.73	.88	15
27. writing articles for medical journals	Students	4.82	1.23	282
	Instructors	4.91	.51	12
	Practitioners	4.60	.63	15
28. writing medical reports	Students	4.55	1.38	282
	Instructors	4.75	.75	12
	Practitioners	4.20	.67	15
29. writing case report	Students	4.37	1.40	282
	Instructors	4.50	.67	12
	Practitioners	3.93	.70	15
30. writing medical prescriptions	Students	4.30	1.31	282
	Instructors	4.25	.75	12
	Practitioners	4.06	.79	15
31. writing instructions to patients	Students	4.25	1.24	282
	Instructors	3.91	.66	12
	Practitioners	3.73	.70	15
32. writing for practical purposes (email messages, letters, etc.)	Students	4.20	1.36	282
	Instructors	3.91	.79	12
	Practitioners	3.66	.97	15

To examine if the medical students' needs (in the 32 subcomponents of the four language skills) differ according to the ideas of the three groups of participants, namely medical students, instructors, and practitioners, and as the data were not normal, Kruskal-Wallis Test was run. The results of the descriptive and inferential statistics are presented in Table 8 and Table 9.

As indicated in Table 7, in all four language skills, medical students had the highest rank (Listening 159.04, Speaking 160.51, Reading 157.91, and Writing 157.35). The mean ranks describe the direction of the differences between these three groups, showing which one is higher. In order to examine whether the differences among the mean ranks among the groups were statistically significant, four Kruskal-Wallis Tests were run. The results are presented in Table 8.

**Table 7**

*Results of Descriptive Statistics for Kruskal-Wallis Test*

Group	N	Mean Rank for each language skill			
		Listening	Speaking	Reading	Writing
Medical students	282	159.04	160.51	157.91	157.35
Medical instructors	12	125.17	109.71	114.67	145.54
Medical practitioners	15	103.00	87.57	132.47	118.47
Total	309				

As indicated in Table 8, Kruskal-Wallis Test revealed a statistically significant difference among the perspectives of the three groups about the medical students' English language needs in Speaking and Listening skills (Sig.<.05). However, the findings indicated no significant difference in the participants' ideas about the Reading and Writing Skills (Sig.>.05) as shown in Table 8.



**Table 8***Results of inferential statistics for Kruskal Wallis Tests*

Language skills	Chi-square	Df	Asymp. Sig.
Listening	7.09	2	.02
Speaking	12.86	2	.00
Reading	3.72	2	.15
Writing	2.86	2	.23

To locate the differences among the perspectives of the three groups in Speaking and Listening needs, six Man-Whitney U tests were run. First, descriptive statistics were calculated. Table 9 presents the mean ranks of the three groups, comparing each pair separately. Table 10 presents the inferential statistics showing where exactly these differences are statistically significant.

**Table 9***Descriptive Statistics for Mann-Whitney U tests for listening and speaking skills*

Group	N	Mean Rank for each language skill	
		Listening	Speaking
Medical students	282	151.68	152.48
Medical Practitioners	15	98.70	83.60

  

Group	N	Mean Rank for each language skill	
		Listening	Speaking
Medical students	282	148.86	149.54
Instructors	12	115.54	99.67

  

Group	N	Mean Rank for each language skill	
		Listening	Speaking
Medical practitioners	15	16.12	16.54
Medical instructors	12	12.30	11.97

Table 10 shows the comparisons between medical students, instructors and practitioners in Listening skill. As indicated in the Table, the mean rank of medical students (*mean rank*=151.68, *n*=218) and that of practitioners (*mean rank*=98.70, *n*=15) was statistically significant (*u*=1360.500, *z*=-2.346, *p*= .019). However, the mean rank of medical students (*mean rank*=148.86, *n*= 218) and that of instructors (*mean rank*=115.54, *n*=12) were not statistically significant (*u*=1308.500, *z*=-1.340, *p*=.180) as were the mean rank of instructors (*mean rank*=12.30, *n*=12) and practitioners (*mean rank*=16.12, *n*=15) (*u*= 64.500, *z*=-1.250, *p*=.211).

**Table 10**

*Follow-up, post hoc inferential statistics for listening skill*

Groups	Man-Whitney U	Wilcoxon W	Z	Asymp. Sig.
Medical students and Medical Practitioners	1360.500	1480.500	-2.346	.019
Groups	Man-Whitney U	Wilcoxon W	Z	Asymp. Sig.
Medical students and Instructors	1308.500	1386.500	-1.340	.180
Groups	Man-Whitney U	Wilcoxon W	Z	Asymp. Sig.
Medical practitioners and Medical instructors	64.500	184.500	-1.250	.211

Table 11 presents the comparisons between medical students, instructors and practitioners in speaking skill. As indicated in the Table, the mean rank of medical students (*mean rank*=152.48, *n*=218) and that of practitioners (*mean rank*=83.60, *n*=15) was statistically significant (*u*=1134, *z*=-3.048, *p*=.002). However, the mean rank of medical students (*mean rank* =149.54, *n*=218) and that of instructors (*mean rank*=99.67, *n*=12) were not statistically significant (*u*=1180, *z*=-2.004, *p*=.45) as were the mean rank of instructors (*mean*

$rank=11.97$ ,  $n=12$ ) and practitioners ( $mean\ rank=11.97$ ,  $n=15$ ) ( $u = 59.500$ ,  $z = -1.497$ ,  $p=.134$ ).

**Table 11**

*Follow-up, post hoc inferential statistics for speaking skill*

Groups	Man-Whitney U	Wilcoxon W	Z	Asymp. Sig.
Medical students and Medical Practitioners	1134.000	1254.000	-3.048	.002
Groups	Man-Whitney U	Wilcoxon W	Z	Asymp. Sig.
Medical students and Instructors	1180.000	1196.000	-2.004	.45
Groups	Man-Whitney U	Wilcoxon W	Z	Asymp. Sig.
Medical practitioners and Medical instructors	59.500	179.500	-1.497	.134

## 5. Discussion

The present study tried to examine the English language needs of medical students to set the groundwork for developing an alternative curriculum for teaching EMP. The findings indicated that medical students, instructors, and practitioners unanimously believed that the students need to be proficient enough in all four major language skills (reading, writing, speaking, and listening) considering the nature of their future profession. In medical sciences, most of the textbooks are in the English language, and compared with other areas of study, they are updated more frequently based on the new developments in the field. Therefore, medical students should have a good command of reading skill to follow the new developments in their field. On the other hand, with the advancement in technology, nowadays many learning materials are audiovisual.

Therefore, medical students should be knowledgeable enough in speaking and listening skills so that they can learn from online resources, and be able to communicate with other people in their discourse community worldwide. Besides, they need to know how to write skillfully to share their experience and research findings with other people in their profession and communicate effectively with them considering the widespread use of written communication in today's world.

All three groups of participants ranked reading as the most important language skill for medical students. This is in line with the findings of some previous studies (such as Çelik, 2017; Javid, 2011; Malmir & Bagheri, 2019; Vahdany & Gerivani, 2016) in which the participants ranked reading as the most important language skill for medical students. The main reason for this choice can be related to the context in which medical students are studying. As students in the EFL context, although most of their teaching materials are in the English language, they have limited oral communication with people in their profession in other parts of the world. In this context, having a good command of reading skill enables students to understand the teaching materials, and surf the Internet if they need to find any information about their field. However, the finding is not in line with Chia et al. (1998) who found that participants perceived listening as the most important language skill for medical students in Taiwan.

The results of the study indicated no significant difference in the opinions of Medical instructors and practitioners about the needs of medical students. This can be reasonable considering the fact that they have a similar understanding of the discipline. However, significant differences were found between the viewpoints of students and practitioners. This is in line with the findings of Shahini and Riazi (2001) who found statistically significant differences among the responses of various stakeholders regarding the

students' language needs. One possible explanation for this difference may be the fact that practitioners, due to their job experience and knowledge, may have a better understanding of the real needs of students in the working context.

In spite of the participants' perceptions of the necessity of paying attention to all four language skills, achieving this goal seems to be unrealistic considering the host of challenges in the status quo of teaching English in Iranian Medical Universities (Nezakatgoo & Behzadpoor, 2017). In fact, there are many reasons deterring the achievement of this goal. Firstly, the classes are very crowded. Most often, there are around 80 students in each class based on the experience of the first author of this study who has been teaching EMP for more than 5 years. Therefore, in such classes working on all four language skills is very difficult. The second problem in the status quo of EMP is related to students' General English Proficiency (GEP) when they register for the class. As students' registration for the class is not based on any placement test to measure their language proficiency, there are heterogeneous students in the class. This makes teaching very difficult for the instructors and very boring for the students as the teaching materials may be too easy for some and too difficult for others. This fact was asserted by the previous researchers too. For example, Atai and Nazari (2011) maintained that "EAP program designers and textbook writers at Iranian universities lost sight of students' GEP level on the entrance to EAP courses" (p. 38).

Besides, the teaching hours and the number of credits for EMP are not enough. Therefore, considering the importance of learning the English language for medical students to be successful in their future profession, it is suggested that policymakers increase the number of credits dedicated to EMP courses. Also, a new curriculum should be developed for teaching EMP based on the English language needs of medical students. Furthermore, for more effective

teaching, it is recommended that the class size be reduced, and the crowded classes are divided into two. Moreover, it is suggested that the students be asked to take a language proficiency test before enrolling for EMP classes and be assigned to different classes based on their scores in the placement test. An alternative to this method can be assigning students to different classes based on their English language scores in the National Entrance Exam of Universities.

## 6. Conclusion

The present investigation came to some important conclusions. First, study participants mentioned that reading skill was the most important required English language skill for medical major students. Second, other language skills including writing, speaking, and listening skills were less important than reading skill. Finally, there was a high agreement among the students' attitudes about the importance of reading skill and other language skills for students studying at medical universities. This study had some limitations. Firstly, there is always this caveat in all studies in which questionnaires are used for data collection that the findings are accurate to the extent that the participants answered the items of the questionnaire accurately and honestly, and this study is not an exception. Secondly, although 282 medical students participated in this study, few medical practitioners and instructors accepted to participate due to their hectic schedule. The present study tried to explore the English language needs of medical students that can be the first step for designing an alternative curriculum for EMP teaching in medical universities. Considering the importance of learning English in all fields of study, especially medical sciences due to the fast advancement and the change of medical sources, it is hoped that this line of research is continued by other researchers. Identifying the steps and measures

that should be taken by different stakeholders and policymakers to change the status quo of EMP to satisfy medical students' English language needs is one area that needs further research. Besides, exploring the effectiveness of alternative teaching approaches, and integrating technology in teaching EMP that can compensate for the shortcomings of the current situation are other areas for further studies.



## References

- Atai, M. R., & Nazari O. (2011). Exploring reading comprehension needs of Iranian EAP students of health information management (HIM): A triangulated approach. *System*, 39(1), 30-43.
- Bachman, L. F., Palmer, A. S. (1996). *Language testing in practice*. Oxford University Press.
- Belcher, D. (2009). What ESP is and can be: An introduction. In D. Belcher (Ed.), *English for specific purposes in theory and practice* (pp. 1–20). University of Michigan.
- Benesch, S. (2001). *Critical English for academic purposes*. Lawrence Erlbaum.
- Çelik, H. (2017). Perceived language needs of undergraduate medical students enrolled in a consecutively running ESP course. *The Journal of Teaching English for Specific and Academic Purposes*, 5(2), 209-218.
- Chia, H. U., Johnson, R., Chia, H. L. & Olive, F. (1998). English for college students in Taiwan: A study of perceptions of English needs in a medical context. *English for Specific Purposes*, 18(2), 107-119.
- Dudley-Evans, T., & St. John, M. (1998). *Developments in English for specific purposes: A multidisciplinary approach*. Cambridge University Press.
- Esfandiari, R. (2015). An investigation into needs of Iranian BA students of law. *The Journal of Teaching Language Skills*, 7(3), 29-59.
- Hutchinson, T. & Waters, A. (1987). *English for specific purposes: A learning-centered approach*. Cambridge University Press.
- Hyland, K. (2006). *English for academic purposes*. Routledge.
- Lombardo, L. (1988). *Language learners needs, interests and motivation: A survey of EFL students in an Italian economics faculty*. ERIC Document Reproduction Service No. ED304006. Retrieved form <https://eric.ed.gov/?id=ED304006>.



- Javid, C. Z. (2011). EMP needs of medical undergraduates in a Saudi context. *Kashmir Journal of Language Research*, 14(1), 89-110.
- Kaewpet, C. (2009). Communication needs of Thai civil engineering students. *English for Specific Purposes*, 28(4), 266-278.
- Long, M. H. (2005). *Second language needs analysis*. Cambridge University Press.
- Mahdavi Zafarghandi, A., Khalili Sabet, M., Sharoudi Lomar, Sh. (2014). Developing an ESP needs profile of Iranian students of Business Administration. *International Journal of Research Studies in Language Learning*, 3(5), 3-18.
- Malmir, A., & Bagheri, M. (2019). Instructors and learners' attitudes about English for science and technology: Learning and target needs of mechanical engineering students. *Iranian Journal of English for Academic Purposes (IJEAP)*, 8(1), 17-34.
- Mazdayasna, G., & Tahririan, M. (2008). Developing a profile of the ESP needs of Iranian students: The case of students of nursing and midwifery. *Journal of English for Academic Purposes*, 7(4), 277-289.
- McDonough, J. (1984). *ESP in perspective: A practical guide*. New Bury House.
- Nezakatgoo, B., & Behzadpoor, F. (2017). Challenges in teaching ESP at the medical universities of Iran from stakeholders' perspectives. *Iranian Journal of Applied Language Studies*, 9(2), 59-82.
- Paltridge, B., & Starfield, S. (Eds.). (2013). *The handbook of English for specific purposes*. John Wiley & Sons.
- Richards, J. C. (1990). *The language teaching matrix*. Cambridge University Press.
- Richards, J. C. (2001). *Curriculum development in language teaching*. Cambridge University Press.
- Richards, J. C., Platt, J., & Platt, H. (1992). *Longman dictionary of language teaching and applied linguistics*. Longman.

- Robinson, P. (1991). *ESP today: A practitioner's guide*. Prentice Hall International Ltd.
- Shahini, G. M., & Riazi, A. M. (2001). A needs assessment for English language courses at Shiraz University. *Indian Journal of Applied Linguistics*, 27(1), 147-155.
- Shi, L., Corcos, R., & Storey, A. (2001). Using student performance data to develop an English course for clinical training. *English for Specific Purposes*, 20(3), 267 – 291.
- Shoja, L. (2008). *Analysis of target and present academic English needs of Iranian undergraduate students of computer Engineering* [Unpublished master's thesis]. Tarbiat Moallem University, Tehran.
- Staples, S. (2015). Examining the linguistics needs of internationally educated nurses: A corpus-based study of lexico-grammatical features in nurse patient interactions. *English for Specific Purposes*, 37(1), 122-136.
- Stevens, P. (1977). Special-purpose language learning: A perspective. *Language Teaching and Linguistics Abstracts*, 10(3), 145- 163.
- Vahdany, F. & Gerivani, L. (2016). An analysis of the English language needs of medical students and general practitioners: A case study of Guilan University of Medical Sciences. *International Journal of English Language and Literature Studies*, 5(2), 104-110.