

Original Article



Analysis of the educational needs for English in pharmacy: The perspectives of Pharmacy School lecturers and students

Hamid Mahmoodi¹, Mohammad Fathalipour², Mohammad Hosein Sheybani-Arani³, Afsoon Piroozan^{1*}

¹English Language Department, Faculty of Medicine, Hormozgan University of Medical Sciences, Bandar Abbas, Iran

²Department of Pharmacology and Toxicology, Faculty of Pharmacy, Hormozgan University of Medical Sciences, Bandar Abbas, Iran

³Student Research Committee, Faculty of Medicine, Hormozgan University of Medical Sciences, Bandar Abbas, Iran

Article info

Article History:

Received: November 14, 2022

Accepted: August 10, 2023

epublished: November 11, 2023

Keywords:

Needs analysis, Students of pharmacology, Medical education, Academic English needs

Abstract

Background: Science is constantly advancing, and educational content must be updated accordingly to meet students' academic needs. This study aimed to assess the educational needs of both students and instructors for English in pharmacy.

Methods: This qualitative study included a sample of 65 junior pharmacy students and a total of 11 pharmacy lecturers at Hormozgan University of Medical Sciences during the academic year 2020-2021. The students were selected using purposive sampling methods while the lecturers were selected through consensus sampling. Based on previous studies analyzing the educational needs of ESP and through verbal communication with students, an interview protocol was developed. Data were collected through structured interviews with the participants, and the findings were presented using descriptive statistics.

Results: The lecturers believed that reading comprehension is the most crucial skill, followed by writing, speaking, and listening, respectively. However, students mentioned that the need for speaking skills is almost as important as the need for other skills. They expressed their enthusiasm for communicating verbally in specific contexts, such as scientific conferences, highlighted the need for learning pharmacy terminology, academic writing skills, prescription abbreviations, and medical terminology, respectively. The participants in our course anticipate that it will be co-facilitated by TEFL specialists and pharmacists."

Conclusion: Both language instructors and pharmacists should take immediate action to advance Pharmacy ESP. Reading comprehension is a crucial skill for this course. Writing skills can be improved through educational workshops. The prerequisite and general English syllabi should be enriched with a focus on speaking skills or extracurricular courses should be devoted to developing students' competencies. In this manner, the listening skills will be improved as well.

Background

Science is constantly advancing, and educational content must be updated accordingly to meet students' academic needs. In this new era, we are witnessing the English language advancing at an unprecedented pace, exerting a dramatically dominant influence worldwide. In addition, a variety of information on global science and technology is typically presented in English.¹ English language skills are crucial for global communication, as this language has become a key to accessing valuable information and resources. That is why the significance of language teaching and learning is enhanced since learning this universal skill undoubtedly helps people navigate their lives more efficiently.

Effectiveness in language teaching and learning

implies the design of a learner-centered curriculum that prioritizes learners' needs.²

It is believed that English, as an institutional learning activity, should align students' needs with their styles, following educational and academic systems."³ Hutchinson and Walter suggest that English for Specific Purposes (ESP) is a learning-centered approach that is rooted in learners' needs.⁴ Strevens formulated two principles focused on the learner's specific needs and enhance the learners' communicative ability in authentic discourse situations.⁵ Therefore, it is understood that the instructional methods used in a specialized field like English for Specific Purposes (ESP) are derived from these two significant principles.

By emphasizing the need for educational centers to

*Corresponding author: Afsoon Piroozan, Email: haf623544@gmail.com

balance student needs with their aspirations, we can stimulate learning motivation and enable them to fulfill their career requirements. This approach may lead to a more accurate needs assessment.^{6,7} Indeed, needs analysis encompasses two primary areas: Firstly, it includes students' personal information, which consists of factors influencing their learning methods, such as previous learning experiences, cultural background, reasons for course enrollment, and their attitude towards English. Secondly, it involves functional information related to the language teaching environment, including human resources and administrative matters.

Needs analysis is indeed crucial in teaching as it fosters a connection between instructors, students, and teaching procedures leading to the improvement of the learning process.⁸⁻¹⁰

Therefore, numerous studies have been conducted to underscore the significant role that ESP courses play in the future performance of university students. For example, Vavelyuk developed an ESP course specifically for science students to improve their English skills and facilitate their integration into the international academic community. The study found that as students improved their academic skills through English learning, they were also able to easily develop other essential skills that could be transferred to various fields.¹¹ In ESP, "language is learned not merely for the purpose of gaining a general education, but rather to achieve enhanced linguistic proficiency in academic, professional, or workplace settings". This implies that the purpose of ESP is to equip language learners with the necessary skills for their specific occupational field.

Therefore, the current study aims to address the question of what priorities and skills are necessary for pharmacy students to minimize the gap and better meet their needs. Therefore, material and curriculum development are inseparable from an educational needs analysis. This qualitative study aimed to assess the educational needs of pharmacy students who have completed the ESP course and already have a general understanding of it.

Materials and Methods

The current qualitative study included a sample of 65 junior pharmacy students and a total of 11 pharmacy lecturers at Hormozgan University of Medical Sciences based on a convenience sampling who participated during the academic year 2020-2021. The students were selected through using purposive sampling methods while the lecturers were selected through consensus sampling. The students who had already passed ESP and had an overview of the course were selected for the study. Pharmacy lecturers' ideas regarding ESP were also collected and analyzed for potential professional changes in the educational content. To achieve the best outcomes, we utilized content analysis and grounded theory methods to examine student preferences. After providing an overview of the study's objectives, procedures, and limitations,

participants were invited to participate voluntarily in the study and the demographic characteristics of the students were also considered. Based on previous studies focusing on the analysis of educational needs in ESP and verbal communication with students, an interview protocol with four questions was developed.

Ultimately, the participants were asked an open-ended question about their perspectives and needs for Pharmacy ESP. Data were collected using semi-structured interviews and open-ended verbal questions. The corresponding author and the first author jointly conducted the semi-structured interview and verbal open-ended questions, following the objectives of the study. The interviews were conducted in the form of audio recordings, which were subsequently transcribed and translated to extract reliable data. The process of conducting the interviews spanned approximately one week. The data were initially transcribed into Persian for publishing purposes, and subsequently translated into English. A proficient bilingual colleague proofread the interview transcripts. Responses were assigned codes, which facilitated the identification of related categories, themes, patterns, and relationships. The interview was conducted in Persian to enhance the validity of the data collected and to prevent potential misunderstandings or incomplete expression of opinions due to possible limitations in English proficiency. Researchers deliberated on data saturation, focusing on identifying all pertinent concepts and eliminating superfluous data. The collected data and results were subsequently presented in the form of descriptive statistics

Results

The initial question probed the participants about the essential skills required for language learning, specifically listening, speaking, reading, and writing. All lecturers concurred that reading comprehension is the paramount skill. Subsequently, they ranked writing, speaking, and listening, respectively. The lecturers rationalized their stance by stating that students require the ability to read and understand English texts and articles in order to complete their thesis, conduct research projects, and maintain current knowledge. In addition to the tasks mentioned above, they also require writing skills to effectively report their findings. However, speaking skills are primarily needed for future professional interactions with international pharmaceutical companies and industries.

In contrast, pharmacy students emphasized the need for speaking skills almost as much as reading skills, which were ranked first. From their responses, it can be inferred that they prefer instruction in reading, speaking, writing, and listening skills, respectively. While they recognize the lecturers' emphasis on the importance of reading skills, the students also express a keen interest in learning to communicate verbally in settings such as scientific

conferences. They attribute their difficulties in speaking English to deficiencies in previous courses, such as prerequisite and general English. In terms of writing skills, they express a preference for learning through educational workshops rather than in ESP classes. Pharmacy students also articulate a desire to enhance their listening skills to benefit from educational resources such as videos and audio files.

In response to the second question, which focused on the essential educational content for ESP, lecturers highlighted the need for learning pharmacy terminology, academic writing skills, prescription abbreviations, and medical terminology, respectively. They assert that mastery of all these elements is crucial for tasks such as thesis submission, article writing, conference presentations, and participation in specialty courses. Pharmacy students concurred with the lecturers regarding the order of importance and utility of the educational content.

The third question inquired whether it would be more effective for English in Pharmacy to be taught by a TEFL expert, a pharmacist, or through a joint effort. Both pharmacy lecturers and students believe that the course should be co-taught by TEFL specialists and pharmacists, as language teachers may not be proficient in pharmacy terminology, while pharmacists may lack expertise in English language teaching.

The final question addressed the current issue of English in Pharmacy being removed from the list of courses evaluated in the comprehensive test. Both lecturers and students unanimously disagreed with this decision, arguing that it diminishes students' extrinsic motivation, devalues the course in the students' perspective, and most importantly, leads to the forgetting of relevant terminology, expressions, and concepts.

Discussion

This study aimed to evaluate and pinpoint the educational needs of pharmacy students to address any potential shortcomings from both the students' and lecturers' perspectives. Among the myriad responsibilities of academics is the task of equipping graduates with sufficient English language skills for their academic advancement and success. This aligns with the viewpoint expressed by O'Neill and Palmer, which asserts that the institution is dedicated to guiding students in developing their competencies to thrive in the professional world.^{12,13}

By providing and developing materials that cater to their preferences, we could potentially enhance students' motivation towards learning English.^{8,14} Students are expected to improve their English skills by engaging with teaching materials that align with the fundamental competencies they need to acquire.

The answers to the questions suggest a strong focus on reading comprehension skills, followed by writing and other abilities. When asked about the importance

of learning English, students expressed that they require specialized English skills to enhance their professional knowledge by reading academic papers and textbooks. It is crystal clear that students spend most of their time on reading texts than engaging in other activities. Therefore, it is quite usual for them to lean more towards improving their reading skills than other skills. Proficiency in specialized English, particularly in the health and pharmaceutical fields, can enhance students' understanding of written materials. This not only leads to more productive activities but also minimizes wasted time.

A few students expressed the need to write health or pharmacy-related reports or articles in English. They perceive this skill as both challenging to acquire and essential in the field of pharmacy. This presents a paradox: the complexity of the task versus its necessity.

Given this fact, writing skills emerged as the second most important aspect for students when asked about the necessity of learning and practicing ESP. Given the students' expressed need, the focus should be on reinforcing this skill and ensuring it is not overlooked by either the students or lecturers. This aligns with Yundayani and colleagues' findings, which state that writing, as a productive language skill, is complex and requires integration of both micro-skills and macro-skills.¹⁵

A contentious issue among lecturers, which remains unresolved, pertains to who should bear the responsibility of teaching pharmacy ESP. The options include a TEFL specialist, a pharmacist, or both. Interestingly, both pharmacy instructors and students believe that the course should be co-taught by TEFL specialists and pharmacists. This is because language teachers may not have sufficient command over pharmacy terminology, while pharmacology lecturers may lack the requisite knowledge to teach English.

However, this issue remains unsolved as it is rooted in the differences between two areas of expertise. Interestingly, the results from the interviews did not strongly advocate for listening. However, Shamsitdinova opposes this stance, suggesting that effectively organizing listening training for professional purposes is a crucial task for teachers in the current stage.¹⁶ Listening is characterized as a receptive form of speech activity, involving the simultaneous perception and interpretation of spoken language through auditory system. The complexity of the subject, or perhaps the perception of its irrelevance in academic contexts, could be the reason for its ignorance. However, under no circumstances can this disregard for such a crucial skill be justified.

The unanimous decision by both students and the lecturer to retain Pharmacy ESP in the list of subjects for the final comprehensive exam underscores the significance of language skills for future practical applications in this field.

The vote against the removal of ESP at this level reflects both the students' motivation to learn and the lecturers' commitment to teaching materials they believe can enhance English proficiency and facilitate access to more advanced knowledge.

Conclusion

The current study sheds new light on pharmacy students' comprehension of the English language. Future research could benefit from examining students' English language needs across diverse contexts. This would not only enhance our understanding of this field of inquiry but also direct the existing body of research regarding pharmacy students' perceptions of English language learning requirements.

The findings of this study also offer valuable insights to faculty members in charge of curriculum design, enabling them to customize their English language instruction to better meet the needs of learners.

In brief, given the increasing global significance of the English language and the profound implications this has on pharmacy students' learning needs, there is a pressing requirement for both theoretical and practical exploration of these students' needs concerning English language learning.

In conclusion, both language educators and pharmacists must take immediate action to promote ESP program for pharmacy students. Reading comprehension is the most crucial skill in this field, as it enhances students' awareness and vigilance regarding current issues in their specialty.

Given the time constraints of the ESP class, writing skills could be incorporated as supplementary activities in educational workshops. Since students need to improve their speaking skills, it is suggested that this competency be integrated into the curriculum or addressed through dedicated extracurricular courses. This approach would also contribute to the improvement of their listening skills.

The research findings suggest that educational authorities should reconsider their decision to remove English in Pharmacy from the comprehensive pharmacy exam and take more effective steps. This decision has demotivated students to learn and their sustained academic vigilance. Furthermore, it appears that evaluating the educational content for this course is crucial. Feedback related to motivation was received from both students and lecturers, leading to a decision to alter the teaching methodology and the authenticity of the materials. Therefore, it is recommended that future studies assess the current textbook while developing a new one under the supervision of language specialists and pharmacists, tailored to the educational needs of pharmacy students.

Acknowledgments

We would like to extend appreciation to the students and academic staff of Hormozgan University of Medical Sciences for their

invaluable contributions to this process.

Authors' Contribution

Conceptualization: Afsoon Piroozan, Hamid Mahmoodi, Mohammad Fathalipour, Mohammad Hosein Sheybani-Arani.

Data curation: Hamid Mahmoodi, Afsoon Piroozan, Mohammad Hosein Sheybani-Arani, Mohammad Fathalipour.

Investigation: Afsoon Piroozan, Hamid Mahmoodi.

Methodology: Hamid Mahmoodi.

Project administration: Afsoon Piroozan, Hamid Mahmoodi.

Resources: Hamid Mahmoodi, Afsoon Piroozan, Mohammad Hosein Sheybani-Arani.

Software: Hamid Mahmoodi, Afsoon Piroozan.

Supervision: Mohammad Fathalipour.

Writing—original draft: Afsoon Piroozan, Hamid Mahmoodi.

Writing—review & editing: Hamid Mahmoodi, Afsoon Piroozan.

Competing Interests

Authors declare no competing interests.

Ethical Approval

The current study was approved by the Ethics Committee of the Hormozgan University of Medical Sciences IR.HUMS.REC.1401.264 and participants were reassured that all collected data, including their names, would be maintained in strict confidentiality.

Funding

This study has no funding.

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