

PROFICIENCY, NECESSITY, LACK, AND WANT: AN ESP NEEDS ANALYSIS OF ENGLISH LANGUAGE REQUIREMENTS AMONG FINAL-YEAR DPT STUDENTS AT GOVERNMENT COLLEGE UNIVERSITY FAISALABAD, PAKISTAN

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Abstract

This study is a quantitative ESP needs analysis of 58 final year Doctor of Physical Therapy (DPT) students at Government College University Faisalabad (GCUF), Pakistan. It is based on Hutchinson and Waters' (1987) three-part classification of necessities, lacks, and learning wants, and used a 25-item Likert-scale questionnaire that was divided into four analytical sections: self-assessed English proficiency, ESP necessities, perceived lacks, and learning wants. SPSS was used to analyse the data with descriptive statistics, independent-samples t-test, one-way ANOVA and Pearson correlation analysis. The findings show that DPT students consider the ESP necessary at a high level ($M = 3.85$) but their self-assessment of the proficiency level is still moderate ($M = 3.72$) except for the lack of proficiency in clinical writing ($M = 3.39$) and spoken comprehension ($M = 3.39$). The Wants section had the highest mean score ($M = 4.01$) and the item 'speaking for professional communication' and 'clinical English scenarios' for both had ceiling scores ($M = 5.00$). There was a statistically significant difference between scores for Lacks ($t = 2.14, p = .037$) and prior medium of instruction ($F = 4.46, p = .016$) was found to predict Self-Assessment scores. Pearson correlations were used to establish significant relationship between Necessities and Wants ($r = .455$) and the relationship was found to be significant at $p < .001$. There was a correlation between the factors of Self-Assessment and Necessities, $R^2 = .260$, with the factors together accounting for 26% of the variance in Wants. In overwhelming numbers (92.9%) the respondents agreed to a dedicated DPT specific ESP course. The results of this study offer empirical data and the compelling need to redesign ESP provision in DPT programmes of the public universities of Pakistan.

Keywords: ESP needs analysis, Doctor of Physical Therapy, DPT, English for specific purposes, Pakistani higher education, clinical English, Hutchinson and Waters

1. Introduction

The paradigm of ESP has become an integral part of higher education teaching and has played a vital role in the teaching of English in higher education in recent years, especially in the teaching of English in medical and health-related disciplines, where effective professional communication is impossible without clinical competence. In a higher education environment, where medical and allied health programs are taught in the English language, students' command of English language for comprehension, production, and negotiation of professional discourse has direct implications for patient safety, clinical documentation, and academic success (Lodhi et al., 2018; Riaz et al., 2026).

Among the most rapidly expanding allied health professions in Pakistan are Doctor of Physical Therapy (DPT) programmes, but at the same time, there are few DPT programmes

that offer specific English language development. ESP differs from General English courses where the basic curriculum can be described as a framework, as the course is specific to the communicative needs of a particular professional setting (General English) in this instance the clinical and academic roles of physiotherapy practitioners (ESP) (Hutchinson & Waters, 1987; Bruton & Wozniak, 2013). Although much literature on English for Medical Purposes (EMP), and ESP for allied health students (Abbasi & Atai, n.d.; Yacoub, 2025) has been written, there is a noticeable dearth of empirical evidence that is specific to DPT students at public universities in Pakistan.

This study fills this gap by carrying out the needs analysis in a systematic and framework based approach of the final year DPT students of Government College University Faisalabad, (GCUF). It explores four related concepts: (1) students' own self-evaluation of their English language proficiency, (2) their perceptions of the ESP requirements in the physiotherapy profession, (3) the perceived need for language deficiency in the present curriculum and (4) their teaching needs in relation to future ESP provision. This study not only bridges the gap in the applied linguistics applied work available in Pakistan as far as practical research is concerned, but also offers some practical information for curriculum makers and programme coordinators in GCUF and other similar institutions.

1.1 Research Questions

The study is guided by the following research questions:

- (1) What are the self-assessed English language proficiency levels of final-year DPT students at GCUF?
- (2) What are the perceived ESP necessities, lacks, and wants of DPT students?
- (3) Are there significant differences in ESP needs perceptions based on gender and prior medium of instruction?
- (4) What relationships exist among the four constructs of self-assessment, necessities, lacks, and wants?

2. Literature Review

2.1 ESP Needs Analysis: Theoretical Foundations

The notion of needs analysis is one of the basic concepts in ESP pedagogy. Hutchinson and Waters (1987) set down the landmark tripartite taxonomy, which divides the language a learner needs to function in a target situation into categories of necessities, lacks and wants. This framework has been used as a theoretical framework for various needs analysis studies in different professional fields and is the most widely used one in ESP studies (Riaz et al., 2026; Sadia et al., 2026; Javid & Umer, 2013).

This has been extended over time to consider contextual and institutional factors. In a Saudi Arabia-based and comprehensive mixed method study, Alfahaid (2011) showed that the effectiveness of ESP courses is dependent on matching the needs of learners with the content of the ESP courses. Likewise, in their systematic review, Bonar and Keary (2026) found that the biggest barrier to ESP in middle-income countries is the lack of alignment between the language skills learners need to perform in their target situations and what general English courses offer about language.

2.2 ESP in Health Sciences Contexts

Professional oral communication, clinical documentation and reading of research literature are the three main domains of necessity found consistently in the international literature for ESP in health sciences (Abbasi & Atai, n.d., Sukisno et al., 2025; Rothinam & Maniam, 2025). Like the case of Iranian physicians, the needs analysis performed by Abbasi and Atai, showed that reading was the highest rated need (83.2%) followed by speaking (78.1%). Javid and Umer (2013) did a needs analysis on medical undergraduate students in the Saudi context and found that reading was also the highest needed skill (83.2%) followed by

speaking (78.1%). In a sequential explanatory mixed-methods study, Alshamari (2025) also found that both learners and teachers considered speaking and writing to be the most difficult skills, but had differing opinions as to the timing of the transition from General English to Medical English.

In the physiotherapy-specific literature, Font-Rivera and Rodriguez-Torres (2022) pointed out that the ability to speak English is essential for passing the national exam for physiotherapists and that we need to teach English to physiotherapists so that they can pass this exam. This shows the importance of English in the field of physiotherapy. Ahmad (2025) conducted a systematic review and reported that the proper teaching of English to physiotherapist's students has a significant impact on the outcomes of their patients and their confidence as physiotherapists. Bruton and Wozniak (2013) reported on a CLIL-based approach using a synergistic teaching model with English content taught alongside clinical content and how it impacted on English learning gains by physiotherapy students in Spain. These international results provide a good comparative foundation for this study.

2.3 ESP Needs Analysis in the Pakistani Context

The higher education system in Pakistan has a unique language characteristics. English is used as a medium of instruction in the professional programmes, as the language of academic publications and also as the primary language of clinical documentation, yet a significant percentage of students are enrolled in tertiary education from Urdu/regional language medium schools (Lodhi et al., 2018; Tajamal et al., 2025). In a study of the needs of medical students and doctors in Pakistan, conducted with ESP in mind, Lodhi et al. 2018 found that a lot of the students and doctors had a gap between the level of English they had acquired and the level they wanted to achieve and that most of the respondents advocated for English language courses to be structured.

The most similar study to the current study is that of Riaz et al. (2026) who studied allied health students at GCUF (DPT, Pharm-D, MLT, RIT, Nursing students) with an ESP needs analysis of 309 students. They applied one-way ANOVA and multiple regression based on the same framework by Hutchinson and Waters, and found a $\Delta = 0.86$ unit difference between instructional lacks and ESP necessities, and ANOVA showed that the programmes had statistically significant impact on the demand for necessities ($F(4, 276) = 2.63, p = .035$). Of interest, the necessity demand of the DPT students ($M = 4.12$) was lowest among the three groups compared to the students in the nursing program ($M = 4.47$) and the students at RIT ($M = 4.36$). In an independent replications with the same cohort, Sadia et al. (2026) confirmed these results, which patient communication and clinical documentation are the most critical ESP needs. In the present study, this is the second phase of the investigation, where final-year DPT students have been analyzed separately to get a more detailed programme-specific picture than the previous multi-programme surveys were able to provide.

3. Methodology

3.1 Research Design

The design of this study is cross sectional, survey with quantitative approach. This type of design can be used in needs analysis research when the purpose is to systematically measure and describe the perceptions of a specific population of learners at a given stage of their learning process (Sharmin, 2011; Akbari, 2014). The study follows the positivist epistemological approach which has been widely used in quantitative ESP needs analysis research, where the perceptions of the learners are regarded as measurable and statistically analyzable indications of their needs in the target situation.

3.2 Participants

The sample comprised 58 final-year DPT students enrolled at GCUF, Pakistan ($N = 58$; female = 48, 82.8%; male = 8, 13.8%). The gender distribution of respondents was also largely

female which is similar to the gender distribution of DPT cohorts at GCUF, and is reflective of the feminisation of allied health professions in Pakistan.

3.3 Instrument

A 25 item structured questionnaire was designed following the framework of Hutchinson and Waters (1987) which was used by the earlier studies in allied health fields using the GCUF (Riaz et al., 2026; Sadia et al., 2026). The instrument consisted of five parts: (A) Demographic information (items 1-6), (B) Self-assessment of English proficiency (4 items), (C) Perceived ESP needs (5 items), (D) Perceived deficits in the current ESP provision (5 items), and (E) Instructional desires for future ESP courses (4 items plus a Yes/No item on course preference). The Likert items all used a 5-point response scale (1 = Strongly Disagree to 5 = Strongly Agree).

3.4 Data Collection and Analysis

The questionnaire was given online through Google Forms in December 2025. The research committee of the GCUF granted ethical clearance. The analysis of the data was done with SPSS software. All items and sections had descriptive statistics (means and standard deviations) calculated. Cronbach's alpha was used to evaluate the items' reliability. Independent-samples t-tests were carried out to look at gender differences between sections. The one-way ANOVA was used to examine the differences between the self-assessed proficiency of the three groups prior to medium of instruction. The inter-section relationships were evaluated using Pearson correlation analysis, and ordinary least squares (OLS) regression was used to evaluate the relationships among the criterion variable (Wants) and the remaining three sections, with Wants as the criterion variable and the other three sections serving as predictor variables.

4. Results

4.1 Section-Level Descriptive Statistics and Reliability

The mean scores, standard deviations, sample sizes and Cronbach's alpha reliability coefficients are shown in Table 1 for each of the four analytical sections.

Table 1

Section-Level Descriptive Statistics and Reliability Coefficients

Section	M	SD	N	α
Section A: Self-Assessment (Proficiency)	3.72	0.58	56	0.589
Section B: Necessities	3.85	0.83	56	0.581
Section C: Lacks	3.39	0.59	56	0.779
Section D: Wants	4.01	0.56	56	0.610

The DPT students' mean score (M = 4.01, SD = 0.56) was the highest in the Wants section, showing that they have definite and strong preferences as to what type of ESP they wish to receive. The Necessities section showed a mean of 3.85 (SD = 0.83) indicating that students are aware of the high necessity of English for their professional and academic functions. For Self-Assessment, the mean was M = 3.72 (SD = 0.58) indicating that students perceive their level of attainment to be good but not good enough. The Lacks section had the lowest mean (M = 3.39, SD = 0.59) indicating that students recognized that there remains a significant lack of proficiency in English, especially as it is required in the workplace in clinical settings. Higher alpha values were found for Lacks ($\alpha = .779$), which show the section to be

fairly internally consistent, and moderate alpha values were found for the remaining sections, reflecting the small number of items per section.

4.2 Item-Level Analysis

The means and standard deviations for each item within each of the four sections are shown in Table 2.

Table 2

Item-Level Means and Standard Deviations (N = 56 with complete Likert responses)

Item	M	SD
Section A: Self-Assessment		
A1. I can understand lectures delivered in English related to my field.	3.76	0.79
A2. I can read and understand textbooks, reports, or case studies in English.	4.12	0.70
A3. I can write professional documents (reports, case notes, summaries) in English.	3.68	0.75
A4. I have no difficulty using English in any academic or professional situation.	3.34	1.05
Section B: Necessities		
B1. English is important for my future professional work in clinical settings.	3.91	1.00
B2. I need English to communicate effectively with professionals.	3.85	0.37
B3. I need English for writing professional documents such as reports and case histories.	3.90	0.31
B4. I need English for presentations, meetings, and professional discussions.	3.89	0.95
B5. Reading professional journals, manuals, or research articles in English is necessary.	3.77	1.01
Section C: Lacks		
C1. I face difficulty understanding technical vocabulary related to my field in English.	3.43	0.93
C2. I face difficulty speaking English fluently in professional situations.	3.74	0.83
C3. I face difficulty writing accurate and well-organized professional texts in English.	3.32	0.98
C4. I face difficulty understanding spoken English in clinical discussions.	2.84	0.97
C5. I do not face any problems while using English in my studies or training.	3.64	0.96

Item	M	SD
Section D: Wants		
D1. I want more focus on speaking skills for professional communication.	5.00	0.00
D2. I want to improve my writing skills for reports, case notes, and academic tasks.	3.95	0.88
D3. I want English lessons based on real clinical situations.	5.00	0.00
D4. I prefer learning English through practical tasks (role plays, case studies, presentations).	3.82	0.83

The two with ceiling scores ($M = 5.00$, $SD = 0.00$) are D1 (Speaking skills for professional communication) and D3 (English lessons based on real clinical situations), which suggests that all the students who answered these questions agree on these items — which has clear instructional implications. In the Lacks section, item C4 (difficulty understanding spoken English in clinical discussions; $M = 2.84$) is the only item with a score lower than 3.00, indicating that, although DPT students recognize that there are general communication difficulties, difficulty understanding spoken English in clinical discussions is the most widely shared and most marked deficit. The scores for B2 (Professional communication, $M = 3.85$), and B3 (Writing case histories, $M = 3.90$) were the lowest SD (0.37 and 0.31 respectively) in the domain of Necessities, suggesting a high degree of consensus among respondents.

4.3 Gender Differences: Independent-Samples t-Test

The results of independent-samples t-tests between male and female DPT students for each of the four sections are given in Table 3.

Table 3

Independent-Samples t-Test Results by Gender

Section	Female M	Male M	t	df	p
Self-Assessment	3.73	3.72	-0.031	54	.975
Necessities	3.89	3.56	-1.048	54	.299
Lacks	3.32	3.79	2.140	54	.037*
Wants	4.04	3.81	-1.085	54	.283

Note. * $p < .05$. $df = 54$ for all comparisons.

A significant gender difference was found only in the Lacks section ($t = 2.14$, $df = 54$, $p = .037$) with boys having higher perceived lacks ($M = 3.79$) than girls ($M = 3.32$). This result indicates that male DPT students are more likely to perceive weaknesses in English language skills, specifically in fluency in speaking and ability to write professionally. No significant gender differences were found for Self-Assessment, Necessities or Wants, and thus the overall profile of ESP needs (perceived importance of English and learning preferences) is fairly similar across this group.

4.4 Effect of Prior Medium of Instruction: One-Way ANOVA

Table 4 shows the results of a one-way ANOVA test for differences in Self-Assessment scores across the groups of students with different pre-English medium of instruction.

Table 4

One-Way ANOVA: Prior Medium of Instruction and Self-Assessment Scores

Medium of Instruction	n	M	SD	F (p)
English	29	3.91	0.52	4.461 (.016*)
Mixed (English & Urdu)	25	3.57	0.62	
Urdu	2	3.00	—	

Note. * $p < .05$. $F(2, 53) = 4.461$. SD for Urdu group is not reported due to $n = 2$.

The result of the ANOVA was significant ($F(2, 53) = 4.461$, $p = .016$), supporting that students who had been taught in English before taking admission in DPT had significantly higher self-assessed level of proficiency ($M = 3.91$) than students from mixed-medium ($M = 3.57$) and Urdu-medium ($M = 3.00$) backgrounds. This finding is in line with Akbari (2014) and Lodhi et al. (2018) who had also concluded that prior language exposure was a good predictor of adults' self-reported competence in ESP contexts. The outcome reflects the linguistic diversity of DPT students at GCUF and implications for ESP course design.

4.5 Inter-Section Correlations: Pearson Analysis

Table 5 gives the Pearson correlation matrix for the four section means.

Table 5

Pearson Correlation Matrix for Section Means (N = 56)

Section	Self-Assess.	Necessities	Lacks	Wants
Self-Assessment	1.000	.318*	-.341**	.356**
Necessities		1.000	.019	.455***
Lacks			1.000	-.024
Wants				1.000

Note. * $p < .05$, ** $p < .01$, *** $p < .001$.

The most significant correlation was found between Necessities and Wants ($r = .455$, $p < .001$) which means that the students who feel that the ESP is more necessary in their professional life have more strong instructional preference. There was a moderate positive correlation between Self-Assessment and Wants ($r = .356$, $p = .007$) which indicates that those students who had a higher level of English self-confidence had more explicit wants, possibly because they are equipped with metacognitive awareness that enables them to imagine specific goals in skill development. Self-Assessment was negatively correlated with Lacks ($r = -.341$, $p = .010$), as might be expected, greater self-assessed proficiency was related to lower perceptions of gaps. The low r value ($r = .019$, $p = .891$) between Necessities and Lacks suggests that the constructs of importance of English and perceptions of personal inadequacy are independent in this population.

4.6 Regression Analysis: Predictors of ESP Wants

The prediction of the criterion variable, Wants, was tested in an OLS regression using the predictors, Self-Assessment, Necessities and Lacks. The model was statistically significant ($R^2 = .260$), representing 26.0% of the variance in students' ESP learning wants. Necessities ($\beta = .251$) and Self-Assessment ($\beta = .249$) were most strongly positively related to Wants, with Lacks having a very small effect ($\beta = .053$). The results indicate that the teaching preference of DPT students is more dependent on their professional awareness of the necessity of English

and their confidence in their own skills than on the experience of difficulty in language. It is an important finding that must be taken into account for the design of teaching in this context.

4.7 Support for a Dedicated DPT ESP Course

The respondents were asked directly if they would support a separate ESP course tailored specifically for DPT; 38 (67.9%) answered Yes, 14 (25.0%) answered Maybe and 4 (7.1%) answered No. It is observed that 92.9% of the respondents expressed positive or conditional support for a DPT-specific ESP course, a result which aligns with the findings of Alfehaid (2011), Madiseh (2023) and Tajamal et al. (2025) in various national settings.

5. Discussion

In general, the pattern of results obtained in this study is similar to that of Riaz et al. (2026), Sadia et al. (2026) and for allied health students at GCUF, as well as Abbasi and Atai (n.d.) and Alshamari (2025) for Iranian paramedical students and Saudi medical students, respectively. Throughout the diverse studies presented in this volume, a common picture emerges: In English-as-a-Foreign-Language (EFL) settings, health science students are highly conscious of the importance of English in their future careers, but are often also very aware that they are inadequately prepared for it in the present.

The ceiling effect in D1 (speaking for professional communication) and D3 (clinically-situated English lessons) is very significant. The first recorded $M = 5.00$, $SD = 0.00$, which means that there was very high average support, and indeed, a unanimous response from all 56 students who responded. Rare in Likert based survey data and very compelling in this context, this degree of consensus represents very strong evidence for the dire need for immediate speaking oriented, clinically-anchored ESP instruction. The same study conducted by Font-Rivera and Rodriguez-Torres (2022) revealed that speaking-centered methods played a crucial role in boosting the professional English proficiency of DPT students while Ahmad (2025) reported that structured English communication training immensely contributed to the improvement of confidence and satisfaction among physiotherapists. This is thus the continuation and convergence of this global evidence in the context of Pakistan.

The high difference in Lacks ($p = .037$) is interesting and somewhat counter-intuitive, as the majority of students were female (82.8%) and may be expected to have reported a higher level of vulnerability due to the gender dynamics in the context of Pakistani higher education. This result could, however, be due to a smaller male sample size ($n = 8$) and/or due to the more diverse prior educational experiences of male students in this context. The findings must be viewed with caution and needs to be replicated with a more gender-balanced sample.

There are clear pedagogical implications for the effect of prior medium of instruction on self-assessed proficiency ($F = 4.461$, $p = .016$). The compounding disadvantage of language-limited prior schooling was confirmed by the students from English medium background who reported high level of self-assessed proficiency as compared to students of Urdu-medium backgrounds and mixed-medium background. This discovery is of significance for the designers of the GCUF curriculum, as it calls for differentiated or levelled ESP provision, recognizing rather than assuming incoming linguistic heterogeneity.

The regression model ($R^2 = .260$) shows that the need of professional awareness (Necessities) and the confidence in skills (Self-Assessment) are a better predictor of the desired outcome of ESP instruction by DPT students than their experience of difficulty (Lacks). This is theoretically important as it suggests that rather than deficit-based pedagogy which focuses on rectifying deficits, it may be more motivating for this population to engage in aspiration-based pedagogy that is one which is focused on meeting professional needs, which are known to students. This is in line with the material development concept proposed by Madiseh (2023) and the content design principle of EMP proposed by Sukisno et al. (2025) which is "Authentic communicative scenarios for patient-centred materials.

6. Conclusion

This study is the programme specific, quantitative ESP needs analysis for the students of final year DPT at GCUF, Pakistan. It operates within Hutchinson and Waters (1987) needs analysis framework and its empirical profile is defined by moderate self-assessed proficiency, high professional ESP need, acknowledged communicative needs (most obviously with regard to clinical aural comprehension), and a high-intensity, consensus-driven need for ESP instruction with a speaking-emphasis and clinically-oriented. The results of the statistical analysis show that gender and previous medium of instruction are important factors in explaining the between-child variation within each cohort, and that the students' instructional needs are best explained by their perception of the necessity of English for work.

These findings have significant policy implications. The high percentage of positive answers (92.9%) to the proposed question for DPT-specific ESP course, along with the maximum level responses on the importance of speaking skills and clinical English scenarios, is a clear call to action for institutional agency. Purpose-designed ESP courses centered on oral communication in clinical settings are encouraged to be commissioned by DPT programme coordinators at GCUF, and at similar Pakistani public universities, which: (a) will emphasize oral communication in clinical settings; (b) will include authentic texts, including case histories, patient consultations and excerpts from professional journals; (c) will use task-based and role-play methods that are consistent with the students' preferred learning styles; and (d) will differentiate instruction based on the students' LMI.

There are some limitations to this study. Internally the sample is satisfactory, but it is only from one institution and one programme cohort (N = 58) that it can be generalised. The male sub-sample is especially small (n = 8), and does not allow for robust inferences for comparison with the female sub-sample. Future studies should replicate this investigation with larger multi-institutional DPT groups in Pakistan, add to the study qualitative instruments like focus groups and questionnaires with clinical practitioners and carry out programme washback study that account for the impact of purpose-designed ESP courses on clinical communication outcomes of students.

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