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RESEARCH ARTICLE

Needs-Based English Vocabulary Instruction for Medical Students: A Synthesis of Recent Evidence and Implications for ESP Course Design

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Abstract

English for Medical Purposes (EMP) is a branch of English for Specific Purposes (ESP) that prepares health-science students to read, write and communicate in professional settings. Vocabulary is one of its most demanding components, because medical students must master both highly technical terms and semi-technical academic words. This paper reports a systematic synthesis of recent studies on needs-based ESP instruction for medical learners, published between 2021 and 2025. Seven sources were identified and coded for context, design, focus and reported outcome. The synthesis shows that needs analysis consistently reveals gaps in medical vocabulary and reading competence, that interactive and self-directed formats are increasingly used to address these gaps, and that controlled studies report gains in specialised vocabulary and language proficiency. The evidence base is small and heterogeneous, so the findings should be read as indicative rather than conclusive. The paper proposes a four-stage course-design cycle in which evaluation results feed back into the needs profile.

KEYWORDS

English for Medical Purposes; ESP; needs analysis; medical vocabulary; course design; interactive learning.

1. INTRODUCTION

Healthcare is increasingly international. Clinicians read English-language guidelines, present at conferences, and communicate with colleagues and patients who may not share their first language. For this reason, English is now a core professional competence in many medical curricula, particularly in countries where English is taught as a foreign language. General English courses rarely prepare students for this demand, because they do not focus on the discourse, terminology and tasks of medicine. This gap is the main rationale for ESP.

ESP is commonly defined as an approach to language teaching in which content and method are determined by the learners' reasons for learning (Hutchinson & Waters, 1987; Dudley-Evans & St John, 1998). Its central procedure is needs analysis, which identifies the target situations in which learners will use English, the language skills and vocabulary those situations require, and the gap between current and required competence. Ibrahim and Alani (2022) describe ESP as a field that has developed around the question of why learners need English, and that answer shapes every later decision about syllabus and materials.

Vocabulary occupies a particular place in EMP. Medical texts

combine a large body of technical terms, such as names of diseases, drugs and procedures, with semi-technical items that are common in academic writing but carry specialised meanings in medicine. Students who recognise the first group but not the second often struggle to read clinical articles fluently. Recent studies from several regions report that medical students perceive terminology as one of their most pressing difficulties (Tabassum, 2022; Shehata, 2022).

The historical development of ESP helps explain why medical vocabulary has become such a visible concern. Early ESP work focused on the language of science and technology, and later work broadened the field to academic and occupational settings (Dudley-Evans & St John, 1998). In this tradition, vocabulary is not treated as a list of isolated words to be memorised before a course begins. It is treated as a set of resources that learners use to carry out specific tasks, such as reading a case report, writing a discharge summary, or presenting a clinical question at a seminar. This task-based view has two consequences. First, the choice of vocabulary depends on the professional role the learner is preparing for, so a future surgeon and a future public-health specialist may need different word sets. Second, the best measure of vocabulary learning is the learner's ability to use words accurately in context, not simply the ability to recall a definition.

Medical English also has a distinctive structure. Terms are often built from Greek and Latin roots, with prefixes and suffixes that signal meaning, such as the difference between a condition of inflammation and a condition of enlargement. Students who learn these patterns can infer the meaning of new terms, which makes word-building instruction a useful complement to glossary-based learning. Semi-technical vocabulary presents a different challenge. Words such as "positive", "negative" or "acute" have ordinary meanings for general readers but precise clinical meanings for physicians. Learners who focus only on the technical register may therefore misread the very texts they are meant to understand.

Despite this interest, the research is fragmented. Studies differ in country, institution, learner level and method, and many are small-scale or published in regional journals with limited international visibility. A structured synthesis is therefore useful for teachers and curriculum designers who need to know what the recent evidence supports. This paper addresses three questions:

RQ1. What do recent studies report about the English needs of medical students?

RQ2. Which instructional approaches to medical vocabulary are described in these studies?

RQ3. What outcomes, and what quality of evidence, do the studies provide?

2. METHODS

2.1 Design. The study uses a narrative synthesis with a transparent set of search and coding rules. It is not a meta-analysis, because the included studies differ too much in design and outcome measures to be pooled statistically.

2.2 Search. Sources were located through academic search engines and institutional repositories using combinations of the terms "English for medical purposes", "ESP", "medical terminology", "medical vocabulary" and "needs analysis". Searches were limited to publications from 2021 to 2026 in English, with the first record retrieved by each query checked against its original publication.

2.3 Eligibility. A source was included if it (a) concerned English instruction for medical or health-science students, (b) addressed needs, vocabulary or instructional design, and (c) was a peer-reviewed article, a validated development report, or an academic thesis with a verifiable record. Sources without a verifiable publication year or author list were excluded.

2.4 Data extraction and analysis. For each source, the following were recorded: country or context, learner group, design, focus, and reported result. Coding was thematic. Themes were assigned inductively and then grouped into the three research questions. Because only one coder was available, the coding is open to individual interpretation and should be checked by a second reader in any follow-up study.

2.5 Inclusion decisions. Several sources were identified during searching but excluded. Some lacked a verifiable author list or publication year, and others addressed general English rather than medical learners. Where a source was located only through a secondary listing and its details could not be confirmed against the original publication, it was not included. This conservative rule reduces the number of sources but protects the accuracy of the bibliography, which is more important for a reader who wishes to check the evidence.

2.6 Limitations of the method. The search was not exhaustive, and the final set of seven sources is small. The synthesis

therefore describes the evidence that could be verified, not the full field.

3. RESULTS

3.1 Characteristics of the included sources. Seven sources met the eligibility criteria. Table 1 summarises their context, design and focus. Four were conducted in medical or health-science settings, one was a dental-education study, one was a theoretical review, and one was a bachelor's thesis. Figure 1 shows that the sources were published across 2021 to 2025, with the largest group in 2022.

Table 1. Characteristics of the sources included in the synthesis

Source	Context	Design	Focus
Yelahina & Fedchyshyn (2021)	Ukrainian medical education	Methodological article	Methods of learning professional English vocabulary
Shehata (2022)	Arabic-language setting; secondary students applying to medical faculties	Needs analysis survey	Ranking of reading, listening and other sub-skills
Tabassum (2022)	Two medical colleges in Bangladesh; ten students	Needs analysis (bachelor's thesis)	Medical jargon and proficiency gaps
Ibrahim & Alani (2022)	General ESP literature	Theoretical review	Definitions, characteristics and development of ESP
Dudina (2024)	Donetsk National Medical University; 26 dental students	Controlled design, one semester	Language proficiency and specialised vocabulary
Yelahina (2024)	Ukrainian medical education, distance learning	Study of interactive strategies	Teaching English medical terminology
Rohmah, Nailufar & Utsani (2025)	Indonesian health-science students	ADDIE development with expert validation	Self-directed e-module for medical terminology

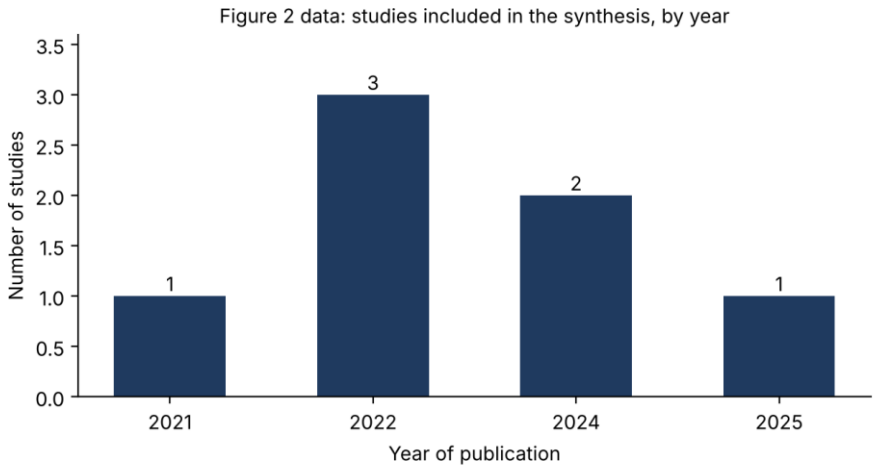


Figure 1. Number of included sources by year of publication (n = 7)

3.2 Thematic findings. Three themes emerged from the coding, summarised in Table 2. The first concerns the content of needs analysis, the second concerns the instructional format, and the third concerns the strength of the reported outcomes.

Table 2. Thematic findings from the synthesis

Theme	Summary of reported findings	Supporting sources
T1. Needs are mainly lexical and receptive	Students report difficulty with medical terms and rank reading and listening sub-skills highly.	Shehata (2022); Tabassum (2022)
T2. Vocabulary is treated as a core learning target	Recent work proposes systematic methods for professional vocabulary and terminology.	Yelahina & Fedchyshyn (2021); Yelahina (2024)
T3. Interactive and self-directed formats are growing	Designs use interactive strategies, e-modules and learner autonomy to support terminology learning.	Yelahina (2024); Rohmah et al. (2025)
T4. Controlled studies report gains	A one-semester ESP curriculum was associated with better language proficiency and specialised vocabulary than conventional instruction.	Dudina (2024)

3.3 Quality of evidence. Only one source used a comparison group (Dudina, 2024). The remaining sources are needs analyses, theoretical reviews, development studies or methodological articles. None reports a large sample or a long-term follow-up. This pattern limits the strength of conclusions about effectiveness, but it does not contradict the broad direction of the findings.

4. DISCUSSION

4.1 Interpretation of the needs findings (RQ1). The needs described in these sources are consistent with the core claim of ESP: learners require language tied to a specific purpose. The studies identify medical terminology as a persistent difficulty, and they suggest that receptive skills, especially reading, are the first priority for students who must consult English-language literature. This finding should not be read as a rejection of speaking and writing. Rather, it indicates that course designers should sequence reading and vocabulary early, because these skills support later communicative tasks.

4.2 Instructional approaches (RQ2). The sources point to a shift from teacher-centred word lists towards interactive and learner-centred formats. Yelahina (2024) examines interactive strategies in a distance-learning context, which is relevant because online instruction removes many of the face-to-face cues that support vocabulary practice. Rohmah et al. (2025) show how an e-module can be designed systematically, using the ADDIE model and expert validation, to support self-regulated learning of medical terminology. Together, these studies suggest that technology is most useful when it is designed around a needs profile rather than added to an existing course.

4.3 Outcomes and their strength (RQ3). Dudina (2024) is the only source in this set with a comparison group. Its report of greater gains in specialised vocabulary and language proficiency is encouraging, but the sample of 26 students in one institution means that generalisation must be cautious. The remaining sources contribute design guidance and needs evidence rather than measured outcomes. A useful next step for the field is therefore not only more studies, but larger and better-controlled studies that use common vocabulary measures.

4.4 Implications for course design. The evidence supports a cyclical approach to ESP course development, shown in Figure 2. The first stage is a needs analysis that identifies the learners' target situations and lexical gaps. The second stage converts these needs into a lexical syllabus that separates technical from semi-technical vocabulary. The third stage produces materials and tasks, ideally interactive and available for self-study. The fourth stage evaluates proficiency and vocabulary gains and feeds the results back into the needs profile. Without the feedback loop, courses risk becoming static even when the learner population changes.

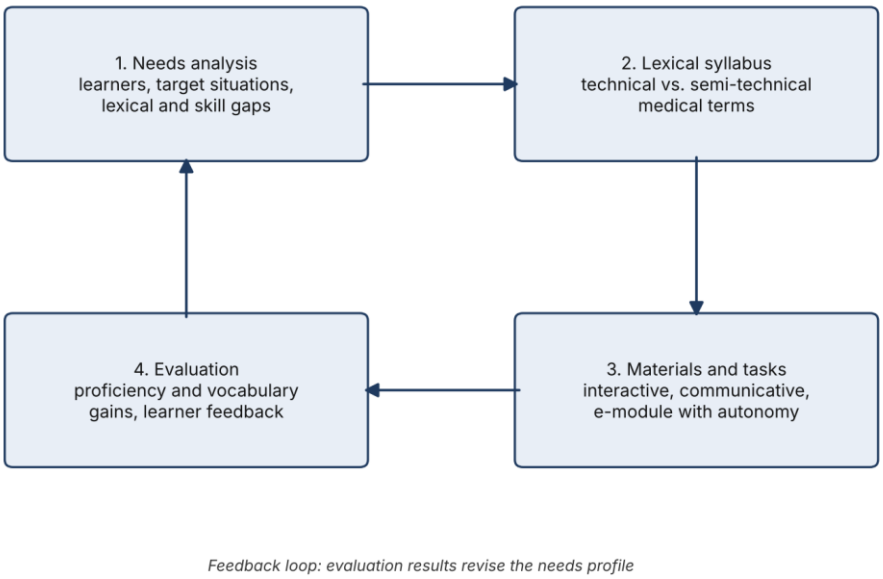


Figure 2. Four-stage cycle for needs-based ESP vocabulary instruction in medical education

4.5 Relation to the wider literature. The findings of this synthesis fit a broader pattern in ESP research, in which needs analysis is treated as the foundation of course design (Hutchinson & Waters, 1987). The sources reviewed here extend that pattern to a clinical setting, and they show that the same logic applies across very different educational systems. The Arabic-language and Ukrainian-language sources, for example, both emphasise terminology and reading, even though their institutional structures differ. This suggests that the needs of medical learners may share a common core, while the details of curriculum, assessment and learner background vary by country.

The emphasis on interactive formats also reflects wider changes in language education. Digital tools make it easier to provide repeated, self-paced practice with terminology, and they allow instructors to track which items learners find difficult. However, the sources reviewed here do not claim that technology is sufficient on its own. The e-module described by Rohmah et al. (2025) was built around a needs profile and validated by experts, and the interactive strategies examined by Yelahina (2024) were presented as part of a structured teaching approach. The implication is that technology should serve the needs analysis rather than replace it.

4.6 Limitations. The conclusions are limited by the small number of sources, their uneven quality, and the mix of contexts, which includes dental, medical and distance-learning settings. Several sources are regional or are theses, which may reduce their visibility. The synthesis also did not measure learner outcomes directly; it reports what the authors of the included studies claimed.

5. CONCLUSION

Recent studies show that medical students' English needs are strongly lexical and that receptive reading skills are a priority. Interactive and self-directed formats are emerging as practical responses, and a small controlled study reports gains in specialised vocabulary and language proficiency. The field would benefit from larger comparative studies and from shared outcome measures. Until such evidence is available, course designers can follow the needs-based cycle described here, using regular evaluation to keep the course aligned with the learners it serves.

REFERENCES

1. Dudina, O. (2024). Enhancing academic competence in future dentists: Leveraging English for specific purposes in dental education. Revista Romaneasca pentru Educatie Multidimensionala, 16(3), 88–100. https://doi.org/10.18662/rrem/16.3/884

2. Dudley-Evans, T., & St John, M. J. (1998). Developments in English for specific purposes: A multi-disciplinary approach. Cambridge University Press.

3. Hutchinson, T., & Waters, A. (1987). English for specific purposes: A learning-centred approach. Cambridge University Press.
4. Ibrahim, O., & Alani, N. (2022). English for specific purposes: An overview: Definitions, characteristics and development. English Language Teaching, 15(12), 28–36. https://doi.org/10.5539/elt.v15n12p28
5. Rohmah, F. N., Nailufar, Y., & Utsani, R. (2025). A self-regulated English medical terminology e-module [title to be confirmed against the published version]. Jo-ELT (Journal of English Language Teaching), 12(2), 354–368. https://doi.org/10.33394/jo-elt.v12i2.17402
6. Shehata, I. A. Y. (2022). Needs analysis of teaching English for specific purposes for secondary students applying to medical faculties. International Journal of Curriculum and Technology Education, 6(9), 1–32. https://doi.org/10.21608/ijcte.2022.116269.1036
7. Tabassum, R. (2022). The necessity of an English language preliminary course for the medical college students in Bangladesh: A need analysis study for an ESP course [Bachelor's thesis]. BRAC University.
8. Yelahina, N. I. (2024). The efficacy of interactive strategies in teaching English medical terminology to medical students in distance learning environment. Medical Education, 1, 104–109. https://doi.org/10.11603/m.2414-5998.2024.1.14587
9. Yelahina, N. I., & Fedchyshyn, N. O. (2021). Methods of learning professional English vocabulary by medical students. Medical Education, 3(93), 106–112. https://doi.org/10.11603/m.2414-5998.2021.3.12609