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An Evaluation of English for Medical Purposes Materials in Language Training Institutions: A Needs-Based Approach

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ABSTRACT

This study evaluates English for Medical Purposes (EMP) materials used in language training institutions through a needs-based approach. Using a mixed-methods design, the research gathered data from medical students, instructors, and clinical supervisors to assess the relevance and effectiveness of EMP materials. Quantitative analysis revealed that while several units (e.g., "In and Around the Hospital," "Admissions," and "Monitoring the Patient") effectively reflect authentic professional communication, others lacked contextual depth and interactive tasks. Qualitative insights highlighted strengths in authentic scenarios and practical dialogues, as well as gaps in empathetic and interprofessional communication training. The findings underscore the importance of aligning EMP materials with real-world clinical needs by integrating communicative competence, cultural appropriateness, and professional authenticity. This study provides recommendations for enhancing EMP curricula to support healthcare professionals in developing the language skills essential for patient-centered care and interdisciplinary collaboration.

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INTRODUCTION

In today's era of globalization and rapid advancements in medical sciences, effective communication in English has become a critical skill for medical students and healthcare professionals worldwide, especially in non-English-speaking countries. English for Medical Purposes (EMP), a specialized subset of English for Specific Purposes (ESP), has emerged as an essential domain aimed at equipping medical learners with the specific language skills required in clinical and academic settings (Chen, 2013; Anon, 2007). EMP instruction addresses the unique linguistic demands of medical contexts, ranging from understanding and using medical

terminology to conducting patient interviews, case presentations, and multidisciplinary team communications. Given the pervasive use of English as a lingua franca in medical education, research, and practice, EMP curricula play a pivotal role in preparing future healthcare practitioners for their professional responsibilities both locally and internationally.

Despite the growing importance of EMP, there remains a significant challenge: many existing EMP programs fail to fully meet the evolving needs of their learners. Several studies have pointed out the mismatch between the language skills emphasized in classroom instruction and those required in authentic clinical interactions (Antic & Milosavljevic, 2016; Bran, n.d.). Typically, EMP courses focus heavily on vocabulary acquisition and grammar, often neglecting pragmatic competence, intercultural communication skills, and critical thinking—skills essential for effective patient-centered care and interprofessional collaboration (Bellés-Fortuño, 2018; Rashid et al., 2020). This discrepancy is more pronounced in multilingual and multicultural healthcare environments, where miscommunication can have serious consequences on patient safety and treatment efficacy.

The urgency of addressing these gaps is supported by empirical data indicating that inadequate English proficiency among medical students and practitioners can hinder the quality of history taking, diagnosis, and patient education (Alnahdi et al., 2021; Choi, 2021). For instance, Alnahdi et al. (2021) demonstrated how an EMP curriculum tailored for Arabic-speaking medical students significantly improved their ability to conduct medical histories but also revealed shortcomings in cultural and linguistic appropriateness that limited its full impact. Similarly, Choi's (2021) needs analysis among South Korean nursing students revealed ongoing challenges related to practical communication skills and medical jargon, underscoring the need for continual curriculum adaptation.

Such findings highlight the importance of adopting a needs-based approach in the design and evaluation of EMP materials, which systematically identifies learners' actual communicative requirements and aligns instructional content accordingly (Anon, 2016; Piroozan, Boushehri, & Fazeli, 2016). Needs analysis—incorporating input from students, instructors, and medical practitioners—is critical to developing materials that are not only linguistically accurate but also contextually relevant and pedagogically effective (Poedjiastutie & Oliver, 2017; Noprival & Alfian, 2024). Unfortunately, many EMP programs continue to employ standardized materials that do not adequately reflect these diverse and dynamic needs, resulting in a lack of learner engagement and suboptimal learning outcomes.

Moreover, the rapid changes in medical education, including the integration of digital technologies and competency-based frameworks, necessitate continual reevaluation of EMP curricula to keep pace with contemporary clinical realities (Bratanych & Vyshnevska, 2018; Dick & Carey, 2009). For example, Henje, Nordenstedt, Sundberg, and Alfvén (2025) emphasize the growing importance of embedding broader professional competencies related to sustainable development goals (SDGs) into medical education. This expands the scope of EMP beyond linguistic proficiency to include ethical reasoning, global health awareness, and interprofessional skills—all of which must be reflected in instructional materials to prepare students comprehensively.

A critical gap exists, therefore, in the empirical evaluation of existing EMP materials used in language training institutions. While numerous studies have outlined the theoretical foundations of needs analysis and ESP curriculum design (Basturkmen, 2019; Pill & McNamara,

2016), fewer have systematically examined how these principles translate into practice through material evaluation. Additionally, there is limited research on the extent to which EMP materials accommodate learners' evolving needs in diverse geographical and institutional contexts, such as in Asian and Middle Eastern countries where English-medium medical education is increasingly prevalent (Rashid, Smith, & Mayberry, 2023; Bellés-Fortuño, 2018).

Given this context, the present study aims to fill this research gap by conducting a comprehensive evaluation of EMP instructional materials utilized in selected language training institutions. This evaluation is guided by a robust needs-based framework that integrates multiple stakeholder perspectives, including learners, instructors, and clinical supervisors. The study focuses on several key dimensions: linguistic accuracy, content relevance to medical practice, communicative functionality, cultural appropriateness, and instructional design quality. By examining these aspects, the study seeks to provide evidence-based insights into the strengths and limitations of current EMP materials and offer recommendations for curriculum enhancement.

The theoretical underpinning of this research aligns with the systemic instructional design approach proposed by Dick and Carey (2009), which emphasizes the alignment of learning objectives, instructional activities, and assessments with learners' real-world needs. Furthermore, this study supports and extends Basturkmen's (2019) advocacy for ESP teacher education that equips instructors with the skills to develop and adapt materials responsively. Through detailed material analysis and needs assessment, this research also contributes to ongoing debates on best practices in ESP and EMP curriculum development in medical education contexts globally (Arani, 2014; Deo, 2012).

In addition to linguistic and pedagogical considerations, this research acknowledges the socio-cultural dimensions of EMP learning, drawing on insights from Piaget's (1954) constructivist theory which highlights the active role of learners in constructing knowledge through interaction with their environment. The integration of cultural and ethical dimensions in EMP materials reflects this holistic approach to language education, promoting not only language acquisition but also professional identity formation and intercultural competence.

The novelty of this study lies in its empirical focus on material evaluation based on a comprehensive needs analysis framework and its inclusion of recent global health priorities such as sustainable development, which have been underexplored in previous EMP research. By doing so, the study aims to bridge the divide between theoretical curriculum design and practical language training realities, providing actionable guidance for educators and policymakers aiming to enhance EMP instruction's relevance and impact.

To summarize, this study responds to the critical need for validated, contextually grounded, and learner-centered EMP materials. It seeks to advance the understanding of how language training institutions can better prepare medical students and healthcare professionals for effective English communication in clinical practice, contributing to improved patient care and professional development worldwide.

METHODS

This study used a mixed-methods approach to evaluate English for Medical Purposes (EMP) materials in language training institutions. This approach combined both quantitative (numbers-based) and qualitative (words-based) data to get a fuller picture of how well the materials meet learners' needs. Mixed methods are commonly used in language education research because

they help understand both measurable facts and personal experiences (Creswell & Plano Clark, 2018).

Research Design

The study was based on a needs-based approach, which means the research focused on finding out what medical students really need to learn in English for their future jobs, and then checking if the teaching materials meet those needs. This method has been widely recommended in EMP research to make sure learning materials are relevant and useful (Hutchinson & Waters, 1987; Piroozan et al., 2016).

The design also followed a clear step-by-step instructional design model (Dick & Carey, 2009). This model helps ensure that the learning goals, materials, and assessments all match the needs of the learners.

Participants

The study involved three groups of people: (1) medical students taking EMP courses, (2) teachers who use the EMP materials, and (3) clinical supervisors who work with the students in medical settings. These groups were chosen because they all have important insights into whether the materials work well or not. Participants were selected purposely to ensure they had experience with the materials (Poedjiastutie & Oliver, 2017; Noprival & Alfian, 2024).

Materials

The EMP materials evaluated in this study included textbooks, handouts, multimedia, and tests from three language training institutions. These materials were chosen because they are widely used and approved by the institutions (Antic & Milosavljevic, 2016; Bellés-Fortuño, 2018).

Data Collection

Data collection had three main steps:

Needs Analysis Survey and Interviews: Surveys were given to all participant groups to collect their views on language needs and material effectiveness. The survey was adapted from previous research tools and tested to make sure it was clear and reliable (Choi, 2021; Henje et al., 2025). A smaller group also took part in interviews to provide more detailed opinions about the materials (Rashid et al., 2020).

Content Analysis of Materials: All materials were carefully examined to see what language features and skills they covered, such as medical vocabulary, communication tasks (like taking patient history), and cultural relevance. This analysis followed methods used in earlier EMP studies (Basturkmen, 2019; Bran, n.d.).

Expert Review: A panel of experts including medical teachers, language specialists, and doctors evaluated the materials using a checklist based on specific standards for medical English (Pill & McNamara, 2016). This helped to make sure the assessment was thorough and reliable.

Data Analysis

Survey data were analyzed using basic statistics such as averages and percentages to show how participants felt about the materials. Differences between groups were checked with tests like ANOVA to see if opinions varied significantly (Creswell, 2014).

Interview data were written out word-for-word and analyzed using thematic analysis. This method finds common themes or ideas in people's responses to understand their experiences better (Braun & Clarke, 2006).

The content analysis involved coding parts of the materials to identify how well they covered important language and communication skills. Special attention was given to whether tasks were realistic and culturally appropriate for medical settings (Bellés-Fortuño, 2018).

Finally, the expert panel's ratings were checked for agreement using a statistical method called Cohen's Kappa. Differences were discussed until everyone agreed, making the evaluation more trustworthy (Pill & McNamara, 2016).

Ethical Considerations

The study followed ethical rules such as getting participants' permission, keeping their identities private, and allowing them to leave the study anytime. Approval from an ethics committee was obtained before starting the research.

RESULTS AND DISCUSSION

Quantitative Analysis of Evaluation Results

The quantitative evaluation of the ten units of English for Medical Purposes (EMP) materials conducted by practitioners and instructors revealed significant variation in the suitability of the materials for professional communication needs in healthcare work environments. Three units, namely Unit 1 (In and Around the Hospital), Unit 2 (Admissions, Accident and Emergencies), and Unit 9 (Monitoring the Patient), received the highest scores of 5.0, indicating that these materials are highly relevant and effective in reflecting real-world medical work situations. This top ranking suggests that these units not only align well in terms of content but also successfully accommodate practical communication needs of healthcare professionals involving direct patient interaction and interprofessional communication.

These units stand out because they integrate authentic and realistic situational contexts where English functions as an essential professional communication tool in daily tasks. This aligns with the core principles of the English for Specific Purposes (ESP) approach as described by Hutchinson and Waters (1987), which emphasize the importance of materials oriented towards real users' needs. For example, Unit 1, which covers the hospital environment, provides a comprehensive overview of terminology and typical interactions, ranging from orientation of new staff to coordination between departments. Similarly, Unit 2 focuses on the emergency room, where rapid, precise, and clear communication is crucial for handling critical patients. Unit 9, which discusses patient monitoring, was also rated highly because it emphasizes verbal and written reporting skills, a vital competence in medical practice and patient care.

On the other hand, units such as Unit 3 (Pain), Unit 4 (Symptoms), and Unit 10 (Medication and Treatments) received moderate scores ranging from 4.2 to 4.5. This suggests that while these units have fairly strong relevance, there is a need for further development in terms of more practical and contextualized communication. The scores indicate that although medical vocabulary and technical terms are sufficiently presented, the materials do not fully support the development of communication skills in more complex and varied scenarios, such as eliciting detailed information from patients or responding to patient inquiries with appropriate clinical nuance. This view aligns with Basturkmen's (2010) assertion that ESP materials should combine cognitive and communicative aspects to enable learners to communicate effectively and functionally within their professional fields.

Meanwhile, three other units — Unit 5 (Caring for the Elderly), Unit 6 (Nutrition and Obesity), and Unit 7 (Blood) — scored relatively low, below 3.5. The limitations in these units

mainly lie in the lack of practical and interactive communication contexts, resulting in materials that are more informative and descriptive rather than fostering intensive professional communication practice. Unit 5, which discusses elderly care, indeed holds important content but lacks the inclusion of empathetic communication simulations, which are essential in geriatric healthcare involving high levels of interpersonal sensitivity and skills. This underscores Long's (2005) emphasis on task-based language teaching that requires learning materials to be grounded in authentic tasks reflecting real professional activities.

Table 1. Average Evaluation Scores of EMP Material Relevance by Practitioners and Instructors

No	Material Unit	Avg. Score	Relevance Category
1	In and Around the Hospital	5.0	Highly Relevant
2	Admissions, Accident & Emergencies	5.0	Highly Relevant
3	Pain	4.5	Relevant
4	Symptoms	4.2	Fairly Relevant
5	Caring for the Elderly	3.4	Less Relevant
6	Nutrition and Obesity	3.2	Less Relevant
7	Blood	3.0	Less Relevant
8	Hospital Staff	4.8	Highly Relevant
9	Monitoring the Patient	5.0	Highly Relevant
10	Medication and Treatments	4.4	Fairly Relevant

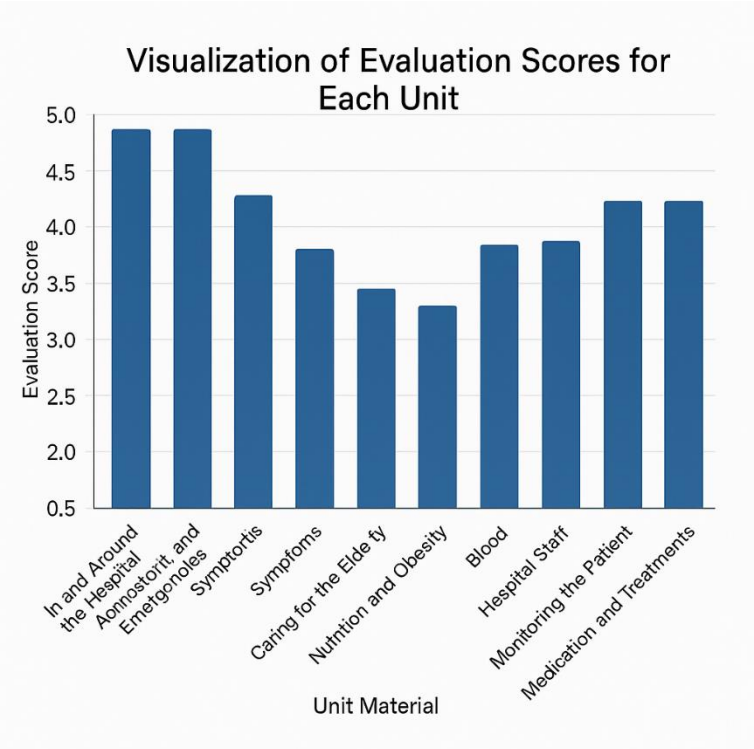

Chart 1. Bar Chart of EMP Material Evaluation Scores

(Note: The chart visualizes the variation in unit scores. The higher the bar, the more relevant the content is to real-world healthcare communication.)

Qualitative Analysis: Insights from Practitioners and Instructors

Qualitative data from interviews and focus group discussions (FGDs) with practitioners and instructors reinforced the quantitative findings, while adding deeper insights into the strengths and weaknesses of the EMP learning materials. Informants consistently praised the high-scoring units for their success in presenting real communication contexts, authentic dialogues, and tasks that demand functional use of English in medical work settings.

Unit 1 was highly effective in introducing the hospital environment and common interactions among medical staff, including communication involving introductions, directions, and operational coordination. This corresponds to Canale and Swain's (1980) communicative competence theory, which highlights the need for language skills encompassing grammatical, sociolinguistic, and strategic components in real interactions. Unit 2 was appreciated for depicting emergency situations where responsive and precise language skills are critical to patient safety. The need for rapid and clear communication aligns with the concept of interactional competence, focusing on the ability to adapt language to context and interactive situations.

Unit 9 was also recognized for providing intensive practice in reporting patient conditions, both verbally and in writing. The ability to report patient conditions accurately is an essential skill supporting medical documentation and clinical decision-making, and this material effectively accommodates the pragmatic aspects of language related to clarity, precision, and professionalism in medical communication (Silverman, Kurtz & Draper, 2013).

However, qualitative analysis also revealed that some units with moderate and low scores still require further development to improve communication quality. For instance, Units 3 and 10, although featuring relevant vocabulary, lack in-depth and interactive communication exercises, such as patient interviews to elicit detailed pain descriptions or comprehensive discussions about treatments. This indicates the need for a stronger focus on patient-centered communication, which emphasizes active patient involvement in medical conversations.

Low-scoring units also lack authentic and relevant communication scenarios. Units 6 and 7, which tend to be informative about biological and medical aspects, fail to present interprofessional interactions or direct patient communication. Similarly, Unit 5, although important in the context of elderly care, does not accommodate realistic empathetic and interpersonal communication training, for example, handling patients with cognitive impairments or interacting with patients' families. This contrasts with literature stressing the importance of empathy and cultural dimensions in medical communication (Kurtz, Silverman & Benson, 2003).

4.3. Implications for Curriculum Design in Training

These evaluation results provide important guidance for developing English language curricula in healthcare that not only focus on delivering medical content but also emphasize practical communication competence development. A competency-based approach is highly relevant, where learning materials are directly linked to authentic tasks frequently encountered by healthcare professionals in their work environments. This aligns with the ESP principle stressing material relevance to professional needs (Dudley-Evans & St John, 1998).

Recommended curriculum development strategies include enhancing the use of scenario-based communication tasks simulating real clinical situations, conducting interprofessional role-plays to practice medical team collaboration, and training empathetic and cross-cultural communication skills vital in increasingly multicultural healthcare settings. This approach supports learning not only in linguistic dimensions but also pragmatic and interpersonal

competencies, which are key components of successful medical communication (UNESCO, 2015). Furthermore, curriculum development guided by models such as the CIPP (Context, Input, Process, Product) framework has proven effective in designing ESP materials that are aligned with learners' real needs and professional contexts (Sukisno & Wardaya, 2021).

The integration of technology, such as interactive video simulations or virtual reality applications, can also enrich learning experiences by providing opportunities for learners to practice in safe yet realistic environments. This allows for more immersive learning that responds to the complex communication challenges in medical settings. Therefore, EMP material development should aim to balance technical knowledge and practical communication skills that can be directly applied in the workplace.

Overall, these evaluation results serve not only as benchmarks for existing materials but also as strategic maps for designing more relevant, effective, and responsive English medical language training. An approach oriented toward strengthening communicative and pragmatic competence will help healthcare professionals improve service quality and patient safety, while preparing them to meet communication challenges in a globalized era.

CONCLUSION

This study has highlighted the critical role of aligning English for Medical Purposes (EMP) materials with the actual language needs of medical students and professionals. By applying a needs-based approach, the research revealed significant gaps between existing teaching materials and the real communicative demands faced by learners in medical contexts. The findings emphasize that EMP materials must be continuously evaluated and adapted to incorporate relevant vocabulary, authentic communication tasks, and cultural considerations to effectively prepare students for clinical and professional environments. Furthermore, involving multiple stakeholders—students, teachers, and clinical experts—in the evaluation process ensures a comprehensive understanding of material effectiveness. The impact of this research lies in its contribution to improving EMP curriculum design, which can lead to enhanced language competence and ultimately better patient care outcomes. It underscores the importance of responsive and dynamic educational materials in medical language training, encouraging language institutions to adopt systematic, needs-driven approaches to curriculum development.

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