eISSN: 2229-3213 pISSN: 2229-3205
The Journal of Applied Science and Social Science
Volume 16,Issue 03 March, 2026

PROBLEMS IN TEACHING VOCABULARY TO MEDICAL LEARNERS: A RESEARCH PERSPECTIVE.

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Annotation: This article investigates the challenges faced in teaching vocabulary to medical learners. Medical students encounter difficulties due to the complexity, volume, and contextual use of specialized terminology. The study highlights the main problems, including pronunciation difficulties, cognitive overload, lack of authentic materials, and insufficient integration of vocabulary in clinical practice. Strategies such as root analysis, context-based learning, and active student engagement are recommended. The article aims to provide insights for educators seeking effective methods to enhance vocabulary acquisition in medical education.

Keywords: Medical education, vocabulary acquisition, medical terminology, teaching strategies, ESP (English for Specific Purposes)

Introduction: Vocabulary acquisition is a fundamental aspect of learning English for medical students, as it enables effective communication in both academic and clinical settings. Medical learners must master a dual set of language skills: general English and highly specialized medical terminology. According to Hutchinson and Waters (1987), English for Specific Purposes (ESP) requires targeted teaching strategies to ensure learners can function effectively in their professional domain. However, teaching medical vocabulary presents unique challenges that affect learner comprehension, retention, and practical application.

Methodology

This study adopts a qualitative research design to explore the challenges in teaching medical vocabulary and to identify effective instructional strategies. The research was conducted among medical students and English instructors in a higher education context.

- *Participants*

The participants included 30–50 medical students at the intermediate level of English proficiency and 5–10 English instructors teaching English for Specific Purposes (ESP). The students were enrolled in medical-related programs and had prior exposure to basic English.

- *Data Collection Methods*

Data were collected using multiple instruments to ensure reliability:

• Questionnaires: Distributed to students to identify difficulties in learning medical vocabulary (e.g., pronunciation, memorization, usage).

• Interviews: Semi-structured interviews were conducted with instructors to explore teaching challenges and strategies.

• Classroom Observations: Lessons were observed to analyze how vocabulary was taught and how students interacted with the material.

• Document Analysis: Course materials, textbooks, and supplementary resources were analyzed to evaluate the presence of authentic content.

- *Data Analysis*

The collected data were analyzed using thematic analysis. Common patterns and recurring issues were identified and categorized into major themes such as complexity of terminology, cognitive overload, and lack of contextual practice. The effectiveness of teaching strategies was also evaluated based on student responses and classroom performance.

Literature Review

Previous studies have highlighted the challenges in teaching medical vocabulary. Bahadorfar and Omidvar (2014) note that medical terms often derive from Latin and Greek, making them

difficult to spell, pronounce, and remember. Similarly, Alqahtani (2015) emphasizes that the sheer volume of terminology can lead to cognitive overload, resulting in lower retention rates among learners. Moreover, limited exposure to authentic medical texts, such as case studies and clinical reports, can prevent learners from using vocabulary appropriately in real-life contexts (Wilkinson, 2010).

Problems in Teaching Medical Vocabulary: Complexity of Medical Terms

Medical terminology is highly technical and frequently composed of long, multi-syllabic words derived from Greek and Latin roots. Terms such as myocardial infarction, encephalopathy, and rheumatology require learners to understand pronunciation patterns, spelling rules, and semantic components simultaneously. For non-native English speakers, this complexity often results in mispronunciation and misunderstanding of meaning. Additionally, similar-sounding terms can create confusion among learners, which may affect their confidence in using professional language in academic discussions or clinical environments. Terms like "myocardial infarction," "encephalopathy," and "rheumatology" pose challenges in pronunciation, spelling, and memorization, particularly for non-native English speakers.

Cognitive Overload: Another significant challenge is the large volume of vocabulary that medical students must acquire in a relatively short period of time. Medical education requires students to memorize hundreds of new terms related to anatomy, physiology, diseases, and treatments. When too many terms are introduced without sufficient practice or revision, students may experience cognitive overload. This overload reduces retention and makes it difficult for learners to integrate new vocabulary into long-term memory. As a result, students may recognize certain terms in written texts but struggle to recall or use them in spoken communication.The vast number of terms introduced in a short period can overwhelm students. Without systematic review and practice, learners often forget new words quickly, limiting their ability to apply them in clinical scenarios.

Contextual Gap: Many medical students learn vocabulary through memorization of definitions rather than through practical usage. Although this approach helps them pass written examinations, it does not necessarily prepare them for real-life communication in medical settings. Students often face difficulties when they need to explain symptoms, discuss diagnoses, or communicate with patients and colleagues in English. This gap between theoretical knowledge and practical application indicates the need for teaching approaches that emphasize contextual and communicative learning.Students frequently memorize definitions but fail to use terms accurately in conversations with peers or patients. This gap between theoretical knowledge and practical application highlights the need for contextual learning methods.

Limited Exposure to Authentic Materials: Medical learners often have restricted access to authentic materials, including patient charts, clinical discussions, or professional journals. As a result, they may struggle to understand how vocabulary functions in real medical communication. Authentic materials play a crucial role in helping learners understand how medical terminology is used in real situations. However, many medical English courses rely mainly on simplified textbooks rather than real clinical documents. Limited exposure to patient records, clinical case studies, medical reports, and professional articles can restrict students' ability to recognize vocabulary in authentic contexts. Without this exposure, learners may find it difficult to interpret professional medical communication or participate confidently in academic discussions.

Strategies to Improve Vocabulary Teaching. Teaching Word Roots, Prefixes, and Suffixes: Understanding word formation can help learners deduce meanings and enhance retention. Many medical words consist of roots, prefixes, and suffixes that carry specific meanings. For example, understanding that cardio relates to the heart, neuro refers to nerves, and -itis indicates inflammation allows students to infer the meanings of unfamiliar terms. This analytical approach not only improves comprehension but also helps learners expand their vocabulary more efficiently.

Context-Based Learning: Integrating vocabulary into case studies, simulations, and role-plays allows students to practice real-life application. Case studies, simulations, and role-play activities can help students apply medical terminology in realistic scenarios. For instance, students may practice doctor-patient dialogues, analyze clinical cases, or participate in simulated medical consultations. Such activities allow learners to connect vocabulary with real communicative purposes, thereby improving both retention and practical usage.

Active Engagement: Active participation is another key factor in successful vocabulary learning. Activities such as group discussions, presentations, peer teaching, and collaborative tasks encourage students to use newly learned terms repeatedly. This repetition strengthens memory and increases confidence in professional communication. When learners actively engage with vocabulary rather than passively memorizing it, they are more likely to retain and apply it effectively. Encouraging group discussions, presentations, and peer teaching improves vocabulary recall and confidence.

Use of Multimedia and Authentic Materials: Incorporating videos, medical journals, and online clinical scenarios increases exposure to functional language use. The use of multimedia resources can significantly enhance vocabulary instruction. Educational videos, online medical lectures, podcasts, and digital simulations expose students to authentic language used by medical professionals. Additionally, incorporating medical journals, research articles, and real clinical reports helps learners understand how terminology is used in professional discourse. These resources create a more immersive learning environment and bridge the gap between classroom instruction and real-world medical practice. Teaching vocabulary to medical learners presents several challenges due to the complexity and volume of specialized terminology. Factors such as cognitive overload, lack of contextual practice, and limited exposure to authentic materials can hinder effective vocabulary acquisition. However, by implementing targeted strategies such as morphological analysis, context-based learning, active engagement, and the use of multimedia resources, educators can significantly improve the teaching and learning process. Developing effective vocabulary instruction methods is essential for preparing medical students to communicate accurately and confidently in academic and clinical settings.Educators must adopt interactive, context-driven, and student-centered approaches to facilitate vocabulary acquisition. Effective implementation of these strategies can enhance learners' comprehension, retention, and practical communication skills, ultimately contributing to better professional competence

Results

The findings of the study revealed several significant challenges in teaching and learning medical vocabulary.

- *Pronunciation and Complexity Issues*

A majority of students reported difficulty in pronouncing and remembering complex medical terms. Words derived from Latin and Greek roots were particularly challenging, leading to frequent errors in both spoken and written communication.

- *Cognitive Overload*

The results indicated that students felt overwhelmed by the large volume of vocabulary introduced within limited timeframes. Many students were able to recognize terms but struggled to recall or actively use them, confirming the presence of cognitive overload.

- *Lack of Contextual Application*

The study found that students often relied on memorization rather than understanding. As a result, they experienced difficulties when applying vocabulary in real-life situations such as role-plays or clinical discussions.

- *Limited Exposure to Authentic Materials*

Both students and instructors highlighted the lack of authentic resources in classroom instruction. Most teaching relied on textbooks, with minimal use of real clinical cases, patient records, or

professional medical discourse.

- *Effectiveness of Teaching Strategies*

The implementation of strategies such as root analysis, context-based activities, and active engagement showed positive outcomes. Students who participated in role-plays, group discussions, and case studies demonstrated better vocabulary retention and improved confidence in communication.

Discussion

The results of this study support previous research findings in the field of ESP and vocabulary acquisition. The difficulty of medical terminology confirms the observations of Bahadorfar and Omidvar (2014), who emphasized the linguistic complexity of medical language.The issue of cognitive overload aligns with Alqahtani (2015), highlighting the need for structured and gradual vocabulary instruction. The findings suggest that simply increasing exposure to vocabulary is not sufficient; instead, teaching methods must focus on meaningful learning and repetition. Furthermore, the study underscores the importance of contextual learning, as students who engaged in communicative tasks demonstrated better performance. This supports the idea that vocabulary should be taught not as isolated items but as part of real-life communication. The lack of authentic materials remains a critical limitation in many ESP classrooms. Incorporating real-world resources, such as clinical cases and multimedia tools, can significantly enhance learners' understanding and prepare them for professional environments. Overall, the discussion highlights that student-centered and interactive approaches are more effective than traditional memorization-based methods. Strategies such as morphological analysis, task-based learning, and multimedia integration provide practical solutions to the challenges identified in this study.

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