

COGNITIVE STRATEGIES FOR LEARNING MEDICAL TERMS

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Abstract

This thesis analyzes the importance of cognitive strategies in learning English medical terminology among medical students. Medical terminology is often difficult because of complex Latin and Greek structures, pronunciation challenges, and specialized vocabulary. The study examines the role of contextual learning, visualization, repetition, association, and multimedia-assisted instruction in improving terminology acquisition. The findings show that cognitive and multimedia-based approaches improve students' comprehension, motivation, pronunciation, and long-term vocabulary retention.

Key words: cognitive strategies, medical terminology, EFL students, multimedia learning, vocabulary acquisition.

Annotatsiya

Ushbu tezis tibbiyot talabalarining ingliz tilidagi tibbiy terminlarni o'rganishda kognitiv strategiyalarning ahamiyatini tahlil qiladi. Tibbiy terminologiya murakkab lotin va yunon tilidagi birliklar, talaffuz qiyinchiliklari hamda maxsus lug'at boyligi sababli o'rganilishi qiyin hisoblanadi. Tadqiqotda kontekstual o'rganish, vizualizatsiya, takrorlash, assotsiatsiya va multimedia vositalarining tibbiy terminlarni o'zlashtirishdagi roli o'rganiladi. Natijalar kognitiv va multimedia asosidagi yondashuvlar talabalar tushinishi, motivatsiyasi va uzoq muddatli xotirasini yaxshilashini ko'rsatadi.

Kalit so'zlar: kognitiv strategiyalar, tibbiy terminologiya, EFL talabalar, multimedia learning, vocabulary acquisition.

Аннотация

Данная работа анализирует значимость когнитивных стратегий при изучении английской медицинской терминологии студентами медицинских вузов. Медицинская терминология считается сложной из-за латинских и греческих структур, трудностей произношения и специализированной лексики. В исследовании рассматривается роль контекстного обучения, визуализации, повторения, ассоциации и мультимедийного обучения в усвоении терминологии. Результаты показывают, что когнитивные и мультимедийные подходы улучшают понимание, мотивацию и долговременное запоминание терминологии студентами.

Ключевые слова: когнитивные стратегии, медицинская терминология, студенты EFL, мультимедийное обучение, усвоение словарного запаса.

English medical terminology has become an important part of modern medical education and professional communication. Medical students are required to understand and use English medical terms in academic studies and clinical practice. However, many EFL medical students experience

difficulties in learning medical terminology because of complex Latin and Greek structures, pronunciation problems, and large amounts of specialized vocabulary.

Traditional memorization-based methods often lead to short-term retention and low student engagement. Therefore, modern researchers emphasize the importance of cognitive strategies in vocabulary learning. Cognitive approaches such as contextual learning, visualization, repetition, and multimedia-assisted instruction help students improve comprehension, motivation, and long-term memory retention in learning medical terminology.

Research shows that one of the main difficulties in learning medical terminology is cognitive overload. According to John Sweller, students experience learning problems when they are exposed to too much unfamiliar information at the same time. Long and complex medical terms increase mental overload and reduce comprehension and memory retention. Similarly, Paul Nation states that vocabulary learning becomes more effective through contextual learning and repeated exposure rather than simple memorization. Students remember terminology better when they use words in meaningful contexts. Another important issue is pronunciation anxiety. Kim (2018) found that many EFL medical students avoid speaking activities because they are afraid of pronouncing medical terms incorrectly. This negatively affects classroom participation and communication skills.

Traditional memorization-based methods are also considered ineffective for long-term retention. Schmitt (2010) explains that rote memorization supports only short-term recall and does not improve active vocabulary usage. In contrast, Richard Mayer emphasizes that multimedia learning improves comprehension and cognitive processing. Videos, diagrams, pronunciation recordings, and interactive quizzes help students learn medical terminology more effectively. Recent studies also show that digital tools such as Kahoot and Quizlet increase student motivation, participation, and vocabulary retention. Multimedia-assisted learning environments create more engaging and less stressful learning experiences for students.

The following statistics summarize the major difficulties faced by medical students in learning English medical terminology:

- Complexity of terminology – 30%
- Limited English proficiency – 25%
- Pronunciation difficulties – 20%
- Traditional teaching methods – 15%
- Psychological factors – 10%

These findings indicate that cognitive and multimedia-based approaches significantly improve learning effectiveness and reduce students' difficulties in acquiring medical terminology.

The results of the analysis demonstrate that cognitive learning strategies play a significant role in improving medical terminology acquisition among medical students. Cognitive approaches such as contextual learning, visualization, repetition, categorization, and association improve students' comprehension and long-term memory retention. The findings also show that multimedia-assisted instruction increases students' motivation and classroom engagement. Students who learn terminology through visual and auditory support demonstrate better pronunciation, higher participation, and improved communicative competence compared to learners taught through traditional memorization methods. Furthermore, interactive technologies such as Kahoot, Quizlet, educational videos, and pronunciation audio materials reduce anxiety and create a more student-centered learning environment.

In conclusion, cognitive strategies are highly important in learning English medical terminology among medical students. Traditional memorization-based methods are insufficient for effective vocabulary acquisition because they often lead to passive learning and short-term retention. Cognitive and multimedia-assisted teaching approaches provide more effective results by improving comprehension, pronunciation, engagement, and long-term vocabulary retention.

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