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ANALYSIS OF HEALTH STUDENTS' PROFICIENCY IN MEDICAL ENGLISH TERMINOLOGY THROUGH IMAGES AND TEXTS AT STIKES NGUDIA HUSADA MADURA

Abstract
This study aims to analyse the proficiency of health students in mastering medical English terminology through the use of images and texts at STIKES Ngudia Husada Madura. The research employs a qualitative descriptive design, with the population consisting of health students who have undertaken a medical English course. The sample was purposively selected, involving students actively using images and texts in their learning. Research instruments included a medical English terminology test and a questionnaire or interviews about students' experiences with these learning media. Data were collected through administering tests, completing questionnaires, and conducting interviews, and were subsequently analysed using qualitative data analysis methods. The findings indicate that the use of images and texts significantly enhances students' understanding and proficiency in medical English terminology. The average test scores were higher among students exposed to image and text-based learning compared to those using text alone. Qualitative analysis revealed that images assist students in associating medical terms with concrete visualisations, while texts provide the necessary linguistic context for deeper understanding. Additionally, lecturer support and the quality of learning materials were crucial to the success of this method. The implications of this study include recommendations for integrating the use of images and texts into the medical English curriculum at health education institutions. This innovative teaching method can improve students' competence in understanding and using medical terminology and motivate them to be more active in their learning process. The study also identifies several limitations, such as the generalisability of results and the measurement methods used, and suggests further research with a broader scope and diverse methodological approaches to confirm and extend these findings.
Keywords: Medical English Terminology, Images And Texts, STIKES Ngudia Husada Madura.

INTRODUCTION

Mastery of medical English is an essential skill for health students, particularly in the current era of globalisation (Matulewska, 2023). Medical English not only aids students in understanding scientific literature, most of which is written in English, but also prepares them for interactions with healthcare professionals from various countries at international forums and when working in healthcare facilities serving foreign patients (Chen et al., 2021). Additionally, proficiency in medical English facilitates access to the latest medical educational resources, which are often available only in English.

In the context of learning, images and texts play a crucial role in helping students master medical terminology (Dew et al., 2018). Image- and text-based learning leverages both visual and linguistic abilities to enhance comprehension and information retention. Images help illustrate complex medical concepts, while texts provide the necessary verbal explanations to understand these images in greater depth (Moro et al., 2021). Research shows that the combination of images and texts is more effective than text alone in improving students' understanding of medical terminology.

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STIKES Ngudia Husada Madura is a health education institution committed to improving its students' medical English proficiency. As an institution located in an area with limited access to international educational resources, STIKES Ngudia Husada Madura faces unique challenges in providing quality medical English learning materials. Therefore, innovation in teaching methods is required to ensure that students can effectively master medical terminology.

One approach implemented at STIKES Ngudia Husada Madura is the use of images and texts in medical English terminology instruction. This method is designed to help students associate medical terms with relevant visualisations, thereby facilitating the learning process and enhancing information retention (Tutubalina et al., 2018). This study aims to analyse the effectiveness of this approach in improving medical English terminology proficiency among students (Tutubalina et al., 2018).

Given the importance of medical English proficiency for health students, this study also seeks to identify factors affecting the effectiveness of using images and texts in learning (Dew et al., 2018). Understanding these factors will enable health education institutions to design more effective learning programmes that meet students' needs.

Through an in-depth analysis of the use of images and texts in medical English learning at STIKES Ngudia Husada Madura, this study aims to make a tangible contribution to the development of innovative and effective teaching methods. Consequently, students will be better prepared to face the challenges of an increasingly competitive and dynamic global healthcare environment.

The primary research question addressed in this study is: How effective is the use of images and texts in enhancing the proficiency of STIKES Ngudia Husada Madura students in mastering medical English terminology?

The main objective of this study is to analyse the effectiveness of using images and texts in medical English terminology instruction at STIKES Ngudia Husada Madura. This study also aims to identify factors that influence the success of this teaching method.

This research provides a significant contribution to the field of health education by offering empirical evidence on the effectiveness of using images and texts in medical English learning. The findings of this study can be utilised by health education institutions to develop more effective teaching strategies and assist students in mastering essential medical terminology for their future professional careers.

METHOD

Research Design

This study employs a qualitative descriptive design to explore and understand the effectiveness of using images and texts in medical English terminology instruction at STIKES Ngudia Husada Madura. The qualitative descriptive approach was chosen because it allows the researcher to collect in-depth data and provide a comprehensive understanding of the phenomenon under investigation through observations, interviews, and document analysis (Creswell, 2013).

Population and Sample

The population of this study consists of all health students at STIKES Ngudia Husada Madura. To obtain a representative sample, purposive sampling was used, where participants were selected based on specific criteria relevant to the research objectives (Nzekwe-Excel, 2022). The criteria included students who had completed a medical English course and were actively involved in learning activities that utilise images and texts as teaching media.

Research Instruments

The research instruments employed include a medical English terminology test and a questionnaire or interviews regarding the use of images and texts in learning. The medical English terminology test is designed to measure students' understanding of medical terms in English. Meanwhile, the questionnaire or interviews are used to gather data on students' experiences and perceptions related to the use of images and texts in learning (Rogers et al., 2020).

Data Collection Procedures

Data collection procedures begin with administering the medical English terminology test to the selected sample. Subsequently, a questionnaire is distributed or interviews are conducted

to gather qualitative data on the use of images and texts in learning. Data collection steps include administering tests, completing questionnaires, or conducting interviews, and documenting the results. To ensure the validity and reliability of the instruments, a pilot test was conducted before the main study, with adjustments made based on the pilot test results (Guetterman et al., 2018).

Data Analysis Techniques

The collected data are analysed using qualitative data analysis methods. The analysis process includes coding the data, grouping themes, and interpreting the findings. Qualitative analysis enables the researcher to identify patterns and key themes emerging from the data and provide a deep understanding of the effectiveness of using images and texts in medical English terminology instruction. Through this approach, the researcher can present findings rich in detail and context, and offer practical recommendations for improving teaching methods(Mabhala, 2013).

RESULTS AND DISCUSSION

Results

1. Data Description

The profile of the study's respondents includes health students from various programmes at STIKES Ngudia Husada Madura. Most respondents are in their 4th to 6th semester, with an age range between 20 and 24 years. The majority of respondents are female, reflecting the common gender distribution in the field of health education. Respondents have diverse academic backgrounds, but all have completed a medical English course as part of their curriculum.

The results of the medical English terminology test reveal varying levels of understanding among respondents. Generally, test scores range from 60 to 90, with an average score of approximately 75. Some students exhibit a strong grasp of medical terminology, while others still struggle to recognise and use terms correctly in context. This data provides an initial insight into students' proficiency in medical English.

Further analysis of the test results indicates that students who are frequently exposed to image- and text-based learning materials tend to achieve higher scores. The use of visual media appears to facilitate understanding of complex medical concepts. This finding aligns with previous research highlighting the importance of multimodal learning in health education.

The distribution of test results also shows significant differences based on study programmes. For instance, students from nursing and midwifery programmes perform better compared to those from public health programmes. This disparity may be due to variations in the intensity and methods of teaching medical English across different programmes.

2. Data Analysis

The use of images and texts in medical terminology learning at STIKES Ngudia Husada Madura shows significant effectiveness in improving students' understanding. Thematic analysis reveals that images help students associate medical terms with concrete visualisations, facilitating information retention. Conversely, texts provide the necessary linguistic context for a more comprehensive understanding of the terms.

The relationship between the use of images and texts and proficiency in medical English terminology was also analysed using correlation. The results show a significant positive correlation between the frequency of using image- and text-based media in learning and test scores in medical terminology. Students who regularly use these media tend to have better comprehension and higher test scores.

Furthermore, interviews with students revealed that they felt more confident using medical terms after being exposed to materials combining images and texts. Students reported that images helped them remember complex terms, while texts aided in understanding definitions and usage of terms in a medical context.

Qualitative analysis also identified several factors affecting the effectiveness of using images and texts in learning. These factors include the quality of learning materials, active student engagement in the learning process, and lecturer support in integrating image and text media into the curriculum.

3. Key Findings

The key findings from the data analysis indicate that the use of images and texts significantly enhances students' ability to master medical English terminology. The simultaneous use of visual and verbal media can strengthen comprehension and information retention, which is crucial in the context of health education (Kobal Grum & Babnik, 2022).

Students who are more frequently exposed to image- and text-based learning demonstrate better performance in medical terminology tests. This suggests that teaching methods combining these two media are more effective compared to conventional methods relying solely on text. These findings support a multimodal learning approach in health education.

The study also finds that lecturer support and the quality of learning materials play a vital role in the effectiveness of using images and texts. Lecturers who actively integrate these media into their teaching and provide high-quality materials can help students better understand and master medical terminology. These findings provide a foundation for developing more innovative and effective curricula at STIKES Ngudia Husada Madura.

Discussion

The research findings demonstrate that the use of images and texts in medical English terminology learning at STIKES Ngudia Husada Madura significantly enhances students' ability to understand and utilise medical terms. The higher average scores observed in students exposed to image- and text-based learning indicate the effectiveness of this method (Qasim et al., 2022). These results align with multimodal learning theory, which posits that combining visual and verbal elements can enhance comprehension and information retention.

These findings also suggest that students actively engaged in the learning process with image and text media show increased confidence in using medical terminology (Shanahan et al., 2019). This is consistent with research indicating that active student participation can improve learning outcomes and practical skills. Students reported that visualisations through images aid in understanding complex medical concepts, while texts provide the necessary context for applying these terms (Farsi, 2021).

In the context of health education at STIKES Ngudia Husada Madura, these results highlight the importance of innovation in teaching methods for medical English. The use of diverse media, such as images and texts, can help address the challenges faced by students in understanding medical terminology, particularly for those with limited access to international educational resources. Thus, integrating these learning methods could enhance the quality of health education at the institution.

Comparisons with previous studies show consistency with other findings in the field of health education. For instance, Mayer (Fitria, 2023) demonstrated that the simultaneous use of visual and verbal media can improve comprehension and information retention among students. Additionally, Garcia and Velazquez (Farsi, 2021) emphasised the importance of using images to help students remember complex medical terms.

However, this study also found that the quality of learning materials and lecturer support play crucial roles in the effectiveness of using images and texts. Students receiving high-quality learning materials and support from competent lecturers showed better performance. This indicates that external factors, such as academic support and the quality of teaching materials, should also be considered in implementing these learning methods (Akinsola & Olaosebikan, 2021). Overall, the study provides strong empirical evidence regarding the effectiveness of using images and texts in medical English terminology learning. These results offer a foundation for developing more innovative and effective curricula at STIKES Ngudia Husada Madura, which could enhance students' competency in medical English and prepare them for professional careers in healthcare.

Based on these findings, it is recommended that medical English teaching at STIKES Ngudia Husada Madura and other health education institutions integrate the use of images and texts into their curricula. This learning approach not only improves understanding of medical terminology but also motivates students to engage more actively in the learning process. Educational institutions are encouraged to provide high-quality learning materials and support lecturers in adopting these innovative teaching methods (Zhang et al., 2019).

This study has several limitations that should be considered. Firstly, the research was conducted at only one educational institution, STIKES Ngudia Husada Madura, which may limit the generalisability of the results to broader contexts. Secondly, the study used a

descriptive qualitative method, which may have limitations in quantitatively measuring the effectiveness of the teaching methods (Ngo & Ha, 2022). Future research is recommended to involve more institutions and use a variety of research methods, including quantitative approaches, to reinforce the existing findings.

CONCLUSION

This study reveals that the use of images and texts in medical English terminology learning significantly enhances students' understanding and proficiency at STIKES Ngudia Husada Madura. Test results indicate that students exposed to image- and text-based learning methods achieve higher scores compared to those using text alone. These findings are supported by qualitative data showing that students feel more confident and better able to recall medical terms when learning materials are presented through a combination of visual and verbal methods. Additionally, lecturer support and the quality of learning materials play a crucial role in the success of this method, highlighting the importance of a supportive learning environment and adequate resources.

Based on these findings, it is recommended that health education practitioners integrate the use of images and texts into the medical English curriculum. This innovative learning method not only enhances students' understanding of medical terminology but also motivates them to engage more actively in the learning process. Educational institutions need to ensure that lecturers have access to high-quality learning materials and receive the necessary training to implement this method effectively. Future research should consider expanding the scope of the study by involving more institutions and using both quantitative and qualitative approaches to confirm and extend these findings, thus providing more generalizable and applicable recommendations across various health education contexts.

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