

*Exploring Student Interest in Global Health as a Component of
Medical English Education*

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Abstract

This work looks at student interest in the concept of global health as a component of medical English education. With the rise of global pandemics and the increasing interconnectedness of the world, understanding global health has become more critical. In Japan, various aspects of global health such as public health, epidemiology, social medicine, and cross-cultural awareness are taught in different medical subjects. However, Global Health as a standalone course does not seem to be part of the medical education curriculum. The results of a Global Health lecture conducted in English for medical students at a Japanese university show that students were eager to learn more about the topic, including topics like non-communicable diseases, global health burden, social factors affecting health, and health equity, as well as how to work in international settings. This suggests the need for a Global Health course taught in English for medical students in Japan to produce well-rounded, globally competent healthcare professionals.

Keywords: Cross-Cultural Awareness, Global Health, Medical English Education

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Introduction

Several papers have contributed to our understanding of the current state of medical education in Japan (Kozu, 2006) and the efforts being made to internationalize medical education. Challenges faced by the Japanese medical education system are issues such as the overcrowded curriculum, the dominance of lecture-based teaching, and the need for greater integration of clinical and basic sciences (Teo, 2007). In the educational reforms to meet the changing healthcare needs, it's important to emphasize on competency-based education, development of communication skills, and integration of clinical training with community healthcare (Suzuki et al., 2009). The review of these papers provides insights into the current state of medical education in Japan, highlighting the need for reforms, including a shift towards competency-based education, the integration of clinical training, and a greater emphasis on communication skills. Furthermore, internationalization efforts are recognized as an important aspect of medical education, with various approaches being implemented to promote global competence among medical students. Additional papers were also found that touch on related topics, such as the importance of learning English for Japanese clinicians (Kuroda et al., 2022) and the implementation of English language education in specific medical disciplines (Hoshina et al., 2022; Rodis & Locsin, 2019). These papers contribute to the broader discussion on language proficiency and internationalization efforts in medical education.

Up until now, there has been limited academic focus on internationalization in medical education. However, with the increased significance of comprehending current internationalization efforts during the COVID-19 pandemic, there is a growing trend towards identifying effective practices in this field. The motivations that drive internationalization of medical education plays a critical role in equipping healthcare professionals with cultural competence and global awareness to meet this objective (Wu et al., 2022). There are various practices of internationalization in medical education, including approaches such as student mobility programs, collaborative research, and international curriculum development (Wu et al., 2022).

Medical education in Japan is undergoing reforms to address challenges and adapt to changing healthcare needs. The incorporation of competency-based education, enhanced communication skills, and internationalization efforts are key components of these reforms (MEXT, 2017). Further research and efforts are needed to evaluate the impact of these reforms and ensure the development of globally competent healthcare professionals in Japan. Given the ongoing transformation in medical education in Japan, with medical schools adopting new curricula to align with global standards, there is an increasing need for greater internationalization and improved practical medical English education (Jego & Amengual, 2017).

Medical English Education in Japan is an evolving field that has gained increasing attention in recent years (Kuroda et al., 2022). The integration of Medical English (ME) into the medical curriculum has become more prevalent, reflecting the recognition of the importance of English proficiency in the medical profession. The National Medical Examination (NME) has also started incorporating ME questions into the competency test, emphasizing the significance of language skills for healthcare professionals. However, despite these developments, Medical English Education (MEE) in Japan still lacks standardization, posing challenges in terms of assessment methods and learning resources. Additionally, there is a

notable lack of motivation among medical students when it comes to learning English, hindering their ability to engage in lifelong learning and independent language development.

Simultaneously, Global Health has emerged as an essential subject in the context of increased globalization and the rise of global-scale pandemics and diseases (Bentley, 2021). In Japan, various aspects of global health such as public health, epidemiology, social medicine, and cross-cultural awareness are taught in different medical subjects (Sato, 2002). However, Global Health as a standalone course does not seem to be part of the medical education curriculum. There is a need for a comprehensive and standardized approach to teaching Global Health in medical education in Japan to equip future healthcare professionals with the necessary knowledge and skills to address global health challenges effectively.

This paper aims to explore the intersection of medical English education and Global Health in the context of medical education in Japan, looking at student's interest in the concept of global health as a component of medical English education. It examines the current state of MEE, highlighting the challenges and motivations surrounding language learning, and discuss the importance of incorporating Global Health as a distinct subject within the curriculum. By addressing these issues, this paper seeks to contribute to the ongoing discussions on enhancing language proficiency and global health education among medical students in Japan.

Conceptual Framework

We designed a conceptual framework to make clear the goals and purpose of this attempt. This conceptual framework you have described illustrates the relationship between Medical Education, Medical English, and Global Health. According to this framework, Medical Education is the overarching concept, encompassing both Medical English and Global Health as sub-components (Figure 1).

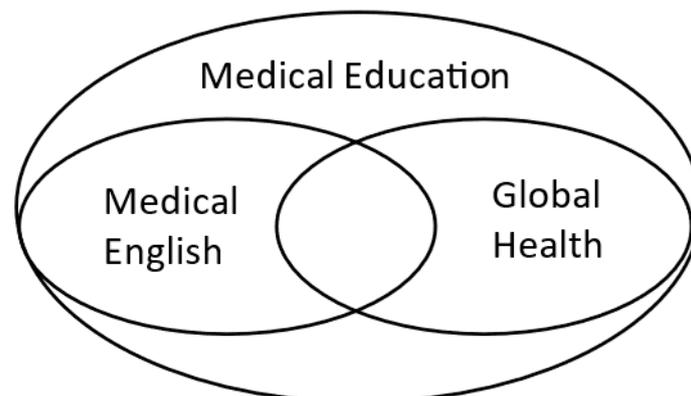


Figure 1: Conceptual Framework

Medical English refers to the specific language skills and knowledge necessary for effective communication in the medical field. It focuses on developing the language proficiency required for medical professionals to understand and communicate complex medical concepts, interact with patients, collaborate with colleagues, and engage in research and academic activities. Global Health, on the other hand, is a multidisciplinary field that addresses health issues and challenges that transcend national boundaries. It emphasizes the interconnectedness of health and healthcare systems across the globe and aims to improve health outcomes for populations worldwide. Global Health encompasses a range of topics

such as epidemiology, public health, healthcare policy, infectious diseases, and social determinants of health.

The intercept between Medical English and Global Health suggests a point of intersection or overlap between these two sub-components. In this case, the intercept can be in the form of lectures or classes conducted in English, known as English as a Medium of Instruction (EMI), specifically focused on global health topics. These lectures or classes would provide an opportunity for medical students or professionals to learn about global health issues while simultaneously enhancing their English language skills. By incorporating global health content into the Medical English curriculum, students can develop a deeper understanding of health challenges faced by diverse populations around the world. They can also explore the impact of language and cultural factors on healthcare delivery, develop cross-cultural communication skills, and broaden their perspectives on global health issues.

This conceptual framework recognizes the importance of both language proficiency and global health knowledge in medical education. By integrating Medical English and Global Health, students can acquire the necessary language skills while gaining a comprehensive understanding of global health challenges and their implications for medical practice. This approach prepares them to navigate the increasingly interconnected and multicultural healthcare environments they may encounter in their careers. It is worth noting that this conceptual framework provides a general overview and can be further expanded and adapted based on the specific context and goals of a medical education program.

Observations

According to the above framework, we expected that medical students already possess a fundamental understanding about various aspects of global health via the subjects studied during the first academic years. Expanding on the framework, it is valuable to identify specific subjects within medical education that play a crucial role in developing knowledge and skills related to global health. Some of the relevant subjects that can be enlisted include epidemiology, medical statistics, research methodology, public health, hygiene, environmental health, social health etc.

This section presents our observations during a class where we assessed the students' level in several key areas: general knowledge, terminology understanding, and motivation, as well as our insights from the feedback session. In a full class of medical students who have the English reading proficiency ranging from intermediate to advanced levels. Interactions showed that the participants had sufficient language skills to comprehend and respond to the class content.

Knowledge

The students have shown a high level of understanding of the concept of health. Two thirds of the respondents demonstrated a good understanding of what health entails. Over half of the class scored correctly on the question “Public health aims to provide the right to be healthy to whom?”. The question “How many % of people do you think have no health problems” was answered correctly by half of the classroom. These results provide insights into the participants' general knowledge related to health concepts and public health targets. While there is a considerable level of understanding regarding the definition of health, there appears

to be room for improvement in accurately estimating the percentage of people without health problems and identifying the target population of public health initiatives.

We observed the familiarity of the students to the vocabulary of global health. Common terms such as public health, primary healthcare, universal health coverage, health system... are well known by the students. However, we discovered a range of vocabulary which is less known, such as non-communicable diseases, global burden of diseases, stakeholders, global South... are less familiar among the students.

We suspected that there is an association between knowing vocabulary on global health and knowledge on public health. The results presented a significant positive correlation ($p=0.038$) between knowledge on Health and vocabulary proficiency. This indicates that participants who understand more about Health tend to know more vocabulary.

The post-lecture reflection data indicates that, on average, participants reported an overall understanding of the English content delivered in the lecture at a rate of $53\% \pm SE18\%$. This finding suggests that the participants had a moderate level of comprehension of the English language used in the lectures. However, the margin of error indicates that individual understanding levels may vary. Many factors could contribute to the participants' reported understanding, including their prior English language proficiency, familiarity with the subject matter, the clarity of the lecturer's delivery, and the level of difficulty of the lecture content.

Motivation

Our observation regarding the motives of studying Medical English indicate that the goals for studying Medical English are predominantly centered around enriching knowledge, hobbies related to travel and conversation, and the ability to communicate with foreign patients in the future. These motivations received high percentages, suggesting that students recognize the value of Medical English for personal development and enhancing their communication skills within a global healthcare context. Surprisingly, motivations such as studying abroad, working abroad, or conducting research in the future received low percentages. This finding suggests that a smaller proportion of students in the study expressed explicit aspirations for international academic or professional pursuits. However, it is possible that factors such as individual interests, career plans, or personal circumstances influenced the varying motivations reported.

We found a significant positive correlation between the variables "Love to Study English" and "Familiarity of Terms" in the context of Medical English. The correlation coefficient of 0.242 ($p<0.05$) suggests a moderate positive relationship, which indicates that students who express a higher level of enjoyment or enthusiasm for studying English also tend to have a greater familiarity with medical English terms. These findings highlight the potential influence of positive attitudes towards studying English on the acquisition and retention of medical English terminology. Students who genuinely enjoy studying English may be more motivated to engage with the subject matter, invest more time and effort into their learning, and consequently, have a better grasp of medical English terms.

Interest and Needs for Further Learning

Based on the feedback received after the session, we gained insights into the specific aspects of the content that captivated learners' attention and identified their desire to delve deeper

into the subject. This feedback has provided us with a clear understanding of what resonated with the learners and the areas they expressed a keen interest in exploring further. We identify the key elements of the session that sparked curiosity and engagement. This feedback has not only affirmed the relevance and value of the session but has also highlighted the potential for further exploration and expansion of the topic.

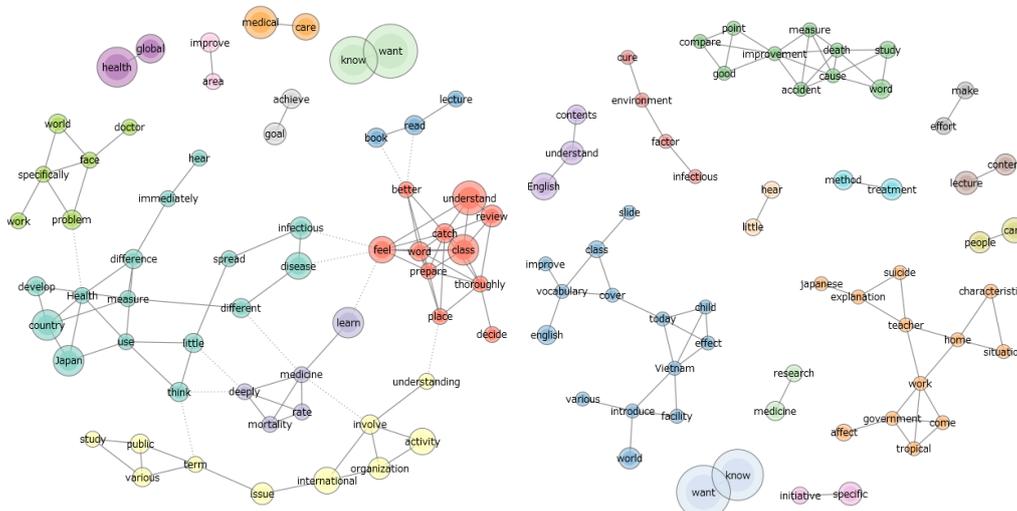


Figure 2. Co-occurrence network analysis

The co-occurrence network analysis revealed important nodes representing topics of interest:

- English Terminology: Signifies the presence and significance of English terminology in the analyzed content.
- Determinants (of health): Indicates the recognition of factors influencing health outcomes.
- Diseases, Issues: Represents discussions or references to specific diseases and associated concerns.
- Mortality: Focuses on understanding death or mortality rates within a specific context.
- Medical Care: Identifies discussions or references related to healthcare services and interventions.
- Measurement (of healthcare): Recognizes the importance of quantifying variables in the healthcare context.
- Stakeholders (of healthcare): Reflects the involvement and relevance of various healthcare stakeholders.
- Review (about healthcare): Highlights the evaluation and summary of existing literature and research in healthcare.

These results provide valuable insights into the main themes addressed in the analyzed content, particularly in the context of healthcare.

Considerations

The association between health knowledge and global health vocabulary proficiency suggests the need for further investigation into other influencing factors. Future research with larger samples or different methodologies could provide comprehensive insights into the relationship between health term familiarity and outcomes in public health quizzes. The study also highlights the opportunity to raise awareness about the value of international experiences

in the medical field, inspiring students to broaden their perspectives. Additional qualitative research, such as interviews or focus groups, can explore the underlying motivations behind students' preferences for studying Medical English. Tailoring language instruction to align with students' needs and aspirations can be informed by understanding these factors. Providing information and resources on studying abroad, working abroad, and international research can increase awareness and promote interest in pursuing global opportunities. Further research is needed to explore the connection between positive attitudes towards studying English and the acquisition of medical terminology. Incorporating teaching strategies that promote enjoyment and engagement can enhance familiarity and proficiency with medical English terms.

There is a need for ongoing efforts to improve participants' understanding of English in the lectures. To further enhance participants' understanding of English in the lectures, it may be beneficial to implement strategies such as providing lecture materials in advance, incorporating visual aids, and utilizing interactive teaching methods. These approaches can help facilitate comprehension and engagement among students with varying levels of English proficiency. Encouraging active participation and providing opportunities for students to ask questions or seek clarification during and after the lectures can contribute to a deeper understanding of the lecture content. Regular feedback and assessment of students' comprehension can also help identify areas that require further support or clarification.

To enhance understanding of specific areas, address lesser-known vocabulary through vocabulary expansion, interactive learning, additional resources, contextual examples, regular assessments, integration into the curriculum, and guest lectures/experts. These actions facilitate students' development of a stronger grasp of global health vocabulary, improving their communication skills and ability to navigate complex challenges in the field.

The findings and reflections presented in this paper shed light on the outcomes of a lecture on Global Health concepts delivered in English to medical students at a university in Japan. The aim of the lecture was to familiarize the students with the English vocabulary associated with the evolution and formation of Global Health. The results indicate that the students displayed a notable level of interest in delving deeper into various concepts, including but not limited to non-communicable diseases (NCDs), the global burden of diseases, social determinants of health, and health equity. This keen interest suggests their recognition of the importance of these topics in the field of medicine and their willingness to expand their knowledge in these areas.

Furthermore, the students' expressed need to work as professionals in international settings adds a crucial dimension to the discussion. It highlights their recognition of the increasingly interconnected nature of healthcare systems worldwide and the importance of global competence in their future careers. This need aligns with the evolving landscape of healthcare, where healthcare professionals are frequently required to collaborate with colleagues from diverse backgrounds and address health challenges that transcend national boundaries. By recognizing and embracing the significance of working in international settings, these students demonstrate their foresight and readiness to contribute to global health initiatives.

The implications of these findings are noteworthy. Firstly, it emphasizes the importance of incorporating Global Health education into medical curricula, especially with a focus on Medical English proficiency. By equipping future healthcare professionals with the necessary

linguistic skills and knowledge of Global Health concepts, universities can better prepare them to address health issues on a global scale. Moreover, integrating such topics into the medical curriculum not only broadens students' understanding of health systems worldwide but also fosters cultural sensitivity and an appreciation for the social determinants of health.

To further enhance the students' learning experience, it is crucial to explore various teaching strategies and resources. Incorporating interactive discussions, case studies, and practical experiences can deepen their understanding of Global Health concepts and promote critical thinking. Additionally, incorporating real-world examples and emphasizing the practical application of these concepts can enhance students' motivation and engagement.

The future perspectives of teaching Global Health within Medical English are promising and hold significant potential for enhancing healthcare education. The results obtained from various studies indicate a clear need for the introduction of an English as a Medium of Instruction (EMI) Global Health course for medical students, aiming to cultivate globally competent healthcare workers. However, further consideration is required to identify specific areas of need and measure students' motivation towards such a course. To ensure effective integration of Medical English and Global Health topics, it is essential to revise the course content and create stronger links between the two disciplines. Additionally, developing a comprehensive question/quiz pool with diversified content will enable a more comprehensive assessment of students' knowledge and understanding. By implementing an EMI Global Health course for medical students, medical education can take a significant step forward in preparing future healthcare professionals to meet the challenges of a globalized world.

Conclusion

This paper highlights the importance of integrating Global Health education into medical curricula. The positive outcomes observed when introducing Global Health concepts in English to medical students in Japan indicate the students' interest in learning more about these topics and their recognition of the need to work in international settings. By combining Medical English and Global Health, universities can foster global competence and prepare healthcare professionals to address global health challenges. This framework can be applied beyond Japan, allowing students worldwide to acquire language skills and a comprehensive understanding of global health. It is adaptable to different contexts and goals of medical education programs.

References

- Bentley, C. Z. (2021). Global Health in Medical Education. *Medical Science Educator*, 31, 5–8. <https://doi.org/10.1007/s40670-021-01399-4>
- Hoshina, Y., Yada, K., Maki, H., Yoshino, T., Takaiso, H., & Akaike, M. (2022). Medical English Education in Japan : Developing a Curriculum to Motivate Students by Providing Visualization Opportunities Using Near-peer Teaching. *The Journal of Medical Investigation*, 69, 332–334. <http://medical.med.tokushima-u.ac.jp/jmi/vol69/pdf/69-3.4p332.pdf>
- Jego, E. H., & Amengual, O. (2017). Current trends in medical English education and the Japan College of Rheumatology International School. *Modern Rheumatology*, 27(6), 1101–1105. <https://doi.org/10.1080/14397595.2017.1307503>
- KH Coder*. (n.d.). Retrieved September 10, 2022, from <https://khcoder.net/>
- Kozu, T. (2006). Medical education in Japan. *Academic Medicine*, 81(12), 1069–1075. <https://doi.org/10.1097/01.ACM.0000246682.45610.DD>
- Kuroda, K., Ohta, R., & Bailey, R. E. (2022). Critical values of learning to speak English for Japanese clinicians. *Journal of General and Family Medicine*, 23(1), 75–76. <https://doi.org/10.1002/JGF2.487>
- MEXT. (2017). *Model Core Curriculum for Medical Education*. MEXT. <https://doi.org/10.2490/jjrm1963.39.191>
- Rodis, O. M. M., & Loesin, R. C. (2019). The implementation of the Japanese Dental English core curriculum: Active learning based on peer-teaching and learning activities. *BMC Medical Education*, 19(1), 1–7. <https://doi.org/10.1186/S12909-019-1675-Y/TABLES/1>
- Sato, T. (2002). Model Core Curriculum for Medical Education. *The Japanese Journal of Rehabilitation Medicine*, 39(4), 191–196. <https://doi.org/10.2490/jjrm1963.39.191>
- Suzuki, Y., Gibbs, T., & Fujisaki, K. (2009). Medical education in Japan: A challenge to the healthcare system. <https://doi.org/10.1080/01421590802298207>, 30(9–10), 846–850. <https://doi.org/10.1080/01421590802298207>
- Teo, A. (2007). The current state of medical education in Japan: a system under reform. *Medical Education*, 41(3), 302–308. <https://doi.org/10.1111/J.1365-2929.2007.02691.X>
- Wu, A., Choi, E., Diderich, M., Shamim, A., Rahhal, Z., Mitchell, M., Leask, B., & DeWit, H. (2022). Internationalization of Medical Education — Motivations and Formats of Current Practices. *Medical Science Educator*, 32(3), 733–745. <https://doi.org/10.1007/s40670-022-01553-6>

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