Enhancing EMP Training for Chinese Medical Students: A Study of a Prestigious Urban University

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Declaration

I, Haiying Liang, confirm that the work presented in this thesis is my own. Where information has been derived from other sources, I confirm that this has been indicated in the thesis.

Haiying Liang

Abstract

English has increasingly been used in the field of medical science as one of the common languages of communication in China. Despite the development and provision of many English for Medical Purposes (EMP) courses in Chinese universities, growing concerns have arisen regarding physicians' ability to use English effectively in medical settings. This raises the question of how well the EMP training in universities in China adequately prepares medical students for their language and communication needs in their future careers, which remains largely unexplored within the context of China.

This mixed-methods study aims to explore this issue by investigating the EMP 'target needs' and 'learning needs' of the undergraduate students in Clinical Medicine at a prestigious Chinese university in China. The investigation employs Hutchinson and Waters (1987)'s needs analysis theoretical framework and compares the identified needs with the existing EMP curriculum to identify misalignment.

To achieve this, semi-structured interviews were conducted with 47 interviewees, and 294 questionnaires were collected from participants. In addition, three EMP course syllabuses were analysed.

This research has uncovered a previously unaddressed target scenario that medical students may encounter in their future careers: communicating with international patients who are non-native English speakers. It also unveiled a specific clinical communication challenge related to conveying information about Traditional Chinese Medicine (TCM) to international patients. Comparting the identified EMP needs with current EMP curricula at the case university revealed that these courses inadequately address the 'target needs' and 'learning needs' of undergraduate medical students, failing to adequately prepare them for their future careers.

Moreover, the study revealed varying perceptions on English language learning among students and physicians at different stages of their educational and professional journeys. As students advance, there is a discernible increase in their perceived importance of EMP learning, except for undergraduate students who seem to lack the willingness and motivation to actively engage in EMP learning.

Based on the findings, this research not only makes suggestions for enhancing EMP at the case university but also illuminates potential challenges associated with its implementation, which are limited support from the case university, EMP teachers' lack of motivation in actively engaging in curriculum improvement, and lack of teaching materials on clinical communication in Chinese healthcare context.

Impact statement

This research holds significant implications for the advancement of EMP practice in Chinese medical education. In a rapidly globalising world where English serves as the dominant language of science and medical research, equipping medical professionals in non-English speaking countries, like China, with proficient English language and communication ability is essential for providing healthcare services to international patients, knowledge exchange, and international collaboration.

This research addresses the limited empirical investigations specifically focusing on the EMP 'target needs' and 'learning needs' for medical students in Chinese healthcare context. Through comprehensive needs analysis involving multiple stakeholder groups, this research provides valuable insights into the unique language and communication requirements and challenges faced by Chinese medical professionals, and shed light on the current gaps between the EMP curriculum and students' EMP needs, providing valuable insights for the case university to revamp their EMP training programmes. In addition, the research's impact extends beyond the case university, as the findings serve as a compelling call-to-action for medical schools and educators across China to examine the alignment between their EMP training and the specific EMP requirements of their students, ensuring the effective preparation of medical students for their upcoming professional journeys. As the medical field becomes increasingly interconnected, proficiency in English communication is no longer just a desirable skill but an essential requirement. The emphasis on EMP training equips medical students with the language proficiency and cultural competence needed to navigate cross-cultural medical interactions and provide patient-centric care to diverse populations.

Moreover, by illuminating the potential challenges inherent in enhancing EMP practice at the case university, this study provides valuable insights for stakeholders to formulate precise strategies and solutions, aiming to surmount these obstacles, ultimately facilitating EMP enhancement in medical education in China.

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Abbreviations

CET	College English Test
EGP	English for General Purposes
EMP	English for Medical Purposes
ESP	English for Specific Purposes
TCM	Traditional Chinese Medicine

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Chapter One: Introduction

This chapter serves as an introduction to the research, outlining the purposes and questions that the study aims to address. Specifically, it will begin by discussing the background and significance of the research, highlighting the evolving role of English as the global language of science (including medicine) and its implications for medical professionals worldwide, including those in non-English speaking countries like China. The chapter will then present the problem statement and discuss the limited empirical research in this area and the importance of understanding both the target learners' EMP target needs and their learning needs for improving EMP course design. Building upon this context, the chapter will state the research purposes. Additionally, the chapter will present the research questions that guide the study.

1.1 Research background

In China, English is progressively becoming more vital in medical science, creating a growing demand for Chinese physicians to utilise English effectively in their professional settings. This may especially be the case for those working in big cities where there is a higher number of foreign residents than in other areas. However, the prevailing English curriculum in most Chinese medical schools, irrespective of their location, primarily revolves around English for General Purposes (EGP), with limited emphasis on EMP, despite numerous scholarly recommendations to emphasise EMP in medical education (Chen et al., 2012; Gupta et al., 2012; Li & Heron, 2021; Lu & Corbett, 2012). This dearth of EMP implementation in medical schools may pose potential challenges for medical students in using English proficiently in medical-related contexts.

Presently, the majority of research on EMP in China has centred around theoretical discussions, advocating its increased emphasis (Lu, 2020; Wang, 2016; Wu et al., 2017). Despite the widespread implementation of EMP programmes across medical schools in China, the raised concerns about the English language proficiency of Chinese physicians bring into question the alignment between the current English language education offered to medical students and their English language requirements within the medical field. While scholars have recognised the significance of EMP, their recommendations have predominantly remained broad and general, lacking concrete solutions that delve into the specific aspects requiring improvement. Furthermore, there is a dearth of empirical research that thoroughly explores challenges and barriers hindering the effective implementation of EMP training in medical education in China.

Addressing these gaps through empirical research can provide valuable insights and practical recommendations to enhance EMP practice and better prepare Chinese medical students for their future careers in medicine.

To attain a comprehensive understanding of how to enhance EMP practice in China and effectively prepare medical students for their future careers, a rigorous analysis is essential. This entails gathering data on the specific English language

needs of the target students, assessing the existing EMP practices provided by the case university, and identifying any barriers hindering the successful implementation of EMP.

1.2 Statement of the problem

It is evident that in using English as a second or foreign language, physicians worldwide frequently encounter significant language difficulties (Tweedie & Johnson, 2022). For physicians working in China, research-related job tasks, including publishing in prestigious English-language journals, have become significant factors for job tenure, promotion, and funding (Qiu, 2010). The pressure to publish internationally recognised articles is high, as many Chinese hospitals consider the number of articles published in the Science Citation Index (SCI) as a crucial indicator for physicians' career evaluation and promotion (Yuan et al., 2013). National and hospital-level requirements further emphasise the significance of publication in SCI-indexed English-language journals for career advancement (Zhang et al., 2014a). To meet journal requirements, physicians may need to write their manuscripts in English. It has been found that reading and writing in a foreign language pose great challenges to physicians both worldwide (Burrough-Boenisch, 2008; Cargill et al., 2012; Langdon-Neuner, 2008) and in China (Wu et al., 2017).

Despite these requirements on English language competency, Zhang and Wang (2015) reported that Chinese physicians typically have low overall familiarity with international journals that use English. (Zhang & Wang, 2015) also carried out a survey with 1663 mainland Chinese physicians and found that they were more likely to look for materials in Chinese (64%) than in English when they encountered clinical difficulties at work. They also found that approximately half of the participants required professional English editing services to publish papers in English-medium journals.

Although existing literature highlights the English language challenges faced by Chinese physicians in medical fields, there remains a lack of clarity regarding the how well the current English language training in China prepares medical students for the language challenges they will encounter in their future careers, as well as how the current EMP practice can be improved.

1.3 The career path of students in Clinical Medicine

Chinese students in Clinical Medicine have a strong preference for working as physicians in public hospitals (Yuan et al., 2013). Hou et al (2015) conducted a survey on the preferred career paths of 2145 Clinical Medicine undergraduates from nine universities in China (three of them located in the east of China, three in the middle and three in the west). Among the respondents, 92% were willing to work as physicians. Among those who were intending to work in the area of Clinical Medicine, 63% preferred to work in large public hospitals, which was the highest percentage among all possible career paths. In addition, 30% of them were intending to pursue a postgraduate degree. As postgraduate students are required to work part-time in university-affiliated public hospitals, they are more likely to stay and work in

these hospitals upon graduation, which will further increase the proportion of those employed in large public hospitals. In addition, 19% of those intending to work in the area of Clinical Medicine said they wanted to study at postgraduate level. Only 2% said that wanted to work in private hospitals. (Hou et al., 2015) conducted another survey with 3020 undergraduate students in Clinical Medicine and obtained similar results: 74% of the participants stated that they would prefer to work in public hospitals in urban areas after graduation.

1.4 Research purpose and questions

The primary purpose of this research is to investigate what and how EMP training can be provided to Chinese medical students to prepare them for their future careers. To achieve this aim, this case study will address the following research questions:

1) To prepare Chinese medical students for their future careers, what are their EMP 'target needs' and EMP 'learning needs'?
2) How well does the current EMP training at a case university align with the above identified needs?
3) How could EMP practice be improved?
4) What are the potential challenges in improving EMP, based on stakeholders' perceptions?

By addressing these research questions, the study aims to provide a comprehensive understanding of the English language needs of Chinese medical students, inform the enhancement of effective EMP training that align with learners' needs, and identify any potential challenges in improving EMP.

1.5 Significance

The research findings serve as a wake-up call, urging medical schools and educators to attach importance to EMP in preparing medical students for future medical careers. In addition, the research extends the existing ESP literature by emphasising the integration of 'learning needs' alongside 'target needs' in EMP course design. While scholars have acknowledged the importance of considering both aspects (e.g., Hutchinson & Waters, 1987), empirical investigations specifically focusing on the EMP needs of Chinese medical students are limited. By involving multiple stakeholder groups and conducting comprehensive needs analysis, this study fills a significant gap in the literature and provides valuable insights into unique language and cultural challenges faced by medical practitioners in Chinese healthcare context.

The recommendations derived from this research, despite being context-specific, can play a role in raising awareness regarding the need to enhance EMP practice within medical schools in China, as well as in shedding light on the challenges faced by medical schools and educators in effectively implementing EMP.

This research therefore has implications for enhancing EMP practice at medical schools in China. By illuminating the challenges and barriers faced by medical schools and educators in implementing EMP, this study prompts a much-needed

conversation on the importance of prioritising EMP in medical education, to bridge the gap between language learning and medical practice, nurturing a generation of proficient and culturally competent medical professionals ready to excel in the global healthcare arena.

1.6 Organisation of this thesis

This thesis is organised into the following chapters to address the research objectives and answer the research questions.

Chapter 1: Introduction, provides an overview of the research topic, presents the research context within the Chinese healthcare system, identifies the research gap, states the research objectives and questions, and highlights the significance of the study.

In Chapter 2: Literature Review, a comprehensive review of the literature is conducted to explore the concepts related to English language needs in the medical profession and the challenges faced by Chinese medical students and physicians in using English.

Chapter 3: Methodology, describes the research methodology adopted for the study. It outlines the research design, data collection methods, and participant selection criteria. It also discusses the ethical considerations and potential limitations of the study.

In Chapter 4: Findings, the collected data were analysed and presented. The chapter presents the specific English language needs identified among Chinese medical students and physicians, explores the challenges and barriers faced in English communication, examines the alignment between course offerings and EMP needs, and identifies potential barriers in enhancing EMP.

In Chapter 5: Discussion, the findings are discussed in relation to the existing literature. The implications of the findings for improving English language education among Chinese medical professionals are examined.

Chapter 6: Conclusion, summarises the key findings of the study, reiterates the research objectives and questions, and discusses their implications. It reflects on the significance of the research and its contribution to knowledge. The chapter concludes with recommendations for future research and offers practical implications for enhancing English language and communication ability among Chinese medical students and physicians.

Chapter Two: Literature Review

This chapter provides a comprehensive review of the literature relevant to the research topic. It is divided into five sections. In the first section, definitions and conceptualisations of English for Specific Purposes (ESP) and EMP practice in China will be reviewed. This section aims to establish a clear understanding of the principles and applications of ESP and EMP within the Chinese medical education context, providing a foundation for the subsequent sections. The second section explores the complexities of intercultural competence in clinical communication and addresses the integration of intercultural communication training within the EMP curriculum, highlighting the existing gaps in research and the need for a more comprehensive approach to prepare medical students for real-world, intercultural healthcare interactions. The third section reviews the concepts of needs analysis, justifying the adoption of a needs analysis framework for the current study. It discusses the importance of considering both 'target needs' and 'learning needs' in designing effective language training programmes for medical students. Additionally, this section reviews previous studies that have employed needs analysis methodologies to identify the language needs of medical students and practitioners worldwide. By synthesising this literature, the section establishes a foundation for the current research and highlights gaps that the study aims to address. The final section of this chapter provides a summary of the insights presented in the literature review. It highlights the main themes, theories, and research gaps identified throughout the chapter, setting the stage for the subsequent chapters of the thesis. This summary serves as a bridge to connect the literature review with the research methodology and empirical findings that will be presented in the subsequent chapters.

2.1 English for specific purposes (ESP)

2.1.1 Definitions of ESP

The concept of ESP emerged in the 1960s. Mackay and Mountford (1978) define it as teaching English for enabling learners to understand and use English in their areas of speciality. However, this definition seems to be too broad and does not cover all aspects of ESP. Blackie (1979) proposed a more comprehensive working definition, suggesting that ESP courses are programmes that are designed for a group of learners who have homogeneous language learning needs. This definition focuses on the homogeneity within the groups of learners, which can be identified through two processes: (1) a present situation analysis to assess learners' English language proficiency by taking a placement test; (2) a learning needs analysis by conducting an appropriate needs analysis. However, the main limitation with Blackie's definition is that it did not state clearly to what extent such homogeneity can be identified within such a group, because the degree of homogeneity of learners' needs in a group may have a great influence on ESP course design (Kennedy & Bolitho, 1984). Indeed, it is usually impossible for group of learners to have homogeneous needs. As

Cunningsworth (1983) stated, the needs of a group of language learners may differ quite considerably from one another in many cases.

Despite the different precise stances on homogeneity, many scholars agree that learners' needs are the basis of ESP course design. Munby (1978) argued that ESP courses must address learners' specific language needs. Mohan (1986) supported this claim by emphasising that ESP course materials should be decided based on the prior analysis of learners' communication needs. Basturkmen (2010) framed ESP as needs-related teaching. More recently, Basturkmen (2021a) refers to ESP as English language teaching that aims to meet the linguistic needs of language learners in their academic studies and work. Anthony (2018) describes ESP as a form of language instruction that addresses both the present and prospective academic or occupational requirements of learners. It concentrates on the vital language, genres, and skills essential for these demands, guiding learners to achieve them. Hyland and Wong (2019) describe ESP as English language instruction tailored to the unique social, cognitive, and linguistic needs of specific contexts.

Compared with EGP, which focuses on learners' general English language abilities, ESP scholars have identified some distinguishing features of ESP. Belcher (2009) differentiates ESP from EGP by asserting that its primary aim is to offer language instruction tailored to students' distinct objectives. According to scholars (Dudley-Evans & St John, 1998; Hutchinson & Waters, 1987; Hyland, 2006; Paltridge & Starfield, 2013), ESP can be classified into two types: 'English for academic purposes' and 'English for occupational purposes'. This implies that the ESP learners are usually either engaged in learning English for academic purposes or working in a specific professional area where English is used, or both. However, this may not be clear-cut and there can be overlaps between these two categories (Belcher, 2006; Flowerdew, 2012). Its vagueness can be ascribed to the fact that one may not always be able to separate the objectives between these two types (Belcher, 2006). For example, English for medicine can be for the purposes of either academic study or work, or both; as Hutchinson and Waters (1987) argued, people can work and study simultaneously. In fact, for Chinese medical physicians working in public hospitals, as their job tasks usually involve both clinical practice and undertaking research (Zhang et al., 2014), the two types of ESP ('English for academic purposes' and 'English for occupational purposes') both apply.

Despite variations on the definition of ESP, the overall suggestion is that ESP courses should be designed based on a comprehensive analysis of the target learners' English language needs, including both the English language requirement and their perceived English learning needs.

2.1.2 Relationship between EGP and ESP

EGP and ESP are different in terms of their scope and content. EGP encompasses general language learning and teaching, catering to a diverse group of learners with varied language needs and goals (Basturkmen, 2021b; Brown, 2016). Its aim is to provide learners with a solid foundation in English, covering grammar, vocabulary, speaking, listening, reading, and writing skills across a wide range of topics. EGP

materials and content are more general in nature, using everyday language scenarios and common themes to help learners develop their language skills for everyday communication, academic pursuits, or personal interests (Brown, 2016). The approach in EGP classes typically follows a more general and communicative method, allowing learners to apply the acquired language skills in various settings.

In contrast, ESP focuses on learners who have specific language needs related to their professional or academic fields (Paltridge & Starfield, 2013). The primary goal of ESP is to equip learners with language skills relevant to their specialised domains, such as EMP. ESP materials and content are highly specialised, tailored to the learners' specific professions or academic disciplines. These materials often include authentic texts, case studies, and tasks that are directly relevant to the learners' field of study or work (Paltridge & Starfield, 2013).

The teaching approach in ESP classes usually adopts a more targeted method than in EGP classes (Basturkmen, 2021b; Flowerdew, 2012). The focus of ESP teaching is on developing the language and communication ability required for specific tasks within the learners' professional or academic contexts. ESP aims to provide learners with the terminology, jargon, and communication patterns specific to their fields, enabling them to engage effectively in their specialised domains (Basturkmen, 2021b; Flowerde).

Scholars have offered varied viewpoints on the balance of EGP and ESP instruction for second language learners. Some advocate for a greater focus on EGP to ensure learners possess a strong foundation in English, enabling easier adaptability across domains (Gaffas, 2019). Others argue in favour of a more ESP-centric approach, highlighting the relevance of specialised language skills for learners' intended professions or fields of study (Cai, 2016). These diverse perspectives stem from differing interpretations of learners' needs and the nature of language acquisition.

The decision-making process in balancing EGP and ESP must consider various factors, such as learners' proficiency levels, intended careers, and linguistic backgrounds (Brown, 2016). Contextual factors, such as the availability of resources, learning environments, and institutional objectives, also impact the balance (Dudley-Evans and St John, 1998). Moreover, the scope of language skills needed in real-world situations should guide the allocation of instructional time between EGP and ESP (Hutchinson and Waters, 1987).

To summarise, despite numerous debates and discussions, a definitive solution for balancing EGP and ESP remains elusive. The dynamic nature of language learning and the diversity of learners and contexts contribute to this complexity. Therefore, it is important to identify the characteristics of the target learners and the learning context by engaging in needs analysis and ongoing evaluation to ensure learners are equipped with the necessary linguistic skills for their intended pursuits.

2.1.3 Evolution of ESP practice in China

In the 1970s, the ten-year Cultural Revolution ended. The Chinese government proposed to vigorously develop foreign language education, especially to improve the

foreign language level of students majoring in science and engineering disciplines. The notion of ESP was introduced into China for the first time.

In 1980, the Chinese Ministry of Education promulgated the *Public English Teaching Syllabus* (Ministry of Education, 1980). This was the first college English syllabus since the Cultural Revolution; it put the focus of college English teaching on ESP. The public English teaching objectives stipulated in the *Public English Teaching Syllabus* were divided into two stages: 1) basic English teaching stage: "laying a solid language foundation for students to read English scientific and technological books"; 2) professional English teaching stage: "enabling students to have a relatively smooth ability to read professional English books and periodicals" (Ministry of Education, 1980). Thus, during this period, many Chinese higher education institutes started to offer ESP courses, especially in science and technology disciplines.

However, there has been much debate on whether ESP courses should be offered in Chinese universities (Cai & Liao, 2010). Fu (1986) summarised the focus of debate: some held negative views towards it, arguing that learners should have a solid English foundation before taking EMP courses. Indeed, the English foundation of Chinese college students is generally too poor to study ESP. For those who held a positive view, they argued that the main purpose for science and engineering students studying foreign languages was for them to learn about foreign science and technology, and that universities should provide relevant ESP courses to improve their foreign language reading skills (Chen, 2005).

In 1999, the Chinese Ministry of Education promulgated the *College English Teaching Syllabus* which determined that college English should focus on EGP rather than ESP. The reasons were as follows: 1) There is a shortage of qualified ESP teachers who know both subject content and the English language; 2) Chinese university students' English proficiency is limited – their English vocabulary is typically less than 1,000 words, making it difficult to learn ESP; 3) The Ministry of Education has approved the CET-4 and CET-6 tests (CET is the acronym of 'The National College English Test', which is a large-scale standardised English examination administered by the Ministry of Education in China, which regards this test as a standard for measuring college English teaching). This test is only for EGP learners, and thus, under these circumstances, Chinese higher education institutes were not encouraged to offer ESP courses (Cai, 2016).

However, in the 2000s, ESP was brought up again by Chinese scholars because: 1) The CET tests resulted in nationwide test-oriented language teaching, which proved to be time-consuming and inefficient with a target on high scores rather than language abilities – both teachers and students were strongly dissatisfied with it (Y. Zheng & Cheng, 2008); 2) China's accession to the World Trade Organisation led to a surge in international communication, but Chinese graduates were not competent at English-language international communication. Therefore, Chinese scholars (Cai, 2004; Cheng, 2002; Lu, 2011; Qin, 2003; Zhang, 2003) started to advocate ESP in China again. However, it was not until 2013, when the Shanghai College English Teaching Committee promulgated the *Shanghai College English Teaching Reference Framework* (Shanghai College English Teaching Committee, 2013), that ESP was

stipulated to be the main content of college English teaching in higher education institutes in Shanghai, and there was a pilot college English reform with ESP as the core of English teaching in Chinese higher education institutes. In 2017, the Ministry of Education issued the *Guidelines for Teaching College English* (Ministry of Education, 2017), which recognised the status of ESP in English teaching in Chinese higher education institutes. However, no mandatory courses were prescribed by these guidelines.

Cai and Liao (2010) conducted a survey of ESP course offerings in 45 universities in China (18 science and engineering universities, 16 comprehensive universities, 6 normal universities, and 5 medical, financial, and maritime universities). They found that only 25 of the universities offered ESP courses, and most of these courses were pedagogically similar to English reading courses.

Given the context that ESP has been an important part of Chinese college English teaching, there is a lack of empirical research on ESP teaching practice in China; more empirical studies are needed to investigate stakeholders' needs and challenges so as to make suggestions to improve ESP teaching in Chinese higher education institutes.

2.1.4 Current status of EMP practice in China

Despite the growing recognition of the importance of ESP, the current state of EMP implementation in China leaves much to be desired. Many medical schools in China do not prioritise the inclusion of EMP curricula for their medical students (Chen et al., 2012). Overall, EMP instruction in China is 'forms-focused' (Collins & Ruivivar, 2020), focusing on formal properties of the language, such as grammar, vocabulary and word-by-word translation (Lu, 2020). However, substantial variations exist across different regions and universities in China (Chen et al., 2012).

In China, the implementation of EMP practice varies among medical schools. While some medical schools have incorporated EMP, a significant portion still lacks exposure to it (Chen et al., 2012). The emphasis largely remains on EGP, resulting in limited class time dedicated to EMP training. This imbalance raises questions about whether medical students are adequately prepared to navigate the intricate language demands of their future medical careers, where precise communication is essential for patient care and interdisciplinary collaboration.

Moreover, teaching methods prioritise grammar and vocabulary (Huang et al., 2014). The absence of meaningful exposure to these scenarios hampers the practical applicability of EMP skills in actual medical contexts, hindering students' ability to effectively communicate with patients, colleagues, and international counterparts.

While scholars advocate for increased implementation of EMP and the revision of teaching methods (Mo, 2003; Wu & Wang, 2010), these recommendations have predominantly arisen from theoretical deliberations rather than empirical substantiation. Notably, there exists a dearth of empirical research that could furnish evidence-based insights to inform these suggestions.

2.2 English as a lingua franca in the context of Chinese healthcare

With the increasing number of international patients living in China, Chinese

physicians may be required to communicate in medical consultation and for treatment with patients who may not understand Chinese. The latest census indicates that a total of 845,697 foreigners are living in mainland China in 2020, an increase of approximately 250,000 since 2010 (National Bureau of Statistics, 2021). It is estimated that there are over 200,000 foreign residents living in Beijing, accounting for about a quarter of all foreign residents in China (www.gov.cn).

When interlingual healthcare communication is required in Chinese healthcare contexts, including when stakeholders are all speakers of a first language other than English, English tends to be used as the language of choice, and is often the only option (Tweedie & Johnson, 2022). For example, when a Bangladeshi patient with limited Chinese proficiency consults a physician in a Chinese hospital, English is often used as the language of communication. Similarly, an Indonesian man who travels to Beijing for a medical consultation with a physician of traditional Chinese medicine may have English as the only available communicative option (Tweedie and Johnson, 2022). The language barriers that foreign residents encounter in seeking medical treatment in Chinese hospitals sometimes result in miscommunication with medical practitioners (Zhang & Wu, 2020), as is often the case in language discordant situations in other global health settings (Meuter et al., 2015).

Clinical communication is a foundational component of pre-vocational medical education, essential for preparing students to become healthcare providers. Before becoming registered doctors, medical students are typically introduced to clinical communication through a variety of pedagogical approaches, including didactic teaching, role-playing, simulated patient interactions, and reflective practice. The curriculum often covers a range of topics such as breaking bad news, informed consent, shared decision-making, and managing difficult conversations (de Haes and Bensing, 2009; Kurtz et al., 1998; Silverman et al., 2005). Consensus statements, such as those from UK medical curricula (von Fragstein et al., 2008), emphasise the importance of communication skills in ensuring patient safety, fostering patient-centred care, and promoting ethical practice. These curricula outline specific competencies that medical students must achieve, including the ability to establish rapport, listen actively, convey information clearly, and respond to patients' emotions. Communication training is generally integrated throughout the medical school curriculum, with students assessed through both formative and summative evaluations to ensure they meet the required standards before entering clinical practice.

In the UK, there is a consensus on the content of communication curricula in undergraduate medical education (von Fragstein et al., 2008). However, in China, no such consensus exists. The teaching of clinical communication in Chinese medical education seems to be less formalised; while some leading medical schools in China have begun to incorporate elements of communication training into their curricula, it is not yet universally prioritised across all institutions. In many cases, clinical communication is not taught explicitly; instead, students often learn how to interact with patients during their clinical rotations through observation and imitation of senior doctors (Liu et al., 2015). This apprenticeship model, while valuable, may leave gaps in students' understanding of the nuances of patient-centred

communication, particularly in areas such as empathy, cultural sensitivity, and patient engagement. As a result, there is a growing recognition of the need for more structured and explicit communication training in Chinese medical schools to better prepare students for the complexities of patient interactions in an increasingly globalised healthcare environment.

2.2.1 Intercultural competence in clinical communication

For medical students in China, clinical communication training in Chinese can serve as a foundation for developing communication ability in other languages and navigating intercultural interactions. One of the primary benefits of such training lies in the emphasis on core communication principles that transcend language and culture. Skills like active listening, empathy, and clear expression of ideas are universal and can be applied across different linguistic and cultural contexts (Bein, 2017). Thus, healthcare professionals who undergo clinical communication training in Chinese may adapt these fundamental principles when communicating in other languages.

While core communication ability is universal and forms a solid foundation, communication in cross-cultural medical contexts requires an additional layer of cultural competence (Lu & Corbett, 2012). Despite the universality of skills like active listening, empathy, and clear expression of ideas, it is essential to recognise that cultural norms and communication styles can vary significantly across different linguistic and cultural contexts. While these core communication principles provide a strong foundation, individuals must also develop an understanding of cultural nuances, nonverbal cues, and contextual factors that can influence communication dynamics in specific professional contexts, such as the medical field.

Studies have shown that the transferability of communication ability between different cultural settings is a complex process. (Shirazi et al., 2020). Cultural competence goes beyond language proficiency and requires individuals to develop a deep appreciation for the values, beliefs, and behaviours of diverse cultural groups (Byram & Neuner, 2003). For medical students in China, clinical communication training in Chinese may lay the groundwork for communication in other languages. However, it is crucial to supplement this training with specific intercultural competence modules that address the unique challenges of cross-cultural interactions in medical practice.

In the globalised landscape of healthcare, effective cross-cultural communication is of paramount importance to ensure optimal patient care and successful interactions with diverse patient populations. There is widespread recognition of the significance of cultural competence training in fostering better communication between healthcare professionals and patients from different cultural backgrounds (Angelelli, 2009; Shirazi et al., 2020; Weissman et al., 2005). Integrating cultural competence into clinical communication training has become a common approach to address the challenges posed by cultural diversity in healthcare settings (Byram & Neuner, 2003).

However, in the context of China, there is a dearth of evidence and research on the implementation and impact of cultural competence training in clinical

communication. This knowledge gap raises important questions about how stakeholders in China perceive the role of intercultural competence in healthcare, and whether they recognise the value of incorporating such training into medical education.

Understanding the perspectives of medical educators, healthcare professionals, and students regarding the importance of cultural competence training can provide valuable insights into the current state of cross-cultural communication practices in Chinese healthcare settings. It can also shed light on potential barriers and challenges that may hinder the integration of cultural competence training in medical curricula.

2.2.2 Intercultural communication training and EMP

While foreign language proficiency is essential for communication with international patients, intercultural competence training complements language skills by enhancing communication. While the EMP curriculum primarily focuses on language proficiency, clinical communication training and intercultural competence training can complement and expand upon language skills.

In the realm of second language acquisition theory, divergent perspectives exist regarding language learning approaches. Some scholars (e.g., Carroll, 1986; Lado, 1961) advocate for a comprehensive approach that encompasses all four language skills, while some others (e.g., Bachman, 2005; Bachman, 1990; Canale & Swain, 1980) emphasise the significance of communicative language learning.

The theoretical foundation elucidates the evolution of language learning theories. While Lado (1961) and Carroll (1986) underscored the distinctness of language skills, Canale and Swain (1980) introduced the concept of communicative language learning and testing, emphasising the importance of evaluating language proficiency based on real-life communication capabilities. Bachman (1990, 2005)'s contribution extended this notion to interaction-ability, recognising the significance of interactive and meaningful communication.

Language skills cannot be isolated from their contextual underpinnings (Bachman, 1990; 2005). This comprehension contradicts the previous stance that language courses should solely concentrate on language skills instruction. The recognition that linguistic proficiency alone is inadequate for communication in diverse contexts becomes apparent.

Interacting with culturally diverse patients necessitates more than linguistic competence. A profound understanding of intercultural dynamics and adept communication strategies is essential. Integrating intercultural competency alongside linguistic competence in EMP course design is pivotal. By doing so, medical students can cultivate a comprehensive skill set that extends beyond language proficiency, enabling effective interactions and communication within real-world medical practice.

However, the incorporation of intercultural communication training in medical education in China remains an understudied area. While the importance of cultural competence and communication in the medical field is widely recognised worldwide (Byram & Neuner, 2003; Cooper & Frain, 2018; Oliveira et al., 2015), there is a lack of comprehensive research on how well Chinese medical education programme have

integrated such training into their curricula ad well as how medical educators, students, and practising healthcare professionals perceive the relevance and importance of cultural competence in clinical communication. Moreover, there is a lack of research exploring the experiences and perspectives of international patients receiving medical care in China. Understanding their experiences can highlight areas where healthcare professionals may need additional support and training to better meet the needs of a diverse patient population.

2.3 Needs analysis

2.3.1 Definition of 'needs'

Since many scholars have suggested that ESP courses should be designed based on the specific 'needs' of the target learners (Hutchinson & Waters, 1987; Dudley-Evans & St John, 1998; Flowerdew, 2012; Basturkmen, 2010; Brown, 2016), it is essential to understand what the term 'needs' means in the field of ESP and how to identify 'needs' before discussing any needs analysis approaches.

In needs analysis research, scholars have different perspectives to identify 'needs'. I will review four prominent approaches used to define needs in ESP research and discuss how my own research conceptualises and defines 'needs'.

Hutchinson and Waters: Needs as a systematic analysis of learners' language requirements

Hutchinson and Waters (1987) introduced the concept of needs analysis in ESP, emphasising a systematic approach to identifying and prioritising learners' language requirements. They proposed that understanding learners' needs involves a comprehensive examination of the specific language skills, functions, and discourse types required in their target professional or academic contexts. This perspective considers needs analysis as a crucial initial step in designing effective ESP programmes, ensuring that instruction is aligned with learners' specific linguistic demands.

Munby: Communicative needs as the focus on learners' functional language use

(Munby, 1978) introduced the notion of communicative needs, emphasising the functional aspects of language use. According to Munby, needs analysis should focus on identifying the specific communicative purposes and tasks that learners need to accomplish within their professional or academic domains. This perspective underscores the importance of identifying the language functions necessary for learners to interact effectively in their target environments. By identifying and prioritising these communicative needs, instructors can design instruction that facilitates learners' ability to express themselves, understand others, negotiate meaning, and accomplish tasks within their specific contexts.

Interactional needs emphasising learners' need for negotiation and interaction

Long (2005) proposed an interactional approach to needs analysis, highlighting the importance of learners' social and interactive language needs. According to Long,

learners need opportunities for negotiation of meaning, interaction, and collaboration in order to develop their language proficiency effectively. This perspective recognises the significance of providing learners with authentic and meaningful opportunities to engage in communicative tasks and social interactions that reflect the target language use in their specific domains. By addressing learners' interactional needs, instructors can create environments that foster language development through meaningful and purposeful communication.

Breen: Experiential needs related to learners' personal and social experiences
Breen (1984) introduced the concept of experiential learning and the importance of considering learners' personal and social experiences in needs analysis. Breen argued that learners' experiences and beliefs shape their language needs and that understanding their past and present experiences is crucial for effective instruction. Experiential needs encompass learners' motivations, interests, cultural backgrounds, and individual learning styles. By incorporating learners' experiential needs into instructional design, educators can create relevant and engaging learning experiences that connect with learners' existing knowledge and experiences.

These theoretical perspectives on needs analysis in ESP provide valuable insights into the multifaceted nature of learners' needs. While Hutchinson and Waters focus on the systematic analysis of learners' language requirements, Munby emphasises the functional aspects of language use. Long highlights the importance of interaction and negotiation, while Breen emphasises the significance of learners' experiential and personal backgrounds. These perspectives collectively underscore the complexity of defining and addressing ESP learners' needs, highlighting a range of dimensions in needs analysis for effective ESP instruction.

In the context of this research, 'needs' refer to the multifaceted language requirements of ESP learners. These needs encompass the linguistic, communicative, socio-cultural, interactive, and individual experiential dimensions of language use within learners' specific professional or academic contexts. It involves a systematic analysis of learners' language skills, communicative purposes, and tasks necessary for communication and task accomplishment. Furthermore, 'needs' incorporate learners' social and collaborative interactions, as well as their personal motivations, interests, cultural backgrounds, and individual learning styles. Understanding and defining these needs are crucial for informing curriculum design, instructional practices, and materials development that are tailored to the specific language demands and goals of ESP learners.

By incorporating elements from Hutchinson and Waters' systematic analysis, Munby's focus on communicative functions, Long's emphasis on interactional needs, and Breen's recognition of experiential factors, this definition provides a comprehensive framework for understanding and addressing the diverse dimensions of ESP learners' needs in this research.

2.3.2 EMP learners' language needs

Although the EMP learners' English language needs could vary substantively in different linguistic and cultural settings, the potential English language difficulties that non-Anglophone physicians could encounter at work were identified and presented in a checklist presented by (Allwright & Allwright, 1977). Although it was proposed over forty years ago, it is still considered as one of the most comprehensive and useful EMP learners' language needs' checklists so far (Paltridge & Starfield, 2013). The checklist is summarised as follows (Paltridge & Starfield, 2013):

1. Reading of textbooks/professional journals/papers for information;
2. Writing papers/reports/articles in English for publication/symposia/conferences;
3. Corresponding with English-speaking colleagues on professional matters;
4. Understanding lectures/papers in English delivered orally at conferences;
5. Medical meetings, symposia;
6. Presenting papers/lectures in English at conferences, medical meetings, symposia;
7. Contributing formal/informal discussion at conferences;
8. Participating in postgraduate courses in English;
9. Speaking to English-speaking patients/colleagues in clinical settings.

The list presented here represents the EMP learners' needs in the specific target situation, rather than reflecting their individual learning needs. It is important to differentiate between the two, as learners' learning needs may differ from the language requirements of a particular scenario.

Furthermore, it is essential to consider the context in which these EMP learners will be applying their language skills. While the target situation needs may be relevant in certain international medical contexts, they might not align perfectly with the healthcare landscape in China. Here, learners may have language needs that are more specific to local patient interactions, medical practices, and cultural considerations. Therefore, it is vital to tailor EMP courses to address the practical language requirements of medical professionals in China, ensuring that they are well-equipped to communicate effectively with patients, colleagues, and international counterparts within the country's healthcare system.

2.3.3 Needs analysis theoretical framework

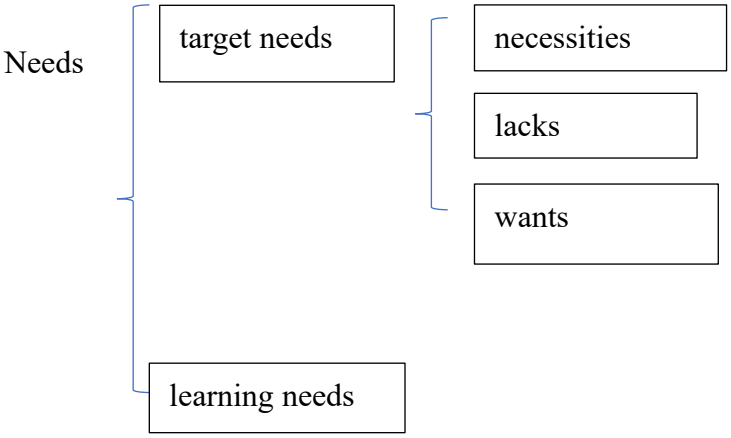
There have been various theoretical frameworks for needs analysis study; thus, it is necessary to justify which one this research will draw on and how needs analysis will be conducted in this research. Among these needs analysis frameworks, in perhaps the earliest one, Munby (1978) proposed the target situation analysis framework that uses a communication needs processor model, and consists of variables that can identify learners' target situation needs. However, this framework only identifies what is needed in the target situation. Another weakness with Munby's communication needs processor model is that it centres on a single learner's needs and thus does not apply to a larger group of participants consisting of different groups of learners. Moreover, it focuses too much on learners' needs; as Munby (1978) states, the model does not take

account of all parties involved in the process of EMP teaching and learning. In addition, it fails to provide solutions for converting learners' needs into procedures of course design (Richards, 2001). To address the weakness of Munby (1978)'s model, Allwright (1982) proposed the present situation analysis framework which emphasises the gap between learners' present and target situations. In addition, Hutchinson and Waters (1987) proposed a more complete needs analysis framework by attempting to identify both target situation needs and students' learning needs, which remedied the limitations of previous frameworks and has been used in various fields of ESP studies (Gass, 2012; Saragih, 2014) and adopted in this research to inform research design.

Hutchison and Waters made a distinction between target needs (i.e., what the learner needs to do in the target situation) and learning needs (i.e., what the learner needs to do in order to learn). Within the category of target needs, they also identify further divisions under the general heading of need. They stated that 'target needs' is an umbrella term, which in practice hides many distinctions. They suggest looking at the target situation in terms of necessities, lacks and wants.

The subsequent section will present a review of Hutchison and Waters' need analysis framework and critically examine how the research design in this thesis draws upon and integrates elements from their established framework. By exploring the key components and principles of Hutchison and Waters' approach, I aim to demonstrate the alignment and utilisation of their framework in shaping the methodology of this study. Through this discussion, I will showcase how this research design leverages the insights and methodologies provided by Hutchison and Waters to conduct a comprehensive and effective needs analysis within the context of EMP.

Table 2.1 *Needs analysis framework (Hutchinson & Waters, 1987)*



Target needs: what the learner needs to do in the target situation
Learning needs: what the learner needs to do in order to learn

Target needs

1. Necessities

The term 'necessities' refers to the type of requirement that arises from the specific demands of the target situation, indicating what knowledge and skills the learner must possess to perform effectively in that particular context. To gather information about these 'necessities', one must observe the situations in which the learner will need to operate and then analyse the various components that constitute those situations.

2. Lacks

Merely identifying the necessities is insufficient in ESP because the focus is on the individual needs of specific learners. It is equally important to assess the learners' existing knowledge to determine which of the necessities they currently lack. This 'lacks' aspect pertains to the disparity between the learners' target proficiency level and their current proficiency level.

3. Wants

The necessities and lacks have so far been viewed from an objective perspective, without actively involving the learners themselves. However, learners also hold their own perceptions regarding their needs. As Richterich (1983) suggests, needs are not standalone entities; rather, individuals construct their understanding of their needs based on information about themselves and their surroundings.

It has been emphasised that awareness of needs is a defining aspect of the ESP context. However, this awareness is subjective and can vary depending from an individual's perspective. Learners may have a clear understanding of their lacks, but their perceptions may not align with those of other stakeholders, such as teachers or programme leaders. Recognising learners' wants is crucial because motivation plays a

significant role in the learning process.

Nevertheless, the objective and subjective views of learners' necessities, lacks, and wants can sometimes clash with each other. Dealing with such situations does not have a one-size-fits-all solution; each case needs to be assessed based on its own circumstances. What matters is that ESP course designers and teachers are aware of these differences and consider them when designing materials and choosing methodologies. Adopting an ESP approach that emphasises learner involvement while disregarding learners' preferences and opinions would defeat the purpose.

The analysis of target situation needs involves asking questions about the target situation and understanding the attitudes of various participants in the learning process towards that situation. While this thesis does not review the detailed procedures for gathering such information, there are other resources that can be referred to for this purpose, such as Mackay and Mountford (1978) and Cohen et al (2018). The simple framework below provides an outline of the kind of information that course designers need to collect through an analysis of target needs.

A target situation analysis framework (Hutchinson & Waters, 1987)

Why is the language needed?
- for study;
- for work;
- for training;
- for a combination of these;
- for some other purpose, e.g. status, examination, promotion.

How will the language be used?
- medium: speaking, writing, reading etc.;
- channel: e.g. telephone, face to face;
- types of text or discourse: e.g. academic texts, lectures, informal conversations, technical manuals, catalogues.

What will the content areas be?
- subjects: e.g. medicine, biology, architecture, shipping, commerce, engineering;
- level: e.g. technician, craftsman, postgraduate, secondary school.

Who will the learner use the language with?
- native speakers or non-native;
- level of knowledge of receiver: e.g. expert, layman, student;
- relationship: e.g. colleague, teacher, customer, superior, subordinate.

Where will the language be used?
- physical setting: e.g. office, lecture theatre, hotel, workshop, library;
- human context: e.g. alone, meetings, demonstrations, on telephone;
- linguistic context: e.g. in own country, abroad.

When will the language be used?
- concurrently with the ESP course or subsequently;
- frequently, seldom, in small amounts, in large chunks.

Hutchinson and Waters propose seeking answers to these questions from diverse sources and then engaging in delicate negotiations to reach a mutually satisfactory compromise.

Similarly, the 'target situation' refers to the specific context or real-world environment in which learners will need to use English for communication. It is the actual setting where learners will apply their English language skills for specific purposes related to their professional or academic needs (Basturkmen, 2005). The 'target situation' acts as a guide, shaping the content and focus of English language instruction, ensuring that it directly addresses the linguistic requirements essential for medical students to succeed in their future roles as healthcare practitioners.
For Chinese undergraduate medical students specialising in Clinical Medicine, the concept of the 'target situation' encompasses the particular contexts in which they will utilise English for their professional endeavours.

Learning needs

Until now, the focus has been on target situation needs, exploring the knowledge and skills learners require to perform effectively in the specific context, considering the starting point (lacks) and the destination (necessities), acknowledging that there may be some debate about what the ultimate goals should be (wants). However, there is one more aspect to consider – the route to reach those goals, which encompasses learning needs.

To grasp the concept of learning needs, it is important to delve deeper into the analysis of target situation needs. When examining the target situation, the ESP course designer seeks to understand what an expert communicator needs to know to function proficiently. This information may include language items, skills, strategies, and subject knowledge. However, the analysis falls short in revealing how these expert communicators acquired the language items, skills, and strategies they currently utilise (Meuter et al., 2015). Studying their actions provides little insight into their learning process. Yet, ESP is fundamentally concerned with learning, not just knowing or doing. Creating a course design based solely on target objectives is therefore overly simplistic. The needs, potential, and constraints of the learning process (the route) must also be considered for a comprehensive analysis of learner needs.

There are various reasons why learners may be motivated and engaged in their subject lessons or work, yet might become disengaged when encountering the same material in an ESP classroom. This suggests that the target situation alone is not a reliable indicator of what is necessary or useful in the ESP learning situation. While the target situation analysis can determine the destination and provide a general direction, the specific route must be tailored according to the available resources (learning situation conditions), the existing knowledge and skills of learners, and their motivation for learning.

To analyse learning needs, Hutchinson and Waters (1987) also provides a similar checklist that can be employed as used for target situation analysis:

A framework for analysing learning needs (Hutchinson & Waters, 1987)

Why are the learners taking the course?
- compulsory or optional;
- apparent need or not;
- are status, money, promotion involved?
- what do learners think they will achieve?
- what is their attitude towards the ESP course? Do they want to improve their English or do they resent the time they have to spend on it?

How do the learners learn?
- what is their learning background?
- what is their concept of teaching and learning?
- what methodology will appeal to them?
- what sort of techniques are likely to bore/alienate them?

What resources are available?
- number and professional competence of teachers;
- attitude of teachers to ESP;
- teachers' knowledge of and attitude to the subject content;
- materials;
- aids;
- opportunities for out-of-class activities.

Who are the learners?
- age/sex/nationality;
- what do they know already about English?
- what subject knowledge do they have?
- what are their interests?
- what is their socio-cultural background?
- what teaching styles are they used to?
- what is their attitude to English or to the cultures of the English-speaking world?

Where will the ESP course take place?
- are the surroundings pleasant, dull, noisy, cold etc?

When will the ESP course take place?
- time of day;
- every day/once a week;
- full-time/part-time;
- concurrent with need or pre-need.

In summary, needs analysis is a multifaceted process that goes beyond merely examining learners' requirements in the target situation. Instead, it requires considering both the needs arising from the target situation and the learning needs of the learners themselves. Reviewing the literature only reveals what medical students will need to do in the target situation in the future as physicians, in other words, the 'necessities'. It does not reveal the 'lacks', 'wants', and learning needs, which requires empirical investigation with stakeholders.

However, one notable limitation of this study is the inability to directly examine the concept of 'lacks' (gaps) in the English language proficiency levels of the target

students. To overcome this limitation, it would be necessary to design a language proficiency test specifically tailored to the target students to obtain accurate and reliable information regarding their English language abilities. Designing a language proficiency test that effectively measures the English language skills of medical students poses its own challenges. The test should encompass various language competencies relevant to their medical practice, including listening, speaking, reading, and writing skills, with a specific focus on medical terminology and discourse. Additionally, the test should be culturally sensitive and consider the distinctive linguistic needs and challenges faced by Chinese medical students. Constructing such a test requires a rigorous and thorough process of test development, validation, and piloting to ensure its validity and reliability.

However, the lack of available data on students' English language proficiency levels adds complexity to the study's methodology and analysis. Without a clear understanding of the students' starting proficiency levels, it becomes challenging to assess the effectiveness of the proposed interventions or to measure any improvement in language proficiency over time. The absence of baseline data limits the ability to make precise comparisons and draw definitive conclusions regarding the impact of the EMP courses on the students' language development.

To address this limitation, future research could incorporate a pre-test and post-test design, where the language proficiency levels of the target students are assessed before and after the implementation of the EMP courses. This would provide a more comprehensive understanding of the students' language needs and progress over time. Additionally, longitudinal studies that track the students' language development throughout their medical education journey could provide valuable insights into the effectiveness of EMP courses and their long-term impact on students' language proficiency.

It is important to acknowledge this limitation as it affects the overall generalisability and interpretability of the findings. While the study aims to address the language needs and challenges of Chinese medical students, the absence of data on students' English language proficiency levels limits the extent to which the findings can be extrapolated to other contexts or student populations. Future research endeavours should strive to overcome this limitation by incorporating robust language proficiency assessments to enhance the validity and reliability of the findings and improve the understanding of English language needs in the medical education setting.

2.3.4 A review of EMP studies in China

The literature search was carried out using several reputable databases, including ERIC (EBSCO), Web of Science, China Academic Journals (CKNI), and China Online Journals (Wanfang). The search covered a significant time period from 2002 to 2022, and both English and Chinese texts from established peer-reviewed journals were considered. More details on the search strategy used for the literature review is attached in Appendix C.

The review of previous needs analysis studies served multiple purposes. First, it

aimed to identify any gaps or shortcomings in the existing literature, ensuring that the current research would contribute to filling these gaps and avoiding duplication of previous work. By understanding the limitations and research focus of previous studies, the current research can be positioned within the context of existing studies, establishing its contribution to the field. The focus of the review was on the research aims, methods, and findings of previous needs analysis studies, particularly those conducted in various countries within the field of EMP. Special attention was given to the English language skills prioritised by EMP learners in different countries.

The review of previous EMP studies revealed a significant gap in the literature, particularly in the context of China. While EMP needs analysis studies have been conducted in many countries worldwide (e.g., Alsamadani, 2017; Kamaruddin et al., 2021; Karimi & Vahdani, 2014), there is a notable scarcity of such studies conducted specifically in China. As highlighted by Yu and Liu (2018), this gap indicates the need for extensive research into needs analysis in the Chinese healthcare context. The current study aims to address this gap and contribute to the understanding of English language learning needs in the Chinese medical education setting.

The existing body of literature on EMP studies in China predominantly comprises theoretical discussions that highlight the imperative for medical professionals to utilise English and advocates an increased emphasis on EMP training on in-career physicians (e.g., Chen et al., 2012). While a few empirical studies have focused on identifying the English language needs in target medical situations, as discussed below, there is a notable lack of empirical research exploring students' learning needs, their perceptions of EMP learning, and their perspectives on the current curriculum.

Survey studies have been conducted using scales to measure Chinese medical students' English learning anxiety (Deng et al., 2022); or assess EMP teachers' cognition on language teaching to Chinese medical students (Cao et al., 2022); or investigate the challenges and adaptation strategies of teachers and students in a medical education program in China using English as a medium of instruction (Yang et al., 2019). However, there is a dearth of empirical studies that directly engage with multiple stakeholders, such as medical students, educators, and healthcare professionals, to gain valuable insights into their perceptions and experiences regarding EMP training. Additionally, theoretical discussions abound about the ideal structure of EMP programmes and their integration with EMP within medical education. However, there is a notable absence of empirical research that validates the feasibility of these recommendations in real-world settings.

Furthermore, the critical review of previous studies also uncovered methodological issues in some of the conducted needs analysis studies. One common problem identified was the lack of triangulation, where some studies solely relied on a single data collection method, such as questionnaires (e.g., Deng et al., 2022). Additionally, some studies only included participants from two groups, namely EMP learners and teachers, without incorporating the perspectives of domain experts. This approach contradicts the suggestions of scholars like Hutchinson and Waters (1987), Dudley-Evans and St John (1998), and Long (2005), who advocate the use of multiple sources of information and data collection methods in needs analysis to enhance the

validity of findings. The lack of triangulation and the exclusion of domain experts' views can pose significant challenges in designing effective EMP courses, as there is a lack of comparison and consideration of different stakeholders' perspectives.

2.4 Chapter summary

This chapter has provided a literature review on EMP practice, focusing on the specific context of China. The chapter consisted of four sections that explored different aspects related to EMP practice and needs analysis studies. The first section reviewed some definitions of ESP and EMP practice in China, establishing the foundation for understanding the specific language needs of medical professionals in the Chinese context. This section highlighted the growing importance of EMP practice in China, given the increasing demand for English language proficiency among medical students and physicians. The second section scrutinises the nuances of intercultural communication in clinical settings, arguing that basic communication skills, while essential, are not sufficient for effective cross-cultural interactions. Additionally, the section discusses the integration of intercultural competence into the EMP curriculum, underscoring the research gaps and the imperative for a holistic educational approach to equip medical students for diverse healthcare scenarios. The third section explored the concept of needs analysis in EMP, justifying the need for conducting comprehensive needs analysis studies. It discussed the importance of considering both target needs and learning needs in EMP course design, drawing from the literature on ESP theories and previous needs analysis studies. This section emphasised the role of needs analysis in developing tailored EMP curricula that address the specific language requirements of medical students.

Overall, this literature review provided a comprehensive overview of EMP practice in China, highlighting the importance of addressing the specific language needs of medical professionals. The reviewed studies emphasise the significance of needs analysis in designing effective EMP curricula and informed the subsequent chapters' research methodology and analysis.

Chapter Three: Methodology and Methods

This chapter provides an explanation of the methodology used in the study, including the research design, participant selection, data collection and analytical methods, as well as the ethical considerations that were taken into account.

3.1 Research paradigm

Pragmatism framed the research paradigm of this study, which is favoured by many mixed-methods researchers (e.g., Dörnyei, 2007; Johnson et al., 2016; Morgan, 2014). Among the various forms of pragmatism, John Dewey's focus on inquiry establishes a direct connection to research design considerations. According to Dewey, inquiry, whether in everyday life or research, starts with recognising a problematic situation that demands resolution through active investigation and action. From a pragmatist point of view, to address a research problem, researchers are advised to choose methods that they think will work best for their inquiries (Dörnyei, 2007). Pragmatism enables researchers to utilise a combination of quantitative and qualitative data to answer their research questions. This study adopts mixed methods, using qualitative methods (semi-structured interviews and document analysis) and a quantitative method (questionnaires), given that many scholars have suggested the adoption of such methodological triangulation in ESP needs analysis studies (e.g., Flowerdew, 2012; Serafini et al., 2015; Smith et al., 2022).

3.2 Methodology

Scholars have emphasised the significance of implementing a rigorous and systematic methodology to gather data on language learners' needs that are perceived by relevant stakeholders (Branden et al., 2009; Ellis et al., 2019; Long, 2005; Nunan, 2004; Shehadeh & Coombe, 2012). Long (2005) strongly recommended drawing on multiple information sources (from various groups of stakeholders) and using multiple methods to obtain information on learners' needs. Serafini et al. (2015)'s study expanded on Long (2005)'s recommendations for needs analysis – to collect data from multiple information sources using multiple data collection methods and to triangulate data – and created a checklist for needs analysis researchers. In Serafini et al. (2015)'s systematic review of needs analysis studies published from 1984 to 2014, they identified inconsistencies and gaps in current needs analysis practice and proposed a checklist for undertaking a robust needs analysis. Some recent studies conducted in foreign language settings have shown that adopting Serafini et al.'s (2015) checklist helps in contributing to the identification of language needs (Arias-Contreras & Moore, 2022; Iizuka & Lefor, 2018; Malicka et al., 2019; Smith et al., 2022). Consequently, this research adopts Serafini et al. (2015)'s methodological checklist, drawing on data collected from multiple groups of stakeholders and using multiple data collection methods to obtain information on the issue under investigation.

3.3 Research design

3.3.1 A case study approach

A case study approach with multiple data collection methods suits the purposes of the current study because the research questions can only be answered through a deep and detailed investigation of a particular case. While conducting multiple case studies can be valuable, focusing on a single case can provide more comprehensive and practical information for identifying changes in learners' perceptions of their English language needs as they progress from students to physicians. In contrast, if multiple case universities were chosen, integrating the results could be challenging due to differences in their medical training systems and the different settings of the hospitals in which they are practising. By examining a single case university, a richer and more comprehensive source of data can be obtained than with multiple case studies.

Through examining this particular case university, this study the study seeks to explore potential discrepancies between the EMP needs of students and the EMP curriculum provided; and how EMP teaching and learning practice at the university in question might be improved to better prepare their medical students for their future careers.

While the findings of this study are particularly relevant to the university in question, the conclusions may also hold interest for other higher education institutions in China that either currently offer, or are considering offering or enhancing, EMP training for medical students.

3.3.2 The rationale for choosing this university

The case university under investigation is one of China's top-ranked institutions for Clinical Medicine. Its affiliated hospitals, all third-tier hospitals located in Beijing, have exacting requirements for physicians working there. As the university is situated in the capital city (Beijing), it has ample opportunities to participate in international events and is more likely to encounter international patients than universities in smaller cities or rural areas. In addition, this university offers undergraduate, master's, and doctoral programmes, as well as access to eight affiliated hospitals where many graduates are employed. This diverse educational landscape allows for a nuanced comparison of students' perceptions of EMP learning across various stages of their academic journey.

However, in the context of this particular university, despite being situated in a major city, where frequent international encounters are common, and being a top-ranked institution, the university offers only three EMP courses to undergraduate students in Clinical Medicine. Perhaps more importantly, these courses are all optional subjects. What's more, two of these courses, as will be discussed in Chapter 4, do not specifically address language-related issues. This raises questions about the university's approach to EMP training, considering the evident need for physicians to possess proficient English language skills to communicate effectively with international patients, quite apart from other purposes.

It becomes essential to explore the perceptions of various stakeholders regarding

its current EMP teaching and learning methods. Understanding the motivations and challenges faced by the university administration, educators, and students can shed light on the broader issue of why EMP training in certain medical schools across China often lacks the attention it deserves.

Despite recognising the insufficiency of physicians' English language proficiency for workplace use, there seems to be an apparent gap in the priority given to EMP training in medical education in China. Uncovering the underlying factors contributing to this disparity can offer valuable insights into the prevailing attitudes towards EMP and language learning in general within the medical community.

3.3.3 The settings of the study case

This case university selected is widely seen as being at the forefront of medical education in China; it is ranked as one of the 10 best Chinese medical schools and has a large number of undergraduate students in Clinical Medicine (Huang et al., 2014; Wang, 2021).

There are three optional English courses provided to undergraduate students in Clinical Medicine. Prior to the initiation of this research, I engaged in informal discussions with EMP teachers and programme leaders to inquire about the implementation of needs analysis. Based on their responses, it became apparent that needs analysis had not been undertaken.

According to the information given on its official website, undergraduate medical students are required to complete their first year in general education at the central campus. From the second year onwards, they receive training at the medical school, which is geographically separate from the main campus. From the second semester of the third year, they are expected to receive placement in one of this university's eight affiliated hospitals in China. The undergraduate programme in Clinical Medicine was established at this university's earliest stage and it now has the largest number of students (almost 600 students in total; around 120 students in each year) of the ten undergraduate programmes provided at this university.

In China, there are three types of routes for students to get a degree in Clinical Medicine (Wu et al., 2014). Students can choose to enter a five-year degree programme (students will be awarded a bachelor's degree upon graduation, i.e., Bachelor of Medicine), a seven-year degree programme (students will be awarded a master's degree upon graduation, i.e., Master of Clinical Medicine) or an eight-year degree programme (students will be awarded a doctoral degree upon graduation, i.e., Doctor of Clinical Medicine) before they enter into university. The five-year degree programme and seven-year programme are offered in more than 40 medical schools in China (Wu et al., 2021). The eight-year programme is the least common one – the Ministry of Education has only authorised 12 leading medical schools in China to offer this type of programme. Across these 12 medical schools, 1300 students are enrolled into the eight-year programme annually (Wu et al., 2021). In this study, the undergraduate students I chose were those studying on the five-year degree programme because this type of programme is more common in China than the other two types (Zheng et al., 2020).

According to this university's Undergraduate Programme Plan for Students in Clinical Medicine (XX University, 2020), all courses are taught in Chinese with the exception of English language courses (including both general English courses and English for specific purposes courses), which are taught either in Chinese or English, depending on the level of the courses and the target learners. In students' first year, all courses (including English and other courses) are designed for a general educational purpose and thus there is no medical specialised course offered. All students are required to take an English placement test to be graded A, B, C or C+ so that they can choose corresponding English courses based on their grades. Grade A indicates the lowest performance in this English language test and grade C+ indicates the highest. Students with grade C+ are expected to take an extra test and, if they pass it, they are exempt from all English courses in their first year; if they fail, they are asked to attend only one English course, namely English Academic Writing. Students with all other grades are required to gain four credits in English curricula during the first year. All English courses are graded by A, B, and C following the test results. Each English course is equivalent to two credits. There are two semesters in each year. In the first semester, students must choose one English course with an equivalent grade to their English placement test result to get two credits; in the second semester, they must choose the other English course with the same grade or one grade above to get two more credits. There are 20 English courses available to be chosen by students with grades B or C, and four English courses available for students who achieve grade A.

From the second year to the end of the first semester of the third year, there is no requirement for students to take English language courses, and all foreign language courses are optional. The foreign language curricula at this university consists of nine English courses, one Japanese course, and one German course, aiming to equip students with foreign language competency. Each course is worth two credits. Students are expected to get four credits before they embark on their hospital placements in the last one and a half years of their study. Although English is commonly employed as the principal language for medical communication in the Chinese healthcare context, it's worth noting that the university offers additional language courses beyond English. These courses are taken by students based on their individual interests and preferences. This variety of language options indicates that the students' linguistic exposure and language learning endeavours extend beyond the confines of the medical field.

Among the nine English courses, three are related to the medical domain (*Medical Terminology; Illness Narratives; Medical Visual Culture*). Medical Terminology is taught using a bilingual approach by Chinese native-speaking teachers; the other two courses are taught with English as the medium of instruction by English native-speaking teachers.

From the second semester of the third year to the end of the fifth year (final year), when students are on their hospital placements, they still receive training from this university but do not need to take any foreign language course unless they have not yet obtained four credits in foreign language curricula.

3.3.4 Mixed-methods approach

This study employed a sequential mixed-methods approach (Dörnyei, 2007; Serafini et al., 2015), beginning with conducting semi-structured interviews with 27 participants (excluding a total of two pre-test and 14 pilot interview participants). Subsequently, 294 respondents (excluding six pilot questionnaires) completed questionnaires. To further augment the depth and comprehensiveness of the data, an additional round of interviews was conducted with 20 participants (excluding eight pilot interview participants) (see Figure 3.1). Then three EMP course syllabuses were analysed. More details of the procedures are explained in the following sections.

As suggested by Serafini et al. (2015) and Long (2005), more 'closed' procedures (questionnaires) were conducted after more 'open' procedures (semi-structured interviews). While the initial round of interviews included a relatively small number of interviewees, additional interviewees was consulted in the second round of interviews so that 47 participants were interviewed in all.

The objective of analysing three EMP course syllabuses was to gain a comprehensive understanding of the current EMP training available at the case university. By examining the content and structure of these syllabuses, I aimed to ascertain and focus of EMP instruction being offered to undergraduate students in Clinical Medicine as well as identify any misalignment between students' EMP needs and EMP course offerings.

In order to address the research questions comprehensively, interview data served as the main source of information. Through in-depth interviews with various stakeholders, valuable information was obtained regarding their perspectives, experiences, and perceptions related to EMP teaching and learning. These interviews provided qualitative data that shed light on the motivations behind the limited EMP provision and the prevailing attitudes towards language training in the medical context.

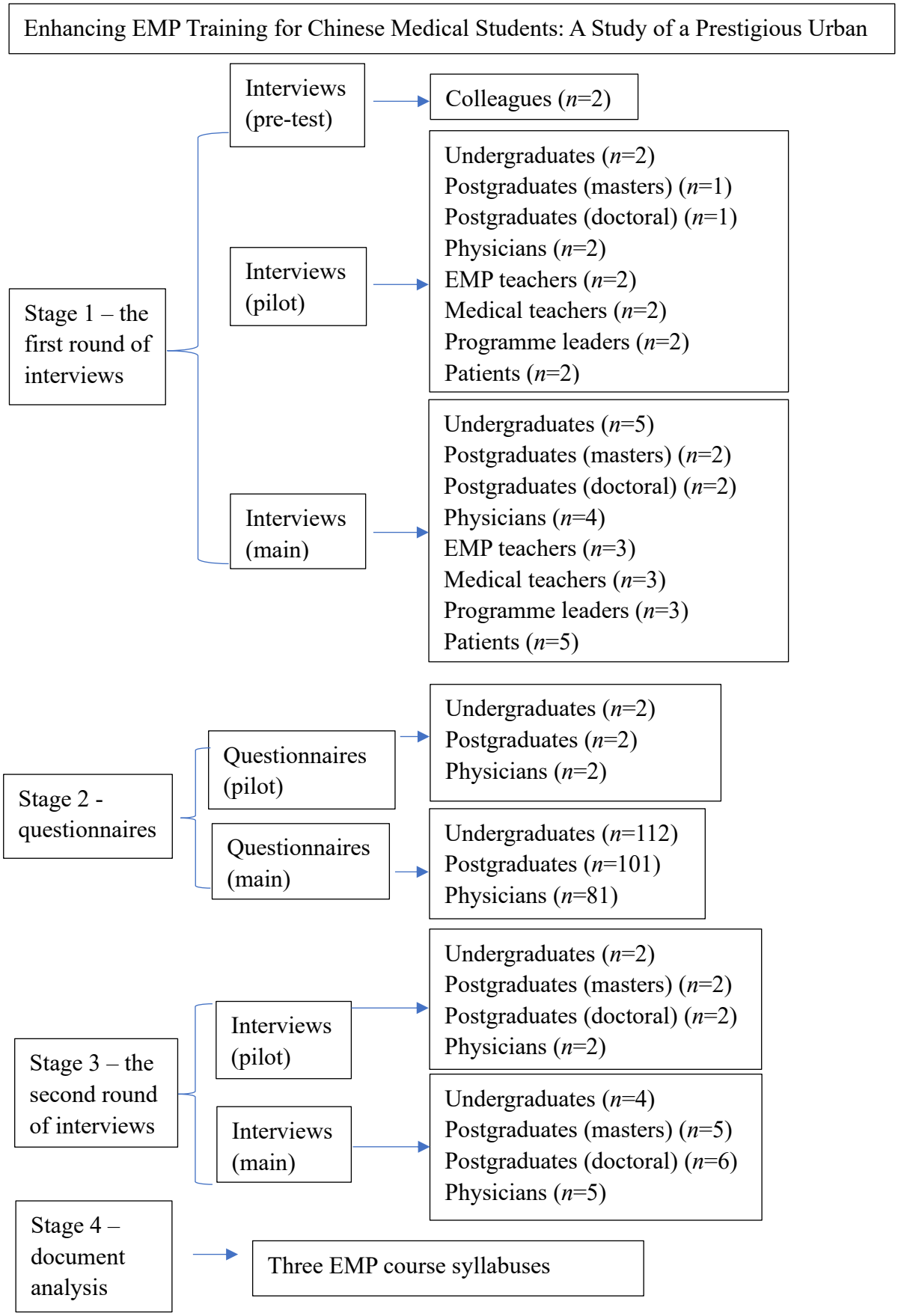
Additionally, questionnaires were utilised as a supplementary tool to the interviews. The goal of employing questionnaires was to assess quantitatively certain aspects of the interview results. By using questionnaires, specific quantitative data could be collected, allowing for a more systematic and comparative analysis of participants' responses. This quantitative data further enriched the findings from the qualitative interviews, providing a more comprehensive and well-rounded picture of the EMP landscape at the case university.

This multi-dimensional approach allowed for a thorough exploration of the research questions, leading to a deeper understanding of the current state of EMP training at the university and the underlying factors influencing its implementation.

In summary, the research methodology adopted for this study involved qualitative interviews as the primary data source. Questionnaires were then utilised to complement quantitatively the data gathered from the interviews. A further round of interviews was then conducted to offer additional insights. The course syllabuses were analysed to help understand what students can and cannot gain from taking the current EMP curriculum at the case university, as well as identify any misalignment between students' EMP needs and EMP course offerings. This multi-method approach aimed to

provide a comprehensive and nuanced analysis, contributing to the understanding of EMP practices in the case university and offering valuable recommendations for improving EMP training in medical schools across China.

Figure 3.1 *Mixed-method research design flowchart*



3.4 Participants

3.4.1 Interviewees

1) Group 1: Undergraduate students

The inclusion criteria for undergraduate students to participate in interviews were as follows: undergraduate students majoring in Clinical Medicine (5-year degree programme) at the university in question, who are Chinese native speakers and have studied English as a foreign language in the Chinese school system. In total, nine undergraduate medical students were interviewed. Five participated in the first round of interviews and four participated in the second round of interviews. Their basic characteristics are presented in Table 3.1.

Table 3.1 *Basic self-described characteristics of the nine interviewed undergraduate medical students*

Round	Code	Gender	Age	Year of study	Gaokao English score	CET4 score	EMP course taken at this university
1st	LCR	Male	19	2	105	479	Medical Visual Culture
1st	AA	Female	21	3	118	483	Illness Narratives
1st	CD	Male	21	4	109	462	Medical Terminology
1st	KAW	Female	23	5	98	453	Medical Terminology
1st	CF	Female	22	3	101	456	Medical Terminology
2nd	WP	Male	20	3	123	487	Medical Terminology
2nd	WG	Male	21	4	118	491	Medical Terminology
2nd	ZHC	Female	22	5	129	483	Illness Narratives
2nd	ZNN	Female	23	4	104	499	Medical Visual Culture

2) Group 2: Postgraduate (master's) medical students

The inclusion criteria for postgraduate (master's) students to participate in interviews were as follows: master's students in Clinical Medicine at this case university. These are Chinese native speakers and have studied English as a foreign language in the Chinese school system. In total, seven postgraduate medical students were interviewed. Two participated in the first round of interviews, and five participated in the second round of interviews. Their basic characteristics are presented in Table 3.2.

Table 3.2 *Basic self-described characteristics of the seven postgraduate (master's) medical students*

Round	Code	Gender	Age	Current major
1st	YLW	Male	29	Dermatology
1st	LH	Male	33	Plastic surgery
2nd	DHM	Female	27	Haematology
2nd	QK	Female	28	Neurosurgery
2nd	CJ	Female	26	Surgery (breast)

2nd	WA	Female	26	General medicine
2nd	MYN	Male	27	Obstetrics and gynaecology

3) Group 3: Postgraduate (doctoral) medical students

The inclusion criteria for postgraduate (doctoral) students to participate in interviews were as follows: doctoral students in Clinical Medicine at this case university. These are Chinese native speakers and have studied English as a foreign language in the Chinese school system. In total, eight doctoral medical students were interviewed. Two participated in the first round of interviews, and six participated in the second round of interviews. Their basic characteristics are presented in Table 3.3.

Table 3.3 *Basic self-described characteristics of the eight postgraduate (doctoral) medical students*

Round	Code	Gender	Age	Current major
1st	LZL	Female	28	Surgery (sports medicine)
1st	KDH	Female	29	Geriatrics
2nd	ZB	Female	27	Respiratory medicine
2nd	HKK	Female	28	Surgery (breast)
2nd	ZC	Male	26	General medicine
2nd	KK	Male	27	Obstetrics and gynaecology
2nd	WAS	Male	29	Paediatrics
2nd	ZMQ	Male	28	Dentistry

4) Group 4: Physicians

The inclusion criteria for physicians to participate in interviews were as follows: physicians who have graduated from this university in Clinical Medicine and are currently working as in-service physicians in hospitals in China. These are Chinese native speakers who have studied English as a foreign language in the Chinese school system. In total, nine physicians were interviewed. Four participated in the first round of interviews, and five participated in the second round of interviews. Their basic characteristics are presented in Table 3.4.

Table 3.4 *Basic self-described characteristics of the nine physicians*

Round	Code	Gender	Age	Area of specialty
1st	ZZM	Female	26	General surgery
1st	LX	Female	29	Ophthalmology
1st	EG	Female	27	Internal medicine
1st	QB	Female	38	Cardiology
2nd	AF	Female	42	General medicine
2nd	HYT	Male	45	Obstetrics and gynaecology
2nd	XLL	Male	47	Paediatrics
2nd	HMY	Male	39	Dentistry

2nd	CTT	Male	29	Internal medicine (oncology)

5) Group 5: EMP teachers

The inclusion criteria for EMP teachers to participate in interviews were as follows: EMP teachers who teach EMP courses provided to undergraduate students in Clinical Medicine at this university. There are three EMP courses at this university: 'Medical Terminology', 'Medical Visual Culture', and 'Illness Narratives'. Each EMP course is taught by a different teacher and there is just one teacher per course. Teaching assistants were not included in the research because they are postgraduate students, and they did not have anything like as much teaching experience as the teachers themselves. To collect data from EMP teachers, I conducted interviews with them instead of administrating questionnaires to them, due to the limited numbers available. They all participated in the first round of interviews. Their basic characteristics are presented in Table 3.5.

Table 3.5 *Basic self-described characteristics of the three EMP teachers*

Code	First language from birth	EMP course taught at this university	Years of teaching at this university
A	English	Medical Visual Culture	5
B	English	Illness Narratives	5
C	Chinese	Medical Terminology	8

6) Group 6: Medical teachers

The inclusion criteria for medical teachers were as follows: teachers who teach medical-related subjects to undergraduate students in Clinical Medicine at this university. In total, I interviewed three medical teachers who teach different medical-related subjects to undergraduate Clinical Medicine students at this university. Their first language is Chinese. The subjects they teach are 'Anatomy', 'Medical Imaging', and 'Biochemistry', and they are coded as 'D', 'E', and 'F' respectively when presenting findings. Their years of teaching this subject at university are sixteen years, ten years and eight years, respectively. They all participated in the first round of interviews.

7) Group 7: Programme leaders

The inclusion criteria for programme leaders were as follows: programme leaders of undergraduate students in Clinical Medicine at this university. There are three programme leaders of the undergraduate programme in Clinical Medicine at this university. Two are males and one is female. They all participated in the first round of interviews. Their years of working at this university are ten years, five years and three years, and they are coded as 'G', 'H' 'L' respectively when presenting findings. Due to the limited sample available, I conducted interviews with them instead of obtaining data from questionnaires.

8) Group 8: Patients

Patient interviewees were recommended by my student and physician interviewees. These non-native English speakers use English to communicate with physicians. The inclusion criteria for patients are as follows: international patients whose first language is not Chinese, and who have communicated with a first-language Chinese clinician in at least one previous health encounter at an affiliated hospital of this university. They all have experience of using English as the medium for communication with physicians in Chinese hospitals. The reason for choosing non-native English-speaking patients as interviewees is based on the interviews with physicians – it is more frequent for these physicians to see non-native English-speaking patients than native English-speaking patients.

A total of five international patients were interviewed to gain an understanding of their perceptions regarding their experiences of communicating with Chinese physicians when seeking healthcare services, with particular attention given to the physicians' proficiency in English. As the English proficiency of the five patients varied, it enabled a comparison of their perspectives. They all participated in the first round of interviews. Their basic characteristics are presented in Table 3.6.

Table 3.6 *Basic self-described characteristics of the five patients*

Code	Age	Gender	First language	Spoken languages	Years of being in China
AB	45	Male	Filipino	Filipino (proficient) English (intermediate) Chinese (beginner)	5
CM	21	Male	Japanese	Japanese (proficient) Chinese (intermediate) English (beginner)	2
PL	26	Female	French	French (proficient) English (proficient) Chinese (beginner)	3
TT	33	Male	Thai	Thai (proficient) English (advanced) Chinese (intermediate)	10
GH	51	Female	German	German (proficient) English (advanced) French (intermediate) Chinese (intermediate)	15

3.4.2 Questionnaire participants

1) Group 1: Undergraduate students

The inclusion criteria for undergraduate students to participate in questionnaires were as follows: undergraduate students majoring in Clinical Medicine (5-year degree programme) at the university in question, who are Chinese native speakers and have studied English as a foreign language in the Chinese school system. The total number

of undergraduate students in Clinical Medicine (five-year programme) is around 450 at this university. About a quarter of them (112) participated in this research. Among the participants, 18 were in the first year, 20 in the second year, 22 in the third year, 25 in the fourth year and 27 in the final year.

This group is composed of 112 undergraduate medical students who have taken EMP courses at this university. They are included because they had attended EMP courses and could provide information based on their experience (Graves, 2000). All of them are native speakers of Chinese, with a mean age of 22 years (range: 19 to 24 years). 69 of them are males and 43 of them are females.

The cities where they took Gaokao are mainly located in the north of China. More of them took Gaokao in Beijing (n = 13) than anywhere else. Their English test scores in Gaokao range from 81 to 140 (the maximum score is 150). Their test scores in College English Test Band 4 range from 435 to 609 (the maximum score is 710). Six of them have been abroad for more than seven days. At this university, 33 of them attended 'Medical Visual Culture', 55 'Medical Terminology' and 30 'Illness Narratives'. Six of them attended two of these courses but none of them attended all three EMP courses. They (say they) spend an average of 16% of the time using English (as opposed to other languages) in daily life outside of class, an average of 52% of the time using English (as opposed to other languages) in their current degree programmes, and an average of 71% of the time using English (as opposed to other languages) in their EMP course specifically.

On the questionnaire, the undergraduate medical students were asked to rate their English proficiency level on a 5-point Likert-type scale (Q16, Appendix B1). They mostly rated their English language sub-skills as 'poor' (58%) or 'neither poor nor good' (33%). It was rare that they rated their language sub-skills as 'good' (2%) or 'excellent' (0%). Of all the language sub-skills that the medical students rated, the lowest proficiency sub-skill is 'speaking to public on medical issues' ($M = 2.31; SD = .723$); the second lowest proficiency sub-skills are 'listening to patients talking in English' ($M = 2.33; SD = .715$) and 'writing medical journal articles in English' ($M = 2.33; SD = .740$); the highest proficiency sub-skills are 'reading medical journal articles in English' ($M = 2.54; SD = .929$) and 'translating journal article abstracts' ($M = 2.54; SD = .900$).

2) Group 2: Postgraduate students

The inclusion criteria for postgraduate students to participate in questionnaires were as follows: postgraduate (including master's and doctoral) students in Clinical Medicine at this case university. These are Chinese native speakers and have studied English as a foreign language in the Chinese school system. This group is composed of 101 postgraduate medical students (including master's and doctoral students) at this university, ranging in age from 22 to 31, with a mean age of 26 years. All of them are native speakers of Chinese. 67 of them are males and 34 of them are females. More of them took Gaokao in Beijing (n = 11) than anywhere else. Their English test scores in Gaokao range from 79 to 140. Their test scores in College English Test Band 4 range from 429 to 598. 21 of them have been abroad for over seven days. 44

of them attended ‘Medical Visual Culture’; 16 of them attended ‘Medical Terminology’; 41 of them attended ‘Illness Narratives’; 11 of them attended two courses. None of them attended all three EMP courses. 42 of them have had training beyond what is offered at this university. They spend an average of 17% of the time using English (as opposed to other languages) in daily life outside of class, an average of 50% of the time using English (as opposed to other languages) in their current degree programmes, and an average of 70% of the time using English (as opposed to other languages) in their EMP course specifically.

On the questionnaire, the postgraduate medical students were asked to rate their English proficiency level on a five-point Likert scale (Q9, Appendix B2). They mostly rated these as ‘poor’ (48%) or ‘neither poor nor good’ (33%). It was rare that they rated their language sub-skills as ‘good’ (7%) or ‘excellent’ (2%). Among all the language sub-skills that the postgraduate students rated, the lowest proficiency ones are ‘listening to patients talking in English’ (*M = 2.06; SD = .396*) and ‘listening to medical lectures in English’ (*M = 2.06; SD = .396*); the next lowest proficiency sub-skill is ‘discussing medical issues at conferences’ (*M = 2.07; SD = .406*); the second highest proficiency sub-skill is ‘reading medical journal articles in English’ (*M = 2.45; SD = .640*); the highest proficiency sub-skill is ‘writing medical journal articles in English’ (*M = 2.46; SD = .714*).

3) Group 3: Physicians

The inclusion criteria for physicians to participate in questionnaires were as follows: physicians who have graduated from this university in Clinical Medicine and are currently working as in-service physicians in hospitals in China. These are Chinese native speakers who have studied English as a foreign language in the Chinese school system. This group is composed of 81 physicians who graduated from this university, ranging in age from 24 to 53 years, with a mean age of 32 years. All of them are native speakers of Chinese. 20 of them started the programme 10 or more years ago, 53 of them started the programme 5 to 10 years ago, 8 of them started the programme less than 5 years ago. 45 of them are males and 36 of them are females. 57 of them hold a master’s degree and 35 of them hold a doctoral degree. Their work experience ranges from 6 months to 23 years. Table 3.7 shows the distribution of their area of specialisation.

Table 3.7 *Physicians’ area of specialisation (n = 81)*

Area of specialisation	***n***
General surgery	8
Obstetrics and gynaecology	5
Neurology	4
Dentistry	4
Cardiology	3
Haematology	3
Anaesthesiology	3

Plastic surgery	2
Otolaryngology	2
Urology	2
Psychiatry	2
Internal medicine department	2
Paediatrics	1
Dermatology	1
Orthopaedics	1
Oncology	1
Ophthalmology	1
Others	35
Total	81

53 of them have had training outside what is offered at this university. They (say that they) spend an average of 33% of the time using English (as opposed to other languages) at work, and an average of 16% of the time using English (as opposed to other languages) in daily life outside of work.

These physicians present an indication of some of the medical students' eventual language needs. They had been working for an average of 10 years (*SD* = 5.5). They all had experience of using English at workplace. They were able to provide suggestions on the work-related language needs of medical students. Many of them had experience as EMP learners when they were studying at this university. Therefore, the information they provided about English language needs are likely to have a high degree of validity.

3.5 Interviews

I used semi-structured interviews to elicit stakeholders' perceptions on medical students' English language needs and their perceptions on current EMP practice at the case university.

Semi-structured interviews suit the purpose of the current study more than either structured or unstructured alternatives because this format allows me to have discussions with the interviewees based on the prepared questions. Many researchers have suggested or employed semi-structured interviews in needs analysis studies within the field of ESP (e.g., Long, 2005;Blandford, 2013; Brown, 2016).

In qualitative research, the interview is not merely a tool for data collection; it is a complex, dynamic process that involves a co-construction of meaning between the interviewer and the interviewee. According to Kvale (2007), the research interview is a conversation where knowledge is produced interactively, rather than merely a method for extracting information. This perspective highlights the role of the interviewer not just as a neutral questioner but as an active participant in the construction of knowledge.

The interview is inherently a social encounter, where the identities, perspectives, and interactions of both the interviewer and interviewee shape the data that are produced. Kvale and Brinkmann (2013) emphasise that interviews are 'socially

constructed realities' where both participants influence the narrative. The questions asked, the tone of voice, the non-verbal cues, and even the silences all contribute to the co-production of the interview content.

The co-produced nature of the interview implies that the data generated are not a straightforward reflection of the interviewee's experiences or opinions but shaped by the interaction between the interviewer and the interviewee. This co-construction means that my preconceptions, the phrasing of questions, and even the interview context can influence the responses.

This understanding calls for a reflexive approach to interviewing, where I need to remain aware of my role in shaping the data. Reflexivity involves acknowledging how my own background, assumptions, and interactions with participants might influence the data. It also requires me to consider how power dynamics – such as those related to authority, gender, or expertise – might affect the interview process and the data produced.

Given the co-produced nature of interviews, the knowledge generated through this method is contextual and situated. This means that the findings from interviews are not necessarily generalisable in a traditional sense but are deeply embedded in the specific interactions and contexts in which they were produced. Therefore, the validity of interview data must be understood in terms of their credibility, transferability, and the degree to which they capture the complexity of the social phenomena being studied.

In this thesis, I have chosen the template approach to thematic analysis as the primary method because it allows for a flexible and nuanced exploration of the data, enabling me to identify patterns across the dataset while remaining attentive to the context in which the data was produced. Unlike more conventional deductive thematic analysis, which often applies a one-size-fits-all approach based on existing theories or literature, or inductive thematic analysis, which claims to be based only on the data, template analysis offers greater flexibility, to some extent 'the best of both worlds', particularly in contexts where the data may not fit neatly into predefined codes. In my study, the initial coding template was established based on themes derived from previous literature, and I then determined how the interview data either conformed to or deviated from this template to further develop the existing template.

3.5.1 Development of interview schedules

I conducted two rounds of interviews. The schedules for the first round of interviews are presented in Appendices A1-A7, and those for the second in Appendices D1-D4.

Before the first round of interviews, to prepare the interview questions, I first wrote down the variables to be dealt with in interviews. In addition, the design of the interview questions was also inspired by existing second language needs analysis studies (e.g., Spence & Liu, 2013), with adaptations based on contextual factors.

The second round of interviews were conducted after the questionnaire data were collected. The schedules for the second round of interviews were formulated through an analysis of the data obtained from the initial interviews and questionnaires. Additionally, I reviewed materials such as the medical practitioner qualification

examination instructions to understand the language requirements for qualified doctors in China. In this phase, any unanswered questions or unclear aspects were further investigated to gain a deeper understanding of the participants' perspectives.

In the interview schedules for both rounds of interviews, medical students (including undergraduate, master's and doctoral students) and physicians are asked about their perceptions on medical students' EMP needs for future careers and their perceptions on their current EMP learning experience.

For EMP teachers, medical teachers and programme leaders, they are asked to comment on their perceptions on medical students' EMP needs for future careers and their perceptions on current EMP teaching and implementing experience.

3.5.2 Recruitment of interviewees

A convenience sampling technique was used to recruit participants who met the recruitment criteria (see Section 3.4) for the interviews. All interviews were conducted online via WeChat, a popular social medical platform in China (duration: 50–60 minutes).

To approach the first group of interviewees – undergraduate students, I first contacted the programme leader and received his approval for me to collect data from them. The programme leader then invited me to join the WeChat group for all current undergraduate students in Clinical Medicine at this university. I then introduced myself and my project to the group. I also attached a poster to make it easier for them to get a sense of what I was doing.

To approach the second, the third and the fourth groups – graduates who are currently studying for a masters' and doctoral degree in Clinical Medicine and graduates who are working as in-service physicians – I was invited by the programme leader to join another WeChat group for alumni. I then introduced myself and my project to the group.

To encourage undergraduate students, postgraduate students and physicians to participate, the recruitment poster explicitly conveyed my readiness to provide complimentary English language support, such as grammar checks for writing. No monetary incentives were given.

To approach the fifth group – EMP teachers, I asked one of them who I knew personally to introduce me and my research to all three of them working at the case university.

Similarly, in approaching the sixth group – medical teachers, I relied on the assistance of the EMP teachers to establish connections and introductions.

For the seventh group – three programme leaders responsible for undergraduate, master's, and doctoral programmes, I reached out to a programme leader with whom I had prior professional interactions. This connection facilitated introductions to the other two programme leaders overseeing their respective programs.

To approach the eighth group – patients, I solicited the cooperation of the interviewed physicians who aided in introducing me to international patients they had encountered during their clinical practice. Although public data confirming the representativeness of this sample is unavailable, insights from the interviewed

physicians and medical teachers suggested a prevalence of encounters with non-native English-speaking patients compared to native English speakers in clinical practice. The majority of these non-native English-speaking patients were identified as international students from neighbouring universities. Consequently, the international patients included in this research were non-native English speakers.

The reason behind selecting the eight groups of interviewees was drawn from researchers (Dudley-Evans & St John, 1998; Hutchinson & Waters, 1987; Long, 2005) who stressed the importance of collecting data from multiple sources to identify needs for ESP learners and of including multiple perspectives that speak to multiple stakeholders involved in the ESP teaching and learning process.

3.5.3 Pilot interviews

For each of the two rounds of interviews, the same piloting procedures were followed. For the first round of interviews, after completing the draft for each interview schedule, I first sent them to my supervisors for review. After several rounds of discussions and revisions, I received their approval. Then, I carried out two sets of pilot interviews: first a pre-test and then a pilot test, as suggested by (Magnusson & Marecek, 2015).

In the pre-test, I invited two colleagues of mine to role-play as the imaginary participants in each group. Since there are seven interview schedules, I conducted seven rounds of mock interviews with each of them. Then, we worked through the interview schedules together, question by question. I asked them to give me feedback on the interview items and the interview process (e.g., what they thought each question meant; if the meanings of the questions were unambiguous; if it was possible to give an answer to each question; if the language was too difficult to understand; if the question itself was too abstract or too general; if one question contain multiple questions that should be separated). After I finished the pre-test interviews, based on their comments, some minor changes were made to those interview questions that had posed problems. For example, one colleague found that it was difficult to come up with an answer to some questions, and suggested I modify some questions to be more explicit (e.g., I changed the question “what is your weakest language skill in performing tasks in clinical settings?” to “what language challenges do you encounter in dealing with tasks in your clinical practice?”). Since, as suggested by (Maguire & Pitceathly, 2002), good interviewing skills and interview schedules are both indispensable in achieving a good interview, the pre-test was also used to develop my interviewing skills. In addition to the wording of the interview questions, I also had discussions with my colleagues regarding my interview style, such as how they reacted to my way of asking questions and how I followed up questions and used prompts for further answers. I received suggestions for alternative ways of approaching a topic and for improving my interview manner (e.g., not to move forward too quickly after certain questions).

In the subsequent pilot, I invited people who fitted the categories of my potential interviewees to participate in a small number of interviews using the revised interview schedules. The pilot interviewees were: undergraduate medical students in Clinical

Medicine at this university (n = 2), postgraduate medical students in Clinical Medicine at this university (n = 2), recent graduates who are working as physicians in public hospitals (n = 2), EMP teachers (n = 2), medical teachers (n = 2) and programme leaders from another university (n = 2), international patients who have the experienced of seeing physicians in a teaching hospital affiliated to this university (n = 2).

In this pilot, I went through the entire process of selecting, recruiting, and contacting participants. I also informed them about ethical rules and consent and audio-recorded the pilot interviews for reviewing afterward. I found that my revised interview schedules worked well. At this stage, these interview schedules were finalised.

The pilot interviews received ethical approval from the University College London Research Ethics Committee (Data Protection Registration No Z6364106/2020/12/09) and passed risk assessment.

The second round of interviews followed the same pre-test and piloting procedures as those used in the first round of interviews, with the same process being applied to the additional four groups of interviewees.

3.5.4 Conducting interviews

1) The first round of interviews

The first round of interviews was conducted from January to February 2020. Before each interview, I briefly introduced myself to the interviewee and then described the research in detail so that they could see the point of taking part in it. I asked each interviewee how they would like to be addressed in the interview. Then I informed the interviewee about the rules regarding privacy and anonymity, and the right to withdraw from the research and to refrain from answering questions by reading these rules out aloud to make sure interviewees understood them. I also presented the written informed consent form for them to read and sign. I then reminded them that, so long as they consented, the interview would be audio-recorded using my phone.

At the beginning of each interview, I explained the topics to be covered in the interview and the type of information that I would like to learn from them. Then, participants were asked whether they preferred to be interviewed in English or Chinese. I followed the interview schedules from here on. In this round of interviews, nineteen interviewees whose first language was Chinese (five undergraduate students, two master's students, two doctoral students, four physicians, three medical teachers, three programme leaders) chose to be interviewed and respond in Chinese. All three EMP teachers and all five patients chose to be interviewed in English. In fact, some interviewees occasionally used code-switching in their responses. For example, medical students, physicians and medical teachers used English when referring to certain diseases and medicines (e.g., Crohn's disease; telmisartan), while EMP teachers and international patients used a few traditional Chinese medicine terms (e.g., 'shanghuo', which means inflammation, and 'zhenjiu', which means acupuncture). The interview schedules and background questionnaires with the seven groups of interviewees can be seen in Appendices A1-A7, which have been uploaded

to the IRIS repository (iris-database.org).

In closing the interview, I asked the interviewees to tell me if there was anything else that was not covered in the interview, but they would like to say. All interviews were audio-recorded, and I (a Mandarin-English bilingual) manually transcribed each interview shortly after the interview and completed each transcription before the next interview. This helped me take notes on my reflections of the interview process.

2) The second round of interviews

A second round of interviews was conducted in March 2023. The reason for collecting this round of interviewing was to further explore and clarify topics that were discussed in the first round of interviews. After collecting the initial interviews and questionnaires data (which will be discussed later), stakeholders' perceptions on medical students' EMP needs for future careers were identified but certain gaps in what is known were not sufficiently addressed.

For example, there was a need to further explore how the perceptions on English learning, EMP learning and the perceived needs for English language proficiency may vary at different stages of students and physicians' learning and careers. A second round of interviews therefore provided an opportunity to delve deeper into those areas and gain a more comprehensive understanding of the topic.

The second round of interviews involved a total of 20 medical students and physicians, namely four undergraduate students, five master's students, six doctoral students, and five physicians. The participants were recruited using a snowball sampling method, whereby I initially contacted three medical students at the university and two physicians requested that they share my recruitment advertisement with potential participants who met the eligibility criteria listed in the advertisement. Subsequently, I asked the recruited participants to share the advertisement with their networks to expand the sample size.

To ensure the eligibility of the participants, I requested each of them to provide evidence of their identity, such as a student card or other relevant documentation. This step was taken to ensure that only qualified individuals were included in the study.

The individuals interviewed in the second round of interview data collection were not part of the initial round of data collection but may have completed the questionnaire. Each interview was conducted via WeChat Video Call. With the interviewees' consent, the interviews were audio-recorded for analysis purposes.

Following each interview, I carefully considered how to improve the questioning approach to elicit more informative responses. After revising the original interview schedule three times for each participant group, only minor modifications were required for the remaining interviews. The final versions of interview schedules used in the second round of interviews are in Appendices D1-D4, which have been uploaded to the IRIS repository (iris-database.org).

3.5.5 Analysis of interview data

After the second round of interviews had been conducted, all interview transcripts were analysed in their original language using the template method as outlined by

King and Brooks (2017) and Braun and Clarke (2006). NVivo 12.0 software was used to help with the coding process and the analysis was conducted from a realist point of view. Additionally, I carefully reviewed each recording to capture non-verbal cues, such as tone shifts and mood changes, which were then included in the analysis. These supplementary details provided valuable insights and enriched the understanding of the interviews.

The coding was performed in a step-by-step manner, following King and Brooks' (2017) approach, and meaningful themes were utilised to create increasingly specific codes. As per the research of Guest et al. (2006), core elements can be identified by analysing around six interviews, which served as the starting point for the analysis. The template was continually improved by refining definitions, adding new codes, removing redundant codes, and repositioning more significant themes to higher-level codes and less significant themes to lower-level codes. The analysis continued until all 47 interviews were analysed and no new codes emerged from the data, at which point it was considered to have reached 'saturation'.

In accordance with Brown and Clarke (2006), the analysis focused on meaningful coding and establishing connections between the interpretations of the themes, instead of reducing the data to numerical frequencies. This can be seen in Table 3.8, where the first-level code "Perceptions of learning English" has second-level codes such as "Students' perceptions of their current English language ability". Third-level and fourth-level codes provide further detail on these themes.

The final template consists of four first-level, meaningful themes that structured the results of the study, sixteen second-level codes, twenty-four third level codes and twenty fourth level codes. Table 3.8 shows the final version of template.

In what follows, these four main themes are illustrated by quotations that were selected because they effectively demonstrate specific points. The analysis aimed to identify both common themes across participants as well as different perspectives encountered.

Table 3.8 *The coding template*

1. Using English in the target situation
    - 1.1 Reading
        - 1.1.1 Read journal literature
        - 1.1.2 Reading medical guides
    - 1.2 Writing
        - 1.2.1 Writing English journal articles
    - 1.3 Translating
        - 1.3.1 Translating medical books (English to Chinese)
        - 1.3.2 Translating journal article abstracts (Chinese to English)
    - 1.4 Listening
        - 1.4.1 Clinical settings
        - 1.4.2 International conferences
    - 1.5 Speaking
        - 1.5.1 Speaking to international patients

1.5.2 Presenting at conferences

2. Perceptions on English learning
   2.1 Students' perceptions of their English language ability
      2.1.1 Students' classification of English needs
         2.1.1.1 Active and passive needs
         2.1.1.2 Current and future needs
   2.2 Perceptions of their current English language ability
      2.2.1 Deteriorated
      2.2.2 Unconfident
   2.3 Perceptions of learning EMP and EGP
      2.3.1 Importance of learning EMP and EGP
      2.3.2 Understanding of EMP concept
      2.3.3 Reasons for studying EMP

3. Views on EMP learning approaches
   3.1 Enriching vocabulary
   3.2 Reading a lot
   3.3 Using alternative methods to traditional lectures
      3.3.1 Reading groups
      3.3.2 Targeted writing tutorials
      3.3.3 Simulated conversion sessions
   3.4 Keeping practising
   3.5 Keeping students engaged
   3.6 Utilising various sources

4. Past EMP learning and teaching experience
   4.1 Course offered by the university
      4.1.1 Passive choice
         4.1.1.1 School requirements
         4.1.1.2 For credit
         4.1.1.3 Low motivation
      4.1.2 Active choice
         4.1.2.1 Easy to pass
         4.1.2.2 Study pressure
         4.1.2.3 Lack of time
      4.1.3 Negative views
         4.1.3.1 Boring
         4.1.3.2 Process
         4.1.3.3 The flipped classroom
         4.1.3.4 General
         4.1.3.5 Rely on textbook structure
      4.1.4 Positive views
         4.1.4.1 Building the foundations

4.1.4.2 Prepare for the future
4.1.5 EMP teachers' dilemmas
4.1.5.1 Workload
4.1.5.2 Research pressure
4.1.5.3 Lack of support from school
4.2 Outside the university
4.2.1 Free sources
4.2.1.1 The quality varies
4.2.1.2 Generic
4.2.1.3 Not targeted/tailored
4.2.2 Paid sources
4.2.2.1 One-to-one paid online touch-ups
4.2.2.2 Vocabulary app membership

3.5.6 Reliability of the coding

To ensure that the data interpretation was of high quality, I asked a postdoctoral researcher at this case university who has similar research interests to mine and had knowledge of template analysis to apply the coding template to a portion of the interview transcripts – three interview transcripts in each group. Any coding differences were resolved through repeated iterations after discussion. The final template was reached after analysing 47 interviews, at which point no new codes were obtained from the data.

3.6 Questionnaires

Questionnaires have been used in many needs analysis studies (Brown, 2016; Tsou & Chen, 2014). In the current study, questionnaire data were collected at the same university where the interviews were undertaken with undergraduate medical students and postgraduate medical students, and also with recent graduates now working as physicians with full professional responsibilities.

To identify the critical concepts that need to be addressed by a questionnaire, Dörnyei and Taguchi (2010) recommend that the design of a questionnaire be preceded by qualitative study, such as interviews. In this research, interviews were undertaken in part to draw up a theoretically sound shortlist of specific content areas to be included in questionnaires. In part to diffuse sensitive items, such as students' self-rated English proficiency level, to which respondents may be reluctant to give honest answers, questionnaires were made anonymous (Dornyei and Taguchi, 2010).

3.6.1 Development of questionnaires

In addition to being informed by the interview data, the items included in the questionnaires also drew on items from pre-existing instruments. I developed three questionnaires for three groups of participants (undergraduate medical students, postgraduate medical students, and physicians). All three questionnaires have a similar structure – there are three parts in each questionnaire. The first part is to

collect respondents' background information. The second part is to investigate their perceived English language needs. The third part asks them to evaluate the EMP courses they have taken at this university.

The items in the first part of the questionnaires were created following recommendations by (Cohen et al., 2017) on how to design questionnaire items to obtain respondents' background information. In the second part, items were adopted from Allwright and Allwright (1977)'s checklist of EMP learners' English language needs. Although this checklist was created decades ago, it is a classic in the field and still considered by many scholars as the most comprehensive one (e.g., Paltridge & Starfield, 2013). However, Allwright and Allwright (1977)'s checklist is very broad and general regarding the tasks that medical practitioners perform in English at their workplace. Therefore, I modified some items to be more specific, i.e., tailored to the Chinese healthcare context. I also included some items that were generated from the initial analysis of the interview transcripts, which were not mentioned in Allwright and Allwright (1977)'s checklist. Moreover, I included some other items such as the amount of time spent speaking English as opposed to other languages in daily life, adopted from Isaacs et al. (2015). In the third part, items were adopted from (Barber et al., 2020)'s suggestions on things to consider when evaluating a course. To measure respondents' degree of agreement on items, a five-point Likert scale (Likert, 1932) was employed as this could reduce respondents' frustration level and increase the response rate (Sachdev & Verma, 2004). The use of a five-point Likert scale helped me identify to what extent participants perceive each language skill to be important in performing tasks in the workplace, and to what extent they agree on each EMP course's components (e.g., course objectives, course contents and materials).

Although the traditional way to address language skills is through the 'four skills' of listening, speaking, reading, and writing, recently, some researchers (Colina & Lafford, 2017) have re-evaluated the place of translation, arguing that translation can be considered as the 'fifth' language skill for some second language learners because the use of first language and translation activities could facilitate the acquisition of the second language. Moreover, in the context of this study, in an official document – the latest version of the College English Curriculum Requirement issued by the Chinese Ministry of Education (2007), which was drawn up to provide Chinese universities with guidelines to teach English to non-English major students – five languages skills are addressed rather than four. In addition, the Common European Framework of Reference for Languages (2001), explicitly recognised translation as a language skill in addition to the traditional 'four skills' to be acquired by learners. Moreover, China's Standards of English Language Ability also includes translation/interpretation in addition to the four skills for second language learners (Ministry of Education, 2017). Considering all the above, I adopt the notion of 'five skills' rather than 'four skills' in the current study.

I originally wrote the questionnaires (see Appendices B1-B3) in English and then translated them into Chinese. The translated questionnaires were then reviewed by an accredited English-Chinese translator – whose first language is Chinese and who has passed the China Accreditation Test for Translators and Interpreters – to assess the

equivalence of the original and translated questionnaires as well as to check the naturalness of the translation (Dörnyei & Taguchi, 2010). Bilingual questionnaires written in Mandarin Chinese and English were administrated to participants. They were able to respond in either language.

3.6.2 Pilot questionnaires

Before finalising the questionnaires, I piloted them to determine if the wording of the questions would achieve the desired results and if further revisions were needed. First, I invited six participants (two in each of the three potential participant groups) to participate in the pilot study (all agreed). I asked them to read through each questionnaire and comment on questionnaire items (e.g., the wording of questions). This step was similar to what I did in the pre-test interviews, described above. Then, the pilot participants and I had a discussion regarding the following issues: if the questions are properly framed; if the questions could have been placed in a better order; if the questions can be understood by participants; if any questions should be deleted; if any further questions are needed; if questionnaire filling instructions were clear to respondents.

After we agreed on the above issues, I administered the questionnaires to them, and asked them to complete the questionnaires twice at a different point of time within three days. After I received the completed questionnaires from them, I performed test-retest reliability tests to assess the consistency of response from one time to another by kappa statistics. The values were 96%, 96% and 98% respectively, indicating the reliability is acceptable. The questionnaires were finalised in this step.

My validity considerations towards the questionnaires partly followed (Roopa, 2012)'s suggestions on checking face validity, which was achieved by having discussions with the six pilot participants regarding their understanding of each questionnaire item and my instructions given to them prior to administering the questionnaires. Modifications were done as a result of this process.

The pilot questionnaires received ethical approval from the University College London Research Ethics Committee (Data Protection Registration No Z6364106/2020/12/09) and passed risk assessment.

3.6.3 Recruitment of questionnaire participants

There are three groups of questionnaire participants. To approach the first group – undergraduate students in Clinical Medicine at this university – I first contacted a programme leader who I used to work with and received his approval for me to collect data from them. The programme leader then invited me to join the WeChat group for all current undergraduate students in Clinical Medicine at this university. I then introduced myself and my project to the group. I also attached a poster to make it easier for them to get a sense of what I was doing. To encourage students to participate, I also sent a WeChat Red Packet (a modest monetary incentive, with around 0.5 RMB – equivalent to around 0.05 GBP, in each packet) to all of them. Students who complete the questionnaires are encouraged to accept the WeChat Red

Packet.

To approach the second and the third groups – graduates who are currently studying for a postgraduate degree in Clinical Medicine and graduates who are working as in-service physicians – I was invited by the programme leader to join another WeChat group for alumni. Again, after introducing myself and my project and attaching a poster, I sent a WeChat Red Packet to encourage potential participants to take part in the research.

Again, an information sheet and consent form were attached in the survey link sent to each participant. Participants needed to click 'agree to these terms' to proceed to the next stage, i.e., to start to fill in the questionnaire.

3.6.4 Distribution of questionnaires

Questionnaires were distributed online to the participants in digital form. The reason I chose not to distribute them in paper form was because the Covid-19 pandemic made it hard to meet the participants face-to-face; in addition, digital questionnaires are more convenient for collecting and analysing data, given the help of online survey platforms. The Chinese versions of these three sets of questionnaires were distributed via the Wenjuanxing website (www.wjx.cn), one of the most popular online survey platforms in China. The invitation links were sent to the relevant WeChat groups to make it easier for potential participants to click on and then fill in the questionnaires. As stated above, an information sheet and consent form were attached in the survey link sent to each participant.

I sent the questionnaires to around 500 potential participants, which is the total number of members in the relevant three WeChat groups. A total of 313 questionnaire returns were received. Nineteen invalid questionnaires were discarded on the grounds of at least one of: 1) over 10% of the questionnaire was unfinished; 2) less than three minutes were spent on completing the questionnaire (as indicated on the Wenjuanxing website); 3) questionnaire responses were invariant (e.g., when a respondent selects a score of 5 for all scale questions). This resulted in 294 valid questionnaires: 112 responses from undergraduate medical students, 101 responses from postgraduate medical students, and 81 responses from recent graduates working as in-service physicians.

3.6.5 Analysis of questionnaire data

Questionnaire data were analysed using SPSS 26.0 (a statistical software package). For Likert scale items in questionnaires, I assigned the five levels of 'very important', 'important', 'neutral', 'not very important', and 'not important at all' as '5', '4', '3', '2', and '1' respectively.

The responses to closed questionnaire items were analysed using descriptive statistics (means, percentages and frequencies) and inferential statistics. Inferential statistics were used to ascertain whether significant differences were present among the three groups regarding their perceptions of English language needs in medical students' target careers. A p value of 5% or lower was considered statistically

significant.

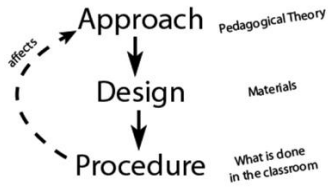
Participants were asked to rate the importance of the five English language skills (Listening, Speaking, Reading, Writing, and Translating/Interpreting) and 12 sub-skills for medical students (see Appendix B). Because the data were ordinal (ranked from 1 to 5), the Kruskal-Wallis test was used to determine if there were any differences among these three groups – undergraduate medical students, postgraduate medical students, and in-service physicians (Field, 2018; Huck, 2012), with the p value set at .05. If a statistically significant difference was revealed, a post-hoc Mann-Whitney U test was then undertaken to identify which specific populations are likely to differ and a Bonferroni correction, to reduce the Type 1 error rate, used to adjust the p value to .016 (.05/3).

3.7 Syllabus analysis

Three EMP course syllabuses (Medical Terminology, Medical Visual Couture, Illness Narratives) were analysed using directed content analysis (Hsieh and Shannon, 2005). According to Hsieh and Shannon (2005), directed content analysis differs from conventional content analysis by beginning with a theory or other relevant research to guide the development of initial codes, rather than deriving them purely from the text data. This approach is more structured than conventional methods, as the coding categories are informed by existing theory or research findings (Hickey & Kipping, 1996). Researchers using directed content analysis identify key concepts or variables as initial coding categories, which are then operationalised based on the theory or other relevant research (Potter & Levine-Donnerstein, 1999).

In this study, I employed the syllabus analysis model proposed by Richards and Rodgers (2001), who present a tiered framework for analysing syllabuses (Figure 3.2). This framework includes three core components: Approach (the underlying theories), Design (the selection of content), and Procedure (the specifics of activities). This model has become a standard in TEFL/TESL course design and is widely recognised for encouraging teachers to consider the interconnectedness across these three tiers.

Figure 3.2 A tiered framework for analysing syllabuses (Richards and Rodgers, 2001, pp. 20–34)



Based on Richards and Rodgers' syllabus analysis framework, I first identified three key concepts for analysing the syllabuses: Approach (language theories), Design (learning objectives and content), and Procedure (teaching methods and course activities). The following themes, identified from the syllabuses, are thus used as sub-headings for the analysis: learning objectives, learning content, teaching methods, and

course activities.

Since the goal of this analysis is to uncover any misalignment between learner needs and course offerings, the syllabus content (Design and Procedure) was assessed against the students' language needs as identified in interviews and questionnaires. In this context, the concept of Approach in ESP courses is understood as a functional representation of learner needs rather than in its broader, theoretical sense regarding language theories.

In this research, the aim of analysing the three course syllabuses is to understand what is currently being taught at the case university and what students are expected to achieve through taking these courses. In addition, the data obtained from previous interviews and questionnaires will be compared with the results from the syllabus analysis to assess the alignment between the current EMP courses and the language needs of the medical students.

Given that course syllabuses typically adhere to specific guidelines, encompassing elements such as learning objectives, assessment procedures, and covered topics, conducting an analysis naturally revolves around these predetermined themes. The structured nature of syllabuses facilitates a directed content analysis approach, streamlining the research process and offering valuable insights into each curriculum's intentions and expected learning outcomes.

The three EMP course syllabuses were downloaded from the university's official website. This does not require anyone's approval, and thus no ethical application was conducted for it. The reason for analysing EMP course syllabuses is because these contain rich information on what these courses were designed to achieve and how teaching and learning are arranged.

Data management was done by Nvivo V20.0. Data analysis was performed based on directed content analysis introduced by Hsieh and Shannon (2005). The most important steps in directed content analysis undertaken in this study were performed as follows: reading the syllabuses carefully for several times to be familiar with them; using the syllabus design model suggested by (Zeraatpishe et al., 2018) to guide the coding process and determine themes; selecting quotes that illustrate each theme; thinking and rethinking the central idea of each theme and writing up the findings.

3.8 Ethical considerations

This research received ethical approval from the University College London Research Ethics Committee (Data Protection Registration No Z6364106/2020/12/09) and passed risk assessment. Potential participants who met the relevant criteria were sent invitations and participation was voluntary. Informed consent was received from the participants prior to data collection. To obtain participants' consent, an information sheet and consent form were attached in the survey link sent to each participant. Participants needed to click 'agree to these terms' to proceed to the next stage – i.e., to fill in the questionnaire. Respondents to the questionnaire were not asked to identify themselves. To protect interviewees' privacy, their names were anonymised. I was meticulous about following the Ethical Guidelines for Educational Research (British Educational Research Association, 2018). To collect data from the university under

investigation, there is no requirement to obtain any further ethical approval. Due to the Covid restrictions, all data were collected online.

To be more specific, before collecting data from participants, I explained the purpose of the research to them and made sure that they understood the process of collecting data from them. I assured the participants that it was completely voluntary to participate in this research. I also informed them that they could withdraw from this research at any time; all participants agreed that their interviews could be audio-recorded. I transcribed all the interviews myself, which avoids any potential threat to confidentiality by using external transcribers. Participants' names did not appear in any interview transcripts. All names and places that were mentioned in interviews were removed and replaced with codes. The name of the case university was anonymised. Before using transcripts for this study, I asked the interviewees if they would like to check the accuracy of the transcripts (none did). All of the data gathered from the participants were kept confidential and anonymous. All stored electronic data are password-protected at both the file and the computer level.

There are also ethical issues that could have been resulted from the researcher being an insider researcher. As an English teacher and medical interpreter, I used to work in the university under investigation in this research. My insider knowledge has enabled me to develop research questions based on my understandings of issues that need investigating – my experience was that medical students and physicians felt the EMP courses need improving, and my colleagues (EMP teachers and medical teachers) also raised their concerns about the insufficient English proficiency of medical students and physicians in completing their work tasks.

However, there is a risk of bias when the researcher is an insider, as my work experience and personal values could have an impact on the research design and results. For example, what participants of this university shared with me during interviews could be influenced by how they perceive me, based on previous experience of me, resulting in informant bias. In very few cases when the interviewees had informally talked with me about the issues being investigated before this research started, they might not give complete answers in the formal interviews as they had already provided similar information. Furthermore, in analysing data and interpretating results, there is the criticism that an insider researcher could be too familiar with the organisation or the participants, and thus may present data in the way they expect the results to be, resulting in data interpretation bias (Mercer, 2007).

Therefore, to minimise potential bias, I began each interview with a disclaimer, emphasising that interviewees should answer questions as if this was the first time they were asked it, even if they had discussed it with me before, as suggested by (Chavez, 2008). I also conducted pilot interviews with EMP teachers from other universities and asked them to challenge my opinions. In addition, as a doctoral student, data interpretation bias could also be minimised thanks to my supervisors' critical feedback, as what I might perceive as familiar and routine was generally unfamiliar to my supervisors.

In addition, my personal relationship with medical students' teachers may also have an impact on their participation in this research. On one hand, students are more

likely to trust my research and its objectives, which can lead to increased participation, as teachers may encourage their students to get involved in my study. On the other hand, students might feel pressured to join the study to please their teachers, which is ethically unsound. To minimise these potential negative impacts, I clearly communicated to the teachers that students' participation should be completely voluntary, and they should not pressure or coerce students to join the study. To avoid bias in my sample, I established objective criteria for student participation, and ensured that these criteria were followed when recruiting students for my research.

To ensure confidentiality, pseudonyms were assigned to each interviewee in the study results.

3.9 The impact of Covid measures on research design

In terms of data collection, the original intention was to conduct all interviews face-to-face. However, due to Covid restrictions during the time when data were collected, face-to-face data collection was not possible. Therefore, interviews were all moved online. At first, I planned to use Teams or Zoom for interviews. However, after informal talk with potential interviewees prior to the formal interviews, many interviewees explained that they did not have access to such online meeting software. Therefore, I decided to use WeChat Video Chat because all interviewees had access to it and agreed to use it. On a very few occasions when the internet connection was not good, I had to ask interviewees to repeat their answers. Overall, though, online interviews conducted through WeChat Video Chat went smoothly.

A second major impact of Covid was that since the university prohibited non-residents from entering the campus, my request to observe classroom instruction was turned down. Since I could not observe directly what happens in classroom, I revised the interview schedules so that I could ask interviewees' views on the current teaching practice.

3.10 Chapter summary

In summary, using pragmatism as the research paradigm, I designed this mixed-method research project by utilising qualitative methods (document analysis and interviews) and quantitative methods (questionnaires) to answer the research questions. These methods were carefully sequenced in an 'open before closed' order. I used convenience sampling to select participants who met the recruitment criteria. I interviewed 47 participants from eight groups and received 294 questionnaires from three groups of stakeholders. Three course syllabuses were analysed using a directed approach to qualitative content analysis. Interview data were analysed following the principles of template approach to thematic analysis. The responses to closed questionnaire items were analysed using descriptive and inferential statistics.

Chapter Four: Findings

There are two main sections in this chapter. The first section presents findings from interviews and questionnaires, which are organised and classified based on the themes that emerged from the analysis of the interview data. Additionally, quantitative data are utilised to complement the qualitative findings and provide quantitative measures of certain aspects of the outcomes under investigation. The analysis of the interview data followed a template analysis approach, which involved identifying four key themes within the data. They are using English in the target situation, perceptions on learning English, views on EMP learning approaches, and past EMP learning and teaching experience. Themes 1 and 2 have addressed the identified target needs, shedding light on what is essential for students to learn. Theme 3 delves into the realm of learning needs, providing insights into the specific methods and approaches that students require for effective learning. Moving on to Theme 4, it offers a review of stakeholders' perspectives on their prior experiences with EMP learning.

Furthermore, the incorporation of non-verbal information adds richness to the analysis. Non-verbal cues, such as change of tone and speaking speed, can convey valuable insights that enhance the interpretation of the interview data. The incorporation of non-verbal information and the integration of quantitative data contribute to a more in-depth understanding of the research outcomes, providing a rounded view of the English language needs of Chinese medical students. The findings presented in this chapter provide the basis for the subsequent chapters, where the implications and recommendations will be discussed, aiming to enhance EMP practice and address the identified English language needs of Chinese medical students.

Findings of EMP course syllabuses analysis are presented in the second section of this chapter. Four themes emerged: learning objectives, learning content, teaching methods, course activities. Findings of syllabuses analysis were also compared with findings from interviews and questionnaires to reveal any misalignment between EMP offerings and the identified EMP target and learning needs at the case university.

4.1 Findings from interviews and questionnaires

4.1.1 Theme 1: Using English in the target situation

4.1.1.1 Reading

During the interviews, all of the physicians mentioned that they needed to engage in reading tasks in English for their work. Specifically, reading medical literature in English, especially journal articles, was identified as a critical task by all physicians. For example, a physician, ZZM, said, "I think one thing that every medical student and physician cannot avoid is reading the English literature, especially the journal literature, and some of the relevant guidebooks." [我觉得每个医学生和医生都躲不开的就是读英文文献，尤其是期刊文献，还有一些相关的指导书。]

Moreover, three medical teachers who were interviewed also emphasised the

significance of medical students and physicians regularly reading English medical journal articles throughout their academic and professional journey. This practice ensures a continuous acquisition of knowledge and expertise, crucial in the field of medicine. For example, a medical teacher, D, said, "The study of medicine is a lifelong learning process . . . medicine is evolving rapidly . . . especially to keep abreast of the latest medical discoveries . . . and need to read journals in English." [学医这个就是需要终生学习的，医学发展很快…尤其是要持续了解最新的医学发现…要读英文的期刊。]

In addition, one physician mentioned the need to read medical guides in English. However, no other types of reading sub-skills were mentioned by the physicians. Despite the importance of reading in English for their work, many students said that they did not find it challenging. They reported utilising translation software to assist them in the process of reading in English. As a doctoral student, ZC said, "I usually use the Google one-click translation function." [我一般用 Google 一键翻译功能。]

4.1.1.2 Writing

In the interviews, all physicians considered "writing English articles" was important for their job promotion prospects; as a physician, LX said, "Publishing research papers in English is a seemingly never-ending task for our community of medical students and doctors. The obligation to publish only ceases when one's professional title is sufficiently established." [发英文论文是我们医学生和医生群体们一个几乎永恒的任务。什么时候职称够用了，什么时候不用发了。] While postgraduate students are not required to publish articles in English-language journals for graduation, they view it as a significant advantage for future academic pursuits or job opportunities. As one master's student, YLW, expressed, "Although there is no requirement for us to publish in English to graduate, having such publications would undoubtedly be a bonus when it comes to pursuing a Ph.D. or securing a job in the future." [我们毕业是没有英文论文发表要求的，但是如果有的话，那对于以后读博或者找工作肯定是一个加分项。]

Regarding the preference for publishing in English-language journals over Chinese-language ones, a physician, QB, explained, "When it comes to title promotion, one English journal article is equivalent to three Chinese journal articles." [评职称的时候，英文论文一篇顶三篇中文。] Another physician talked about the prevailing issue with the quality of many Chinese journals: "It is often observed that these journals lack rigorous peer review processes and can be easily published in through personal connections with editors or monetary transactions." [我们业内的都知道中文期刊太'水'了，很多都不怎么审稿，认识主编或者给钱就能发。] (AF) There were no other types of writing sub-skills mentioned as important in the interviews.

Nonetheless, it is important to underline that physicians' focus gravitates towards acquiring the precise techniques required to compose English articles that lead to a heightened probability of acceptance by prestigious SCI journals. This preference can be illustrated through the perspective of a physician, as articulated by HYT: "I mainly want to know the use of English in SCI journal articles and some of the relevant rules, which will be more time-saving." [主要是觉得要知道 SCI 发表的英文的使用，那个是有套路的，还有相关的一些规则，这样会比较节省时间。]

4.1.1.3 Translating

During the interviews, several physicians mentioned that they occasionally find themselves needing to translate English books into Chinese as part of their research projects. However, they tend to delegate such tasks to the postgraduate students under their supervision. Three undergraduate and master's students who were interviewed said they were asked to do so, and they used various types of translation software such as "Google translate", "Baidu translate", "DeepL", and "Youdao". They did not see such translation as a difficult task as they were not asked to do a 'perfect' job. As a master's student, DHM, said, "some teachers have some translation projects and then assign them to students for a few pages each, but they will also have them reviewed at a later stage, so the translation doesn't have to be perfect." [有的老师会有一些翻译项目，然后分配给学生，每人几页，但是后期还会有审校的，所以翻译的不用太完美。]

4.1.1.4 Listening

In the interviews, all physicians expressed a clear need for listening skills, both for communication with patients and for attending international conferences and communicating with experts from other countries. For example, a physician, AF, said: "There is a likelihood of encountering international patients at our clinic, and we do tend to see a significant number of international students. Nonetheless, we frequently participate in international conferences, and we would need to make a presentation." [临床上碰见外籍患者的概率是有的，主要是留学生。但是我们经常会投一些国际会议，中了的话需要去做 Pre（演讲展示）。] A physician, ZZM, highlighted the importance of listening skills, particularly when interacting with foreign experts during conference breaks. He stated, "It can be quite problematic if you can't understand what the foreign experts are saying during casual conversations at meetings." [和外籍专家在组会间隙的聊天上，要是听不懂人家说什么也是很麻烦的。] The need to make a presentation in English was not only mentioned by physicians but also by postgraduate students, with one doctoral student noting that the pandemic had led to a "decrease of opportunities to participate in international conferences" [少了很多参加国际会议的机会] (HKK). Some interviewees expressed a desire to improve their listening skills in preparation for future international exchange opportunities.

Few students emphasised the significance of listening skills for comprehending courses taught in English. A master's student, LH, noted, "Having strong listening skills is crucial when attending courses taught by foreign instructors or even online courses, although there aren't many courses taught by foreign instructors." [听外教课或者一些网课的话，有个好的听力是很重要的，当然外教课也不多。]

4.1.1.5 Speaking

4.1.1.5.1 Speaking to international patients

Interview results indicated that all physicians had experiences with international patients who had limited Chinese proficiency and required spoken English. In rare cases, some had even encountered patients with both limited Chinese and limited

English proficiency. While some of them said that the ability to speak with international patients in English was not crucial as it was uncommon, others believed it was important. A physician, LX, who works in an emergency department, stated: “It is crucial to be able to handle such situations effectively, especially in emergency cases which are generally quite serious.” [遇到了你就得能够处理得好，一般来说急诊的情况还都蛮严重的。] A physician also experienced case when the patient has limited English and Chinese, but he did not think it is common, “Once I had a Pakistani patient who stumbled over his Chinese and English, but luckily he called his friend to help translate later, but this is not very common. Most of the international students we encounter could speak good English.” [有一次遇到一个巴基斯坦的患者，中文英文都磕磕巴巴，好在后来他打电话叫他朋友帮忙翻译了，但这种情况也不是很常见。大部分我们遇到的留学生都是可以讲很好的英文的。] (ZZM)

A doctoral student also explained that it is not uncommon to receive international patients who are students from nearby universities, “Because this university is in Haidian District, which is the most densely populated area for universities in Beijing, and our affiliated hospitals are basically nearby, and they are all designated hospitals (which can reduce or waive the fees for medical treatment if students of these universities visit these designated hospitals), we actually receive quite a lot of international students.” [因为我们学校在海淀区，这边是北京高校最密集的地方，然后我们附属医院也基本是这附近，还都是各个学校的定点医院，就其实接诊的留学生还是挺多的。] (KDH)

In contrast, two senior undergraduates, AA and CD, who have clinical experience, did not express concern regarding communication with international patients for their current learning stages, as they believe that their instructors (i.e., supervising physicians) will be able to communicate effectively with them. “Usually, in such cases, out supervisors would take charge.” [一般这种情况我们带教老师都会亲自上的。]

In addition, three physicians (LX, EG, AF) also mentioned communication breakdowns caused by cultural difference, especially in “prescribing traditional Chinese medicine” [开中药] and “explaining traditional Chinese medical treatment procedures” [解释中医疗程]. For example, a physician, LX, said, “When prescribing Chinese medicine to foreigners, I do not know how to explain it. For example, when it comes to the medicine which is for diminishing inflammation, I really don’t know how to explain it in English, and I may even struggle to explain it in Chinese. Because it has never been explained to Chinese patients either. And there are many more words like that.” [给外国人开中药时，不知道怎么解释。比如说到这个药是清热泻火的，确实不知道如何用英文解释，可能中文解释都费劲。因为也从来也没和中国患者解释过。而这样的词还有很多。] Another physician, EG shared an instance, saying, “During consultations, I found it hard to convey the intricate concepts of TCM treatment to international patients. For instance, explaining the balance of Yin and Yang in the body, or the flow of Qi energy. Without a foundational understanding of TCM, these discussions become a struggle.” [在问诊过程中，我发现很难向外国患者讲清楚中医治疗的概念。好比说解释人体的阴阳平衡或气的流动。要不是对中医有个基本了解，就很难说明白。] Physician AF highlighted, “Many international patients have no exposure to TCM concepts. Once, I had to explain the benefits of an herbal decoction for ‘harmonising the body’s

Qi.' Trying to bridge the gap between Eastern concepts and Western understanding was daunting. The language barrier coupled with cultural differences made it challenging to convey the essence accurately." [许多外籍患者其实没有接触过中医概念。有一次我要解释一种草药煎剂对'调和人体气机'的好处。真的很难去找到怎么去架构东西方文化理解的鸿沟。语言障碍加上文化差异，就很难弄。] In a similar vein, a physician, LX shared, "Explaining the potency of TCM herbs to foreign patients is like navigating a linguistic maze. I recall describing an herb's effects as 'warming and invigorating.' The translation was fine, but the essence of how it influences the body's energy wasn't fully grasped. It's not just about words; it's about understanding." [跟外籍患者解释中医草药的功效就像在走迷宫。我记得自己曾用"温补活血"来形容一种草药的功效。翻译没有问题，但它如何影响人体能量的本质并没有完全接解释出来。这不光是语言的问题，更重要的是如何理解。]

These examples vividly depict the intricate challenges that Chinese physicians encounter when attempting to communicate TCM concepts to international patients.

From the perspectives of international patients who speak English at proficient or advanced levels (i.e., GH, PL, TT), Chinese physicians' oral English proficiency did not usually allow for communication as they had they had encountered communication breakdowns during this process when seeking healthcare services. One patient said, in English, "I had a kidney stone … the physician did not speak English, so I managed to explain in my limited Chinese vocabulary what my problem was … she said I had to take some tests, then gave me some papers in Chinese to sign. I couldn't understand those characters at all, but no one there could explain them to me in English, so I had to sign anyway" (PL). Another one said, in English, "it was an interesting fact that I saw lots of bilingual signs in Chinese hospitals, while it was still difficult to communicate with Chinese physicians and other hospital staff in English" (TT). For the other interviewed patients who speak English at beginner or intermediate levels (i.e., AB, CM), they seemed to have experienced worse cases; as CM said, in English, "I couldn't understand what the doctor was saying, and she didn't seem to understand what I was saying. Then we used software to communicate, it was inconvenient and didn't work well."

Patient PL, proficient in English but beginning to learn Chinese, encountered difficulties in understanding TCM principles. When the physician explains how certain herbs are meant to "activate blood circulation," CM struggled to relate this to their own medical knowledge. CM expressed, "I'm having trouble connecting 'activating blood circulation' to what I know about medicine." Patient TT, unfamiliar with TCM terminology, was frustrated when the physician describes the prescribed treatment as 'tonifying Qi.' TT might have difficulty comprehending how this relates to his health concern. Expressing their frustration, TT said, "I found it hard to understand what 'tonifying Qi' means for my condition. But my doctor did not give me any more information about how this treatment will help me and I don't know why."

4.1.1.5.2 Presenting at conferences

All the physicians I interviewed recognised the importance of participating in

international medical conferences, which may require proficiency in English language skills for both listening and speaking, as well as academic writing and presentation. In contrast, undergraduate students did not mention the need to participate in international medical conferences. Although such participation is not mandatory, postgraduate students consider it crucial for "enriching medical knowledge" (e.g., QK, ZC) and "improving clinical treatment skills" (e.g., YLW, LH).

Interestingly, physicians do not appear to prioritise the ability to present at conferences as a key target need. As one physician, CTT, succinctly put it, "Such meetings occur only once or twice a year, and our attendance—or lack thereof—has minimal impact on us." [这种会议一年的话也就一两次，而且其实参不参加对我们也没什么影响。] Another physician, ZZM, shared, "I generally rely on simultaneous interpretation software to assist with listening comprehension. While some translations may not be entirely accurate, they suffice for overall understanding." [基本上用一些同传软件辅助着听，有些翻译不准，总体理解上倒也还好。]

Despite it, both postgraduate students and physicians acknowledged facing significant language-related challenges. A doctoral student shared the difficulty he faced during a QandA session, where "people with various English accents asked me questions." (ZMQ) [被那些英语口音很重的人提问到的时候。] A similar experience was shared by another physician, who found it hard to understand other conference participants' questions and felt uncomfortable asking them to repeat themselves multiple times in front of a large audience. "I found it hard to understand what they [other conference participants] were asking, and it made me feel awkward to ask them to repeat over and over again in front of so many people." (EG) [我感觉他们问的太难理解了。要是总让人家重复我又觉得不好意思。] A physician, LX, said, "My speaking skills are lacking to the extent that I feel somewhat hesitant to engage in conversations with others during inter-meeting interactions." [我觉得口语太差了，会间和其他人交流的时候会有点怯，不敢开口。]

Summary of Theme 1

Theme 1 revealed how English is needed and used by physicians at work, which is the target situation of medical students' EMP learning. Reading medical literature, especially journal articles, was deemed critical for physicians' work. The ability to stay updated with the latest medical discoveries was seen as essential in the rapidly evolving field of medicine. While some students relied on translation software to aid their reading, they maintained that they did not find reading in English challenging.

Writing English articles was considered vital for job promotion, with English publications carrying greater weight than Chinese ones. Physicians expressed concerns about the quality of some Chinese journals, and this may have contributed to the preference for English publications. Translating English books into Chinese was occasionally necessary for physicians' research projects, and they often asked postgraduate students to help, and these students used various types of translation software for this task. These students said that a focus on achieving a perfect translation was not paramount.

Listening skills were emphasised by all physicians, both for communication with

patients and during international conferences. The ability to present in English at these conferences was seen as an essential aspect of showcasing research and networking with colleagues in the field. While undergraduate students did not (unsurprisingly) mention the need for international conference participation, postgraduate students recognised its significance for enriching medical knowledge. Some physicians shared experiences of language barriers encountered during conferences, highlighting the challenges posed by diverse English accents.

Regarding communication with international patients, physicians acknowledged the importance of being able to converse effectively in English, especially in emergency cases. While some students believed their clinical instructors would handle such situations, others recognised the need to handle them effectively themselves. International patients' perspectives shed light on the communication breakdowns that can occur due to language barriers, highlighting the importance of improving English proficiency among physicians for effective patient care. Physicians also mentioned that cultural differences could cause communication breakdowns.

In summary, Chinese physicians often face a multitude of challenges related to the English language within their workplace. Beyond the realm of language barriers, medical practitioners also grapple with intercultural complexities when it comes to clinical communication, especially in cases involving the prescription of TCM or the application of TCM treatments for international patients. It's worth noting that these intercultural considerations are not as prominent in other aspects of their professional duties.

4.1.2 Theme 2: Perceptions on learning English

4.1.2.1 Students and physicians' perceptions of their English language ability

The results from the background questionnaire completed by each interviewee before each interview starts indicating that the mean scores for the CET-4 and CET-6 tests were 603 and 596 (respectively higher than the national average scores for Chinese students, which are 495 and 526) (Li et al., 2019). However, the interviews showed that many postgraduate students identified that their English had "deteriorated" since their undergraduate days; as a doctoral student (ZC) said: "My English has deteriorated a lot compared to my undergraduate stage." [我英语和本科比起来退化了好多。] Indeed, some undergraduate students felt their English had "deteriorated" since high school; as an undergraduate student (LCR) said: "My English was at its peak in high school. [高中才是我英语水平巅峰。] Many of the students and physicians were 'unconfident' with their current English ability, even for a physician (LL) who has worked overseas for three years, during which time English was used as the working language: "I was very unconfident with my oral English when I was abroad . . . I feel that my speaking skills have deteriorated since I returned to China." (LL) [在国外的时候对自己口语就特别不自信…回国以后明显感觉自己口语退化了。]

Surveys provided quantified results for respondents' perceptions of their English language ability. Undergraduate and postgraduate students rated their English language proficiency on a 5-point Likert scale (Appendix B1, Q16; B2, Q9). The

results showed that postgraduate students had lower mean scores ($M = 3.25$) than undergraduate students ($M = 3.61$), and there is a significant difference between the two groups ($p < 0.05$) which supports findings from qualitative analyses – postgraduate students are less confident in their English language proficiency than undergraduate students.

4.1.2.2 Students' classification of English needs

4.1.2.2.1 Active and passive needs

When asked about why they feel they need to learn English, students differentiated between active and passive reasons. Interviews results reveal that postgraduates tend to be more self-motivated to learn English compared to undergraduates. The interviews revealed that undergraduates often learn English only to "pass upcoming exams" (LCR), and had little motivation to learn English beyond these exams. One participant, LH, a master's student, acknowledged that "There are no English courses from the university side, but I think it's important to learn English by myself." [学校那边倒是没要求必须上什么英语课了，但我还是觉得自己还是得学。] This sentiment was shared by other postgraduates and physicians who emphasised the importance of acquiring English skills as a means of improving their competitiveness in the job market. For example, a physician, HTY, said "I need to have a period of overseas experience if I'm going to be promoted. I have planned to be a visiting scholar overseas for a few months, but I feel that my English is so poor that I need to improve it." [我马上要评副高的话需要有一段海外经历，我准备出去交换几个月，但感觉自己英语太差了，就很需要提高。]

In contrast, postgraduates are driven by the need to prepare for their career prospects, and therefore, have a stronger motivation to learn English. A physician talked about the importance of learning English in their meetings with English-speaking patients, "If you have consultations with international patients who speak English, and if you can speak English and communicate well, you feel that the patients will trust you more." [如果有那种说英语的外籍患者，如果你英语好，口语好，能交流，就感觉患者也会更信任你。]

4.1.2.2.2 Current and future needs

Regarding English learning strategies, the interviews showed that undergraduate students spent minimal extra time on English learning beyond the university requirements, which was passing the CET-4 and CET-6 exam. For example, an undergraduate student, KAW, said, "My main concern at this stage is my CET-4 and CET-6 exams, and I don't spend much time on my English studies apart from going to classes." [我目前这个阶段主要考虑的还是大学四六级考试，除了上课以外就没有花太多时间了。]

In the interviews, many students and physicians indicated that English was not frequently used in their daily life or current workplace. For example, a doctoral student, ZMQ, said, "English is certainly not used much in my daily life, nor is it used intensively in the clinical practice, except in some cases where I was specially required." [日常生活用到英语的肯定占比不高，在临床那边用英语的频率也不密集，除了一

些被特殊要求的时候。] Survey results revealed that physician participants believed that they spent 20% of time using English at work (B3, Q10). Undergraduate, postgraduate students and physicians all felt that they spent 10% of time on average using English in daily life (B1, Q13; B2, Q13; B3, Q11). These survey results indicate that English is used but not extensively, either in students' and physicians' daily lives or in physicians' work.

However, although many postgraduate and physician interviewees indicated that they did not currently frequently use English, they learn English to "prepare for the future". For example, a doctoral student, KDH, said, "I have little chance to speak English at the moment, but I hoped to improve it … to prepare for future … I hope to work as a postdoctoral researcher abroad after I graduate." [我现在是没什么机会用到英语口语，但是我还是很想提高口语的…为以后做准备…我毕业以后想出国做个博后。] This sentiment was echoed by other interviewees (e.g., QK, CTT, XLL, HMY) who emphasised the importance of learning English as a means of advancing their career prospects and expanding their opportunities.

4.1.2.3 Perceptions of learning EMP and EGP

The interviews revealed that the value placed on EMP differed between students and physicians. Postgraduate students (including master's and doctoral) and physicians seemed to value EMP more than undergraduates. Among undergraduate students, senior students seem to have more insightful thoughts on the concept and importance of EMP, whereas junior students placed more emphasis on learning EGP.

Upon further inquiry about their perceptions of EGP learning, many students seem to critique the EGP courses they have taken. For instance, an undergraduate student, WP stated that "the content covered in the first-year EGP class was similar to what I had learned in high school". [我们第一年的通识英语上的跟高中差不多。] Similarly, a senior master's student felt that there was "a lack of connection" [缺少关联] between the EGP course and EMP learning (QK).

According to one postgraduate student, focusing more on speaking and listening in EGP would be beneficial since such training was lacking in high school. A doctoral student expressed that they were "struggling to speak English fluently and facing difficulties in understanding English listening" [很难讲好英语，而且听也听不懂。] (WAS). Another doctoral student said, "Regarding reading and writing, especially in EGP reading, I believe that the knowledge we acquired before college is sufficient, and there is no need to allocate more time to it." [我觉得之前的读写基础应该差不多了，特别是读。没必要再花太多时间在这上面了。] (ZMQ)

LZL, a doctoral student, gave a broader and more affirmative answer, stating, "When I hear the term, I think of all English-related aspects in medicine. It's a very broad concept." [说到这个词，我可能会想到的就是医学中所有可能涉及到英语相关的，我觉得都涵盖，就是一个非常广的概念。] By comparison, when asked about their understanding of EMP, most undergraduates had little knowledge of it. For instance, LCR, an undergraduate student, responded with uncertainty: "Is it medical terminology in English?" [就是英文的医学术语吗？] In general, undergraduate students lack learning motivation and awareness for EMP.

Furthermore, the analysis of non-verbal information revealed that postgraduate students and physicians tend to speak at a faster pace with a higher voice and use more words compared to undergraduate students. For example, a physician, ZZM, raised her voice and spoke fast when giving me her reasons of learning EMP: “I want to go abroad for exchanges, and applying for funding require English publications as endorsement, and many opportunities require good English.” [我想出国交流，申课题需要有英文文章背书，很多的机会都需要英语好。] This suggests that they experience stronger emotions in their experiential learning of EMP.

The interviews also revealed that postgraduate students and physicians expressed more substantial reasons for studying EMP compared to undergraduate students. When queried regarding the significance of learning EMP, undergraduate students provided a mean response time of 49 seconds, with a range of 39 to 65 seconds. In contrast, master’s students exhibited a response time of 139 seconds, with a range of 115 to 165 seconds, while doctoral students required an average of 218 seconds to respond, with a range of 153 to 329 seconds. The reasons undergraduate students gave for learning EMP were mainly related to earning credits. For instance, AA, an undergraduate student, stated, “The main reason is to pass the exam.” [主要是为了通过考试。] Furthermore, surveys revealed that 89% of undergraduate students chose ‘to earn credits’ as their reason for taking EMP curricula, 53% of them chose ‘It was fun/interesting’ and 23% of them chose ‘I need it for my target career’ (B1, Q11).

Postgraduate students and physicians had more diverse reasons for studying EMP. For example, a master’s student stated, “I want to study abroad for my PhD, and I’m sure I’ll need to communicate in English when the time comes.” [想出国读博，到时候肯定会有交流需要。] A physician said, “I would like to try to take the USMLE (United States Medical Licensing Examination) to work in the US.” [想试试考一下 USMLE 去美国工作。] In contrast, the reasons for learning EMP among undergraduate students are less diverse. Many of them pursue EMP due to it being a compulsory requirement by the university. For example, an undergraduate student (AA) said, “I need to take some foreign language credits and I think it will be better to get credits for this (EMP) compared to others (other foreign language courses).” [就是要修一些外语的学分，我觉得这个相对其他的课会好拿分一些。]

In contrast with many undergraduate students who took EMP courses to earn credits, the majority of postgraduate students and physicians took EMP courses for the purposes of their future or current career. Survey results showed that only 65% of postgraduate students and 35% of physicians chose ‘to earn credits’ as their reason for taking EMP curricula, whereas 59% of postgraduate students and 85% of physicians chose ‘It was fun/interesting’ and the large majority (82% of postgraduate students and 97% of physicians) chose ‘I need it for my target/current career’ (B2, Q16; B3, Q12).

Summary of Theme 2

Many students and physicians felt that their English language ability had deteriorated since their undergraduate days. This was particularly evident among doctoral students, who lacked confidence in their current English skills despite having used English as a

working language during overseas experiences. Surveys supported these interview findings, showing that postgraduate students rated their English proficiency lower than undergraduate students.

Motivations for learning English varied between active and passive reasons. Postgraduate students were more self-motivated to learn English, aiming to improve their career prospects and competitiveness. Conversely, some undergraduate students learned English only to pass exams and lacked motivation beyond these academic requirements. Postgraduates and physicians prioritised English learning to enhance communication with English-speaking patients and excel in the job market.

Although English was not extensively used in their current daily life, many students learned it to prepare for future career opportunities, such as studying abroad or advancing in their field. They recognised the importance of English proficiency for their future endeavours, leading them to invest in language learning.

All participants acknowledged the significance of learning EMP, but the value attributed to EMP varied between undergraduate students, postgraduate students and physicians. Postgraduate students and physicians placed higher importance on EMP compared to undergraduates. While senior students demonstrated insightful thoughts about EMP's relevance, junior students were often less aware of its scope and importance.

4.1.3 Theme 3: Views on EMP learning approaches

4.1.3.1 Enriching vocabulary

All undergraduates, postgraduates and physicians unanimously concur on the indispensable need to acquire medical vocabulary for the pursuit of EMP education. According to an insight shared by an undergraduate student, KAW, "The acquisition of a specific lexicon is of utmost importance when immersing oneself in the realm of EMP learning." [学医学英语的话，有一定的词汇量是很关键的。] Echoing this sentiment, a physician, ZZM, further affirms, "A substantial reservoir of English vocabulary is essential." [必须要掌握大量的英文词汇。]

While an EMP course centred around medical terminology exists at this case university, more than half of the interviewed students and physicians are inclined to believe that augmenting their lexical repository can be achieved without formal classroom instruction. The preference for self-guided vocabulary enrichment emerges as they deem conventional classes to be less effective. In contrast, they incline towards internalising terminology during their leisure hours.

Furthermore, doctoral students and physicians advocate a contextualised approach to vocabulary learning. They propose that vocabulary acquisition should not occur in isolation but rather be integrated within broader medical courses to enhance comprehension. Reflecting this sentiment, a doctoral student, WAS, stated, "While not undermining the importance of standalone vocabulary courses, integrating them with core medical knowledge would likely provide a more cohesive understanding of these terms and concepts." [不是说这个课没有用，但是如果能够能够和其他医学主课的知识相结合的话，我觉得会能够更整合的理解这些词汇和知识。]

A physician, HMT, shared similar views: “From my perspective, cultivating familiarity with pertinent medical English vocabulary remains a prudent endeavour, albeit one need not embark on exclusive coursework. Combining this learning process with activities such as English reading can facilitate the concurrent memorisation of terms.” [我觉得掌握一些和自己专业相关的医学英语词汇还是很有必要的，但没有必要单独上课学。我觉得其实可以结合其他的比如英语阅读来顺便记忆单词。]

4.1.3.2 Reading a lot

While the suggestions on this matter are absent from undergraduate students, a resounding consensus among postgraduate students, physicians and other interviewees underscores the paramount significance of immersing oneself in English literature within the medical domain as a catalyst for enhancing EMP writing prowess. As articulated by a medical teacher, D, “Reading stands as the input, while writing manifests as the output. How can one expect to generate output devoid of substantial input?” [读是输入，写是输出。你都没有足够的输入，怎么会有输出呢？] Echoing this sentiment, a doctoral student, LZL, expounds, “If the sensation of inadequacy in writing takes root, it invariably implies that one’s reading endeavours have been insufficient, leaving the reservoir of knowledge barren.” [如果觉得不会写的话，那肯定是读的太少了，脑子里没有东西。]

In light of the fact that numerous undergraduate students acknowledge their reliance on translation software to facilitate their reading habits, their opportunities to engage directly with English texts remain limited. Exemplifying this perspective, an undergraduate student, ZNN, remarked, “My approach primarily revolves around employing instant translation tools, with scant instances of engaging directly with English content.” [我基本都是用的一键翻译，很少直接读英文的。]

4.1.3.3 Early clinal exposure

Numerous postgraduate students, physicians and medical educators expressed the viewpoint that providing undergraduate students with insights into their future roles as physicians would greatly benefit their educational journey. According to physician, AF, reflecting on her own academic path, she noted, “During my undergraduate years, I didn’t fully grasp the significance of medical English, and now that I’ m older, I find it more challenging to learn. It would be advantageous for undergraduates to gain an early understanding of the situations where they will eventually utilise English.” [其实上本科的时候不太了解医学英语的重要性，感觉现在年纪大了，学起来也就更费劲了。最好能让本科生早一点了解他们以后在哪些情况下会用到英语。]

Furthermore, a medical teacher, E, shared a similar sentiment, stating, “Early exposure to clinical settings would not directly enhance their English proficiency, but it would deepen their comprehension. Regardless of whether the student opts for a clinical career path in the future, this exposure would be beneficial for their present learning experience.” [可以让学生早一点接触临床，虽然说不能直接帮助他们提高英语学习，但是会让他们增进了解。不管这个学生以后是否选择进入临床工作，对他们当下的学习都是有好处的。]

This approach, as suggested by the participants, could potentially bridge the gap between theoretical learning and practical application, allowing undergraduates to contextualise their English language learning within the framework of their future medical careers.

4.1.3.4 Using alternative methods to traditional lectures

4.1.3.4.1 Reading groups

Based on insights gathered from postgraduate students and physicians, a notable suggestion has emerged, indicating that the delivery of EMP education need not be confined exclusively to formal classroom settings. However, it is worth noting that undergraduate students refrained from offering specific commentary on this matter. Conversely, postgraduate students and physicians put forth the proposition that unconventional avenues beyond the traditional classroom paradigm can be harnessed to enhance the process of EMP learning. For example, a physician, ZZM, said "It doesn't have to be in the form of a large class, I think the key is to learn something useful." [不一定非要以上大班课的形式进行，我觉得关键是能学到有用的东西。] A doctoral student, ZC, had a similar view: "I think we can study the English literature of the specialty together in small groups during our departmental rotations, which will be more focused and efficient than taking a large class." [我觉得我们在科室轮转的时候可以以小组的形式一起研读这个专业的英文文献，会比上大课那种更有针对性，更高效。]

In interviews, several senior postgraduate students suggested the idea of having intensive reading groups, to enhance undergraduates' ability to read English medical literature (e.g., DHM, QK, LZL). This approach involves grouping students in the same or similar areas of study, and a tutor or one of the students takes the lead in guiding the reading sessions. Their suggestion entails that during the undergraduate phase, a broad spectrum of subjects can be explored through extensive reading. However, as undergraduate students transition to the postgraduate level, a more focused approach to selecting reading material might prove more advantageous. As a master's student, CJ, said: "Undergraduates could read more broadly, but now I prefer to focus on reading English literature in my area of expertise." [本科的时候可以读的更泛一些，但是现在我更想专注于自己专业领域的英文文献。]

Moreover, some doctoral students and physicians emphasised the reciprocal relationship between reading and writing in English. A doctoral student, KDH, noted, "The main challenge in writing English articles is that many people simply don't read in English enough, primarily because they tend to avoid the task of reading." [我觉得英文论文写作的难点就是很多人其实读的英文太少了，主要是大家都很逃避阅读这个事情。] Another physician, EG, added, "If there were a reading group format, it would compel many to read. Reading extensively is undoubtedly beneficial for writing as well." [如果能有这样一个阅读小组的形式，其实很多人就不得不去读了。读的多其实对于写作肯定也是有好处的。]

4.1.3.4.2 Targeted writing tutorials

Although the university in question does not presently provide academic writing courses, a prevailing sentiment among numerous postgraduate students and physicians

suggests the value of such courses for undergraduate medical students. It is noteworthy, however, that no undergraduate students broached this topic during the interview process. Among master's and doctoral students, a prevalent viewpoint suggests that specialised tutorials focusing on composing English medical journal articles could be particularly advantageous for their undergraduate counterparts; as a master's student, QK, said: "I've always wondered why the university doesn't provide academic English writing training, and I think it's crucial." [我一直很疑惑为什么学校没有给这种学术英语写作的教学，我觉得还挺关键的。]

Reflecting upon her own learning journey, a physician, AF, recollects her experiences and arrives at the conclusion that broad-based academic writing instruction might not be imperative for undergraduate students at this case university. Conversely, she asserts that the emphasis should lean towards honing the skills required for crafting English journal articles adhering to the standards of the SCI. Furthermore, she contends that attending conventional lectures might not be conducive to achieving this particular goal. As she said, "I think undergraduates like those in our university, who actually have a good foundation in English, don't need to learn writing in a generalised way. I think we can follow the norms and requirements of writing a high-quality SCI paper to provide students with more targeted guidance, not in the form of a lecture class." [我觉得像我们学校的本科生，其实他们的英语基础都是很好的，不用再去泛泛的学写作了。我觉得可以按照高质量的 SCI 论文的写作规范和要求去给学生提供更有针对性的指导，不是讲座课的形式。]

4.1.3.4.3 Simulated conversion sessions

Students at all learning stages expressed the same concern about the lack of opportunities to speak English in an authentic environment. As a master's student, DHM, said: "I think the biggest problem is that there are not too many opportunities to use oral English." [我觉得最大的问题就是说英语的机会不太多。] Some postgraduate students suggested the use of simulated patients to practise their English speaking, listening and communication ability in a safe and controlled environment. This approach can also help to improve listening skills as they interact with the patient and respond to their needs. For example, a doctoral student, ZMQ, said "Many of our medical courses now use simulation teaching methods, such as using simulated patients, or scenario simulations, and I think this can actually be used in English classes as well, especially in practising English listening and speaking, using simulated patients and simulated scenario exercises." [我们现在很多医学课程都会用到模拟教学的方法，比如使用模拟病人，或者场景模拟，我觉得其实英语课也可以用这个方法，尤其是在练习英语听说这一块，可以用模拟患者和模拟情景演练。]

However, EMP teachers expressed their concerns regarding the scarcity of teaching materials tailored specifically to the field of clinical communication in the Chinese healthcare context. As an EMP teacher, C, said: "Nowadays, there are basically no textbooks on the market, and the number of people who specialise in this field is still relatively small. We mainly use the original foreign textbooks." [就是现在的话，市面上基本没有这方面相关的教材，就是专门这块的人还比较少。我们主要用国外的原版教材。]

Another EMP teacher, D said, “In the past, whether it was EGP or EMP, we tended to focus more on reading and writing, and not enough emphasis was placed on listening and speaking skills. For EMP, the attention has mainly been on medical paper writing, as almost all doctors need this skill. However, when it comes to spoken English, not all doctors require it. As a result, finding relevant teaching materials is quite challenging. In China, there’s hardly anyone collecting authentic English clinical language data, so we still rely on foreign resources for guidance.” [我们以往不管是 EGP 还是 EMP 都是比较注重读写，对听说这部分还是重视不够。像 EMP 的话，往往都还是只关注医学论文写作，毕竟几乎所以大夫都需要。像口语的话，就不是所有大夫都需要了，所以相关的教材确实很难找，国内几乎没有人去收集真实的英文临床语料，都还是要借鉴国外的资料。]

Two medical teachers also mentioned the unique challenge faced by physicians practising in China when prescribing TCM to international patients, and suggested that training on their intercultural competency needs enhancement. As a medical teacher, F, said, “We know that in fact the main difficulty that many doctors are now facing in communicating with foreign patients is not in English, it is that once Chinese medicine is involved, it is very troublesome and many people do not know how to explain it. That is why I think that this medical English programme should also include these relevant contents.” [我们知道其实很多医生现在面临的和外国患者沟通最主要的困难不是在英语，是一旦涉及到中医，就很麻烦，很多人都不知道该怎么解释。所以我觉得这个医学英语课程也应该包含这些相关的内容。] Another medical teacher, D, suggested “incorporating more intercultural communication training into the curriculum would better equip our medical professionals to handle such situations with confidence.” [其实是可以增加一些跨文化沟通的内容进来，会更有利于他们处理这些情形，会更有信心地去面对。]

4.1.3.5 Keeping practising

Some interviewees, especially senior postgraduate students and physicians, emphasised the importance of continuous practice using English in medical scenarios or writing practice in order to retain what they have learned, as KDH, a doctoral student, put it: “If I don’t use English for a while, I tend to forget.” [一旦我有一段时间不用英语，我就容易忘记。] Interviewees feel this does not have to be done in the form of taking classes, as a physician said: “You can only remember it at the time of the lesson, but you will still forget it if you don’t practise it later. I also think I had a good foundation in English before, but now I’ve forgotten it all. So, it is more crucial to keep practising consistently.” [上课只能当时记得，后面不练还是会忘的。我也觉得我之前英语基础还不错，但是现在都忘光了。所以更关键的是要保持持续练习。]

A master’s student, LH, said, “I would hope to have some role plays in practising English, and more interactive activities can make learning English more enjoyable and practical. It’s not just about memorising vocabulary and grammar.” [我会觉得说要多一点角色扮演的环节来练习英语，还有更多的互动也能让学英语这件事更有趣、更有用一些。这不是光是记单词语法就行了的。]

In addition, students hope to have more chances for practising using English not just in EMP, but also in EGP. As one undergraduate put it: “I hope to have more chances for practising English speaking and listening skills in general, not just in the

medical fields." [就是想多练习英语听说，不是说光医学这方面。] (ZNN)

4.1.3.6 Keeping students engaged

Many of the students who were interviewed expressed their preference for EMP curricula that are co-led by both teachers and students, where each party plays an active role in teaching and learning. As a doctoral student, KK said, "I believe that a collaborative approach in EMP curricula could greatly enhance the learning experience. When both teachers and students actively engage in the teaching process, it creates a more interactive environment, and could also empower us to take ownership of our learning journey." [我觉得医学英语课要是采取合作教学的形式会对整个的学习体验来说更好一点吧。就是如果老师学生都参与到这个教学过程的话，就会更有互动，也给我们，就是说，能掌握学习的主动性。].

A physician, EG, said, "I believe learning is more effective when we are directly involved in discussions and practical activities. For example, using something like role-plays may be particularly helpful in preparing us for real-life medical communication scenarios. I know this but I haven't used it before." [我觉得还是要参与到讨论和练习环节里面，这个学习才更高效。比如说要用到比如果像一些角色扮演这种可能就会为我们现在真实生活里的医疗会话情景来说会有帮助。我是知道一点，但我其实也没用过这种。]

In addition, some students mentioned that they would like EMP curricula to include 'interactive activities' to enhance their learning experience, as a master's student, QK, said, "I believe having more interaction would be beneficial, providing us with a sense of participation." [我觉得多一点互动会好些，就是能够有参与感。] Echoing this sentiment, a doctoral student, ZC, articulated similar views, noting that "Compared to passively receiving information, students need to actively engage in the learning process to achieve higher efficiency. It can't just be about simple listening." [相比于被动接受信息，那肯定还是学生要主动参与到学习过程里面学习效率才会更高。就不能光是简单的听讲。]

4.1.3.7 Utilising various sources

Many postgraduate students and physicians suggest using various learning courses to assist EMP learning, such as using vocabulary apps to memorise English words (WA, LH, DHM, ZB, QB), using Massive Open Online Courses (WAS, QK, LHL, KDH, ZMQ, AF, HTY) and the Bilibili website to access free English courses available online (WAS, DHM, ZC, LX, HYT), while a few bought English courses from the Taobao website (WAS, ZC, HTY). For example, a master's student, WA, said: "I will use some apps like . . . to memorise words, mainly medical words, and then I will use the Bilibili website to watch some course videos." [我会用一些比如说…这类的 APP 来背单词，主要是医学单词，然后会用 B 站看一些课程视频。] A doctoral student, WAS, said: "There are some free course videos available on MOOCs and the Bilibili website, and I sometimes buy some online courses from Taobao." [慕课和 B 站会有一些免费的课程视频，然后我有时候也会在淘宝买一些网课。]

According to the interviews, master's students spent an average of seven hours per week on English learning, while doctoral students spent five hours, and physicians

three hours. The questionnaires revealed that 21% of undergraduates, 76% of postgraduates, and 95% of physicians had received English training outside of what was offered at university. These quantitative results confirm the qualitative findings that postgraduates and physicians were more inclined to learn EMP using self-learning strategies than were undergraduates.

Summary of Theme 3

The insights drawn from interviews with various participants, including undergraduate and postgraduate students, physicians, and educators, shed light on various perspectives related to learning approaches in EMP.

All participants agree on the essential nature of acquiring a specialised medical vocabulary for effective EMP education. They emphasise the importance of building a substantial repository of English medical terminology, noting its indispensability in the realm of medical communication and learning.

Extensive reading in English literature within the medical field is considered as a key strategy for enhancing EMP writing skills, particularly among postgraduate students and physicians. The connection between reading and writing proficiency is emphasised, and concerns are raised about limited direct engagement with English texts among undergraduate students. Several physicians and medical educators also recognised the value of early clinical exposure for undergraduate students, highlighting its potential to enhance their learning of EMP.

Alternative methods to traditional lectures are proposed by postgraduate students and physicians to enrich the EMP learning experience. Collaborative learning approaches involving both educators and learners are suggested to create interactive environments. Simulated patient scenarios are recommended for practising English communication skills, though challenges are acknowledged in accessing teaching materials tailored to clinical communication within the Chinese healthcare context.

Consistent practice is highlighted as essential for language retention and proficiency by postgraduates and physicians. They emphasise the need for practical activities such as role-playing and interactive exercises to enhance linguistic and intercultural competence beyond mere memorisation.

Engagement in EMP curricula that involve active participation from both educators and students is favoured by many interviewees. Practical activities like role-playing are suggested to better prepare students for real-world medical communication scenarios. However, some concerns are expressed about the efficiency of PBL methodologies for effective knowledge transfer.

Leveraging a variety of resources is recommended for EMP learning, including vocabulary apps, MOOCs, and platforms like Bilibili. Students and physicians express a preference for self-directed strategies and consistent practice to master EMP, with postgraduates and physicians displaying a stronger inclination towards such approaches compared to undergraduates.

4.1.4 Theme 4: Past EMP learning and teaching experience

4.1.4.1 Course offered by the university

4.1.4.1.1 Passive choice

The interviews revealed that all students and physicians had taken EMP curricula at some point in their academic or professional journey. However, most of them had only taken EMP curricula during their undergraduate studies, with very few continuing to take them after that. The general consensus was that the EMP curricula offered by the case university were "quite general" (e.g., LCR, QK, HKK) and "did not play a significant role" [没什么大用] in improving their English ability (ZC). Many students and physicians took these courses solely to fulfil university requirements (LCR, LH, CJ, KK) and earn credits (AA, LH, CJ, KK), rather than being motivated to improve their English proficiency. As a result, they viewed EMP curricula as a passive obligation rather than an opportunity for active learning.

4.1.4.1.2 Active choice

Many students and physicians cited "study pressure" as a major obstacle to their EMP learning, often feeling that they lacked the time needed to improve their English skills (e.g., DHM, QK, ZB). Some students even chose to take EMP curricula simply because they believed these courses were "easier to pass" than others with equivalent credits. For example, an undergraduate student, CD, stated, "I was too pressed for time to study, so I chose this course after hearing from my seniors that it was easy to pass." [因为学习压力太大了，我没有足够的时间学习，所以选择了这门课程，听前辈说好过。]

4.1.4.1.3 Negative view

The interviews revealed that many students found the EMP curricula they had taken to be "boring" and merely a "formality" (e.g., CF, WG, CJ, KK). For instance, a master's student named CJ commented that "The class felt like just going through the motions, very formal, and I didn't really learn anything." [感觉上这个课就是走个流程，很形式化，没有学到真东西。] Two EMP teachers (i.e., A and C) mentioned that the use of a "flipped classroom" teaching method was employed in their class to "motivate students to learn" (A) and to "encourage students to engage" (C). However, some student interviewees who participated in these courses felt that the use of 'flipped classroom' method was "stressful" and "ineffective" (e.g., LCR, WP). As a doctoral student named KK noted "Everyone focuses on their own part and doesn't listen properly to what others have to say." [大家都只关注自己的部分，不好好去听别人讲了。] Furthermore, a doctoral student, HKK, felt that the teacher relied too heavily on the textbook structure, which could make the class somewhat tedious: "I feel that the way the teacher taught relied too much on the structure of textbooks. It was kind of boring sometimes." [感觉一直还是在跟着教材去讲，就会有点枯燥。]

4.1.4.1.4 Positive view

While most students and physicians expressed negative views towards the EMP

curricula offered by the university, not all of them held such views. One of the few students who held a positive view was QK, a master's student, who said "I think it helped me build some foundations for my English language learning." [它至少帮助我打下了一些英语学习的基础。] A physician, EG, shared a similar view by saying that "It has more or less helped me to keep my sense of (English) language." [多多少少还是有帮助我保持（英语）语感的。]

However, in general, the number of negative comments outweighs the number of positive comments.

4.1.4.1.5 EMP teachers' dilemmas

EMP teachers reported that medical schools lack adequate support for EMP teaching. Specifically, "the medical school currently do not endorse mandatory EMP courses, and there is insufficient allocation of teaching hours for EMP." [现在医学部还是不让开医学英语的必修课，而医学英语这部分现在的课时量其实给到的也很小。] Furthermore, EMP teachers also exhibit a lack of motivation for enhancing teaching.

EMP teacher A highlighted, "The main point is that teaching well actually has little impact on a teacher's personal development. It's just that the school has a requirement of how many hours to complete, for example, we have to complete 216 hours per year." [主要是教的好坏其实对老师个人发展的影响不大。只是学校有会要求完成多少课时，比如我们每年要完成 216 个课时。] In addition, EMP teacher C elaborated, "It's not that I don't think there's a problem with teaching now, it's just that there's too much pressure on our research performance appraisals. Teachers have to fulfil the assessment targets given by the university, so it is difficult for them to spend too much time on teaching." [也不是说觉得现在的教学就没有问题，只是我们科研绩效考核压力太大了。老师们都去完成学校给的考核指标了，就很难愿意花太多时间给教学上。] Furthermore, EMP teacher, B shared, "I mostly teach EGP, and I have already been assigned many teaching hours on EGP. But then I was asked to teach EMP." [我主要是教通识英语的，那边的课时量已经很多了。但是就被要求过来讲医学英语。]

Programme leader, H, also highlighted "It is true that there is a situation where research is more important than teaching, that is, the indicators for teachers' appraisal in our colleges are basically related to research outputs, such as the number of papers and the amount of money spent on projects. But for teaching, as long as there are no major teaching accidents, the assessment will not be affected." [现在确实是有这么一个重科研轻教学情况的，就是我们学院里给老师考核的指标基本都是跟科研产出相关的，比如论文数量、课题金额。但是教学的话，只要没有发生重大教学事故就不会影响考核。] Furthermore, in discussions with programme leaders, it became evident that they do not fully grasp the significance of EMP training. Their concerns revolve around the potential impact of language training on students' medical education, given the already demanding nature of their medical coursework. As G worried: "integrating EMP might burden students and detract from their primary focus on medicine learning" [增加 EMP 的话可能会对医学课程的学习造成不好的影响。]. G also added "While the primary focus of our curriculum remains on the medical program, it's not to say that languages and humanities are unimportant. However, they do serve a supplementary role in the broader context of medical education" [毕竟我们医学课程还是

要为主的，其他的语言和人文类，不是说不重要啊，但终究都是属于为辅。]

4.1.4.2 Outside the university

4.1.4.2.1 Free sources

Apart from the EMP courses offered by the university, many students used to turn to online resources such as MOOCs or the Bilibili website to supplement their EMP learning, but the quality of the available resources varies. As expressed by a master's student, DHM, "locating the appropriate resource can be time-consuming." [寻找我所需要的资源可能会耗费很长时间。] and many of these courses lack specificity and relevance to their learning needs.

4.1.4.2.2 Paid sources

Some students felt that compared to free video resources, paid channels such as one-to-one paid online tutoring are more targeted towards their learning needs. Some students chose to "purchase a Vocabulary app membership" (e.g., ZB, LZL) to access premium features. Some chose to "pay for English academic writing tutorials" (e.g., EG, QB, CTT) For example, an undergraduate, LCR, said "I had a paid online simultaneous one-to-one proofreading once before, where you are told on why they are revising certain words while proofreading your article, and then I found it particularly relevant, but it is expensive." [我之前有找过一次付费的线上一对一润色，就是一边润色你的文章一边给你讲为什么这样做，然后我觉得特别有针对性，就是价格贵了点。]

Summary of Theme 4

The EMP courses offered by the university are mostly taken passively by students and physicians. Many learners take these courses only to fulfil university requirements and earn credits, lacking motivation for active learning.

Study pressure is a major obstacle to EMP learning, with learners feeling pressed for time and choosing EMP courses as an easier option to pass. Some students find EMP courses boring and merely a formality, with negative views towards the teaching methods employed. Additionally, teachers expressed a sense of inadequate support from the medical school in advancing EMP education. Furthermore, teachers identified multiple constraints that hinder improvements to the EMP curriculum and teaching practices, including the pressure to produce research output, time limitations, and a lack of motivation to contribute to improvements in the EMP curriculum.

Despite generally negative views, a few students and physicians hold a positive view of EMP courses, acknowledging that they helped build some foundations for their English language learning and maintained their sense of language.

Outside the university, many learners turn to online resources like MOOCs or the Bilibili website to supplement their EMP learning, but they find it time-consuming to locate appropriate resources with relevant content. Some learners prefer paid sources, like one-to-one paid online tutoring, vocabulary app memberships, or English academic writing tutorials, as they are more targeted towards their specific learning needs.

4.2 Findings of analysing EMP course syllabuses

In this section, the analysis was directed by the needs identified through the initial needs analysis, rather than simply describing the existing curriculum. The directed content analysis framework allowed for an evaluation of how well the current EMP syllabuses aligned with the students' target and learning needs.

Using the categories derived from Richards and Rodgers (2001) – Approach, Design, and Procedure – the syllabuses were assessed not only for content coverage but for how effectively they addressed key areas such as intercultural competence, medical terminology, and practical communication scenarios. The directed approach ensured that the analysis focused on evaluating specific gaps and misalignments, such as the absence of essential medical communication content and insufficient practical language use.

By using predetermined coding categories, including learning objectives, teaching methods, course activities, and learning content, the directed content analysis revealed a significant gap between the identified needs of the students and the curriculum currently being offered. This evaluative approach went beyond merely documenting the course content, instead focusing on assessing its relevance and adequacy in meeting the students' professional and academic demands.

Four distinct themes have emerged as a result of analysing the three syllabuses (Appendix E): learning objectives, learning content, teaching methods, course activities. This section will commence by showcasing selected quotations extracted from the EMP syllabuses, which will then be followed by my corresponding interpretations. Subsequently, the results from the syllabus analysis were juxtaposed with the identified EMP needs to uncover any discrepancies. This comparison will inform the discussion on enhancing EMP practices at the case university in the next chapter.

4.2.1 Theme 1: Learning objectives

Medical Terminology

The Medical Terminology course has several objectives designed to prepare students for learning English medical terminology in healthcare settings. The course aims to "familiarise students with common medical terms" to enable better understanding and communication. It also seeks to help students "understand word roots and affixes," thereby enhancing their comprehension of complex medical vocabulary. Another objective is to "develop English pronunciation," ensuring that students can articulate medical terms clearly. The course also aims to "enhance written and oral communication ability," which is crucial for tasks like documenting patient information. Lastly, it aims to "cultivate awareness of medical terminology variations" across different specialties, preparing students for specialised medical contexts.

Medical Visual Culture

The course on medical visual culture has four main objectives. First, it aims to

“integrate humanities and medicine, using interdisciplinary techniques for problem resolution.,” seeking to connect art, science, and healthcare. Second, the course encourages students to “merge and utilize knowledge from various fields, contemplating aspects such as morality, ethics, socio-economic effects, cultural viewpoints, and changing settings,” promoting a multidisciplinary understanding of medical imagery by drawing from fields like art history, health sciences, and cultural studies. Third, the objective to “collaborate on team-focused projects and presentations.” fosters teamwork and communication skills as students work together on topics related to medical visual culture. Finally, the course aims to “learn analytical approaches” used by art historians and health professionals to critically assess the impact of visual culture on healthcare practices.

Illness Narratives

The course objectives for illness narratives are designed to offer a comprehensive understanding of the complexities of illness experiences. The objective to “explore diverse representations of illness in film and life writing” aims to expose students to various perspectives through different narrative media. The course also seeks to “analyse theoretical and auto/biographical perspectives,” providing a well-rounded understanding of illness narratives. Another goal is to “understand illness experiences in different contexts,” emphasising the role of cultural, social, and historical factors. The course encourages “critical analysis” to help students reflect on the meaning and impact of illness experiences. Finally, the objective to “promote empathy and understanding” aims to enhance students’ communication skills in medical settings by engaging them with diverse illness narratives.

4.2.2 Theme 2: learning content

Medical Terminology

The topics covered in the Medical Terminology course provide a comprehensive understanding of medical language and its application in healthcare contexts. The course starts with “an introduction to medical terminology and word formation”, teaching students the foundational elements of medical terms. Subsequently, students “explore the terminology related to different body systems”, such as the skeletal, muscular, and cardiovascular systems, among others. Diagnostic and laboratory terminology is introduced, enabling students to grasp the language used in medical testing and analysis. The course further “covers medical procedures and treatments terminology”, essential for understanding medical interventions. Students learn common medical abbreviations and acronyms to facilitate efficient communication in medical settings. The specialised medical terminology in different specialties, like paediatrics, neurology, and oncology, is also addressed, enhancing students’ awareness of medical language variations across medical disciplines. Lastly, medical terminology used in clinical settings, such as hospitals and emergency rooms, is discussed to prepare students for practical communication scenarios in healthcare environments.

Medical Visual Culture

The topics covered in the Medical Visual Culture course are organised into three modules, each focusing on distinct aspects of medical visual representation. The first module emphasises the use of medical imaging and the intersection between art and science throughout history. The module highlights the role of digital imaging in modern medical practice, including CT scans, MRIs, and other forms of digital scanning. In the second module, students examine the representation of epidemics and their impact on society. The module also delves into historical events such as the Black Death, while examining how AIDS is portrayed in various forms of art and media. In the third module, the focus shifts to visual imagery associated with healing and treatment. Concepts like harm reduction and alternative therapies are explored, along with the portrayal of treatment places and methods. This module aims to foster a deeper understanding of the visual components of healing practices.

Illness Narratives

The topics covered in this course encompass a wide range of perspectives on illness experiences and their representation in various forms of storytelling. The course begins with "an introduction to Narrative Medicine" and the significance of narratives in the field of medicine and healthcare. Students explore the role of stories in shaping our understanding of health and illness. The course then delves into the representation of "disability and physical challenges", providing insights into how society portrays and interprets these conditions through narratives. Subsequently, students analyse diverse illness narratives, including those related to cancer, HIV/AIDS, and transgender experiences. These narratives offer students an opportunity to examine how different groups and individuals articulate their experiences with illness. The course culminates in an Illness Narratives Workshop, providing students with a platform to share and collaboratively edit their own illness profiles. This hands-on activity encourages students to engage with their own narratives and those of their peers, fostering a deeper connection to the course material.

4.2.3 Theme 3: Teaching methods

Medical Terminology

While the course aims to provide a comprehensive learning experience through a mix of "lectures" and "in-class presentations," the absence of other teaching methods is notable. The curriculum appears to lean heavily on lecture-based instruction, which may limit opportunities for interactive learning. Furthermore, the term "in-class presentations" can be misleading, as it doesn't necessarily imply a high level of student interaction or engagement.

Medical Visual Culture

The primary teaching method employed in the Medical Visual Culture course is lectures. "Lectures" offer a structured format for delivering content on the visual representations of medical practices and their cultural significance. In lectures, instructors present various artworks, images, and historical contexts to illustrate the

evolution and impact of medical visual culture.

Illness Narratives
The Illness Narratives course adopts a blend of teaching methods to create a comprehensive learning experience. “Lectures” form the core of information dissemination, offering students a structured and cohesive understanding of narrative medicine and the representation of illness experiences. During lectures, instructors present various examples of illness narratives and discuss their significance. “Tutorials” likely involve more intimate sessions, providing opportunities for students to explore course materials in-depth and engage in open discussions with the instructor or small groups of peers. Tutorials also involve interactive activities and exercises to reinforce learning. “Workshops” offer a hands-on approach, enabling students to actively participate in activities related to illness narratives. In workshops, students analyse and critique narratives, engage in creative writing exercises, or collaborate on projects.

4.2.4 Theme 4: Course activities

Medical Terminology
The course activities in Medical Terminology aim to reinforce and apply the knowledge gained through the learning objectives. “Medical case studies” provide students with practical scenarios where they can apply their understanding of medical terms in a real-world context. By analysing and interpreting medical cases, students develop problem-solving skills and gain insights into the practical use of terminology in healthcare settings. “Pronunciation drills” are crucial for mastering the correct pronunciation of medical terms. Through repetitive practice and guidance from instructors, students can confidently communicate medical terms, ensuring communication with patients and healthcare professionals.

Medical Visual Culture
The primary course activity in the Medical Visual Culture course is the “Group Presentation and Project”. By assigning students to work collaboratively in groups, the activity fosters teamwork and communication ability. Students engage in in-depth research on a specific topic within the field of medical visual culture and present their findings in a “15-minute presentation”. This activity promotes critical thinking, research skills, and the ability to articulate complex concepts concisely. Presenting their work allows students to practise public speaking and communication, sharing their insights with their peers and the instructor. Additionally, the project enables students to explore a particular area of interest within medical visual culture, encouraging them to become active participants in their learning process.

Illness Narratives
The course activities in Illness Narratives centre around “conducting interviews and writing parallel charts”. Conducting interviews allows students to engage directly with individuals who have experienced illness or disability, fostering empathy and

understanding. Through interviews, students gain first-hand insights into the lived experiences of those dealing with health challenges, enhancing their ability to comprehend illness narratives from a more personal perspective. “Writing parallel charts” involves the creation of narratives that mirror or parallel the stories shared by individuals during interviews. This activity encourages students to analyse and synthesise the interviewees’ experiences, helping them grasp the complexities of illness narratives and the significance of storytelling in healthcare. The process of writing parallel charts also enables students to reflect on the ethical implications of representing others’ experiences and narratives.

4.2.5 Comparing the identified EMP needs and the curriculum offerings

Overall, the analysis reveals that the three courses – Medical Terminology, Medical Visual Culture, and Illness Narratives – inadequately address the English language needs of medical students in the target situation and their specific language learning requirements. In summary, these courses fall short in catering to the language needs of medical students in these aspects:

4.2.5.1 Irrelevant course objectives

Medical Visual Culture and Illness Narratives appear to be more suitable for students pursuing humanities or arts-related disciplines, rather than medical students seeking to enhance their English language skills. The content, primarily centred, as the titles suggest, around visual representations and narratives, does not directly address the specific target language needs identified by this study.

4.2.5.2 Limited focus on language proficiency

Despite being essential for communication in a medical context, the courses, particularly Medical Visual Culture and Illness Narratives, lack a robust focus on language proficiency development. For example, medical students require a strong command of writing academic articles in English, and articulating themselves in English accurately, yet these courses do not prioritise these language components adequately.

4.2.5.3 Absence of medical context

None of the courses seem to integrate a medical context explicitly. For medical students, learning English in the context of medical settings, such as hospitals, clinics, or patient interactions, is vital. The courses should provide language training that is directly applicable to real-world medical scenarios, enabling students to communicate effectively with patients, colleagues, and healthcare professionals.

4.2.5.4 Lack of practical language use

The courses do not prioritise practical language use nor provide ample opportunities for medical students to apply their language skills in authentic situations. Engaging in interactive activities, role-plays, and simulations within medical contexts would be highly beneficial for language learning, yet these elements seem to be lacking.

4.2.5.5 Medical terminology

A dedicated course is available that specifically focuses on the instruction of medical terminology. However, medical students indicated that they find it more beneficial to learn medical terminology within the context of real-world applications or as an integrated component of other medical courses. This approach, they believe, offers a more holistic understanding of the terms and their usage, as opposed to studying them in isolated, standalone classes that may lack practical relevance. Nevertheless, students did not regard the standalone course on medical terminology as without merit. Instead, they suggested that its educational impact could be significantly amplified if the course were integrated with or complemented by other medical courses. This integration would provide a more contextualised and holistic learning experience, helping students better understand and apply medical terminology in real-world medical scenarios.

4.3 Chapter summary

The findings indicate a misalignment between the current offerings in the EMP courses and the specific EMP needs of students within their target situations and learning requirements. This chapter first commences by exploring the significant ways in which physicians employ English within their professional realm. Notably, reading medical literature, particularly journal articles, emerges as an indispensable practice for staying updated in the rapidly evolving field of medicine. Another crucial aspect highlighted in the chapter is the paramount importance of writing English articles for career advancement, with English publications holding greater weight than their Chinese counterparts. Additionally, physicians occasionally undertake the task of translating English books into Chinese for research purposes, often seeking assistance from postgraduate students with various translation software. The chapter also emphasises the significance of intercultural competence, which are vital for communication with international patients who may speak limited English. Moreover, physicians may attend international conferences, even though this aspect is not prioritised by them in EMP learning.

This chapter examines the perceptions and motivations of medical students regarding their English learning journey. Notably, many students and physicians express concerns about the decline in their English language proficiency since their undergraduate days. However, postgraduate students and physicians demonstrate higher self-motivation to learn EMP, driven by the desire to enhance career prospects and competitiveness. Conversely, some undergraduate students principally view English learning merely as a means to pass exams, lacking motivation beyond such institutional requirements.

Insights into learners' preferences and strategies for EMP learning are also examined in the chapter. Reading groups and tutorials are lauded by learners as effective means of improving their English medical literature comprehension. Additionally, learners place great emphasis on vocabulary acquisition, often preferring integrated learning approaches over isolated language classes. Some

students advocate for the adoption of alternative teaching methods and pedagogies, such as co-designed curricula and interactive activities like role-playing and group discussions, as opposed to relying solely on traditional lectures.

The chapter sheds light on the learners' experiences with EMP courses offered by the university. Despite the significance of EMP learning, many learners hold passive views to these courses, viewing them as inadequate for significantly enhancing their English proficiency. Undergraduate students report feeling overwhelmed by the academic demands of their medical courses and exams, which in turn diminishes their willingness to allocate time for English language learning. Nevertheless, a few learners express positive sentiments towards EMP courses, recognising the foundational benefits they offer in developing English language skills.

Beyond the university, learners often resort to online resources to complement their EMP learning. However, the search for appropriate resources can prove time-consuming, and some learners opt for paid sources that cater to their specific learning needs.

The analysis of EMP courses has revealed a notable discrepancy between the objectives and content of these courses and the identified EMP needs of the medical students. This misalignment is evident in several key areas: the identified learning objectives often lack a direct connection to the authentic language demands that medical practitioners face; the courses appear to emphasise topics that may be more suited for humanities or arts-related disciplines, rather than the specific linguistic demands of medical professionals; the predominance of lectures as the primary teaching method might limit student engagement and interactive learning; while a variety of activities are present, they often lack a clear medical context; the assessment methods, while diverse, do not necessarily reflect the specific EMP needs of medical students.

In essence, these EMP courses, as currently structured, may not adequately equip medical students with the linguistic and cultural competence required for their professional roles. A recalibration of course content, teaching methods, and assessment strategies is imperative to ensure that students are better prepared to navigate the linguistic challenges they will encounter in their future medical careers.

Chapter 5: Discussion

This chapter serves as a comprehensive discussion of the study's findings. It begins by summarising findings and drawing connections to relevant existing literature. Furthermore, this chapter discusses the alignment between the identified language needs and the current EMP curriculum, which sheds light on the discrepancies between the current offerings and the actual English target needs and learning needs of medical students, thereby emphasising the necessity and making suggestions for EMP curriculum adjustments that better address these needs. In addition, the chapter goes on to discuss potential strategies for enhancing EMP and addressing the challenges that could arise in this process.

5.1 Target needs and learning needs

5.1.1 Target needs

This section discusses the identified 'target needs' of undergraduate medical students in relation to their EMP learning. Themes 1 and 2 between them capture the essence of these 'target needs', wherein theme 1 addresses the fundamental 'necessities', and theme 2 explores the aspirational 'wants', all in alignment with the ESP needs analysis framework put forth by Hutchinson and Waters (1987). As stated in the Literature Review chapter, the measurement of the expected learning outcomes for students was absent, and thus the aspect of 'lacks' in Hutchinson and Waters (1987)'s needs analysis framework was not thoroughly examined in this study. Nevertheless, the interviews did look at stakeholders' perceptions regarding the anticipated level of undergraduate medical students' English language proficiency.

In this study, the 'target situation' for undergraduate students involves their future roles as physicians. Valuable insights were gleaned from stakeholders engaged in physicians' workplaces. While senior undergraduate and postgraduate students possess some clinical learning experience, it is experienced physicians and medical educators who have a deeper understanding of the dynamics within clinical scenarios. In the interviews, undergraduate students offered minimal commentary when discussing clinical scenarios. As a result, the exploration of the 'target situation' primarily focused on the perspectives of physicians, medical instructors and international patients who have genuine experience of real-world medical situations within the Chinese healthcare context.

According to the findings, medical students at the case university are likely to encounter situations in their future workplaces where English language usage is essential. These situations encompass communicating with international patients who may speak limited English, reading English medical literature, composing English journal articles, participating in international conferences and translating medical texts from English to Chinese.

When comparing those situations where Chinese physicians use English at a workplace identified in this research to those identified in the literature (e.g., Paltridge and Starfield, 2013a), some similarities emerged. For example, this study identified a

specific situation where physicians deem writing proficiency to be crucial. This finding is consistent with the current medical professional landscape in China, where physicians are often required to publish articles in English-language journals as a prerequisite for career advancement (Qiu, 2010).

However, it is important to highlight that the number of EMP target situations identified in this study is relatively lower when compared to the list presented by Paltridge and Starfield (2013). Notably absent are needs related to composing English prescriptions or engaging in professional discussions with English-speaking colleagues, as well as participating in postgraduate courses conducted in English. This is likely due to the fact that the interviewed physicians in this study all work in the affiliated public hospitals of the case university, where Chinese is used as the working language (Wen et al., 2016). Therefore, for participants in this case university, there is no such requirement to write prescriptions in English or to speak English to colleagues.

Nevertheless, this research has uncovered a previously unaddressed target situation. As highlighted by senior students, physicians and medical teachers, their clinical practice frequently involves more interactions with international patients who are non-native English speakers than with native English speakers. Nevertheless, English is used as a lingua franca in such cases in such cases.

The situation where both physicians and their patients speak English as a second language presents unique challenges for healthcare communication. One of the most immediate challenges is limited proficiency in English from both parties. This can result in misunderstandings, especially when discussing complex medical terminology and instructions (Tweedie & Johnson, 2022). Unfamiliar accents can further complicate the situation, making it difficult for both parties to understand each other clearly (Tweedie & Johnson, 2022).

In addition to language barriers, cultural norms and taboos can also affect how both physicians and patients communicate about health issues. Non-verbal cues, such as facial expressions and gestures, may differ between cultures, adding another layer of complexity to the communication process (Bein, 2017). The stress of not being able to communicate effectively can exacerbate the already high-stress situation of medical consultations, which can, in turn, affect the quality of care (Bein, 2017). To improve this situation, several strategies can be employed. Physicians can prepare common phrases or questions in simple English to facilitate smoother communication and undergo cultural competency training to better understand the cultural nuances that may affect communication (Lu & Corbett, 2012).

In addition, this research also revealed that physicians face a distinctive intercultural communication hurdle, which emerges when these physicians are tasked with prescribing TCM or elucidating TCM treatments to international patients who possess limited or negligible familiarity with TCM practices. This situation often leads to communication breakdowns, as the patients may struggle to understand TCM treatments and the physicians may find it difficult to convey the necessary information effectively in English. It becomes more challenging when the patients speak both limited English and Chinese. However, only one physician interviewed

reported encountering such cases and mentioned that it was rare.

In China's medical education landscape, although Clinical Medicine students predominantly engage with Western medical paradigms, there has been a growing emphasis on TCM in recent years (Wang, 2022). This shift has been accompanied by its widespread integration within hospital settings, where TCM is increasingly prescribed to patients (Wang, 2022).

Both Western and TCM are widely practised in China, encompassing practices such as prescribing Chinese herbal medicine and utilising TCM treatment methods(Wang et al., 2021). The Chinese National Healthcare Security Administration includes an equal proportion of Western and Chinese medicines in its coverage, with a total of 2,709 drugs listed in the current national medical insurance drug catalogue. Among these, there are 1,370 types of Western medicine and 1,339 types of TCM (National Administration of Traditional Chinese Medicine, 2020).

Furthermore, in recent years, China has been actively promoting the development of TCM and increasing its usage in outpatient care. According to a survey conducted in 20 tertiary public hospitals, the proportion of TCM prescriptions in outpatient clinics is 28%, while it rises to 51% among inpatients (Wang et al., 2017).

Intercultural communication in medical students is scarcely emphasised in China, especially in the context of TCM. However, for this case university situated in the densely populated educational hub of Haidian District, where numerous universities are clustered, including many international students, it is essential. Therefore, graduates of this institution are likely to encounter in clinical practice international patients who are students at these universities. As physicians and doctoral students highlighted, it is not unusual to have international students as patients.

While physicians may navigate this challenge more seamlessly when communicating with Chinese patients who share a similar cultural background, the dynamics shift markedly when they deal with international patients. The growing influx of international patients highlights the need to address this challenge proactively. It may otherwise emerge as a substantial obstacle, culminating in communication breakdowns. The intricacies of TCM concepts pose a formidable barrier when translated into English (Chen & Chen, 2018). Even professional interpreters, well-versed in bridging linguistic gaps, grapple with the intricacies of TCM translation and interpretation as the inherent complexity of TCM often results in terms and concepts that lack direct equivalents in other languages.

This challenge compels medical students to cultivate an acute awareness of the existence of cultural nuances. Consequently, they will not only need to navigate the linguistic intricacies of TCM but also to bridge the cultural gap between TCM's rich context and international patients' unfamiliarity with it. This multifaceted challenge underscores the growing necessity for medical professionals to possess not only strong English language skills in speaking and listening but also sensitivity to the cultural dimensions embedded within medical interaction (Byram & Neuner, 2003).

Furthermore, medical students will have occasional obligations to present at international conferences, even though such engagements are not obligatory. Extensive research has underscored the profound value of medical practitioners'

involvement in global conferences as a conduit for disseminating research outcomes, fostering knowledge interchange, and enriching their professional connections (Ozone et al., 2014). Their inclination to engage in international conference presentations, even without a mandatory stipulation, mirrors the dynamic evolution of medical education and professional advancement within the distinct context of China.

These above discussion on language usage in the target situation revealed by theme 1 reflect the concept of 'necessities' within the framework of 'target needs'. However, as discussed by Hutchinson and Waters (1987), the inclusion of these necessities does not imply that learners of ESP must excel in all of these areas. This study echoes this sentiment by revealing that both physicians and students recognise the importance of reading medical literature in English. However, they generally do not consider it challenging, due to the availability of translation software, thereby overlooking the need to improve their English reading skills.

In contrast, theme 2 reflects the notions of 'wants' in Hutchinson and Waters' needs analysis framework which spotlights EMP learners' perceptions of their English language proficiency and where they wish to improve and the extent of their motivation to do so. This theme also elucidates the evolving perceptions of language proficiency, shifts in attitudes and motivation towards EMP learning, and the transformation in understanding the significance of EMP at different stages of students and physicians' learning and careers.

As medical students transition from the undergraduate level to postgraduate studies and eventually to becoming practising physicians, an intriguing trend surfaces: a gradual decline in their self-rated confidence in their English language proficiency. Notably, this decline appears to be rooted in their subjective perceptions rather than a concrete measure of their actual English competence. This phenomenon might be attributed to the increasing complexity of tasks they encounter as they progress through their medical education, tasks that demand a heightened level of English language prowess. This observation aligns with the viewpoint put forth by (Carrasco et al., 2019), who underscores that learners' self-assurance in their learning journey is moulded by a myriad of intricate factors.

To delve deeper into this trend, it is essential to recognise the nuanced interplay between self-rated confidence and objective language proficiency. While self-assessment provides valuable insights into learners' perceptions, it may not necessarily reflect their 'true' linguistic competence. As learners engage with more intricate medical concepts and intricate communication scenarios, their perceived linguistic challenges may naturally escalate, giving rise to a decrease in self-assurance. This, however, should not be misconstrued as an actual regression in language proficiency. Instead, it could signify a transformative phase where learners are confronted with more intricate language demands that inherently foster self-awareness of their learning curve.

In addition, another intriguing phenomenon comes to light – a concurrent evolution in their understanding of and motivation towards EMP learning. This metamorphosis aligns with the principles of ESP, which posits that learners' motivation and grasp of a specialised domain like EMP intensify as they are exposed

to a growing array of domain-specific scenarios (Hutchinson and Waters, 1987).

The analysis of non-verbal cues also provides intriguing insights into the evolving perspectives of students as they advance through higher learning and practising stages. A discernible trend emerges, wherein students become progressively more vocal and engaged in discussions related to EMP learning. This heightened level of participation can be interpreted as an indicator of their deepening involvement and enhanced understanding of the subject matter.

This evolution in the willingness to express thoughts aligns with educational theories that emphasise the developmental nature of learning (Bandura, 1977). It signifies that students are progressing beyond a mere assimilation of information to a stage where they are able to critically analyse, synthesise and articulate their viewpoints.

However, an intriguing contradiction surfaces between students' perceived current needs and their projected future needs. While physicians advocate for undergraduate students to engage in EMP learning as a means of future preparation, many undergraduates tend to overlook this need due to their limited exposure to clinical practice and their predominant focus on academic performance and graduation requirements.

5.1.2 Learning needs

The above discussion on themes 1 and 2 illuminates the EMP 'target needs', encompassing the essential aspects in Hutchinson and Waters' needs analysis framework. However, identifying the target needs only offers partial information for EMP course design. Considering the complexity of the learning process and factors related to learning, the target situation alone is not a reliable indicator of what is needed or useful in the ESP learning situation (Hutchinson & Waters, 1987). In contrast, theme 3 delves into students' EMP 'learning needs', and focuses on the approaches learners need to employ to facilitate effective learning. The amalgamation of 'target needs' and 'learning needs' constitutes the learners' EMP needs within the scope of this study.

The term 'learning needs' is defined by Hutchinson and Waters (1987) as what students need to do in order to learn. In this research, in order to be able to effectively utilise English in the target situation, stakeholders share their perspectives on what they perceive undergraduate medical students need to do in order to facilitate EMP learning.

Among these perspectives, several of the identified 'learning needs' align with prior research in the field of second language acquisition and ESP, e.g., practical application in language learning (Kvashnina & Martynko, 2016), extensive reading (Chen, 2016), vocabulary enhancement (Yufrizal, 2019), and utilising various learning resources (Narayana, 2023).

However, the study also revealed novel perspectives. Among these, physicians and medical educators introduced a compelling notion: the early introduction of undergraduate students to clinical scenarios that involve the use of English, with the intention of enhancing their motivation towards EMP learning. This trend was further

elucidated through the analysis of evolving perceptions regarding EMP learning among students and physicians at various educational and professional stages. Notably, undergraduate students displayed limited awareness and motivation towards EMP learning. Conversely, senior postgraduate students and physicians expressed a growing recognition of the benefits associated with early engagement in EMP learning during their academic and professional journey.

This proposal of early clinical exposure resonates with the ongoing discussions within medical education literature (James et al., 2022; Kaur et al., 2020; Khabaz Mafinejad et al., 2016; Kimura et al., 2021), which emphasise the significance of introducing junior undergraduate medical students to authentic clinical environments, so as to instil motivation and enhance their learning within medical curricula. However, its application within the context of EMP education in China remains relatively unexplored.

In addition, it is intriguing to note that both students and physicians expressed reservations about the efficacy of lectures as the optimal vehicle for mastering EMP. They often view lectures as inadequate for driving substantial enhancements in their EMP learning, although some students and physicians found them suitable for EGP learning.

However, this does not imply that they advocate a complete absence of lectures; rather, their perspective highlights the desire for a greater incorporation of interactive activities that can actively engage students in the learning process. This aligns with the pedagogical trend that recognises the importance of learner engagement and active participation in fostering effective understanding and knowledge retention (Luo et al., 2019; Self & Widmann, 2016; Vaughan et al., 2017). Introducing a blend of interactive activities alongside traditional lectures can create a more dynamic and stimulating learning environment that caters to diverse learning styles and preferences.

5.2 The alignment of EMP needs and the current EMP curriculum

This section presents a discussion that integrates the findings from theme 4, where stakeholders evaluated their previous EMP experiences, with the findings from the analysis of the EMP course syllabuses. In addition, by comparing the identified 'needs' with the syllabus analysis, a comprehensive view of the alignment between stakeholders' perceptions and the actual EMP offerings is obtained.

The three courses – Medical Terminology, Medical Visual Culture, and Illness Narratives – do not adequately meet undergraduate medical students' EMP target needs and their learning needs identified by this study. To elaborate, a notable lack of alignment exists between the prescribed learning objectives of these courses and the actual target needs of the students. Furthermore, the emphasis on enhancing language proficiency is limited, and a noticeable gap exists concerning the practical application of acquired skills within authentic medical settings, alongside a scarcity of interactive learning experiences.

Misalignment of course objectives and target needs

The findings reveal a significant misalignment in the EMP courses – namely, Medical Terminology, Medical Visual Culture, and Illness Narratives – in relation to the specific EMP needs of undergraduate medical students. These courses appear to be misaligned with the students' target needs.

These course objectives do not comprehensively address the target situations that students will encounter in their future medical careers. Specifically, they may not adequately prepare students for real-world situations where communication in English is paramount. For instance, interacting with international patients demands a level of linguistic proficiency that extends beyond basic medical terminology. Being able to convey diagnoses, treatment plans, and medical instructions with clarity and empathy requires a refined skill set that encompasses not only medical knowledge but also language fluency (Lu, 2020).

Furthermore, the emphasis on medical visual culture and illness narratives, while valuable for a holistic medical education, might not directly address the English language demands of writing journal articles or engaging in scholarly discussions within the international medical community. In these contexts, students are often required to articulate complex medical concepts, research findings, and insights in a clear, concise, and academically sound manner. This entails a high degree of English language precision and a deep understanding of academic discourse conventions.

Moreover, there exists an intercultural imperative, especially pertinent when physicians interact with patients conversing in English as a second language. The nuances of communication and conflict resolution in such situations present distinct challenges, yet these nuances remain unexplored in the courses under consideration. Additionally, physicians commonly encounter difficulties when conveying TCM insights to international patients. Regrettably, this aspect also remains absent from the stated learning objectives of these courses.

Insufficient focus on language proficiency

Moreover, there is an insufficient emphasis on enhancing language proficiency, a critical component for communication in healthcare settings. Medical students often need to write academic articles and articulate complex medical terms in English; however, the current EMP courses do not adequately prioritise these essential skills.

The courses of Medical Visual Culture and Illness Narratives, while undoubtedly valuable in fostering a broader understanding of healthcare contexts, seem more aligned with disciplines in the humanities or arts. However, for medical students aiming to augment their English language proficiency, these courses might not offer the precise focus they require.

The learning contents in these courses do not directly cater to the specific language requirements that medical practitioners need to succeed in their field. While visual culture and narratives play a crucial role in comprehending the broader aspects of healthcare, the language skills essential for effectively communicating with patients and engaging in professional discussions might not receive adequate attention.

Absence of contextual medical training

The absence of a medical context in these courses is another glaring issue. Learning English in the context of medical settings is crucial for medical students. The courses should ideally offer language training that is directly applicable to real-world medical scenarios, thereby enabling students to communicate effectively with a diverse patient population, colleagues, and other healthcare professionals.

The array of course activities appears to be diverse; however, careful observation reveals a significant shortcoming – the absence of a direct integration of medical context. For medical students, acquiring English skills within a medical framework, encompassing scenarios encountered in hospitals, clinics, and patient interactions, holds paramount importance (Paltridge & Starfield, 2013). It would be of value for the courses to offer language training that precisely mirrors real-world medical situations, equipping students to communicate adeptly within these situations\.

By embedding authentic medical contexts into the course activities, students would be helped to bridge the gap between language learning and its practical application in their future medical careers. For instance, incorporating role-play scenarios where students simulate patient consultations, medical interviews, or case discussions can provide a holistic understanding of the linguistic nuances required in actual medical settings and also motivate students to develop their English skills. Engaging in these activities not only hones language skills but also cultivates the confidence necessary for effective medical communication (Paltridge & Starfield, 2013).

Lack of practical application and learner engagement

The courses do not offer ample opportunities for practical language application, a feature that has been shown to be highly beneficial for language acquisition (Turan & Akdag-cimen, 2020). Interactive activities, role-plays, and simulations within medical contexts are largely missing from the current curriculum.

The current teaching methods predominantly rely on traditional lecture-based approaches, which may benefit from an infusion of more interactive and participatory strategies. One potential avenue for improvement is to shift towards a more student-led instructional approach. This approach can empower students to take an active role in their learning process, fostering engagement and a deeper understanding of the course content (Edwards & Thatcher, 2004).

A notable area for improvement lies in the integration of practical language use within the courses. Presently, there seems to be a limited emphasis on providing opportunities for medical students to apply their language skills in real-life scenarios. Such scenarios can mirror the challenges medical professionals face when communicating with patients, colleagues, or even writing medical reports.

In conclusion, a shift towards more interactive and practical-oriented teaching methods, combined with authentic language use opportunities, can greatly enhance the effectiveness of these courses. By actively involving students in their learning and providing them with situations that mirror real-life medical interactions, the courses can better align with the language needs and professional aspirations of medical

students.

Medical terminology in isolation

Interestingly, while there is a course dedicated to medical terminology, students expressed a preference for learning these terms within the context of their other medical courses or real-world applications. This perspective aligns with the broader literature, suggesting that integrated, context-based learning often provides a more holistic understanding of subject matter.

One of the notable findings from the study is the students' perspectives on the course dedicated to medical terminology. This sentiment is not distinctive to the students in this study but is supported by a growing body of literature advocating for context-based learning (Shehadeh & Coombe, 2012).

Learning medical terminology in isolation can be akin to learning vocabulary without understanding its usage or nuances. While students may memorise terms, the lack of context can result in a superficial understanding, limiting the students' ability to apply these terms effectively in clinical settings (Reynolds et al., 2021).

Contextual learning, on the other hand, allows students to understand not just the 'what' but also the 'why' and 'how' of medical terminology. For instance, learning the term 'myocardial infarction' alongside its treatment protocols, patient symptoms, and diagnostic tests provides a more rounded understanding. This approach aligns with the constructivist theory of learning, which posits that knowledge is best constructed when new information is integrated into existing frameworks (Sung et al., 2022).

Moreover, integrating medical terminology within real-world applications or clinical rotations can enhance retention and practical application. Students are more likely to remember terms that they have used in patient consultations or have come across in medical records (Alcina, 2011).

Students in this study did not dismiss the standalone course on medical terminology as irrelevant. Instead, they suggested that its educational impact could be amplified if integrated with other medical courses. Such an integrated approach would offer a more contextualised and holistic learning experience, better preparing them for real-world medical scenarios (Alcina, 2011)..

Overall, the analysis reveals that the three courses – Medical Terminology, Medical Visual Culture, and Illness Narratives – inadequately address the English language needs of medical students in the target situation and their specific language learning requirements. In summary, these courses fall short in catering to the language needs of medical students in a number of respects.

Stakeholders' evaluations of EMP courses confirmed this misalignment where many physicians feel the EMP courses were not helpful for addressing their current workplace language needs, and, as a result, they were compelled to seek learning resources outside of the university setting. While courses such as Medical Visual Culture and Illness Narratives offer some content aimed at fostering intercultural awareness among medical students, they do not meet the specific intercultural needs identified by physicians for the target learners in the context under study. Conversely, the physicians emphasised that the training should concentrate on strategies for

interacting with international patients who have limited English proficiency and those who may possess minimal understanding of TCM.

The findings of this research provide empirical evidence to bolster the ongoing discourse advocating for the enhancement of EMP practices in China (Yu & Liu, 2018). Despite the growing consensus on the importance of English for EMP education, there is a notable absence of research scrutinising the effectiveness of these EMP courses in achieving this objective. Prior to this research, the disparity between the existing EMP curricula and the actual needs of students remained unexplored and unsupported by empirical data in the context of China. This study fills this crucial gap by providing an evidence-based understanding of where the misalignments lie.

The identification of these misalignments offers practical insights for curriculum improvement. By pinpointing these misaligned areas, this research serves as a foundation for recommendations aimed at refining EMP practices at the case university.

5.3 How EMP practice can be improved

5.3.1 Align curriculum objectives with target needs

To comprehensively address the pinpointed target needs within the EMP curriculum, a primary recommendation emerges: the thorough re-design of EMP courses, ensuring that the course objectives are tailored to the identified target needs (e.g., communicating with international patients who may speak limited English; writing English journal articles). Many ESP scholars have emphasised the importance of aligning ESP course objectives with the learners' target needs (Hutchinson & Waters, 1987; Li & Flowerdew, 2020). Beyond the enhancement of linguistic proficiency, the integration of intercultural competency training becomes imperative, especially within situations such as communicating with international patients who have limited English proficiency and prescribing TCM or effectively conveying TCM information to international patients. This multifaceted approach acknowledges the intricate nature of communication in medical contexts and aims to equip learners with the necessary skills to navigate the complexities of cross-cultural interactions.

5.3.2 Early clinical exposure

The undergraduate students exhibit a lack of awareness regarding the significance of learning EMP. Their attention seems predominantly fixated on the attainment of satisfactory scores in standardised language assessments, such as the CET. Undergraduate students' lack of awareness of the eventual utility of improving their medical English diminishes their motivation to participate enthusiastically and with commitment in EMP courses. To overcome this, it is essential to emphasise the practical significance of EMP for their future medical careers, perhaps especially regarding communication with English-speaking patients and colleagues.

Accordingly, this suggestion revolves around exposing undergraduate students to clinical settings during their early stages of learning. By immersing them in real-world clinical scenarios that involve the use of English, these budding medical

professionals can not only better comprehend the practical application of EMP skills but also cultivate a heightened sense of relevance and motivation for their English language learning journey. This approach resonates with the discourse in the medical education literature that advocate for early clinical engagement to bridge the theory-practice gap (Liu et al., 2022).

5.3.3 Pedagogical shift

The recommendation on pedagogical shift stems from both postgraduate students and physicians advocating a transformation in teaching approaches in the EMP curriculum, specifically endorsing more interactive and participatory pedagogical methods. The incorporation of simulated practice sessions and the utilisation of interactive instructional techniques – such as student-led role-playing and discussions – have the potential to empower learners to take an active role in their own language development (Ashida & Otaki, 2022; Bagacean et al., 2020; Hild et al., 2021; Shriner & Hickey, 2008).

Students and physicians felt that they lack opportunities to practise using English in real-life situations. One potential solution is to simulate real clinical situations using standardised patients, which would allow students to practise their speaking and listening skills while also interacting with patients (Ypinazar & Margolis, 2006). However, finding standardised patients can be challenging. Another potential solution is to have students take turns playing the role of mock patients, which would allow for regular practice of these skills (McGaghie et al., 2010).

Yeung (2019) showed that peer role-play (students act as patients and physicians) and simulated patients (actors act as simulated patients) could enhance nursing students' self-efficacy and improve their performance in adverse event disclosure in a simulated environment in Hong Kong. The effectiveness of these two training methods has also been demonstrated by other researchers (Ashida & Otaki, 2022; Bagacean et al., 2020; Hild et al., 2021; Shriner & Hickey, 2008). Hild et al (2021) used international medical students in role-play to improve Hungarian medical students' English language competence. The results showed that the Hungarian medical students were motivated and enthusiastic to use English during the role-plays.

Shriner and Hickey (2008) demonstrated over a decade ago that using simulated patients improved medical students' confidence in dealing with patients who have language and cultural barriers. More recent research conducted by Ashida and Otaki (2022) also revealed that the use of English-speaking simulated patients in Japanese medical students' EMP courses was effective in better facilitating students in respect of their communications with international patients, both linguistically and in terms of cultural sensitivity. However, in Japan, many of these simulated patients were recruited from local communities and received little training on performance, impacting the EMP training outcomes. Therefore, Ashida and Otaki (2022) suggested that it is necessary to find ways to ensure the availability, quality, and sustainability of trained English-speaking simulated patients to include more practice in EMP classes.

In the case of Chinese EMP classrooms – as is also the case in Japan (Ashida & Otaki, 2022) – where professional actors (English-speaking simulated patients) are a

reasonably readily available resource, peer role-play could be adopted in EMP classes to enhance Chinese medical students' clinical consultation skills with patients in English.

5.3.4 Providing opportunities to practise

Both students and physicians who were interviewed expressed a strong desire for more opportunities to practise their English language skills, specifically in writing and oral communication. They noted that the current English courses available to them do not adequately provide these opportunities. Oral practice enables students to harness the power of spoken language, refining their articulation, intonation, and clarity in conveying medical information. This facet of practice particularly aids in honing their ability to communicate with patients, colleagues, and medical professionals in diverse clinical situations. On the other hand, written practice accentuates the importance of precision and clarity in documenting medical information (Hyland, 2006). By engaging in exercises that involve composing academic papers, students refine their aptitude for crafting well-structured and scientifically rigorous narratives in English (Brown, 2007).

In essence, this recommendation aims to change the EMP educational experience from a static classroom setting into a dynamic journey of ongoing growth. By offering students a diverse range of practical opportunities, EMP education not only reinforces classroom learning but also encourages continuous practice and skill enhancement.

5.3.5 Encouraging students to use various learning resources

In this research, interviewed students and physicians often found that the resources provided by the case university did not fully meet their English learning needs. In such instances, they frequently turn to alternative educational platforms, such as specialised websites, mobile applications, and online courses. This highlights the importance of cultivating a learning environment that encourages resourcefulness and self-directed learning (Guy & Marquis, 2016). Educators can significantly contribute to this adaptive learning ecosystem by guiding students toward reliable and effective external resources, thereby enriching their academic experience and promoting a more comprehensive educational approach (Haydon, 2003).

By encouraging students to embrace a diverse array of resources, EMP education can transcend the boundaries of conventional methodologies and engender a well-rounded learning experience that equips students with the adaptability and resilience necessary to excel in the multifaceted world of medical communication and practice.

5.3.6 Re-design materials

In the realm of ESP, the significance of contextualised learning materials cannot be overstated (Hutchinson & Waters, 1987). Language skills, particularly in a specialised field like medicine, are most effectively honed when learners engage with content that resonates with their real-world experiences. However, the implementation of this recommendation is not without challenges. One of the key hurdles faced by EMP

teachers in this research is the scarcity of readily available and suitable practice materials tailored to the intricacies of the Chinese healthcare context. The shortage of resources that adequately address the language needs of medical professionals poses a significant impediment to effective EMP instruction. Such challenge has also been found by Khalili and Tahririan (2020).

In the light of these challenges, the adaptation and creation of practice materials should be regarded as a collaborative endeavour that involves the combined expertise of EMP educators, medical practitioners, and language specialists (Khalili & Tahririan, 2020). The development of these materials requires a deep understanding of the intricacies of medical communication and an awareness of the specific linguistic hurdles faced by professionals in the Chinese healthcare domain.

5.3.7 Providing tailored tutorials in EMP writing training and feedback

In contrast to large classes where individual attention may be limited, postgraduate medical students and physicians feel that tailored tutorials for EMP writing for undergraduate students could offer a more effective and personalised learning experience.

Moreover, tailored tutorials can be customised to meet the specific language proficiency levels and medical backgrounds of students. This flexibility can help ensure that the content and pace of the training align with the learners' abilities, ensuring a more comfortable and productive learning environment (Zhang & Zhang, 2023).

Furthermore, the need for effective and efficient feedback mechanisms for refining writing skills is also suggested by postgraduate students and physicians. The conventional approach of delivering instruction in large classroom settings, while suitable for imparting general knowledge, often falls short in addressing the nuanced intricacies of writing skills development (Yin, 2019). Acknowledging this limitation, a shift towards a more tailored approach may be an effective strategy in nurturing students' writing proficiency.

5.3.8 Cultivating intercultural competence in EMP education

As emphasised by students, physicians and medical teachers in the interviews, clinical practice frequently involves interactions with non-native English speakers, outnumbering the instances of interactions with native English speakers. Despite this, English remains the predominant language of communication with non-Chinese patients. Consequently, physicians often find themselves in situations where they need to employ distinct communication skills to effectively engage with these international patients, who might possess limited proficiency in English.

As the majority of interactions with non-Chinese patients involve non-native English speakers, the focus of EMP training may extend beyond conventional English language skills. Specifically, EMP training needs to encompass intercultural communication competencies that enable medical students to understand and adapt to the cultural nuances and communication preferences of diverse patient groups and to

navigate cross-cultural interactions effectively.

In addition, understanding different cultures is especially important, particularly when prescribing TCM to international patients, as physicians must be able to explain treatments effectively in English while being sensitive to cultural differences (Byram & Neuner, 2003).

In situations when medical professionals are dealing with international patients, communication transcends language barriers and requires navigating various cultural sensitivities; language department may play a role in equipping doctors with both the necessary language skills and the intercultural competence to interact proficiently with patients from diverse backgrounds (Byram & Neuner, 2003).

Therefore, intercultural competence training is an essential component. Placing such training within the EMP curriculum is appropriate because by integrating intercultural competence training into this context, medical students can enhance their language skills while also learning how to navigate intercultural interactions effectively.

Furthermore, by learning language in the context of medical communication, students can better understand how culture influences language use and vice versa. This awareness can facilitate a deeper integration of language and cultural understanding, empowering medical students once they enter the medical field to communicate effectively with patients from different cultural backgrounds.

5.3.9 Balance EGP and EMP in medical education

Currently, medical faculties in Chinese universities place a strong emphasis on EGP as the primary language teaching focus, providing undergraduate medical students with a comprehensive language learning experience encompassing listening, speaking, reading, writing, and translating/interpreting (Yu & Liu, 2018).

At this case university, although EGP only serves as the foundational stage for learners in their first year of study, feedback from students reveals that many perceive these EGP courses as repetitive and akin to what they have already learned in high school. Consequently, there is a growing sentiment among students that the EGP courses can be reduced or eliminated. This sentiment aligns with the arguments of several Chinese researchers (Luo & Garner, 2017; Yu & Liu, 2018) who advocate the exclusion of EGP in favour of ESP, a position supported in many ways by the findings of this research, which highlights the underutilisation of EMP.

Interviews with senior undergraduate and postgraduate medical students underscore their desire to enhance their EGP skills, especially in English speaking and listening. Despite performing well, relative to their peers in other universities across China, in the CET-4 test, these students express dissatisfaction with their aural-oral English abilities. This discrepancy may be attributed to the English education system in China, which places more emphasis on reading and writing training, while neglecting speaking and listening ability development (Butler, 2014; Dali, 2017).

Based on these findings, a potential approach is to retain EGP courses but with reduced emphasis, offering more focused training in speaking and listening. This adjustment would cater to students' expressed learning need for improvement in these

essential English speaking and listening skills in EGP. Moreover, students suggest that teaching time for speaking and listening can be reduced while providing more opportunities for practical application and practice. This approach could be integrated throughout the entirety of medical education, rather than being limited to the first year of undergraduate study.

5.4 Challenges in implementing EMP training

5.4.1 Lack of support from medical schools

The findings reveal a lack of support from the case university in improving EMP education in medical curriculum. One of the primary issues is the prevailing emphasis on medical subject knowledge over language training within medical school curricula (Yang et al., 2019). As medical education places heavy demands on students, language proficiency, including EMP, is often perceived as a secondary concern or even an unnecessary distraction. This lack of priority given to language training can lead to inadequate resources, time, and attention being dedicated to students' developing language skills.

Medical education, by its very nature, places significant academic and time demands on students. In such a high-pressure environment, language proficiency, including EMP, tends to be relegated to a secondary status. This perception poses risks for their future professional interactions, where language barriers can lead to medical errors or misunderstandings (Lu et al., 2012).

5.4.2 EMP teachers' lack of motivation

A lack of motivation among EMP teachers to actively participate in the enhancement of the EMP curriculum was observed. This may be the result of the prevailing priorities within the case university and other universities in China. Universities in China prioritise research over teaching in their faculty promotion mechanisms, as highlighted by Zhou et al. (2022). Consequently, teachers are disinclined to allocate time and effort to the enhancement of curriculum and teaching methods. This is particularly evident in certain Chinese universities where the pursuit of higher rankings and reputation takes precedence over ensuring teaching quality. This results in a disproportionate emphasis on research productivity while diminishing the significance of effective teaching (Li et al., 2023; Zhou et al., 2022). The weighty responsibilities and demands placed on teachers for research-related tasks further reduce their capacity to focus on teaching requirements. The outcome is that teachers are compelled to channel their energy primarily towards research endeavours, leaving them with limited opportunity to engage in comprehensive curriculum development and substantial improvements in teaching methods.

5.4.3 Lack of real-word clinical communication materials

Improving English speaking and listening skills requires the integration of more simulated practice into EMP courses. However, EMP teachers felt that they encounter obstacles due to the limited availability of suitable practice materials aligned with

real-world communication scenarios in the Chinese healthcare context. Developing and adapting resources to address this shortfall may help enhance the effectiveness of EMP training.

At the same time, it is important to appreciate and acknowledge that the process of materials development is intricate and may demand a collaborative endeavour involving EMP instructors, medical practitioners, curriculum designers, and language specialists (Basturkman, 2005).

5.5 Chapter summary

This study pinpointed previously unrecognised target needs in Chinese healthcare context: communicating effectively with international patients who may have limited proficiency in English and conveying TCM information to international patients who might have a limited understanding of TCM. These focal points underscore the physicians' abilities not only to engage with international patients in clinical settings proficiently but also to navigate the accompanying intercultural challenges adeptly. Such competencies go beyond mere linguistic proficiency, encompassing skills that extend beyond just English speaking and listening abilities. Despite their significance, these aspects have not received adequate attention in the past.

In addition, this study has shed light on a distinct aspect in comparison to existing literature, as it revealed a narrower range of target needs while highlighting the significance of intercultural communication between physicians and international patients who may speak limited English. Notably, the exploration of this aspect has been relatively limited in previous literature that focuses on EMP needs and education in other countries, rendering it a distinctive focus within the Chinese healthcare context.

Furthermore, this research has generated valuable insights into potential pedagogical strategies, notably proposing alternative approaches to traditional lectures, such as simulated conversation sessions. It is noteworthy that while these innovative strategies exhibit promising potential, their incorporation into EMP instruction remains relatively uncommon within the Chinese educational landscape.

A noteworthy finding of this study is the misalignment that surfaced between the identified target and learning needs and the prevailing EMP curriculum offered by the case university. This misalignment underscores the need for a comprehensive reassessment of the EMP curriculum to ensure its effectiveness and relevance in equipping medical students with the requisite language skills for their future professional contexts. It also emphasises the importance of curricular evolution to address the evolving demands and complexities of the medical field.

In summary, this research not only contributes a novel dimension by highlighting the intercultural communication challenges faced by physicians but also underscores the potential of innovative pedagogical methods within EMP education. The identified incongruity between perceived needs and the current curriculum underscores the dynamic nature of language education and the necessity of continuous adaptation to cater to the evolving requirements of healthcare professionals.

Chapter 6: Conclusion

This chapter begins by revisiting the research questions and offers comprehensive answers to each in the initial four sections of the chapter. Subsequently, it presents the contribution to scholarly knowledge made by this study, outlines its limitations, and provides recommendations for future research.

The four research questions of this study are:

1) To prepare Chinese medical students for their future careers, what are their EMP 'target needs' and EMP 'learning needs'?
2) How well does the current EMP training at a case university align with the above identified needs?
3) How could EMP practice be improved?
4) What are the potential challenges in improving EMP, based on stakeholders' perceptions?

6.1 The EMP target needs and learning needs

EMP target needs

The identified EMP target needs include writing English journal articles, reading medical literature in English, communicating with international patients who may speak limited English, presenting at conferences, and translating medical texts from English to Chinese.

Although there are some similarities, the number of EMP needs identified in this study is relatively lower when compared to the comprehensive list presented by Paltridge and Starfield (2013a). Notably absent are needs related to composing English prescriptions or engaging in professional discussions with English-speaking colleagues, as well as participating in postgraduate courses conducted in English.

What previous research on EMP target needs has not highlighted, but is distinctive within the Chinese healthcare context, is the specific challenge physicians face when engaging in communication with international patients. This challenge becomes particularly pronounced when the patients have limited English proficiency and when it involves prescribing TCM or conveying TCM-related information in English to patients who may possess limited or no understanding of TCM principles. This has not been widely explored in EMP in the context of China.

Among these target needs, what physicians particularly 'want' to improve are clinical communication with international patients and writing SCI standard journal articles. These needs can be prioritised over other target needs (e.g., presenting at conferences; translating medical books) in EMP education for the target learners at this case university.

EMP learning needs

The stakeholders' perceptions on undergraduate medical students' EMP learning needs are enriching vocabulary, reading extensively, early exposure to clinical

settings, using alternative methods to traditional lectures, keeping practising, keeping students engaged, utilising various sources. While some of these facets (e.g., enriching vocabulary, reading a lot) have found mention in previous literature (Chen, 2016; Kvashnina & Martynko, 2016; Narayana, 2023; Yufrizal, 2019) in the field of second language acquisition, the study casts light on the distinctive perspectives of early clinical exposure and the integration of alternative pedagogical methods. While the concept of early clinical exposure has been a subject of consideration in the literature regarding the development of integrated medical curriculum (Ewnte & Yigzaw, 2023; Liu et al., 2022; Simmenroth et al., 2023), it has yet to be extended as a suggestion for EMP instruction. These novel viewpoints rejuvenate the discussion, spotlighting innovative strategies that help elevate EMP instruction beyond the realm of conventional language learning.

6.2 The alignment between language needs and the current EMP curriculum

The current EMP curriculum at this university falls short of adequately addressing the EMP target needs and learning needs of undergraduate medical students for their future careers. The courses exhibit deficiencies in providing relevant language training, practical language use, and effective intercultural communication training in the target clinical situations identified by this study.

The existing EMP learning objectives, though noteworthy, appear to lack a comprehensive coverage of the EMP situations that students are likely to encounter in their forthcoming medical careers. Notably, the courses Medical Visual Culture and Illness Narratives, while undoubtedly valuable in cultivating a broader understanding of healthcare contexts, seem to be more aligned with disciplines in the humanities or arts, rather than directly addressing the linguistic demands of medical practice, or cultivating the intercultural competency that is required in the target situations identified by this study.

Presently, the predominant teaching methods heavily lean towards traditional lecture-based approaches, which could potentially benefit from an infusion of interactive and participatory strategies to enhance engagement and skill acquisition. While the assortment of course activities may seem diverse, a critical assessment uncovers a notable deficiency – the absence of a direct integration within medical contexts. The reliance on quizzes, tests, and written assignments, while valuable in certain respects, seems likely to fall short in providing a comprehensive articulation of medical students' capacity to communicate effectively and function in English within the intricate and demanding landscape of medical situations.

6.3 Suggestions for improving EMP training

This research study has unearthed a comprehensive array of insights aimed at elevating the quality of EMP instruction at the university in question.

Firstly, there is a pressing need to recalibrate the EMP course objectives to align them more closely with the identified target needs of the student body.

Secondly, early exposure to clinical scenarios that require English proficiency can serve as a motivational catalyst for junior undergraduate students, thereby enhancing

their engagement levels.

Thirdly, the adoption of interactive teaching strategies, such as simulated patient dialogues, peer-to-peer role-playing, and other dynamic instructional techniques, is recommended.

Fourthly, by offering students ample opportunities for both oral and written English practice, language skills are not just refined but also sustained over time, thereby laying a robust foundation for effective medical communication.

Fifthly, students should be encouraged to tap into a diverse range of learning resources, whether institutional or external. This multi-pronged approach to learning would be further enriched by the inclusion of digital tools, supplementary materials, and textbooks.

The sixth recommendation addresses the complex challenge of developing practice materials that authentically reflect real-world communication scenarios within the Chinese healthcare system. Customised resources that mirror genuine medical interactions can enable students to fine-tune their language skills in a context that is highly relevant to their future careers.

The seventh recommendation advocates for a shift in the feedback paradigm, emphasising the need for targeted guidance. Unlike generic instruction, a tailored feedback mechanism allows students to identify and address specific areas for improvement, thereby enhancing their proficiency in the nuanced field of medical communication.

Eighthly, given the global nature of medical practice, the integration of intercultural competency training within EMP curricula is important. This would help equip future healthcare professionals with the skills needed to navigate cross-cultural communication barriers, especially when discussing TCM concepts with international patients or those with limited English proficiency.

Lastly, the study underscores the need for a balanced approach between EGP and EMP within the broader medical curriculum.

By adopting these recommendations, the university stands to enhance its EMP instruction, thereby equipping future healthcare professionals with the language proficiency and intercultural skills they need to excel in their medical careers.

6.4 Potential challenges in improving EMP

Potential challenges in improving EMP in Chinese medical education were also identified in interviews. The principal challenges are a lack of support from the university, teachers' lack of motivation for EMP improvement, and the lack of suitable teaching materials for use in the Chinese healthcare context.

One of the primary challenges to improving EMP lies in the prioritisation of medical subject knowledge over language training by the medical school at this case university. Medical education is demanding, and students often face significant academic pressure. As a result, language training, including EMP, can be perceived as a secondary concern.

EMP teachers exhibit a lack of motivation when it comes to actively engaging in the improvement of the EMP curriculum. This lack of motivation can probably be

attributed to the prevailing promotion mechanisms at the case university, where, in common with other Chinese universities, an emphasis on research output tends to take precedence over the enhancement of teaching quality. As a result, the incentive for teachers to invest time and effort in EMP curriculum development and teaching improvement is diminished.

The availability of high-quality and contextually relevant EMP teaching materials tailored to the Chinese healthcare setting remains limited. Courses that specifically address clinical communication skills in English within the Chinese medical context are lacking. As a result, the EMP curriculum may struggle to provide relevant and practical training for medical students to excel in real-world medical interactions.

6.5 Contribution

Previous studies on improving EMP for Chinese medical students have focused on identifying the overall EMP target situations for Chinese physicians, akin to Hutchinson and Waters' ESP needs analysis framework concept of 'necessities' (Li & Flowerdew, 2020; Liu et al., 2015). In a departure from this approach, the current study also examined the other dimensions within this framework, specifically the 'wants' and 'learning needs', to pinpoint areas where the target students aspire to enhance their proficiency and to identify potentially beneficial learning methodologies.

This research has unveiled distinctive intercultural clinical communication hurdles encountered by Chinese students and physicians when speaking in English with international patients who are non-native English speakers, which requires a different set of communication skills compared with speaking in English to native English speakers. This challenge becomes especially pronounced when physicians are required to prescribe TCM or convey information about TCM to patients possessing limited familiarity with TCM. Moreover, the study has shed light on the potential efficacy of pedagogical shifts in enhancing EMP instruction and learning. Additionally, it has defended the argument that early exposure to clinical settings could play a pivotal role in instilling within students a greater awareness of the value of mastering EMP.

This research also revealed the different perceptions on English language learning held by medical students and physicians at different stages of their learning and careers. These differences encompassed several dimensions, including their comprehension of the EMP concept, learning motivation, willingness to engage, preferred learning strategies, and perspectives on EMP in contrast to EGP learning.

Moreover, this research pinpointed potential obstacles to the enhancement and implementation of EMP courses at the case university. These challenges stem from a range of issues including the limited support from the medical school, a deficiency in teacher motivation to advance their teaching practice, and a scarcity of high-quality teaching materials for clinical communication scenarios in English within the Chinese healthcare context.

Furthermore, it is intriguing to discover that even in a prestigious university in Beijing, there exists a substantial discrepancy between the EMP curriculum offered

and the actual EMP needs of students. This finding raises important questions about the extent to which EMP curricula in other universities across China are tailored to meet the specific needs of their student populations, an area that remains unexplored.

It is important to emphasise that this research is not intended to propose universally applicable recommendations for every region within China. Instead, the findings serve as a call to action for universities across China, prompting them to be more vigilant in assessing whether their EMP courses effectively cater to the EMP needs of their students.

6.6 Limitations

'Needs'

As a result of the absence of a measurement for learners' anticipated outcomes in EMP learning, the 'lacks' category within Hutchinson and Waters' needs analysis framework (1987) was not subject to assessment. Instead, the study focused on the analysis of stakeholders' viewpoints regarding these perceived 'lacks'.

Sample size

As this study is based on a single case, the sample size available for analysis is limited. In particular, due to the scarcity of EMP teachers, programme leaders, and medical teachers at the university, only a small number of interviews could be conducted with them. However, two rounds of interviews were conducted, with a total of 47 interviewees participating. A total of 294 completed questionnaires were gathered.

It is possible that some respondents gave socially desirable answers. Therefore, caution should be exercised when generalising the findings to other contexts. Further research with larger and more diverse samples is needed to validate and extend these results. Additional studies are also needed to evaluate current EMP practice in other universities in China to enable more robust recommendations on EMP curriculum reform to be made.

Another potential limitation stemming from the methodology is that the participants of the questionnaire may not be fully representative of the total population, given that I utilised convenience sampling rather than a more stratified approach. This sampling strategy may introduce biases as it doesn't ensure every subgroup within the population is adequately represented, potentially affecting the generalisability of the findings.

However, it is crucial to note that the principal data source for this research is the information garnered through interviews, relegating the survey data to a supportive role. Consequently, while the sampling approach might be seen as a limitation, its impact on the overall results may not be significantly detrimental. Nonetheless, future research could benefit from adopting a more rigorous sampling strategy to foster a richer and more nuanced understanding of the themes explored in this study.

Methods

No classroom observation of EMP teaching to medical students could be undertaken,

due to Covid-19 restrictions. This meant that stakeholders' views about their EMP needs could not be triangulated with observational data. In future research, if infectious disease conditions permit, observational data should be collected by observing EMP teaching sessions.

Additionally, when formulating interview schedules, the scarcity of materials on the foreign language requirements for qualified doctors in China hindered my ability to systematically gather information to shape the interview agenda.

Selection bias

It is possible that only those who were interested in English learning chose to participate in this research, whether by returning a completed questionnaire or participating in an interview. While the recruitment advertisement for interviews did not offer any monetary incentives, it did mention that I could offer English language learning support to participants for free, and a small number of interviewees took me up on this. For instance, I assisted some medical students by correcting their grammar when they translated Chinese journal articles into English. During the interviews, many interviewees expressed curiosity about my doctoral research and interest in the interview experience. Although there may be some selection bias in the interviewee selection process, this is unlikely to have a negative impact on the results, as the research focuses on English language needs, and those who are interested in English learning may be able to provide more meaningful information than those who are not interested.

International patients' limited language proficiency

Interviewing international patients with limited proficiency in both English and Chinese introduced challenges to the data collection. Patients' restricted language skills might hinder their ability to express emotions and experiences comprehensively, resulting in superficial or incomplete descriptions.

To address these potential negative impacts, I used simplified language and avoided complex medical terms so as to help such patients better understand the questions and provide more valid responses. I also encouraged patients to seek clarifications and I sometimes paraphrased their responses. I suggested to them that they repeat or use other expressions to express themselves, whenever something was not expressed clearly. I also encouraged them to use Chinese expressions if they wished.

Generalisability

While this research provides valuable insights into this specific context, it is essential to acknowledge that the findings may not represent all medical schools across the diverse landscape of China, indeed are bound not to.

The study was conducted at a university located in the capital city of China. The university is renowned for its medical programmes and attracts students from various provinces and cultural backgrounds. The medical curriculum is rigorous and emphasises both medical knowledge and clinical skills. Due to the focus on a single

medical school, this study's findings are specific to this case university and its distinctive characteristics, which may differ from those in other medical schools across China. Therefore, caution should be exercised when attempting to apply the findings to other institutions.

The context-specific tasks that physicians are required to perform are not the same in different medical settings. The suggested EMP curriculum outlined above is not expected to meet the English language needs of physicians working in all settings. Furthermore, this research was conducted in an urban university in China, so it would not be appropriate to generalise to hospitals in rural areas (for one thing, physicians working in rural areas may not encounter as many English-speaking patients as physicians in urban areas do).

To achieve geographical representation and to obtain a fuller picture of language needs across the country, larger scale survey studies are needed to investigate the perspectives of participants from various medical universities in China and from a greater number of majors and disciplines. There would also be value in a study that looked more systematically at patient views, as patients are the ultimate beneficiaries of the work that is undertaken by clinical physicians. For example, future studies can investigate international patients' perspectives on their language (discordant) experience when visiting physicians in China.

However, the dilemmas and challenges of implementing EMP, as identified in this study, shed light on the reasons behind the limited attention given to EMP practice in China, despite advocacy from many scholars. The empirical evidence from this research provides significant insights into the barriers faced by medical schools and educators in effectively integrating EMP into the medical education curriculum.

Effectiveness

The suggestions for improving the EMP curriculum were not validated in this study; therefore, it remains uncertain whether a new curriculum would yield the intended outcomes. Further research could investigate the extent to which the recommended EMP curriculum would effectively address the English language learning needs of the target learners.

6.7 Recommendations for future studies

Geographical representation

Conduct larger-scale survey studies to encompass participants from various medical universities across China. This will provide a more comprehensive understanding of the English language needs and challenges faced by medical students and physicians in different regions of the country. Including a diverse range of universities and disciplines will offer insights into the specific language demands across various medical specialities.

Longitudinal studies

Conduct longitudinal studies to evaluate the effectiveness of suggested EMP courses when implemented in medical education programmes. Tracking the language

development and communication abilities of medical students over time will provide valuable data on the impact of EMP training on their language proficiency and clinical practice.

Interdisciplinary approach
Employ an interdisciplinary approach to explore the integration of EMP with other medical disciplines and courses. Investigate how EMP can be effectively incorporated into medical curricula to ensure seamless language skill development alongside medical knowledge acquisition.

Faculty development
Investigate the professional development needs of EMP instructors to enhance their pedagogical skills and expertise in delivering effective language training to medical students. Empowering teachers with the necessary tools and resources should improve the quality of EMP courses.

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Appendices

Appendix A1 Background questionnaire and interview schedule for undergraduate medical students (First round)

A1.1 Background questionnaire for undergraduate medical students

The purpose of this questionnaire is to gather information about your background as a medical student. Please answer as completely as you can.

1. Are you majoring in Clinical Medicine (five-year degree undergraduate programme) at this university? (Please answer 'Yes' or 'No'):
2. Which year of study are you in? (For example, if you are in your first year, please write '1'):
3. Age:
4. Gender:
5. First language(s) from birth:
6. City of taking "Gaokao":
7. What is your English test score in "Gaokao"?
8. What is your test score in College English Test Band 4? (if applicable)
9. How would you rate your English proficiency level? (1=very poor, 5=excellent)

Skills	Sub-skills	My current ability in this skill is:				
		1	2	3	4	5
Listening	Listening to patients talking in English					
	Listening to colleagues talking in English					
	Listening to medical lectures in English					
Speaking	Speaking to public on medical issues					
	Speaking to colleagues in English					
	Discussing medical issues at conferences					
	Speaking to patients in English					
Reading	Reading medical journal articles in English					
	Reading medical books in English					
Writing	Writing medical journal articles in English					
	Writing prescriptions in English					
Translating/ interpreting	Translating journal article abstracts					
	Interpreting in clinical settings					

10. Have you been to other countries?
    If yes, please complete table below. (You do not need to specify your experience when the total duration of being in this country is less than 7 days.)

    Country:
    Period (mm/yyyy – mm/yyyy):

Purpose (e.g., travel, study, visiting families):

Country:
Period (mm/yyyy – mm/yyyy):
Purpose (e.g., travel, study, visiting families):

Add more___

11. Have you taken any EAP/EMP courses since you were enrolled at this university? If yes, which one have you taken?
12. Have you had training in English outside of what is offered for everyone in school?
13. Approximately what percent of the time do you use English (as opposed to other languages) in daily life outside of class?
14. Approximately what percent of the time do you use English (as opposed to other languages) in your current degree programmes?
15. Approximately hat percent of the time do you use English (as opposed to other languages) in your EMP course specifically?

A1.1 Interview schedule for undergraduate medical students

1. Can you tell me what motivated you to learn English?
2. How have you found learning and using English in general so far?
3. How have you found learning and using English in a healthcare related context (e.g., communicating with patients or other English-speaking colleagues)?
4. Have you encountered any difficulties in learning and using English in healthcare related context? If yes, could you tell me what you have encountered and how you dealt with them?
5. Can you tell me what you would like to do within medicine after you graduate and in what setting (e.g., emergency, GP surgery, palliative care)?
6. What tasks will you need to do in English in your future envisaged career?
7. What English language/communication abilities do you envisage you will need to do these tasks?
8. Can you give me some examples when English is used in your undergraduate studies at this university?
9. Can you give me some examples when English is used in your clinical practice in hospitals (if applicable)?
10. In order to perform well in your research-related tasks, what English language skills do you think are the most important? Why?
11. In other to perform well in your clinical tasks, what English language skills do you think are the most important? Why?
12. How does your current English ability measure up to what you will be expected to do in such a job post-graduation?
13. Would you like to improve your English language skills in healthcare-related contexts? If yes, which aspects do you feel are most important? Why?
14. Which EMP courses have you taken at this university? What do you feel are the strengths and weaknesses of these courses (e.g., course duration, stated objectives, pedagogies, teaching materials, grading procedures etc.)? Why?
15. Do you intend to take any other EMP courses? Why or why not?
16. What strategies are you using to enhance your language learning in your EMP courses?
17. What strategies are you using to enhance your language learning in your knowledge/understanding of medical English in general?
18. How well do you think the current EMP course at this university prepare you for your current academic studies at this university and your future envisaged career?
19. Do you have any final thoughts on how the EMP courses at this university could better meet your language learning and communication needs?
20. Have you taken any EMP courses apart from those provided by this university? If yes, what courses have you taken? Why? Can you tell me more about the differences between EMP courses provided at this university and those you have taken outside this university?

Appendix A2 Background questionnaire and interview schedule for postgraduate medical students (First round)

A2.1 Background questionnaire for postgraduate medical students

The purpose of this questionnaire is to gather information about your background as a medical student. Please answer as completely as you can.

1. Age:
2. Gender:
3. First language(s) from birth:
4. Do you hold an undergraduate degree (five-year programme) in Clinical Medicine from this university?
5. Which year did you graduate from this programme?
6. Do you hold any other degree? If yes, what other degrees do you currently hold?
7. Are you currently studying full time?
8. Which university are you currently studying at?
9. In what subject are you currently majoring?
10. What is your test score in College English Test Band 4 and 6?
11. Please tick in the box below the importance of English language sub-skill you think for performing research-related tasks and clinical tasks (1=not important, 5=very important).

Skills	Sub-skills	For research-related tasks					For clinical tasks				
Listening	Listening to patients talking in English	1	2	3	4	5	1	2	3	4	5
	Listening to colleagues talking in English										
	Listening to medical lectures in English										
Speaking	Speaking to public on medical issues										
	Speaking to colleagues in English										
	Discussing medical issues at conferences										
	Speaking to patients in English										
Reading	Reading medical journal articles in English										
	Reading medical books in English										
Writing	Writing medical										

	journal articles in English										
	Writing prescriptions in English										
Translating/ interpreting	Translating journal article abstracts										
	Interpreting in clinical settings										

12. Have you been to other countries?
    If yes, please complete table below. (You do not need to specify your experience when the total duration of being in this country is less than 7 days.)

    Country:
    Period (mm/yyyy – mm/yyyy):
    Purpose (e.g., travel, study, visiting families):

    Country:
    Period (mm/yyyy – mm/yyyy):
    Purpose (e.g., travel, study, visiting families):

    Add more___

13. Did you take any EMP courses when you were studying at this university? If yes, which courses did you take?
14. Did you have training in English outside of what is offered at this university during your undergraduate study? If yes, what training have you had?
15. Did you take EMP courses in your postgraduate studies? If yes, what courses did you take?
16. Do you plan to take any other EMP courses? If yes, what are they?
17. Approximately what percent of the time do you use English (as opposed to other languages) in daily life outside of class?

    0% 10 20 30 40 50 60 70 80 90 100%

18. Approximately what percent of the time do you use English (as opposed to other languages) in your current degree programmes?

    0% 10 20 30 40 50 60 70 80 90 100%

19. Approximately hat percent of the time do you use English (as opposed to other languages) in your EMP course specifically?

    0% 10 20 30 40 50 60 70 80 90 100%

A2.2 Interview schedule for postgraduate medical students

1. Can you tell me what motivated you to learn English?
2. How have you found learning and using English in general so far?
3. How have you found learning and using English in a healthcare related context (e.g., communicating with patients or other English-speaking colleagues)?
4. Can you tell me what you would like to do after you graduate and in what setting (e.g., emergency, GP surgery, palliative care)?
5. What tasks will you need to do in English in your future envisaged career?
6. What English language/communication abilities do you envisage you will need to do these tasks?
7. How does your current English ability measure up to what you will be expected to do in such a job?
8. Can you give me some examples when English is used in your research-related tasks?
9. Can you give me some examples when English is used in your clinical practice?
10. Have you encountered any difficulties in learning and using English in healthcare related contexts? If yes, could you tell me what you have encountered and how you dealt with them?
11. Would you like to improve your English language skills in healthcare-related contexts? If yes, which aspects do you feel are most important? Why?
12. Which EMP courses have you taken when you were studying for your undergraduate degree at this university? What do you feel are the strengths and weaknesses of these courses (e.g., course duration, stated objectives, pedagogies, teaching materials, grading procedures etc.)? Why?
13. Why didn't you take other EMP courses?
14. (If the interviewee answered "Yes" in Question 14 of Background Questionnaire "Did you have training in English outside of what is offered at this university during your undergraduate study? …") Can you tell me more about the differences between EMP courses provided at this university and those you have taken elsewhere?
15. What strategies did you use to enhance your language learning in your EMP courses?
16. What strategies did you use to enhance your language learning in your knowledge/understanding of medical English in general?
17. Do you have any final thoughts on how the EMP courses at this university could better meet your language learning and communication needs?
18. Have you ever worked with medical interpreters in your clinical practice? If yes, can you give me some examples? How have you found working with medical interpreters?

Appendix A3 Background questionnaire and interview schedule for physicians (First round)

A3.1 Background questionnaire for physicians

The purpose of this questionnaire is to gather information about your background as a medical practitioner. Please answer as completely as you can.

1. Age:
2. Gender:
3. First language(s) from birth:
4. Do you hold an undergraduate degree in Clinical Medicine (five-year programme) from this university?
5. Which year did you graduate from this programme?
6. Do you hold any other degree? If yes, what other degrees do you hold?
7. Can you tell me your work experience by completing the table below?
   Job title:
   Workplace (e.g., XX hospital):
   Department (e.g., orthopedics)
   Period (mm/yyyy – mm/yyyy):
   This job is: Full time__ Part time__ Internship__ Others__

   Job title:
   Workplace:
   Department:
   Period (mm/yyyy – mm/yyyy):
   This job is: Full time__ Part time__ Internship__ Others__

   Add more__

8. Please tick in the box below the importance of English language sub-skill you think for performing research-related tasks and clinical tasks (1=not important, 5=very important).

Skills	Sub-skills	For research-related tasks					For clinical tasks				
Listening	Listening to patients talking in English	1	2	3	4	5	1	2	3	4	5
	Listening to colleagues talking in English										
	Listening to medical lectures in English										
Speaking	Speaking to public on medical issues										

	Speaking to colleagues in English										
	Discussing medical issues at conferences										
	Speaking to patients in English										
Reading	Reading medical journal articles in English										
	Reading medical books in English										
Writing	Writing medical journal articles in English										
	Writing prescriptions in English										
Translating/ interpreting	Translating journal article abstracts										
	Interpreting in clinical settings										

9. Did you take any EMP courses when you were studying at this university? If yes, which courses did you take?
10. Have you had training in English outside of what is offered at this university? If yes, what training have you had?
11. Approximately what percent of the time do you use English (as opposed to other languages) at work?

    0% 10 20 30 40 50 60 70 80 90 100%

12. Approximately what percent of the time do you use English (as opposed to other languages) in daily life outside of work?

    0% 10 20 30 40 50 60 70 80 90 100%

A3.2 Interview schedule for physicians

1. Can you tell me what motivated you to learn English?
2. How have you found learning and using English in general so far?
3. How have you found learning and using English in a healthcare related context (e.g., communicating with patients or other English-speaking colleagues)?
4. What tasks do you need to do in English in your job?
5. What English language/communication abilities do you need to do these tasks?
6. How does your current English ability measure up to what you are expected to do in such a job?
7. Have you encountered any language difficulties in using English to complete the tasks of your job? If yes, could you tell me what they were and how you dealt with them?
8. Would you like to improve your English language skills in healthcare-related contexts? If yes, which aspects do you feel are most important? Why?
9. Which EMP courses have you taken at this university? What do you feel are the strengths and weaknesses of these courses (e.g., course duration, stated objectives, pedagogies, teaching materials, grading procedures etc.)? Why?
10. Were there any other English courses being offered when you were studying at this university? If yes, what were they? Why didn't you take any other EMP courses?
11. What strategies did you use to enhance your language learning in your EMP courses?
12. What strategies have you used to enhance your language learning in your knowledge/understanding of medical English in general?
13. How well do you think the EMP course you took at this university prepared you for job?
14. Do you have any final thoughts on how the EMP courses at this university could better meet your language learning and communication needs?
15. (If the interviewee answered "Yes" in Question 10 of Background Questionnaire "Have you had training in English outside of what is offered at this university? …") Can you tell me more about the differences between EMP courses provided at this university and those you have taken outside this university?
16. Have you ever worked with medical interpreters in your clinical practice? If yes, can you give me some examples? How have you found working with medical interpreters?

Appendix A4 Background questionnaire and interview schedule for EMP teachers

A4.1 Background questionnaire for EMP teachers

The purpose of this questionnaire is to gather information about your background as an EMP teacher. Please answer as completely as you can.

1. Age:
2. Gender:
3. First language(s) from birth:
4. Which EMP course are you teaching at this university?
5. How long have you been teaching this EMP course?
6. Do you teach any other course at this university? If yes, what other courses do you teach? Who are your target audience?
7. Can you tell me your education background?
   Degree:
   Subject:
   University:
   Period (mm/yyyy – mm/yyyy):

   Degree:
   Subject:
   University:
   Period (mm/yyyy – mm/yyyy):

   Add more__

8. Can you tell me your work experience?
   Job title:
   Workplace:
   Period (mm/yyyy – mm/yyyy):
   This job is: Full time__ Part time__ Internship__ Others__

   Job title:
   Workplace:
   Period (mm/yyyy – mm/yyyy):
   This job is: Full time__ Part time__ Internship__ Others__

   Add more__

9. Approximately what percent of the time do you use English (as opposed to other languages) in your class?

   0% 10 20 30 40 50 60 70 80 90 100%

10. Approximately what percent of the English language is required (as opposed to

other languages) in completing your course assignments?

0% 10 20 30 40 50 60 70 80 90 100%

A4.2 interview schedules for EMP teachers

1. How have you found your teaching experience in general?
2. How have you found your English teaching experience at this university so far?
3. Can you give me some examples when English is used in your course?
4. What English language/communication abilities do you envisage your students (undergraduate students in Clinical Medicine) will need to complete tasks in your course?
5. How does your students' English ability measure up to what they will be expected to do in their future jobs?
6. Do you think your students need to improve their English language skills in healthcare-related contexts? If yes, which aspects do you feel are most important? Why?
7. What strategies did you use to design the EMP course you teach?
8. How did you decide the course objectives, course content, pedagogy, grading procedures?
9. Did you conduct English language needs analysis on your target students before you designed the EMP course?
   - If yes, can you explain to me how and when you did this? How did the results of your needs analysis feed into your course design?
   - If no, have you considered doing it? Why or why not?
10. Have you encountered any difficulties in your EMP course teaching? If yes, can you give me some examples?
11. Do you think the current EMP courses provided to undergraduate students in Clinical Medicine at this university need improving? If yes, can you give me some examples? (If the interviewee mentioned any suggestions on improving the current EMP courses, I will then ask:) Do you envisage any feasibility issues in implementing the strategies that you just mentioned? If yes, can you explain what feasibility issues may be?
12. Do you think your students should be given more flexibility in choosing EMP learning contents? Why?
13. What do you feel are the strengths and weaknesses of your EMP course (e.g., course duration, stated objectives, pedagogies, teaching materials, grading procedures etc.)? Why?
14. Do you have any final thoughts on how the EMP courses at this university could better meet your students' language learning and communication needs?

Appendix A5 Background questionnaire and interview schedule for medical teachers

A5.1 Background questionnaire for medical teachers

The purpose of this questionnaire is to gather information about your background as a medical subject teacher. Please answer as completely as you can.

1. Age:
2. Gender:
3. First language(s) from birth:
4. Which courses do you teach undergraduate students in Clinical Medicine (five-year programme) at this university?
5. How long have you been teaching this/each course?
6. Do you teach any other courses at this university? If yes, what other courses do you teach? Who are your target audience?
7. Can you tell me your work experience?
   Job title:
   Workplace:
   Period (mm/yyyy – mm/yyyy):
   This job is: Full time__ Part time__ Internship__ Others__

   Job title:
   Workplace:
   Period (mm/yyyy – mm/yyyy):
   This job is: Full time__ Part time__ Internship__ Others__

   Add more__

8. Approximately what percent of the time do you use English (as opposed to other languages) in your class?

   0% 10 20 30 40 50 60 70 80 90 100%

9. Approximately what percent of your course assignments require the English language (as opposed to other languages) for completion?

   0% 10 20 30 40 50 60 70 80 90 100%

A5.2 interview schedules for medical teachers

1. How have you found your teaching experience in general?
2. How have you found your teaching experience at this university so far?
3. Can you give me some examples when English is used in your class?
4. Can you give me some examples when English is used in your course assignments?
5. How does your students' current English ability measure up to what they are expected to complete tasks in your course?
6. How does your students' current English ability measure up to what they will be expected to do in their future jobs?
7. Do you think your students need to improve their English language skills in healthcare-related contexts? If yes, which aspects do you feel are most important? Why?
8. Can you tell me how well do you know about what EMP courses are being offered to undergraduate students in Clinical Medicine at this university? Do you think the current EMP courses provided to undergraduate students in Clinical Medicine at this university need improving? If yes, can you give me some examples? (If the interviewee mentioned any suggestions on improving the current EMP courses, I will then ask:) Do you envisage any feasibility issues in implementing the strategies that you just mentioned? If yes, can you explain what feasibility issues may be?
9. Do you have any final thoughts on how the EMP courses at this university could better meet your students' language learning and communication needs?

Appendix A6 Background questionnaire and interview schedule for programme leaders

A6.1 Background questionnaire for programme leaders

The purpose of this questionnaire is to gather information about your background as a course administrater. Please answer as completely as you can.

1. Age:
2. Gender:
3. First language(s) from birth:
4. Can you tell me your work experience?
   Job title:
   Workplace:
   Period (mm/yyyy – mm/yyyy):
   This job is: Full time__ Part time__ Internship__ Others__

   Job title:
   Workplace:
   Period (mm/yyyy – mm/yyyy):
   This job is: Full time__ Part time__ Internship__ Others__

   Add more__

5. What language skills does this university expect undergraduate students in Clinical Medicine to have when they graduate? Please rate the importance of the five language skills (listening, reading, writing, speaking, translating) from 1 to 5 for undergraduate students in Clinical Medicine at the this university.

Skills	Sub-skills	The importance of this skill			
		1	2	3	
Listening	Listening to patients talking in English				
	Listening to colleagues talking in English				
	Listening to medical lectures in English				
Speaking	Speaking to public on medical issues				
	Speaking to colleagues in English				
	Discussing medical issues at conferences				
	Speaking to patients in English				
Reading	Reading medical journal articles in English				
	Reading medical books in English				
Writing	Writing medical journal articles in English				
	Writing prescriptions in English				
Translating /interpreting	Translating journal article abstracts				
	Interpreting in clinical settings				

6. What do undergraduate students in Clinical Medicine usually do after graduation? Can you give me some examples of their choices? If you know, roughly what percentage of students have made each choice?

A6.2 interview schedules for programme leaders

1. How were the EMP courses at this university determined? Can you explain to me the process of determining a course at this university in detail? What are the criteria?
2. Why are there no other EMP courses?
3. Why are the EMP courses at this university all optional?
4. Why not have compulsory EMP courses?
5. What does this university expect undergraduate students in Clinical Medicine to be able to do in English when they graduate from this university?
6. How does the English ability of undergraduate students in Clinical Medicine measure up to what they will be expected to do in their future jobs?
7. Are there any official criteria to evaluate EMP teachers' work at this university? If yes, can you explain them to me?
8. Do you think the current EMP courses provided to undergraduate students in Clinical Medicine at this university need improving? If yes, can you give me some examples on the strategies of improving them? Do you envisage any feasibility issues in implementing the strategies that you just mentioned? If yes, can you explain what feasibility issues there might be?
9. Do you have any final thoughts on how the EMP courses at this university could better meet the students' language learning and communication needs?

Appendix A7 Background questionnaire and interview schedule for international patients

A7.1 Background questionnaire for international patients

The purpose of this questionnaire is to gather information about your background as a international patient in China. Please answer as completely as you can.

1. Age:
2. Gender:
3. First language(s) from birth:
4. What languages do you speak? Please fill in the form below:
   Language:
   Level: Proficient___ Advanced___ Intermediate___ Beginner___

   Language:
   Level: Proficient___ Advanced___ Intermediate___ Beginner___

   Language:
   Level: Proficient___ Advanced___ Intermediate___ Beginner___

   Add more___

5. How many years have you been in China?
6. What are your main reasons for being in China (e.g., work, travel, visiting family)?
7. Do you have the experience of seeing physician(s) in hospitals in China?
   If yes, approximately what percent of the time did you use English (as opposed to other languages) in communicating with the physician(s)?

   0% 10 20 30 40 50 60 70 80 90 100%

A7.2 Interview schedules for international patients

1. Can you tell me about your experience of seeing physicians in China?
2. Would you like to share with me any thoughts or feelings on your experience of seeing physicians in China?
3. Have you encountered with any language difficulties while seeing physicians in China? If yes, can you give me some examples?
4. Have you encountered any other difficulties in general while seeing physicians in China? If yes, can you give me some examples?
5. How satisfied are you with the English of physicians you have seen?
6. What is your overall impression of the English language proficiency of the physicians you have seen? How have you found their language skills (e.g., listening, speaking), vocabulary and communication ability?
7. Have you used interpreters when seeing physicians in China? If yes, how have you found using an interpreter when seeing physicians in China? Who hired the interpreter (hospital or yourself)? Was he/she experienced? How helpful was the interpreter?
8. Do you think Chinese medical practitioners need to improve their English language skill? If yes, what language skills you expect Chinese medical practitioners to improve?

Appendix B1 Questionnaire for undergraduate medical students

1. Are you majoring in Clinical Medicine (five-year degree undergraduate programme) at this university? (Please answer 'Yes' or 'No'):
2. Which year of study are you in? (For example, if you are in your first year, please write '1'):
3. Age:
4. Gender:
5. First language(s) from birth:
6. City of taking "Gaokao":
7. What is your English test score in "Gaokao"?
8. What is your test score in College English Test Band 4? (if applicable)
9. Have you been to other countries?
   If yes, please complete table below. (You do not need to specify your experience when the total duration of being in this country is less than 7 days.)

   Country:
   Period (mm/yyyy – mm/yyyy):
   Purpose (e.g., travel, study, visiting families):

   Country:
   Period (mm/yyyy – mm/yyyy):
   Purpose (e.g., travel, study, visiting families):

   Add more___

10. Have you taken any EMP courses at this university? If yes, which one(s) have you taken?

11. Why did you take one or more EMP courses at this university? Please tick in the box below. You can tick more than one box.

To earn credits.	
It is fun/interesting.	
I need it for my target career.	

12. Have you had training in English outside of what is offered for everyone in school?

13. Approximately what percent of the time do you use English (as opposed to other languages) in daily life outside of class?

    0% 10 20 30 40 50 60 70 80 90 100%

14. Approximately what percent of the time do you use English (as opposed to other languages) in your current degree programmes?

0% 10 20 30 40 50 60 70 80 90 100%

15. Approximately what percent of the time do you use English (as opposed to other languages) in your EMP course specifically?

0% 10 20 30 40 50 60 70 80 90 100%

16. How would you rate your English proficiency level? (1=very poor, 5=excellent)

Skills	Sub-skills	My current ability in this skill is:				
		1	2	3	4	5
Listening	Listening to patients talking in English					
	Listening to colleagues talking in English					
	Listening to medical lectures in English					
Speaking	Speaking to public on medical issues					
	Speaking to colleagues in English					
	Discussing medical issues at conferences					
	Speaking to patients in English					
Reading	Reading medical journal articles in English					
	Reading medical books in English					
Writing	Writing medical journal articles in English					
	Writing prescriptions in English					
Translating/ interpreting	Translating journal article abstracts					
	Interpreting in clinical settings					

17. Please tick in the box below the importance of English language skill you think for performing research-related tasks and clinical tasks (1=not important, 5=very important).

Skills	Research-related tasks					Clinical tasks				
	1	2	3	4	5	1	2	3	4	5
Listening										
Speaking										
Reading										
Writing										
Translating/Interpreting										

18. Please tick in the box below the importance of English language sub-skill you think for performing research-related tasks and clinical tasks (1=not important, 5=very important).

Skills	Sub-skills	For research-related tasks					For clinical tasks				
Listening	Listening to patients talking in English	1	2	3	4	5	1	2	3	4	5
	Listening to colleagues talking in English										
	Listening to medical lectures in English										
Speaking	Speaking to public on medical issues										
	Speaking to colleagues in English										
	Discussing medical issues at conferences										
	Speaking to patients in English										
Reading	Reading medical journal articles in English										
	Reading medical books in English										
Writing	Writing medical journal articles in English										
	Writing prescriptions in English										
Translating/ interpreting	Translating journal article abstracts										
	Interpreting in clinical settings										

19. To what extent do you think the course objectives are important for your research-related tasks and clinical tasks? Please tick in box below (1=not important at all, 5=very important).

Course name: Medical Visual Culture (Only complete this section is you have attended this course)										
Course objective	For research-related tasks					For clinical tasks				
	1	2	3	4	5	1	2	3	4	5
Connect interdisciplinary knowledge between the health and humanities.										
Learn and apply interdisciplinary skills.										

Synthesise knowledge over disciplinary boundaries.										
Learn the analytical tools used by health and art historians.										

Course name: Medical Terminology (Only complete this section if you have attended this course)										
Course objective	For research-related tasks					For clinical tasks				
	1	2	3	4	5	1	2	3	4	5
To learn medical terminology										
Learn and apply cross-disciplinary skills to solve problems										
To improve reading skills in medical settings										
To improve communication skills in medical settings										

Course name: Illness Narratives (Only complete this section if you have attended this course)										
Course objective	For research-related tasks					For clinical tasks				
	1	2	3	4	5	1	2	3	4	5
To provide students with a grounding in auto/biographical illness that focus on narratives that focus on aspects of the body.										
To help students reflect upon variants of the experience of illness in various contexts.										
To discover how has the illness impact upon, changed or defined the person and examine the social and cultural contexts of the person's experience of illness.										

20. To what extent do you agree or disagree with the following statements? Please tick in the box below (1 = strongly disagree, 5 = strongly agree).

Statements	1	2	3	4	5
The EMP courses I attended have met my language needs in performing research-related tasks.					
The EMP courses I attended will meet my language needs in performing clinical tasks.					

The EMP courses I attended were helpful in improving my speaking skills.					
The EMP courses I attended were helpful in improving my listening skills.					
The EMP courses I attended were helpful in improving my reading skills.					
The EMP courses I attended were helpful in improving my writing skills.					
The EMP courses I attended were helpful in improving my translating/interpreting skills.					
The duration of EMP courses I attended was appropriate for me.					
The difficulties of EMP textbooks is appropriate for me.					
The EMP course teaching methods are appropriate for me.					
The EMP course assessment procedures are appropriate for me.					

21. Do you have any final thoughts on how the EMP courses at this university could better meet your language learning and communication needs?

Appendix B2 Questionnaire for postgraduate medical students

1. Are you majoring in Clinical Medicine (five-year degree undergraduate programme) at this university? (Please answer 'Yes' or 'No'):
2. Which degree are you perusing for?
3. Age:
4. Gender:
5. First language(s) from birth:
6. City of taking "Gaokao":
7. What is your English test score in "Gaokao"?
8. What is your test score in College English Test Band 4? (if applicable)
9. How would you rate your English proficiency level? (1=very poor, 5=excellent)

Skills	Sub-skills	My current ability in this skill is (1=very poor, 5=excellent):				
		1	2	3	4	5
Listening	Listening to patients talking in English					
	Listening to colleagues talking in English					
	Listening to medical lectures in English					
Speaking	Speaking to public on medical issues					
	Speaking to colleagues in English					
	Discussing medical issues at conferences					
	Speaking to patients in English					
Reading	Reading medical journal articles in English					
	Reading medical books in English					
Writing	Writing medical journal articles in English					
	Writing prescriptions in English					
Translating/ interpreting	Translating journal article abstracts					
	Interpreting in clinical settings					

10. Have you been to other countries?
    If yes, please complete table below. (You do not need to specify your experience when the total duration of being in this country is less than 7 days.)

    Country:
    Period (mm/yyyy – mm/yyyy):
    Purpose (e.g., travel, study, visiting families):

    Country:
    Period (mm/yyyy – mm/yyyy):
    Purpose (e.g., travel, study, visiting families):

    Add more___

11. Have you taken any EMP courses since you were enrolled at this university? If yes, which one have you taken?

12. Have you had training in English outside of what is offered for everyone in school?

13. Approximately what percent of the time do you use English (as opposed to other languages) in daily life outside of class?

    0% 10 20 30 40 50 60 70 80 90 100%

14. Approximately what percent of the time do you use English (as opposed to other languages) in your current degree programmes?

    0% 10 20 30 40 50 60 70 80 90 100%

15. Approximately hat percent of the time do you use English (as opposed to other languages) in your EMP course specifically?

    0% 10 20 30 40 50 60 70 80 90 100%

16. Why did you take one or more EMP courses at this university? Please tick in the box below.

To earn credits.	
It was fun/interesting.	
I needed it for my target career.	

17. Please tick in the box below the importance of English language skill you think for performing research-related tasks and clinical tasks (1=not important, 5=very important).

Skills	Research-related tasks					Clinical tasks				
	1	2	3	4	5	1	2	3	4	5
Listening										
Speaking										
Reading										
Writing										
Translating										

18. Please tick in the box below the importance of English language sub-skill you think for performing research-related tasks and clinical tasks (1=not important, 5=very important).

Skills	Sub-skills	For research-	For clinical tasks

		related tasks									
Listening	Listening to patients talking in English	1	2	3	4	5	1	2	3	4	5
	Listening to colleagues talking in English										
	Listening to medical lectures in English										
Speaking	Speaking to public on medical issues										
	Speaking to colleagues in English										
	Discussing medical issues at conferences										
	Speaking to patients in English										
Reading	Reading medical journal articles in English										
	Reading medical books in English										
Writing	Writing medical journal articles in English										
	Writing prescriptions in English										
Translating/ interpreting	Translating journal article abstracts										
	Interpreting in clinical settings										

19. To what extent do you think the course objectives have been achieved and how important do you think these objectives are for your academic studies and target careers? Please tick in box below (1=not achieved at all, 5=fully achieved).

Course name: Medical Visual Culture (Only complete this section is you have attended this course)										
Course objective	For research-related tasks:					For clinical practice:				
	1	2	3	4	5	1	2	3	4	5
Connect interdisciplinary knowledge between the health and humanities.										
Learn and apply interdisciplinary skills.										
Synthesise knowledge over disciplinary boundaries.										

Learn the analytical tools used by health and art historians.										

Course name: Medical Terminology (Only complete this section if you have attended this course)										
Course objective	For research-related tasks:					For clinical practice:				
	1	2	3	4	5	1	2	3	4	5
To learn medical terminology										
Learn and apply cross-disciplinary skills to solve problems										
To improve reading skills in medical settings										
To improve communication skills in medical settings										

Course name: Illness Narratives (Only complete this section if you have attended this course)										
Course objective	For research-related tasks:					For clinical practice:				
	1	2	3	4	5	1	2	3	4	5
To provide students with a grounding in auto/biographical illness that focus on narratives that focus on aspects of the body.										
To help students reflect upon variants of the experience of illness in various contexts.										
To discover how has the illness impact upon, changed or defined the person and examine the social and cultural contexts of the person's experience of illness.										

20. To what extent do you agree or disagree with the following statements? Please tick in the box below (1 = strongly disagree, 5 = strongly agree).

Statements	1	2	3	4	5
The EMP courses I attended have met my language needs in performing research-related tasks.					
The EMP courses I attended have(will) met(meet) my language needs in performing clinical tasks.					
The EMP courses I attended were helpful in improving my speaking skills.					

The EMP courses I attended were helpful in improving my listening skills.					
The EMP courses I attended were helpful in improving my reading skills.					
The EMP courses I attended were helpful in improving my writing skills.					
The EMP courses I attended were helpful in improving my translating/interpreting skills.					
The duration of EMP courses I attended was appropriate for me.					
The level of difficulties of EMP textbooks was appropriate for me.					
The EMP course teaching methods were appropriate for me.					
The EMP course assessment procedures were appropriate for me.					

21. Do you have any final thoughts on how the EMP courses at this university could have better met your language learning and communication needs?

Appendix B3 Questionnaire for physicians

1. Do you hold an undergraduate degree in Clinical Medicine (five-year programme) from this university?
2. Which year did you start this programme?
3. Age:
4. Gender:
5. First language(s) from birth:
6. Do you hold any other degree? If yes, what other degrees do you hold?
7. Can you tell me your work experience by completing the table below?
   Job title:
   Workplace (e.g., XX hospital):
   Department (e.g., orthopedics)
   Period (mm/yyyy – mm/yyyy):
   This job is: Full time__ Part time__ Internship__ Others__

   Job title:
   Workplace:
   Department:
   Period (mm/yyyy – mm/yyyy):
   This job is: Full time__ Part time__ Internship__ Others__

   Add more__

8. Did you take any EMP courses when you were studying at this university? If yes, which courses did you take?

9. Have you had training in English outside of what is offered at this university? If yes, what trainings have you had?

10. Approximately what percent of the time do you use English (as opposed to other languages) at work?

    0% 10 20 30 40 50 60 70 80 90 100%

11. Approximately what percent of the time do you use English (as opposed to other languages) in daily life outside of work?

    0% 10 20 30 40 50 60 70 80 90 100%

12. Why did you take one or more EMP courses at this university? Please tick in the box below. You can tick more than one box.

To earn credits.	
It is fun/interesting.	
I need it for my current career.	

13. Please tick in the box below the importance of English language skill you think in performing research-related tasks and clinical tasks (1=not important, 5=very important).

Skills	Research-related tasks					Clinical tasks				
	1	2	3	4	5	1	2	3	4	5
Listening										
Speaking										
Reading										
Writing										
Translating										

14. Please tick in the box below the importance of English language sub-skill you think in performing research-related tasks and clinical tasks (1=not important, 5=very important).

Skills	Sub-skills	For research-related tasks					For clinical tasks				
Listening	Listening to patients talking in English	1	2	3	4	5	1	2	3	4	5
	Listening to colleagues talking in English										
	Listening to medical lectures in English										
Speaking	Speaking to public on medical issues										
	Speaking to colleagues in English										
	Discussing medical issues at conferences										
	Speaking to patients in English										
Reading	Reading medical journal articles in English										
	Reading medical books in English										
Writing	Writing medical journal articles in English										
	Writing prescriptions in English										
Translating/ interpreting	Translating journal article abstracts										

	Interpreting in clinical settings										

15. To what extent do you think the course objectives have been achieved and how important do you think these objectives are for your academic studies and target careers? Please tick in box below (1=not achieved at all, 5=fully achieved).

Course name: Medical Visual Culture (Only complete this section is you have attended this course)										
Course objective	For research-related tasks:					For clinical practice:				
	1	2	3	4	5	1	2	3	4	5
Connect interdisciplinary knowledge between the health and humanities.										
Learn and apply interdisciplinary skills.										
Synthesise knowledge over disciplinary boundaries.										
Learn the analytical tools used by health and art historians.										

Course name: Medical Terminology (Only complete this section if you have attended this course)										
Course objective	For research-related tasks:					For clinical practice:				
	1	2	3	4	5	1	2	3	4	5
To learn medical terminology										
Learn and apply cross-disciplinary skills to solve problems										
To improve reading skills in medical settings										
To improve communication skills in medical settings										

Course name: Illness Narratives (Only complete this section if you have attended this course)										
Course objective	For research-related tasks:					For clinical practice:				
	1	2	3	4	5	1	2	3	4	5
To provide students with a grounding in auto/biographical illness that focus on narratives that focus on aspects of the										

body.										
To help students reflect upon variants of the experience of illness in various contexts.										
To discover how has the illness impact upon, changed or defined the person and examine the social and cultural contexts of the person's experience of illness.										

16. To what extent do you agree or disagree with the following statements? Please tick in the box below (1 = strongly disagree, 5 = strongly agree).

Statements	1	2	3	4	5
The EMP courses I attended have met my language needs to in in performing research-related tasks.					
The EMP courses I attended has met my language needs in in performing clinical tasks.					
The EMP courses I attended were helpful in improving my speaking skills.					
The EMP courses I attended were helpful in improving my listening skills.					
The EMP courses I attended were helpful in improving my reading skills.					
The EMP courses I attended were helpful in improving my writing skills.					
The EMP courses I attended were helpful in improving my translating/interpreting skills.					
The duration of EMP courses I attended was appropriate for me.					
The level of difficulties of EMP textbooks was appropriate for me.					
The EMP course teaching methods were appropriate for me.					
The EMP course assessment procedures were appropriate for me.					

18. Do you have any final thoughts on how the EMP courses at this university could have better met your language learning and communication needs?

Chinese version

附录 A1
医学本科生的背景信息问卷调查表和访谈提纲
A1.1 医学本科生的背景信息问卷调查表

此问卷的目的是收集有关你作为医学生的背景的信息。请尽可能完整地回答。

1. 你在这所大学的专业是临床医学（五年制本科）吗？ （请回答”是”或”否”）：
2. 你现在是大几？ （例如，如果你是第一年，请写”1”）：
3. 年龄：
4. 性别：
5. 出生时的第一语言：
6. 参加高考城市：
7. 你在高考的英语考试成绩是多少？
8. 你大学英语四级的考试成绩是多少？ （如果适用）
9. 你如何评价你的英语水平？ （1=非常差，5=优秀）

技能	子技能	我目前在这个技能上的能力是：				
		1	2	3	4	5
听	听病人说英语					
	听同事说英语					
	听英语医学讲座					
说	就医疗问题向公众发表讲话					
	用英语与同事交谈					
	在会议上讨论医疗问题					
	用英语与患者交谈					
读	阅读英文医学期刊文章					
	阅读英文医学书籍					
写	用英语撰写医学期刊文章					
	用英语写处方					
笔译/口译	翻译期刊文章摘要					
	在临床环境中进行口译					

10. 你去过其他国家吗？
    如果去过，请填写下表。 （当你在这个国家的总停留时间少于 7 天时，你无需说明你的经历。）

    国家：
    期间（mm/yyyy - mm/yyyy）：
    目的（例如，旅行、学习、探亲）：

    国家：

期间（mm/yyyy - mm/yyyy）：
目的（例如，旅行、学习、探亲）：

添加更多___

11. 自从你在这所大学就读以来，你是否参加过任何 EAP/EMP 课程？如果是的话，你参加了哪一个？
12. 在学校为每个人提供的课程之外，你是否接受过英语培训？
13. 在课外的日常生活中，你大约有百分之几的时间使用英语（相对于其他语言）？
14. 在你当前的学位课程中，你使用英语（相对于其他语言）的时间大约是多少？
15. 你在 EMP 课程中大约有百分之多少的时间使用英语（相对于其他语言）？

A1.2 医学本科生访谈提纲

1. 你能告诉我是什么是你学习英语的动力来源吗？
2. 到目前为止，你对学习和使用英语的总体感受如何？
3. 你在医疗情境下学习和使用英语的感受如何（例如，与患者或其他说英语的同事交流）？
4. 你在医疗情境下学习和使用英语时遇到过任何困难吗？如果遇到过的话，你能告诉我你遇到了什么以及你是如何处理它们的吗？
5. 你能告诉我你毕业后想在医学领域做什么以及在什么环境下（例如，急诊、全科医生手术、姑息治疗）吗？
6. 在你未来设想的职业生涯中，你需要用英语完成哪些任务？
7. 你认为完成这些任务需要哪些英语语言/沟通能力？
8. 你能给我举一些你在这所大学的本科学习中使用英语的例子吗？
9. 你能给我举一些你在医院临床实践中使用英语的例子吗（如果适用）？
10. 为了在与研究相关的任务中表现出色，你认为哪些英语语言技能最重要？为什么？
11. 为了在你的临床任务中表现出色之外，你认为哪些英语语言技能最重要？为什么？
12. 你目前的英语能力与你毕业后在这样一份工作中的预期表现匹配吗？
13. 你想在医疗情境下提高你的英语语言技能吗？如果是，你认为哪些方面最重要？为什么？
14. 你在这所大学上过哪些 EMP 课程？你觉得这些课程的优势和劣势是什么（例如，课程持续时间、既定目标、教学法、教材、考试等）？为什么？
15. 你是否打算参加任何其他 EMP 课程？为什么或者为什么不？
16. 你在 EMP 课程中使用哪些策略来促进英语学习？
17. 总体而言，你使用什么策略来提高你对医学英语的学习？
18. 你认为这所大学目前的 EMP 课程如何为你未来设想的职业做好准备？
19. 你对这所大学的 EMP 课程如何更好地满足你的语言学习和交流需求有什么想法吗？
20. 除了这所大学提供的课程之外，你还参加过任何 EMP 课程吗？如果参加过，你上过哪些课程？为什么？你能告诉我更多关于这所大学提供的 EMP 课程和你在这所大学以外的课程之间的区别吗？

附录 A2
医学研究生背景信息调查问卷和访谈提纲
A2.1 医学研究生的背景信息调查问卷

此问卷的目的是收集有关你作为医学研究生的背景的信息。请尽可能完整地回答。

1. 年龄：
2. 性别：
3. 出生时的第一语言：
4. 你是否拥有这所大学的临床医学本科学位（五年制课程）？
5. 你是哪一年毕业的？
6. 你有其他学位吗？如果有，你目前还持有哪些其他学位？
7. 你现在是全日制学习吗？
8. 你现在在哪所大学读书？
9. 你现在是什么专业？
10. 你在大学英语四级和六级的考试成绩是多少？
11. 对于你认为完成科研任务和临床任务的英语语言子技能的重要性，请在下面合适的方框中打勾（1=不重要，5=非常重要）。

技能	子技能	科研任务					临床任务				
听	听病人说英语	1	2	3	4	5	1	2	3	4	5
	听同事说英语										
	听英语医学讲座										
讲	就医疗问题向公众发表讲话										
	用英语与同事交谈										
	在会议上讨论医疗问题										
	用英语与患者交谈										
读	用英语阅读医学期刊文章										
	阅读英文医学书籍										
写	撰写医学期刊文章										
	用英语写处方										
笔译/口译	翻译期刊文章摘要										
	在临床环境中进行口译										

12. 你去过其他国家吗？
    如果去过，请填写下表。（当你在这个国家的总停留时间少于 7 天时，无需说明。）

    国家：
    期间（mm/yyyy - mm/yyyy）：
    目的（例如，旅行、学习、探亲）：

    国家：
    期间（mm/yyyy - mm/yyyy）：

目的（例如，旅行、学习、探亲）：

添加更多___

13. 你在这所大学学习的时候有没有参加任何 EMP 课程？如果是，你参加了哪些课程？
14. 在本科学习期间，你是否接受过这所大学提供的以外的英语培训？如果有，你接受过哪些培训？
15. 你在研究生学习期间参加过 EMP 课程吗？如果参加过，你参加过哪些课程？
16. 你是否打算参加任何其他 EMP 课程？如果是，它们是什么？
17. 在课外的日常生活中，你大约有百分之几的时间使用英语（相对于其他语言）？

    0% 10 20 30 40 50 60 70 80 90 100%

18. 在你当前的学位课程中，你使用英语（相对于其他语言）的时间大约是多少？

    0% 10 20 30 40 50 60 70 80 90 100%

19. 你在 EMP 课程中大约有百分之多少的时间使用英语（相对于其他语言）？

    0% 10 20 30 40 50 60 70 80 90 100%

A2.2 医学研究生访谈提纲

1. 你能告诉我你学习英语的动力是什么吗？
2. 到目前为止，你对学习和使用英语的总体感觉如何？
3. 你觉得你在医疗情境下学习和使用英语的感受如何（例如，与患者或其他同事用英语交流）？
4. 你能告诉我你毕业后想做什么以及在什么环境下（例如，急诊、全科医生手术、姑息治疗）？
5. 在你未来设想的职业生涯中，你需要用英语完成哪些任务？
6. 你认为完成这些任务需要哪些英语语言/沟通能力？
7. 你觉得自己目前的英语能力与你在未来工作中的预期表现相匹配吗？
8. 你能给我举一些科研任务中使用英语的例子吗？
9. 你能给我举一些在你的临床工作中使用英语的例子吗？
10. 你在医疗情境下学习和使用英语时遇到过任何困难吗？如果遇到过的话，你能告诉我你遇到了什么以及你是如何处理它们的吗？
11. 你想在医疗情境下提高你的英语语言技能吗？如果是，你认为哪些方面最重要？为什么？
12. 在这所大学攻读本科学位时，你参加过哪些 EMP 课程？你觉得这些课程的优势和劣势是什么（例如，课程时长、教学目标、教学法、教材、考试等）？为什么？
13. 你为什么不参加其他 EMP 课程？
14. （如果受访者在背景调查问卷的第 14 题中回答”是”，”你在本科学习期间是否接受过这所大学提供的以外的英语培训？”）你觉得的学校提供的 EMP 课程和其他英语培训课之间有什么异同？
15. 你在 EMP 课程中使用了哪些策略来促进英语学习？
16. 你使用了哪些策略来提高你对医学英语的学习？
17. 你对这所大学 EMP 课程如何更好地满足你的语言学习和交流需求有什么想法吗？
18. 你是否曾在临床实践中与医学口译员合作过？如果是的话，你能给我一些例子吗？你和这些医疗口译员一起工作的感受如何？

附录 A3
医生的背景信息问卷调查和访谈提纲
A3.1 医生的背景信息问卷调查

此问卷的目的是收集有关你作为医生的背景的信息。请尽可能完整地回答。

1. 年龄：
2. 性别：
3. 出生时的第一语言：
4. 你是否拥有这所大学的临床医学本科学位（五年制课程）？
5. 你是哪一年从这个项目毕业的？
6. 你有其他学位吗？如果有，你还持有哪些其他学位？
7. 你能通过填写下表告诉我你的工作经历吗？
   职称：
   工作场所（如 XX 医院）：
   科室（如骨科）
   期间（mm/yyyy - mm/yyyy）：
   这份工作是：全职__兼职__实习__其他__

   职称：
   工作场所：
   部门：
   期间（mm/yyyy - mm/yyyy）：
   这份工作是：全职__兼职__实习__其他__

   添加更多__

8. 请在你认为执行科研任务和临床任务的英语语言子技能的重要性下面的方框中打勾（1=不重要，5=非常重要）。

技能	子技能	科研任务					临床任务				
听	听病人说英语	1	2	3	4	5	1	2	3	4	5
	听同事说英语										
	听英语医学讲座										
说	就医疗问题向公众发表讲话										
	用英语与同事交谈										
	在会议上讨论医疗问题										
	用英语与患者交谈										
读	用英语阅读医学期刊文章										
	阅读英文医学书籍										
作	用英语撰写医学期刊文章										
	用英语写处方										
笔译/口译	翻译期刊文章摘要										
	在临床环境中进行口译										

9. 你在这所大学学习的时候有没有参加任何 EMP 课程？如果有，你参加了哪些课程？
10. 在这所大学提供的课程之外，你是否接受过其他英语培训？如果有，你接受过哪些培训？
11. 你在工作中使用英语（相对于其他语言）的时间大约是多少？

    0% 10 20 30 40 50 60 70 80 90 100%

12. 你在工作之外的日常生活中使用英语（相对于其他语言）的时间大约占多少？

    0% 10 20 30 40 50 60 70 80 90 100%

A3.2 医生访谈提纲

1. 你能告诉你学习英语的动力来源是什么吗？
2. 到目前为止，你对学习和使用英语的总体感受如何？
3. 你感觉在与医疗情境下学习和使用英语的体验如何（例如，与患者或其他说英语的同事交流） ？
4. 你在工作中需要用英语完成哪些任务？
5. 完成这些任务需要哪些英语语言/沟通能力？
6. 你目前的英语能力和你的预期相匹配吗？
7. 你在使用英语完成工作任务时遇到过语言上的困难吗？如果遇到过，你能告诉我有什么吗困难以及你是如何应对它们的吗？
8. 你想在医疗情境中提高你的英语语言技能吗？如果想，你认为哪些方面最重要？为什么？
9. 你在这所大学上过哪些 EMP 课程？你觉得这些课程的优势和劣势是什么（例如，教学时长、教学目标、教学法、教材、考试等）？为什么？
10. 你在这所大学学习的时候还有参加过其他的英语课程吗？如果是，它们是什么？
11. 你在参加 EMP 课程的过程中使用了哪些策略来促进你的英语学习？
12. 总体而言，你使用了哪些策略来增强你对医学英语的知识/理解方面的语言学习？
13. 你觉得你在这所大学上过的 EMP 课程有没有为你未来就业的英语需求做好准备？如果有，是哪些？
14. 你对你学校的 EMP 课程如何更好地满足你的英语学习和交流需求有什么想法吗？
15. （如果受访者在背景调查问卷的第 10 题中回答”是”，”你是否接受过这所大学提供的以外的英语培训？”）你能告诉我你在你学校上过的 EMP 课和你在外面接受的英语培训有哪些相同和不同吗？
16. 你在你的临床工作中有没有和医学科研合作过？如果有的话，能给我举一些例子说说当时的情况吗？你和这些易学口译员一起工作的总体感受如何？

附录 A4
EMP 教师的背景信息问卷调查表和访谈提纲
A4.1 EMP 教师的背景信息问卷调查表

此问卷的目的是收集有关你作为 EMP 教师背景的信息。请尽可能完整地回答。

1. 年龄：
2. 性别：
3. 出生时的第一语言：
4. 你在这所大学教授哪门 EMP 课程？
5. 你教过这门 EMP 课程多久了？
6. 你在这所大学还教任何其他课程吗？如果是，你还教什么其他课程？你的学生群体是哪些人？
7. 你能告诉我你的教育背景吗？
   学历：
   专业：
   学校：
   时间（mm/yyyy - mm/yyyy）：

   学历：
   专业：
   学校：
   时间（mm/yyyy - mm/yyyy）：

   添加更多__

8. 你能告诉我你的工作经历吗？
   职称：
   工作场所：
   时间（mm/yyyy - mm/yyyy）：
   这份工作是：全职__兼职__实习__其他__

   职称：
   工作场所：
   时间（mm/yyyy - mm/yyyy）：
   这份工作是：全职__兼职__实习__其他__

   添加更多__

9. 你在课堂上使用英语（相对于其他语言）的时间大约是多少？

   0% 10 20 30 40 50 60 70 80 90 100%

10. 在你的课程的考试中英语使用量的占比是多少（相对于其他语言）？

0% 10 20 30 40 50 60 70 80 90 100%

A4.2 EMP 教师的访谈提纲

1. 总体而言，你对自己的教学经历有什么感受？
2. 到目前为止，你对自己在你现在所在的这所学校的教学经历有什么样的感受？
3. 你能具体说一说在你的 EMP 课堂上你使用英语的一些情况吗？
4. 你认为你的学生（临床医学本科生）需要具备哪些英语语言/沟通能力才能完成课程中的任务？
5. 你觉得你的学生的英语水平能不能满足他们在未来就业中的需求呢？
6. 你觉得你的学生们需要在医疗情境下提高他们的英语水平吗？如果是的话，你觉得哪些方面的语言技能比较重要？为什么？
7. 你在设计 EMP 课程时主要基于哪些原则和策略？
8. 你是如何制定教学目标、教学内容、教学法、和考试的？
9. 在设计 EMP 课程之前，你是否对目标学生进行了英语语言需求分析？
   - 如果是，你能向我详细说一说当时你是如何分析你的目标学生群体的语言需求以及什么时候做的需求分析呢？你当时的需求分析的结果是如何被应用到你的 EMP 课程设计中的？
   - 如果没有，你是否考虑过这样做？为什么或者为什么不？
10. 你在 EMP 课程教学中遇到过什么困难吗？如果是的话，你能给我一些例子吗？
11. 你认为目前这所大学为临床医学本科生提供的 EMP 课程是否需要改进？如果是的话，能具体说说吗？ （如果受访者提到了改进当前 EMP 课程的任何建议，我会问：）你觉得你提出的这些建议是否可行呢？能不能具体说说你觉得可能存在哪些可行性问题吗？
12. 你觉得你的学生是否应该对于 EMP 课程的学习内容有更灵活的选择的权利呢？你为什么？
13. 你觉得你所教授的 EMP 课程的优势和不足有什么？（例如，教学时长、课程目标、教学法、教材、考试等）？为什么？
14. 对于这所大学的 EMP 课程如何更好地满足学生的语言学习和交流需求，你有什么最终的想法吗？

附录 A5

医学教师背景信息问卷调查表和访谈提纲

A5.1 医学教师的背景信息问卷调查表

此问卷的目的是收集有关你作为医学学科教师背景的信息。请尽可能完整地回答。

1. 年龄：
2. 性别：
3. 出生时的第一语言：
4. 你在现在这所大学教授临床医学（五年制）本科生哪些课程？
5. 对于你所教授的这些课程，你分别都已经交了多久了呢？多
6. 你在这所大学教过其他课程吗？如果是，你还教什么其他课程？你的目标受众是谁？
7. 你能告诉我你的工作经历吗？

   职称：
   工作场所：
   时间（mm/yyyy - mm/yyyy）：
   这份工作是：全职__兼职__实习__其他__

   职称：
   工作场所：
   时间（mm/yyyy - mm/yyyy）：
   这份工作是：全职__兼职__实习__其他__

   添加更多__

8. 你在课堂上使用英语（相对于其他语言）的时间大约是多少？

   0% 10 20 30 40 50 60 70 80 90 100%

9. 在你的考试中英语使用量的占比是多少（相对于其他语言）？

   0% 10 20 30 40 50 60 70 80 90 100%

A5.2 医学教师的访谈提纲

1. 总体而言，你对于你的教学经历有什么样的感受？
2. 到目前为止，你在你现在所任教的这所大学的教学经历有什么样的感受？
3. 你能给我举一些你课堂上使用英语的例子吗？
4. 你能给我举一些在你的课程作业中使用英语的例子吗？
5. 你觉得你的学生当前的英语水平能否完成他们现在的课程任务？
6. 你的学生当前的英语能力能满足他们未来就业中英语需求吗？
7. 你觉得你的学生需要在医疗情境中提高他们的英语水平吗？如果是的话，你觉得哪些方面的英语语言技能最重要？为什么？
8. 你对这所大学为临床医学本科生提供哪些 EMP 课程了解多少？你认为目前这所大学为临床医学本科生提供的 EMP 课程是否需要改进？如果是的话，你能给我一些具体说说吗？（如果受访者提到了改进当前 EMP 课程的任何建议，我会问：）你觉得你提出的建议是否可行呢？你有没有考虑过其中存在哪些可行性问题呢？
9. 对于这所大学的 EMP 课程如何更好地满足学生的语言学习和交流需求，你有什么最终的想法吗？

附录 A6

项目主管的背景信息问卷调查表和访谈提纲

A6.1 项目主管的背景信息问卷调查表

此问卷的目的是收集有关你作为课程管理员的背景的信息。请尽可能完整地回答。

1. 年龄：
2. 性别：
3. 出生时的第一语言：
4. 你能告诉我你的工作经历吗？

   职称：
   工作场所：
   时间（mm/yyyy - mm/yyyy）：
   这份工作是：全职__兼职__实习__其他__

   职称：
   工作场所：
   时间（mm/yyyy - mm/yyyy）：
   这份工作是：全职__兼职__实习__其他__

   添加更多__

5. 这所大学希望临床医学专业的本科生毕业后具备哪些语言技能？请从 1 到 5 对这所大学临床医学专业本科生的五种语言技能（听、读、写、说、译）的重要性进行评分。

技能	子技能	这个技能的重要性：				
		1	2	3	4	5
听	听病人说英语					
	听同事说英语					
	听英语医学讲座					
说	就医疗问题向公众发表讲话					
	用英语与同事交谈					
	在会议上讨论医疗问题					
	用英语与患者交谈					
阅	用英语阅读医学期刊文章					
	阅读英文医学书籍					
写	用英语撰写医学期刊文章					
	用英语写处方					
笔译/口译	翻译期刊文章摘要					
	在临床环境中进行口译					

6. 临床医学专业的本科生毕业后通常会做什么？你能给我一些他们就业去向的例子吗？这些就业去向大概的比例如何呢？

A6.2 项目负责人的访谈提纲

1. 这所大学的 EMP 课程是如何确定的？你能详细解释一下这所大学确定课程的过程吗？标准是什么？
2. 为什么没有开设其他 EMP 课程？
3. 为什么这所大学的 EMP 课程都是选修课？
4. 为什么不开设 EMP 为必修课？
5. 这所大学希望临床医学专业的本科生从这所大学毕业后能够用英语做什么？
6. 根据以往毕业生的情况，他们的英语能力能否满足他们在工作中的英语语言需求呢？
7. 是否有任何官方标准来评估这所大学 EMP 教师的工作？如果是的话，你能给我解释一下吗？
8. 你认为目前本校临床医学专业本科生开设的 EMP 课程是否需要改进？如果是的话，你能给我一些改进策略的例子吗？你觉得你提出的这些建议是否可行呢？有没有考虑过可行性问题？
9. 对于这所大学的 EMP 课程如何更好地满足学生的语言学习和交流需求，你有什么最终的想法吗？

附录 B1

本科医学生问卷

1. 你在这所大学主修临床医学（五年制本科课程）吗？（请回答”是”或”否”）：
2. 你在哪一年学习？胡聊啊（例如，如果你是第一年，请写”1”）：
3. 年龄：
4. 性别：
5. 出生时的第一语言：
6. 考取”高考”城市：
7. 你在”高考”的英语考试成绩是多少？
8. 你的大学英语四级考试成绩是多少？（如果适用）
9. 你去过其他国家吗？
   如果是，请填写下表。 （当你在这个国家的总停留时间少于 7 天时，你无需说明你的经历。）

   国家：
   期间（mm/yyyy - mm/yyyy）：
   目的（例如，旅行、学习、探亲）：

   国家：
   期间（mm/yyyy - mm/yyyy）：
   目的（例如，旅行、学习、探亲）：

   添加更多___

10. 你在这所大学上过任何 EMP 课程吗？如果是，你上过哪些？

11. 你为什么在这所大学学习一门或多门 EMP 课程？请在下面的方框中打勾。你可以勾选多个方框。

赚取学分。	
这很有趣/有趣。	
我的目标职业需要它。	

12. 在学校为每个人提供的课程之外，你是否接受过英语培训？

13. 在课外的日常生活中，你大约有百分之几的时间使用英语（相对于其他语言）？

    0% 10 20 30 40 50 60 70 80 90 100%

14. 在你当前的学位课程中，你使用英语（相对于其他语言）的时间大约是多少？

0% 10 20 30 40 50 60 70 80 90 100%

15. 你在 EMP 课程中使用英语（相对于其他语言）的时间大约占多少？

0% 10 20 30 40 50 60 70 80 90 100%

16. 你如何评价你的英语水平？（1=非常差，5=优秀）

技能	子技能	我目前在这个技能上的能力是：				
		1	2	3	4	5
听	听病人说英语					
	听同事说英语					
	听英语医学讲座					
说	就医疗问题向公众发表讲话					
	用英语与同事交谈					
	在会议上讨论医疗问题					
	用英语与患者交谈					
读	用英语阅读医学期刊文章					
	阅读英文医学书籍					
写	用英语撰写医学期刊文章					
	用英语写处方					
笔译/口译	翻译期刊文章摘要					
	在临床环境中进行口译					

17. 请在下面的方框中打勾，你认为英语语言技能对执行研究相关任务和临床任务的重要性（1=不重要，5=非常重要）。

技能	科研任务					临床任务				
	1	2	3	4	5	1	2	3	4	5
听										
说										
读										
写										
笔译/口译										

18. 请在你认为执行科研任务和临床任务的英语语言子技能的重要性下面的方框中打勾（1=不重要，5=非常重要）。

技能	子技能	科研					临床任务				
听	听病人说英语	1	2	3	4	5	1	2	3	4	5
	听同事说英语										
	听英语医学讲座										
说	就医疗问题向公众发表讲话										

	用英语与同事交谈										
	在会议上讨论医疗问题										
	用英语与患者交谈										
读	用英语阅读医学期刊文章										
	阅读英文医学书籍										
写	用英语撰写医学期刊文章										
	用英语写处方										
笔译/口译	翻译期刊文章摘要										
	在临床环境中进行口译										

19. 你认为课程目标在多大程度上对你的科研任务和临床很重要？请在下面的方框中打勾（1=根本不重要，5=非常重要）。

课程名称：医学视觉文化（完成此部分即为你已参加此课程）										
教学目标	用于研究相关任务					用于临床任务				
	1	2	3	4	5	1	2	3	4	5
Connect interdisciplinary knowledge between the health and humanities.										
Learn and apply interdisciplinary skills.										
Synthesise knowledge over disciplinary boundaries.										
Learn the analytical tools used by health and art historians.										

课程名称：医学术语（如果你参加过本课程，请填写此部分）										
教学目标	用于研究相关任务					用于临床任务				
	1	2	3	4	5	1	2	3	4	5
Connect interdisciplinary knowledge between the health and humanities.										
Learn and apply interdisciplinary skills.										
Synthesise knowledge over disciplinary boundaries.										
Learn the analytical tools used by health and art historians.										

课程名称：疾病叙述（如果你参加过此课程，请填写此部分）										
教学目标	用于研究相关任务					用于临床任务				
	1	2	3	4	5	1	2	3	4	5
Connect interdisciplinary knowledge between the health and humanities.										
Learn and apply interdisciplinary skills.										
Synthesise knowledge over disciplinary boundaries.										

20. 你在多大程度上同意或不同意以下陈述？请在下面的方框中打勾（1=非常不同意，5=非常同意）。

陈述	1	2	3	4	5
我参加的 EMP 课程满足了我在执行研究相关任务时的语言需求。					
我参加的 EMP 课程将满足我在执行临床任务时的语言需求。					
我参加的 EMP 课程有助于提高我的口语能力。					
我参加的 EMP 课程有助于提高我的听力技巧。					
我参加的 EMP 课程有助于提高我的阅读能力。					
我参加的 EMP 课程有助于提高我的写作技巧。					
我参加的 EMP 课程有助于提高我的翻译/口译技能。					
我参加的 EMP 课程的持续时间对我来说是合适的。					
EMP 课本的难点适合我。					
EMP 课程的教学方法适合我。					
EMP 课程考试适合我。					

21. 你对这所大学的 EMP 课程如何更好地满足你的语言学习和交流需求有什么想法吗？

附录 B2

医学研究生问卷

1. 你在这所大学主修临床医学（五年制本科课程）吗？ （请回答”是”或”否”）：
2. 你正在攻读哪个学位？
3. 年龄：
4. 性别：
5. 出生时的第一语言：
6. 考取”高考”城市：
7. 你在”高考”的英语考试成绩是多少？
8. 你的大学英语四级考试成绩是多少？ （如果适用）
9. 你如何评价你的英语水平？ （1=非常差，5=优秀）

技能	子技能	我目前在这个技能上的能力是（1=很差，5=很好）：				
		1	2	3	4	5
听	听病人说英语					
	听同事说英语					
	听英语医学讲座					
说	就医疗问题向公众发表讲话					
	用英语与同事交谈					
	在会议上讨论医疗问题					
	用英语与患者交谈					
读	用英语阅读医学期刊文章					
	阅读英文医学书籍					
写	用英语撰写医学期刊文章					
	用英语写处方					
笔译/口译	翻译期刊文章摘要					
	在临床环境中进行口译					

10. 你去过其他国家吗？
    如果是，请填写下表。 （当你在这个国家的总停留时间少于 7 天时，你无需说明你的经历。）

    国家：
    期间（mm/yyyy - mm/yyyy）：
    目的（例如，旅行、学习、探亲）：

    国家：
    期间（mm/yyyy - mm/yyyy）：
    目的（例如，旅行、学习、探亲）：

添加更多___

11. 自从你在这所大学就读以来，你参加过任何 EMP 课程吗？如果是的话，你参加了哪一个？

12. 在学校为每个人提供的课程之外，你是否接受过英语培训？

13. 在课外的日常生活中，你大约有百分之几的时间使用英语（相对于其他语言）？

0% 10 20 30 40 50 60 70 80 90 100%

14. 在你当前的学位课程中，你使用英语（相对于其他语言）的时间大约是多少？

0% 10 20 30 40 50 60 70 80 90 100%

15. 你在 MP 课程中大约有百分之多少的时间使用英语（相对于其他语言）？

0% 10 20 30 40 50 60 70 80 90 100%

16. 你为什么在这所大学学习一门或多门 EMP 课程？请在下面的方框中打勾。

赚取学分。	
这很有趣/有趣。	
我的目标职业需要它。	

17. 请在下面的方框中打勾，你认为英语语言技能对执行科研任务和临床任务的重要性（1=不重要，5=非常重要）。

技能	科研任务					临床任务				
	1	2	3	4	5	1	2	3	4	5
听										
说										
读										
写										
笔译/口译										

18. 请在你认为执行研究相关任务和临床任务的英语语言子技能的重要性下面的方框中打勾（1=不重要，5=非常重要）。

技能	子技能	用于研究相关任务					用于临床任务				
听	听病人说英语	1	2	3	4	5	1	2	3	4	5
	听同事说英语										
	听英语医学讲座										

说	就医疗问题向公众发表讲话										
	用英语与同事交谈										
	在会议上讨论医疗问题										
	用英语与患者交谈										
读	用英语阅读医学期刊文章										
	阅读英文医学书籍										
写	用英语撰写医学期刊文章										
	用英语写处方										
笔译/口译	翻译期刊文章摘要										
	在临床环境中进行口译										

19. 你认为课程目标在多大程度上已经实现，你认为这些目标对你的学术研究和目标职业有多重要？请在下面的方框中打勾（1=根本没有达到，5=完全达到）。

课程名称：医学视觉文化（完成此部分即为你已参加此课程）										
教学目标	科研任务：					临床任务：				
	1	2	3	4	5	1	2	3	4	5
Connect interdisciplinary knowledge between the health and humanities.										
Learn and apply interdisciplinary skills.										
Synthesise knowledge over disciplinary boundaries.										
Learn the analytical tools used by health and art historians.										

课程名称：医学术语（如果你参加过本课程，请填写此部分）										
教学目标	科研任务：					临床任务：				
	1	2	3	4	5	1	2	3	4	5
Connect interdisciplinary knowledge between the health and humanities.										
Learn and apply interdisciplinary skills.										
Synthesise knowledge over disciplinary boundaries.										
Learn the analytical tools used by health and art historians.										

课程名称：疾病叙述（如果你参加过此课程，请填写此部分）										
教学目标	科研任务：					临床任务：				
	1	2	3	4	5	1	2	3	4	5

Connect interdisciplinary knowledge between the health and humanities.										
Learn and apply interdisciplinary skills.										
Synthesise knowledge over disciplinary boundaries.										

20. 你在多大程度上同意或不同意以下陈述？请在下面的方框中打勾（1=非常不同意，5=非常同意）。

陈述	1	2	3	4	5
我参加的 EMP 课程满足了我在执行研究相关任务时的语言需求。					
我参加的 EMP 课程（将）满足（满足）我在执行临床任务时的语言需求。					
我参加的 EMP 课程有助于提高我的口语能力。					
我参加的 EMP 课程有助于提高我的听力技巧。					
我参加的 EMP 课程有助于提高我的阅读能力。					
我参加的 EMP 课程有助于提高我的写作技巧。					
我参加的 EMP 课程有助于提高我的翻译/口译技能。					
我参加的 EMP 课程的持续时间对我来说是合适的。					
EMP 教科书的难度水平对我来说是合适的。					
EMP 课程的教学方法很适合我。					
EMP 考试方法适合我。					

21. 你对这所大学的 EMP 课程如何更好地满足你的语言学习和交流需求有任何最终想法吗？

附录 B3

医生问卷

1. 你是否拥有这所大学的临床医学本科学位（五年制课程）？
2. 你是哪一年入学的？
3. 年龄：
4. 性别：
5. 出生时的第一语言：
6. 你有其他学位吗？如果是，你还持有哪些其他学位？
7. 你能通过填写下表告诉我你的工作经历吗？

   职称：
   工作场所（如 XX 医院）：
   科室（如骨科）
   时间（mm/yyyy - mm/yyyy）：
   这份工作是：全职__兼职__实习__其他__

   职称：
   工作场所：
   部门：
   时间（mm/yyyy - mm/yyyy）：
   这份工作是：全职__兼职__实习__其他__

   添加更多__

8. 你在这所大学学习的时候有没有参加任何 EMP 课程？如果是，你参加了哪些课程？

9. 在这所大学提供的课程之外，你是否接受过英语培训？如果是，你接受过哪些培训？

10. 你在工作中使用英语（相对于其他语言）的时间大约是多少？

    0% 10 20 30 40 50 60 70 80 90 100%

11. 你在工作之外的日常生活中使用英语（相对于其他语言）的时间大约占多少？

    0% 10 20 30 40 50 60 70 80 90 100%

12. 你为什么在这所大学参加 EMP 课程？请在下面的方框中打勾。你可以勾选多个方框。

赚取学分。	
这很有趣/有趣。	
我的目标职业需要它。	

13. 请在下面的方框中打勾，你认为英语语言技能在执行科研任务和临床任务中的重要性（1=不重要，5=非常重要）。

技能	科研任务					临床任务				
	1	2	3	4	5	1	2	3	4	5
听										
说										
读										
写										
笔译/口译										

14. 请在下面的方框中打勾你认为在执行研究相关任务和临床任务中英语语言子技能的重要性（1=不重要，5=非常重要）。

技能	子技能	科研任务					临床任务				
听	听病人说英语	1	2	3	4	5	1	2	3	4	5
	听同事说英语										
	听英语医学讲座										
说	就医疗问题向公众发表讲话										
	用英语与同事交谈										
	在会议上讨论医疗问题										
	用英语与患者交谈										
读	用英语阅读医学期刊文章										
	阅读英文医学书籍										
写	用英语撰写医学期刊文章										
	用英语写处方										
笔译/口译	翻译期刊文章摘要										
	在临床环境中进行口译										

15. 你认为课程目标在多大程度上已经实现，你认为这些目标对你的学术研究和目标职业有多重要？请在下面的方框中打勾（1=根本没有达到，5=完全达到）。

课程名称：医学视觉文化（完成此部分即为你已参加此课程）										
教学目标	对于科研任务：					对于临床实践：				
	1	2	3	4	5	1	2	3	4	5
Connect interdisciplinary knowledge between the health and humanities.										
Learn and apply interdisciplinary skills.										
Synthesise knowledge over disciplinary boundaries.										

Learn the analytical tools used by health and art historians.										

课程名称：医学术语（如果你参加过本课程，请填写此部分）										
教学目标	对于科研任务：					对于临床实践：				
	1	2	3	4	5	1	2	3	4	5
Connect interdisciplinary knowledge between the health and humanities.										
Learn and apply interdisciplinary skills.										
Synthesise knowledge over disciplinary boundaries.										
Learn the analytical tools used by health and art historians.										

课程名称：疾病叙述（如果你参加过此课程，请填写此部分）										
教学目标	对于科研任务：					对于临床实践：				
	1	2	3	4	5	1	2	3	4	5
Connect interdisciplinary knowledge between the health and humanities.										
Learn and apply interdisciplinary skills.										
Synthesise knowledge over disciplinary boundaries.										

16. 你在多大程度上同意或不同意以下陈述？请在下面的方框中打勾（1 = 非常不同意，5 = 非常同意）。

声明	1	2	3	4	5
我参加的 EMP 课程满足了我在执行研究相关任务时的语言需求。					
我参加的 EMP 课程满足了我在执行临床任务时的语言需求。					
我参加的 EMP 课程有助于提高我的口语能力。					
我参加的 EMP 课程有助于提高我的听力技巧。					

我参加的 EMP 课程有助于提高我的阅读能力。					
我参加的 EMP 课程有助于提高我的写作技巧。					
我参加的 EMP 课程有助于提高我的翻译/口译技能。					
我参加的 EMP 课程的持续时间对我来说是合适的。					
EMP 教科书的难度水平对我来说是合适的。					
EMP 课程的教学方法很适合我。					
EMP 考试方法适合我。					

18.对于这所大学的 EMP 课程如何更好地满足你的语言学习和交流需求，你有什么最终的想法吗？

Appendix C: Search Strategy

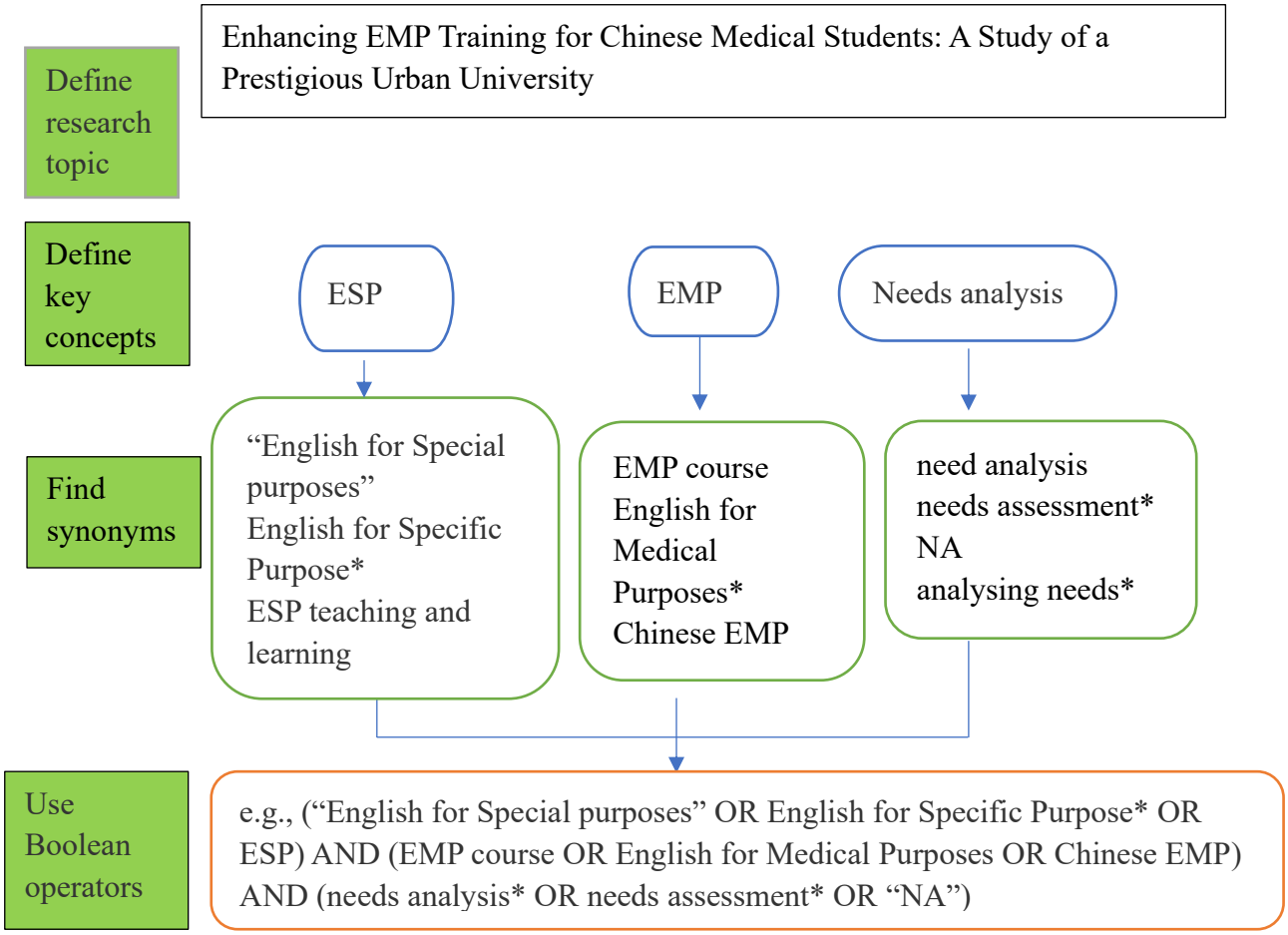
This section explains how literature were searched and provides reasons for inclusion and exclusion for reviewing. To ensure the coverage and validity of studies included in this review, I developed a search strategy using the following databases: ERIC (EBSCO), Web of Science, China Academic Journals (CKNI) and China Online Journals (Wanfang), for the time period of 2002-2022 using both English and Chinese texts from established peer-reviewed journals. Table C.1 presents the inclusion criteria for items included in this review.

Table C.1: *Inclusion criteria for published material included in the review.*

Inclusion criteria	
Date	2002-2022
Language	English; Chinese
Participants	University students who learn English as a second/foreign language
Indexed by	SSCI; AHCI; SCI
Peer reviewed	Yes

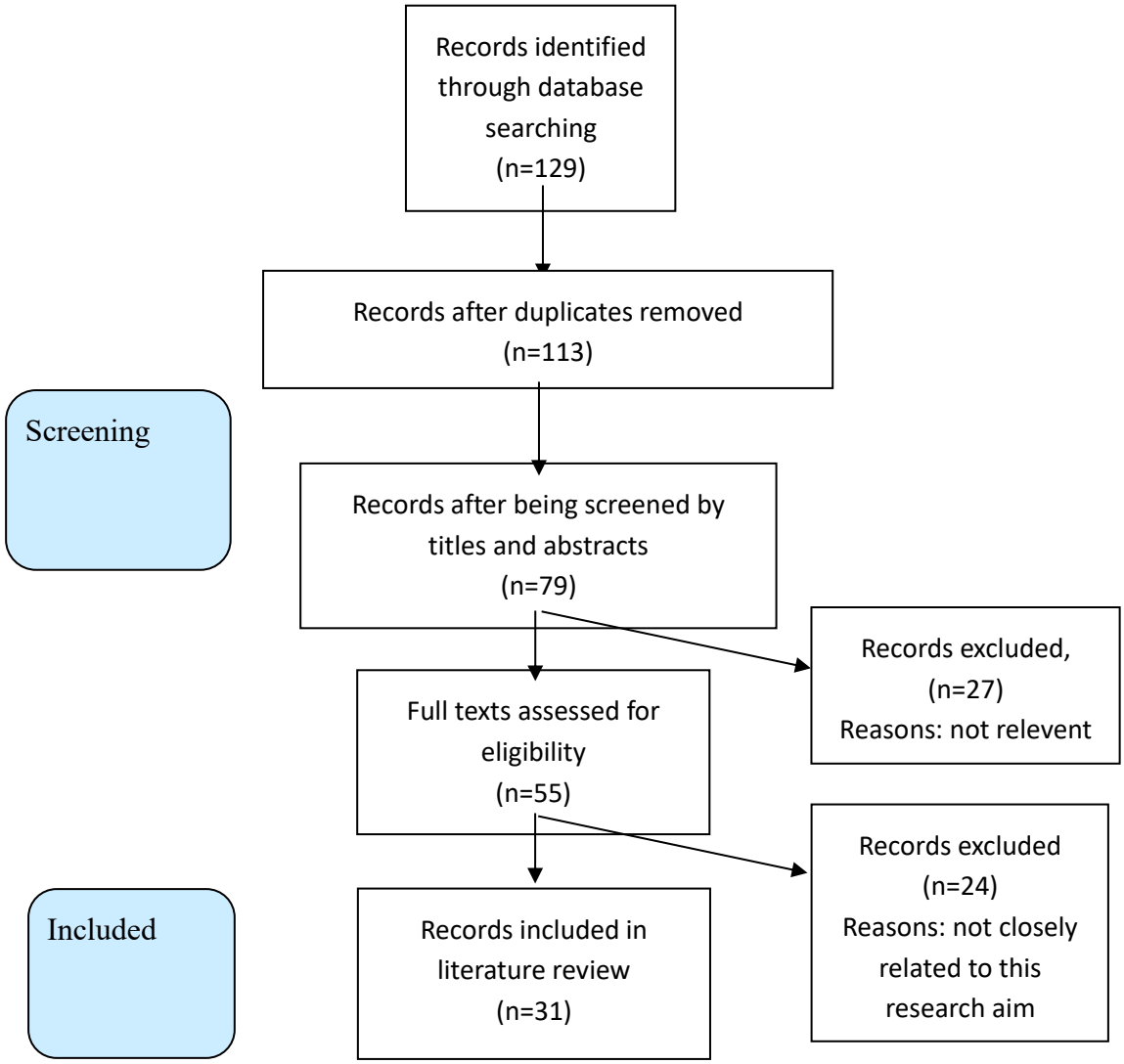
Based on the research topic, key words were firstly identified as follows: English for medical purposes; needs analysis; and course evaluation. Then, in order to pick up more results, synonyms were added (see Table C.2 below). When searching in databases, Boolean operators were used to combine search terms. Truncation/wildcards techniques were applied to search for alternative endings to words, such as singular and plural forms (e.g., type an asterisk '*' at the end of a keyword to find any word ending). Due to the lack of articles found in my first attempt, I revised my search strategy to use synonyms so as to identify more items for inclusion. Then I reduced the number of items identified based on types of document (journal articles), source (SSCI, CSSCI, or AHCI) language (English or Chinese), quality (peer-reviewed) and relevance. Search histories in these databases are presented below in Table C.2.

Table C.2: *Search strategy*



The total number of records was 129. To remove duplicates, their citations were imported into EndNote X9 and the number of records after removing duplicates was 113. After screening the titles and abstracts to see if they are relevant to this research, 79 records were left. Then, all full texts were accessed to review them for eligibility; finally, 31 items were identified to be included in the literature review. A PRISMA flow diagram of this screening process is included in Table C.3 below.

Table C.3: *PRISMA Flowchart (Moher et al., 2011)*



Appendix D Interviews schedules

Appendix D1 Background questionnaire and interview schedules with undergraduate medical students (Second round)

English version

D1.1 Background information questionnaire for undergraduate medical students

Name or nickname:
University:
Internship unit (if any):
Year of study:
Major and direction.
CET-4 and CET-6 scores (if any):
Your available interview slots for the next three days:

D1.2 Interview outline for undergraduate medical students

1. First of all, do you study clinical medicine in this university?
2. How old are you now? Have you started your internship? How is your internship? Have you been divided into directions? What direction and department? What are your English needs during the internship?
3. Do you have any ideas and plans for your future work?
4. Are you interested in learning English? Do you like learning English? Why? Can we talk about it?
5. Do you think you need to learn English? Why? Can we talk about it?
6. Generally speaking, do you think it is difficult to learn English? Why difficult if so? What English learning strategies do you usually use? What are your study habits (self-study)?
7. Do you think it is necessary for you to learn medical English? What are your needs in the areas of listening, speaking, reading, writing and translating?
8. How do you understand medical English? What do you think is medical English?
9. Have you taken any medical English classes? If yes, which ones? Tell me more about them.
10. Do you think the medical English classes you have taken have helped you learn English? If so, how did they help? If not, where do you think the problem might be?
11. What would your ideal medical English class look like? For example, what do you think should be included? The way the class is taught? Online and offline?
12. What English skills would you most like to improve?
13. How much time would you be willing to spend on English learning?
14. Regarding the teaching method, do you prefer teacher-led or student-led? Why?
15. Do you have a preferred method of assessment?

Appendix D2 Background questionnaire and interview schedules with master's students (Second round)

D2.1 Background information questionnaire for master's students

Name or nickname:
University:
Internship unit (if any).
Year of study:
Major and direction:
CET-4 and CET-6 scores (if any):
Your available interview slots for the next three days:

D2.2 Interview schedule for master's students

1. First of all, are you a master's student in Clinical Medicine at this university?
2. Which year are you in now? Have you done any clinical internship in a hospital? In which hospital? What department? What is the content of the internship?
3. Do you have any ideas and plans for your future work?
4. Are you interested in learning English? Do you like learning English? Why? Can we talk about it?
5. Do you think you need to learn English? Why? Can we talk about it?
6. Generally speaking, do you think it is difficult to learn English? Why difficult? What English learning strategies do you usually use? What are your study habits (self-study)?
7. Do you think it is necessary for you to learn medical English? What are your needs in the areas of listening, speaking, reading, writing and translating?
8. How do you understand medical English? What do you think is medical English?
9. Are you currently taking any medical English classes? If yes, which ones? Both on-campus and off-campus?
10. How do you feel your need for medical English has changed between your undergraduate and master's degree?
11. Do you think the medical English classes you have taken have helped you in your English learning? If so, how? If not, where do you think the problem might be?
12. What would your ideal medical English class look like for your current English needs? For example, what content do you think should be included? Method of delivery? Online and offline?
13. How much time would you be willing to spend?
14. Regarding teaching methods, do you prefer teacher-led or student-led?
15. Do you have a preferred assessment method?

Appendix D3 Background questionnaire and interview schedules with doctoral students (Second round)

D3.1 Background information questionnaire for doctoral students

Name or nickname:
University:
Internship unit (if any):
Year of study:
Major and direction:
CET-4 and CET-6 scores (if any):
Your available interview slots for the next three days:

D3.2 Interview schedules for doctoral students

1. First of all, are you a doctoral student in Clinical Medicine at this university?
2. Which year are you in now? Are you doing any clinical internship in a hospital? In which hospital? What department? What is the content of the internship?
3. Do you have any ideas and plans for your future work?
4. Are you interested in learning English? Do you like learning English? Why? Can we talk about it?
5. Do you think you need to learn English? Why? Can we talk about it?
6. Generally speaking, do you think it is difficult to learn English? Why difficult? What English learning strategies do you usually use? What are your study habits (self-study)?
7. Do you think it is necessary for you to learn medical English? What are your needs in the areas of listening, speaking, reading, writing and translating?
8. How do you understand medical English? What do you think is medical English?
9. Are you currently taking any medical English classes? If yes, which ones?
10. Do you think your need for medical English has changed in different stages of your study?
11. Do you think the medical English classes you have taken have helped you in your English study? If so, how? If not, where do you think the problem might be?
12. What would your ideal medical English class look like? For example, what content do you think should be included? The way the class is taught? Online and offline?
13. How much time would you be willing to spend?
14. Regarding the teaching method, do you prefer teacher-led or student-led?
15. Do you have a preferred method of assessment?

Appendix D4 Background questionnaire and interview schedules with physicians (Second round)

D4.1 Background information questionnaire for physicians

Name or nickname:
University where you received your highest degree:
Year of graduation:
Workplace:
Highest degree:
Department and research area:
Your available interview slots for the next three days:

D4.2 Interview schedules for physicians

1. First, did you graduate from this university?
2. What year did you enrol and graduate? Did you study for a bachelor's or master's degree or doctorate at this university?
3. Can you tell me about your current workplace, department and title? Previous work experience?
4. Are you interested in learning English? Do you like learning English? Why? Can you tell us more about it?
5. Do you think you need to learn English? Why? Can we talk about it?
6. What situations do you need to use English in your work? Do you have difficulty using English at work?
7. Do you think your English needs to be improved? If so, in what way would you like to improve it?
8. In general, do you think it is difficult to learn English? Why difficult? What English learning strategies do you usually use?
9. Do you think it is necessary for you to learn medical English?
10. How do you understand medical English? What do you think is medical English?
11. Are you currently taking any medical English classes? If yes, which ones?
12. Do you think the medical English classes you have taken have helped you learn English? If so, how did they help? If not, where do you think the problem might be?
13. What would your ideal medical English class look like? For example, what content do you think should be included?

Chinese version

D1.1 医学本科生背景信息问卷

姓名或昵称：
学校：
实习单位（如有）：
年级：
专业及方向：
大学英语四六级成绩（如有）：
最近 3 天可以参加访谈的时间：

D1.2 医学本科生访谈提纲

1. 首先确认一下，你是在这所大学读临床医学本科吗？
2. 你现在大几了？有没有开始实习？实习情况？分方向了吗？什么方向、科室？实习过程中英语需求？
3. 对未来工作有什么想法和规划吗？
4. 你对学英语感兴趣吗？喜欢学英语吗？为什么呢？可以展开聊聊吗？
5. 你觉得你需要学习英语吗？为什么呢？可以展开聊聊吗？
6. 总的来讲，你觉得学英语难吗？难在哪里？你通常会用什么英语学习策略？学习习惯（自学）？
7. 你认为你学习医学英语有必要吗？听说读写译这几方面的需求点？
8. 你如何理解医学英语？你认为什么是医学英语？
9. 你现在有没有上过医学英语课？如果有，上过哪些？包括校内的和校外的？
10. 你觉得你上过的医学英语课对你的英语学习有帮助吗？如果有，有哪些帮助？如果没有，你觉得问题可能会出在哪里？
11. 你理想的医学英语课是怎样的？比如，你认为应该包含哪些内容？授课方式？线上线下？
12. 最想提高的英语技能？
13. 愿意花多少时间？
14. 关于教学法，你更喜欢老师主导还是学生主导？
15. 你有没有比较喜欢的考核方式？

D2.1 医学硕士研究生背景信息问卷

姓名或昵称：
学校：
实习单位（如有）：
年级：
专业及方向：
大学英语四六级成绩（如有）：
最近 3 天可以参加访谈的时间：

D2.2 医学硕士研究生访谈提纲

1. 首先确认一下，你是在这所大学读临床医学硕士吗？
2. 你现在几年级了？有没有在医院从事临床实习工作？在哪家医院？什么科室？实习工作的内容？
3. 对未来工作有什么想法和规划吗？

4. 你对学英语感兴趣吗？喜欢学英语吗？为什么呢？可以展开聊聊吗？
5. 你觉得你需要学习英语吗？为什么呢？可以展开聊聊吗？
6. 总的来讲，你觉得学英语难吗？难在哪里？你通常会用什么英语学习策略？学习习惯（自学）？
7. 你认为你学习医学英语有必要吗？听说读写译这几方面的需求点？
8. 你如何理解医学英语？你认为什么是医学英语？
9. 你现在有没有上过医学英语课？如果有，上过哪些？包括校内的和校外的？
10. 你觉得自己本科和硕士对医学英语的需求有变化吗？
11. 你觉得你上过的医学英语课对你的英语学习有帮助吗？如果有，有哪些帮助？如果没有，你觉得问题可能会出在哪里？
12. 针对你当前的英语需求，你理想的医学英语课是怎样的？比如，你认为应该包含哪些内容？授课方式？线上线下？
13. 愿意花多少时间？
14. 关于教学法，你更喜欢老师主导还是学生主导？
15. 你有没有比较喜欢的考核方式？

D3.1 医学博士研究生背景信息问卷

姓名或昵称：
学校：
实习单位（如有）：
年级：
专业及方向：
大学英语四六级成绩（如有）：
最近 3 天可以参加访谈的时间：

D3.2 医学博士研究生访谈提纲

1. 首先确认一下，你是在这所大学读临床医学博士吗？
2. 你现在几年级了？有没有在医院从事临床实习工作？在哪家医院？什么科室？实习工作的内容？
3. 对未来工作有什么想法和规划吗？
4. 你对学英语感兴趣吗？喜欢学英语吗？为什么呢？可以展开聊聊吗？
5. 你觉得你需要学习英语吗？为什么呢？可以展开聊聊吗？
6. 总的来讲，你觉得学英语难吗？难在哪里？你通常会用什么英语学习策略？学习习惯（自学）？
7. 你认为你学习医学英语有必要吗？听说读写译这几方面的需求点？
8. 你如何理解医学英语？你认为什么是医学英语？
9. 你现在有没有上过医学英语课？如果有，上过哪些？包括校内的和校外的？
10. 你觉得自己本硕博不同阶段对医学英语的需求有变化吗？
11. 你觉得你上过的医学英语课对你的英语学习有帮助吗？如果有，有哪些帮助？如果没有，你觉得问题可能会出在哪里？
12. 你理想的医学英语课是怎样的？比如，你认为应该包含哪些内容？授课方式？线上线下？
13. 愿意花多少时间？
14. 关于教学法，你更喜欢老师主导还是学生主导？

15. 你有没有比较喜欢的考核方式？

D4.1 医生背景信息问卷

姓名或昵称：
毕业学校：
毕业时间：
工作单位：
最高学历：
当前科室/研究方向：
最近三天方便访谈的时间：

D4.2 医生访谈提纲

1. 首先确认一下，你是毕业于这所大学吗？
2. 你是哪年入学的？读的是该校的本科还是硕士还是博士呢？哪年毕业的呢？
3. 方便告知现在的工作单位、科室及职称吗？之前的工作经历
4. 你对学英语感兴趣吗？喜欢学英语吗？为什么呢？可以展开聊聊吗？
5. 你觉得你需要学习英语吗？为什么呢？可以展开聊聊吗？
6. 你在工作中有哪些情况需要用英语？你工作中使用英语有困难吗？
7. 你觉得你的英语还需要提高吗？如果你觉得需要，你想要从哪方面提高呢？
8. 总的来讲，你觉得学英语难吗？难在哪里？你通常会用什么英语学习策略？
9. 你认为你学习医学英语有必要吗？
10. 你如何理解医学英语？你认为什么是医学英语？
11. 你现在有没有上过医学英语课？如果有，上过哪些？包括校内的和校外的？
12. 你觉得你上过的医学英语课对你的英语学习有帮助吗？如果有，有哪些帮助？如果没有，你觉得问题可能会出在哪里？
13. 你理想的医学英语课是怎样的？比如，你认为应该包含哪些内容？

Appendix E Anonymised syllabuses of the three EMP courses at the case university

1. Medical Terminology (in its original language)

Course Description:
This course is specifically designed to assist students in acquiring English medical terminology. Through comprehensive study and practical exercises, students will develop a strong foundation in medical terminology, enabling them to effectively communicate in medical settings and excel in English-speaking healthcare environments.

Course Objectives:
Familiarize students with common medical terms used in English-speaking healthcare contexts.
Build students' understanding of word roots, prefixes, and suffixes to decipher complex medical terms.
Develop students' ability to accurately pronounce medical terms in English.
Enhance students' skills in using medical terminology in written and oral communication.
Cultivate students' awareness of medical terminology variations in different medical specialties.

Course Topics:
Introduction to Medical Terminology and Word Formation
Body Systems Terminology (Skeletal, Muscular, Cardiovascular, etc.)
Diagnostic and Laboratory Terminology
Medical Procedures and Treatments Terminology
Common Medical Abbreviations and Acronyms
Medical Terminology in Specialties (e.g., Pediatrics, Neurology, Oncology)
Medical Terminology in Clinical Settings (e.g., Hospital, Emergency Room)

Teaching Methods:
The course will primarily employ a combination of lectures and in-class presentations to facilitate a comprehensive learning experience.

Assessment:
Quizzes and Vocabulary Tests: Regular quizzes will assess students' grasp of medical terms and their meanings.
Pronunciation Assessments: Students will be evaluated on their pronunciation of medical terms in English.
Final Exam: The comprehensive final exam will cover all topics taught throughout the course.

Grading:
Quizzes and Tests: 30%
Pronunciation Assessments: 30%
Class Participation and Homework: 20%
Final Exam: 20%

Course Duration:
This course will span 14 weeks, with each weekly session lasting two hours.

Note to Students:
Active participation and consistent practice are essential for success in this course. Regularly reviewing and practicing medical terminology outside of class will significantly contribute to your learning progress.

By the end of this course, students will have gained a solid understanding of English medical terminology, empowering them to effectively communicate and work confidently in English-speaking medical environments.

Timelines

Content	Week
Introduction to Medical Terminology	1-2
Combining Forms, Prefixes and Suffixes	3-4
Breathingand Respiratory System	5-6
HBPand Cardiovascular System	7-8
Urinary System	9-10
Clinical Communication	10-11
Case Presentation and Medical Dispensatory	11-12
Themed Presentation	12-13
Final Test	14

2. Medical Visual Culture (in its original language)

Course Description: This interdisciplinary course delves into the visual dimensions of medical practice, exploring how imagery has influenced medical understanding over time. We will scrutinize artistic depictions of both healthy and afflicted bodies, as well as the rise and significance of visual technologies in medicine. Structured as a three-module lecture series, the course will center on:

The portrayal of the medical body,
The depiction of disease and illness, and
Representations of treatment and healing.

By the end of this course, students will enhance their proficiency in image analysis and gain a deeper understanding of the cultural nuances that have historically shaped medical practices.

Learning Outcomes:
Students will,

• Bridge the gap between the humanities and medicine, employing interdisciplinary skills for problem-solving.
• Combine and apply insights from various disciplines, considering aspects of morality, ethics, socio-economic influences, cultural perspectives, and evolving environments.
• Work jointly on team-based projects and presentations.
• Acquire analytical methods employed by both art historians and healthcare experts.
• Develop advanced visual comprehension and sharpen critical analysis abilities.

Grading:
Short Paper Assignments 40%
Homework 30%
Group Project: Presentation and Final Paper 30%

Neglecting to submit a paper or an exam/assignment will earn a score of zero. Active participation in class will influence the determination of final grades.

Throughout the course, students must submit brief papers or essays. Details regarding these assignments can be found on the class website.

Students will be grouped to undertake a mini-project. Every group is expected to share their results in a 15-minute presentation. Detailed information about this project will be provided in a separate handout.

Your assignments involve posting and commenting on blog entries on the class

website. The instructors will provide a specific topic for your blog posts and comments. Online instructions for posting can be found in the Blogging Guidelines section. Engaging on the blog is compulsory.

Students must attend every class session. Missing more than two classes will lead to failing the course. Habitual tardiness will negatively impact your grade; being late three times is equivalent to one absence.

Passing off someone else's work as your own is strictly prohibited.

Plagiarism encompasses using content from books or online without proper citation or presenting another person's writing as your own. Any such offense will lead to a score of 0 for the specific assignment or exam. A repeat offense will automatically result in a course grade of F.

Lecture Schedules
Weeks 1-5: The Medical Body
This segment delves into how the human body has been visualized, ranging from early anatomical studies to contemporary medical imaging. The journey starts in the Renaissance, a time when art and science converged to unravel the mysteries of human anatomy. This module also probes into the 19th-century's innovative use of photography in medical science. We'll conclude with a look at the present-day significance of medical imaging techniques like CT scans, MRIs, and sonograms, as they become integral in modern medicine.

Weeks 6-10: Visualizing Disease and Illness
This module explores how imagery has shaped our perception of diseases and illnesses, spotlighting depictions of epidemics from the late middle ages onwards. Among the topics discussed will be the profound effects of the Black Death. Moving into the twentieth century, we'll look at Jonas Salk's groundbreaking polio vaccine and the celebratory representation of physicians in magazines such as Life. The module culminates in an in-depth review of AIDS representation across fine arts, popular visuals, journalism, and activism.

Weeks 11-15: Imagery in Treatment and Healing
This final module sheds light on the visual portrayal of therapeutic processes, from medieval times to the present-day vast pharmaceutical marketing landscape. It's bifurcated into two themes: locations dedicated to treatment (like hospitals and asylums) and the methodologies employed for healing. Here, students will navigate through topics like harm reduction and alternative treatment approaches.

3. Illness Narratives (in its original language)

Course Booklet

Course Description

This course will provide students with a grounding in auto/biographical illness that focus on narratives that focus on aspects of the body — from cancer, HIV/AIDS to disability — by examining key theoretical and auto/biographical texts as well as biographical films. By analyzing heterogeneous representations of illness and modes of narration in life writing students will reflect upon variants of the experience of illness in various contexts. Students will also engage with volunteers from the Cancer Rehabilitation Society of the Chinese Anti-Cancer Association to write about their experience of living with cancer.

Instructor
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Contact Details

For all emails, presentations and essays you must include:
- Name in Chinese and Pinyin
- Student ID
- Course name
- Class time

Resources
All texts, films and other resources will be supplied and will be in English (or subtitled in English) and made available to students via WeChat or Baidu Pan. The resources are for educational purposes only. Please do not share the resources with others.

Class Methodology
Class will consist of lectures, tutorials, and workshops:

Lectures:
Each lecture will focus on key works across various genres. The main themes, arguments, issues will be summarised and explored. Students are encouraged to actively engage during the lecture by raising issues, sharing experiences, asking questions, and to debate with fellow classmates and the instructor.

Tutorials:
Based on two prescribed articles students will form groups of 4 students. For each tutorial students are required to read all of the articles in advance and prepare a minimum of 2 questions and/or discussion points. he questions and discussion points must be compiled into a folio and submitted each week at class. This is essential as you are expected to actively participate in class discussions based on the readings.

Assigned readings must be completed before each class meeting in order to make a valuable contribution.

Assessment
Class Attendance and Tutorial Portfolio 20%
Profile of an Illness 50%
Parallel Chart 30%

Class Attendance and Participation (20%)
Class attendance is compulsory and active participation in tutorials and class discussions is strongly encouraged. Before each tutorial students are required to read all of the articles in advance and prepare 2 questions and/or discussion points. The questions and discussion points must be submitted in class each week.

Cancer Rehabilitation in China: A Narrative Medicine Project (50%)

Create an illness profile of a volunteer from the Cancer Rehabilitation Society of the Chinese Anti-Cancer Association. An illness profile describes "the patient's perception, experience, expression, and pattern of coping with symptoms". (Dein 2004) According to Arthur Kleinman (1978), "Illness … signifies the experience of disease and the societal reaction to disease. Illness is the way the sick person, his family, and his social network perceive, label, explain, valuate, and respond to disease."

Engaging with patients is essential to understanding the individual, social, cultural and historical aspects of illness. As Charon (2006) writes, "narrative training helps health care professionals to fulfill their duty to bear witness to the suffering of others."

The best profiles will be published in newspapers, magazines and journals in China and internationally.

On Sunday 13 October you will meet with a volunteer from the Cancer Rehabilitation Society and will later conduct a series of interviews.

Interview Guide

The interview is divided into three parts:

1. Basic information about the volunteer:

- Name
- Age
- Gender
- Place of birth
- City of residence
- Education background
- Occupation

2. Kleinman's explanatory model (EM):

- What do you think has caused your problem?
- Why do you think it started when it did?
- What do you think your sickness does to you? How does it work • How severe is your sickness? Will it have a short or long course?
- What kind of treatment do you think you should receive?
- What are the most important results you hope to receive from this treatment?
- What are the chief problems your sickness has caused for you?
- What do you fear most about your sickness?

3. Open ended-questions:

As part of your interview you are free to continue asking questions and exploring various aspects of the patient's experience of living with rare disease.

Some tips:

- If you find that the patient is feeling uncomfortable perhaps you can share something about yourself that is relevant to make them feel like you can understand how they feel.
- Try not interrupt the patient when they are talking. Allow them to finish their point before asking another question or offering a comment.
- Learn about other aspects of the patient's life. For example, what was their life like before their illness? What are their hobbies? Have they travelled overseas? This will not only allow you to understand more about their life but can perhaps make everyone feel more relaxed.
- Be aware of your body language and don't play on your phone. Keeping eye contact shows that you are engaged with their stories. Don't be distracted by other things such as your phone. If possible switch your phone to airplane mode so that you can give your full attention to the patient.
- Examine the language that they use. Do they use particular symbols, metaphors, similes, images or analogies?
- Keep an open mind and examine your assumptions.

The profile can be portrayed from various perspectives eg. before and after an illness, the process of diagnosis, the experience of medical treatment of an illness, how the illness affected the subject's relationship to others, the doctor-patient relationship, and more. It is up to the volunteer and you to decide how you want to approach your topic and

compose your narrative.

Some Research Tips

- Your mission is to discover how has the illness impact upon, changed or defined the person and examine the social and cultural contexts of the person's experience of illness.

- Your writing will flow from the material you've gathered. The better the research, the better your profile will be.
- Record the interview(s) with your subject. Don't just rely on notes and/or memory.
- Do some cultural and social research to give the patient's experience some context. As the American writer Gay Talese states "the role of the nonfiction writer should be with private people whose lives represent a larger significance."

Consent and Anonymity

Please fill out the consent form and attach it to your essay. You can find the INFORMED CONSENT FORM.

Verity

This essay is a non-fiction narrative, that is, it should not contain any imagined, false, or fictional elements. However, this does not mean you can not be creative with language and structure. Be inventive, innovative, and insightful.

Word count: 2,000 words in Chinese and English
Please submit via email: XX

You MUST include in your email:

- Name in Chinese and Pinyin
- Student ID
- Course name
- Major
- Cover sheet
- Academic integrity statement
- Consent form

For example:
Dear XX,
My name is Sima Qian 司马迁 (2015123456). I am a student in your Illness Narratives: The Body course. My major is Biomedical English.

Please find attached:

- Cover Sheet
- Academic Integrity Statement
- Consent Form
- Illness Profile
- Parallel Chart

Best wishes, Sima Qian

Parallel Chart (30%)

After each of your meetings with one of the volunteers from the Cancer Rehabilitation Society write about your personal experience, ideas, and emotions as a means of reflecting upon your engagement. Unlike a medical chart, a Parallel Chart is not a formal document, rather you can write about your personal responses about the patient. Rita Charon (2006) provides the following instructions to her students:

Every day, you write in the hospital chart about each of your patients. You know exactly what to write there and the form in which to write it. You write about your patient's current complaints, the results of the physical exam, laboratory findings, opinions of consultants, and the plan. If your patient dying of prostate cancer reminds you of your

grandfather, who died of that disease last summer, and each time you go into the patient's room, you weep for your grandfather, you cannot write that in the hospital chart. We will not let you. And yet it has to be written somewhere. You write it in the Parallel Chart.

Charon argues that the goal of the Parallel Chart is to enable health care workers to "recognise more fully what their patients endure and to examine explicitly their own journeys through medicine." The Parallel Chart is not a diary but it should note the date of the meeting(s) with the patient and written in ordinary language. The purpose of the Parallel Chart is to enable you to reflect upon your engagements with the patients, to further help understand the patient's experience of having a rare disease, and to augment your cognitive and creative faculties.

The Parallel Chart is private and will not be shared with the volunteer.

Word count: 1,000 words in English
Please submit via email: XX

Course Schedule
Week 2: Introduction
Melissa Shang, Stories About Disability Don't Have to Be Sad
Week 3: Introduction to Narrative Medicine I TED Honoring Stories of Illness: Dr Rita Charon
Week 4: Introduction to Narrative Medicine II
Miriam Divinsky, Stories for Life Introduction to Narrative Medicine
Week 5: Arthur Frank, At the Will of the Body
Sayantani DasGupta, The Art of Medicine: Narrative Humility
Week 6: National Holiday
Week 7: TO BE CONFIRMED:
Meeting with Volunteers from the Cancer Rehabilitation Society Room 716 Yifu Building on Sunday 13 October 13.30-14.30: Biomedical English majors 15.00-16.00: Medical majors
Week 8: Susan Sontag, Illness as Metaphor I
Rebecca Byerly, She Had Stage 4 Lung Cancer, and a Mountain to Climb
Week 9: Susan Sontag, Illness as Metaphor II
Paul Kalanithi, How Long Have I Got Left?
Week 10: Susan Sontag, AIDS and Its Metaphors
Fan Yiying, HIV-Positive Students Ponder Life After High School
Week 11: Introduction to Narrative Medicine III: The Parallel Chart
Rita Charon, The Parallel Chart
Week 12: Physical Disability Narratives
Dai Wangyun, Invisible Millions: China's Unnoticed Disabled People
Week 13: The Diseased Surface
Wang Bang, My Fight to Be White
Week 14: Born in the Wrong Body? Transgender Narratives I
Dan Levin, The Human Experience is Infinite
Week 15: Born in the Wrong Body? Transgender Narratives II Fan Yiying, China's Gay and Disabled Face Double Discrimination
Week 16: Illness Narratives Workshop I
Please bring a copy of the first draft of your illness profile to share with your group for editing purposes.
Week 17: Illness Narratives Workshop II
Please bring copies of the full draft of your illness profile to share with your group for editing purposes.
Week 18: Conclusion