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The Review on English for Medical Purposes: Course Development and Evaluation in China

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Abstract: This review critically examines the development and evaluation of English for Medical Purposes (EMP) in China within the broader domain of English for Specific Purposes (ESP). Integrating theoretical constructs and empirical research, it explores how core ESP principles, especially needs analysis, genre-based instruction, and task-based learning, have shaped pedagogical practices in EMP. The paper identifies the unique communicative demands of medical students, alongside persistent institutional and sociocultural barriers to effective course delivery. It also highlights the uneven implementation of national initiatives such as the Medical English Test System (METS), and ongoing challenges in teacher expertise, curriculum design, and assessment reliability. Through a synthesis of current practices and systemic gaps, the review calls for coherent curriculum reform, cross-disciplinary teacher development, and rigorous, context-sensitive evaluation models. Ultimately, it advocates for the redefinition of EMP not as a peripheral language supplement, but as a strategic pillar in China's medical education system amid the demands of globalized healthcare.

Keywords: English for Specific Purposes (ESP); English for Medical Purposes (EMP); Needs Analysis (NA); course design; curriculum evaluation; medical English education

1. Introduction

In the rapidly globalising world, proficiency in English has become essential for academic and professional engagement. Nowhere is this more apparent than in the healthcare sector, where access to scientific literature, participation in international discourse, and collaboration across borders require practical English communication skills. English is the dominant language in medical literature, conferences, and multinational research collaborations (Crystal, 2003; Ferguson, 2007). In China, the urgency to equip healthcare students with such skills is growing due to the nation's increasing integration into global medical networks and higher education partnerships.

However, traditional English language education continues to emphasize general grammar-based instruction, largely disconnected from the realities of medical education and healthcare communication. This disconnect calls for a fundamental reassessment of how English is taught to healthcare students. The goal of this review is to explore how English for Specific Purposes (ESP), grounded in needs analysis and contextual relevance, can serve as a more effective framework for language education in Chinese medical universities. By examining ESP theory, it needs analysis practices, and instructional strategies tailored to healthcare contexts, the review outlines a path toward meaningful curriculum reform.

2. English for Specific Purposes

English for Specific Purposes (ESP) emerged in the 1960s as a response to the increasing demand for domain-specific English instruction in academic, scientific, and occupational contexts (Dudley-Evans & St. John, 1998). Unlike English for General Purposes (EGP), ESP is defined by its learner-centered orientation, in which all pedagogical decisions are informed by the learner' s professional goals and contextual needs (Hutchinson & Waters, 1987). ESP courses are distinguished by their use of authentic disciplinary materials, targeted lancriticisedtions, and emphasis on communicative tasks with real-world relevance. In medical contexts, ESP equips students with the communicative strategies and

comprehension skills necessary for navigating both academic studies and clinical interactions. Recent scholarship affirms the importance of aligning ESP curricula with professional discourse practices, emphasizing genre awareness, pragmatics, and workplace-based simulations (Hyland&Shaw, 2016; Flowerdew&Wang, 2015; Xu, Coxhead, Parkinson&Gu, 2025). These findings reinforce the view that ESP should be continuously informed by evolving disciplinary practices and learner expectations in globalized professional environments.

A central concern in ESP course design is ensuring that learners' current language abilities are appropriately aligned with the communicative competencies required in their target academic or professional domains. For instance, medical students may be expected to interpret research articles, draft clinical notes, or participate in patient consultations, despite possessing only basic general English proficiency. This disparity— commonly referred to as the "needs gap" — provides the rationale for systematic syllabus planning and instructional intervention (Long, Basturkmen, 2010).

While Hutchinson and Waters (1987) proposed a widely used tripartite model of needs— necessities, lacks, and wants, it has been critiqued for underemphasizing contextual variables such as genre, discourse practices, and institutional constraints (Dudley-Evans&St. John, 1998). In more recent ESP research, there has been a shift toward genre-based and corpus-informed approaches that account for the linguistic features and communicative norms specific to professional settings (Flowerdew, 2013). These developments highlight the importance of moving beyond learner perception to include empirical discourse analysis in curriculum development. Ensuring that learners' present abilities align with the competencies they aim to acquire is crucial. For example, a student may be required to interpret texts related to a particular discipline, illustrating the discrepancy between their current skill set and the desired level of proficiency. This gap serves as the foundation for planning the learning process. While Hutchinson and Waters (1987) offer a foundational model, it is criticised for omitting essential aspects of needs assessment, such as analyses of context, language, discourse, and genre, as noted by Dudley-Evans and St. John (1998).

English for Specific Purposes (ESP) can be conceptualized not merely as a language teaching method, but as a learner-driven instructional framework that integrates pedagogical content with clearly defined communicative objectives. These objectives are shaped by learners' professional trajectories andthe linguistic demands of their target domains. In this sense, ESP curricula are constructed through a dynamic negotiation between learners' evolving purposes and the socio-professional contexts in which language is used (Belcher, 2009).

A precise analysis of the intended learning context, including its communicative events, genres, and discourse practices, must be accompanied by an assessment of learners' current proficiency and potential limitations. Hutchinson and Waters' (1987) tripartite model remains influential in categorizing learners' needs as necessities (what they must know), lacks (what they do not yet know), and wants (what they feel they need). However, contemporary ESP research emphasizes that effective course planning must also account for effective and logistical constraints, such as learner motivation, cognitive readiness, institutional support, and technological access (Dou, 2024). Only by balancing these pedagogical and contextual variables can ESP instruction achieve both relevance and efficacy.

2.1 English for Specific Purposes (ESP), English for General Purposes (EGP) and English for Medical Purposes (EMP)

A foundational distinction in English Language Teaching (ELT) lies in the differentiation between English for Specific Purposes (ESP) and English for General Purposes (EGP). As emphasized by Hutchinson and Waters (1987), this distinction is not solely based on subject matter but is fundamentally concerned with identifying the specific needs of the learner. Rather than assuming a broad requirement for English proficiency, ESP courses are purpose-built around learners' professional or academic contexts, focusing on how English will be used in real-life scenarios.

Expanding on this idea, Guo and Yu (2022) observe that ESP learners are typically adults who already have a working knowledge of English. These individuals engage in ESP programs with the intent of enhancing their language skills for targeted, often occupational, functions. This sets ESP apart from EGP, where learners are usually taught general language structures and vocabulary without immediate application to specific career fields. This practical orientation of ESP is further highlighted by Farahian and Rajabi (2022), who state that ESP instruction is deeply aligned with learners' individual goals, particularly those related to professional advancement. Unlike general English courses, which broadly cover a variety of linguistic topics, ESP tailors its content to equip learners with the linguistic competencies they need in their respective careers.

Similarly, Lertchalermtipakoon et al. (2021) argue that most ESP participants are not beginners in English; instead, they already possess foundational proficiency. This prior knowledge allows them to focus on developing specific language skills necessary for their fields rather than spending time on general English instruction. The role of needs analysis is critical in differentiating ESP from EGP. According to Rahman (2015), while EGP programs typically provide balanced instruction across all four core language skills—listening, speaking, reading, and writing—ESP courses prioritize the skills most relevant to learners' objectives. For example, suppose learners are preparing for careers in business. In that case, ESP syllabi may place heavier emphasis on writing business reports and participating in professional discussions, rather than even covering all language competencies.

The typology of ESP has also been well-documented in the literature. Carver (1983) identified three major categories of ESP: English as a restricted language, English for academic and occupational purposes (EAOP), and English with specific topics. The first category—restricted English—refers to language used within narrowly defined contexts,

such as air traffic control or restaurant service, where the range of communication is limited and context-specific. Building upon this, Carver (1983) and Hutchinson and Waters (1987) both acknowledged that the distinction between English for Academic Purposes (EAP) and English for Occupational Purposes (EOP) is often fluid. Many learners simultaneously engage in professional roles while pursuing academic advancement, making it challenging to separate these categories strictly. Therefore, EAP and EOP are frequently viewed as overlapping components within the larger framework of ESP.

The practical focus of ESP, especially in workplace settings, is emphasized by Carver (1983), who argued that while teaching methods may differ between EAP and EOP, both aim to prepare learners for employment. Employment remains the unifying objective, even though the routes taken—academic versus professional—can vary significantly. ESP's real-world relevance is most apparent in English for Occupational Purposes (EOP), which, according to Dudley-Evans and St. John (1998), is concerned with non-academic language use across a variety of professional domains such as healthcare, law, administration, and business. These courses cater to learners both within and outside the workforce, aiming to develop the language competencies required in actual job settings.

Kamil and Muhammad (2021) point out that in today's professional environment, proficiency in English is increasingly viewed not just as a desirable skill, but as a performance benchmark. For many job roles, the ability to communicate effectively in English is directly linked to professional success and career advancement. The structure and delivery of EOP courses often depend on the learners' career stage. As described by Bui and Lê (2023), whether a course is conducted before, during, or after vocational training can significantly affect its content and focus. This flexibility ensures that learners acquire the exact skills needed for their specific occupational context. Finally, Salmani Nodoushan (2020) emphasized the importance of designing ESP courses based on detailed analysis of the language used in specific situations such as academic conferences, professional meetings, or international collaborations. This approach ensures that learners are not just acquiring general language proficiency but mastering the linguistic functions they will actually use in their field.

Within the broader framework of ESP, English for Medical Purposes (EMP) has emerged as a prominent subfield that exemplifies the shift from general language education to context-specific instruction. English for Medical Purposes (EMP) represents a distinct branch within the broader field of English for Specific Purposes (ESP), characterized by its specialized use of medical language and communication practices (Maher, 1986). As highlighted by Abugohar et al. (2019), EMP focuses on equipping learners with the essential linguistic and communicative competencies required in medical and healthcare environments. This includes mastery of specialized vocabulary and terminology related to medicine, effective communication with patients and healthcare professionals, as well as proficiency in academic reading and writing tasks pertinent to medical studies. Notably, Jiang et al. (2021) emphasize that medical discourse constitutes a unique form of language, specifically tailored to facilitate clear, precise, and efficient communication within healthcare contexts. This specialized discourse not only supports clinical interactions but also underpins professional collaboration, research dissemination, and patient education, all of which are critical for successful practice in the medical field. Consequently, EMP plays a vital role in preparing medical students and professionals to navigate the linguistic demands of their careers effectively.

2.2 ESP Teaching in China

The development of ESP instruction in China has unfolded gradually over several decades. Initially introduced in the late 1970s, ESP was primarily associated with English for Science and Technology (EST), reflecting the country's strategic emphasis on modernization and scientific advancement. As China integrated more deeply into the global economy and academic community, the demand for professionals with both domain-specific expertise and English communication competence increased substantially. This shift prompted policy-level reforms, notably the 2007 College English Curriculum Requirements, which encouraged a transition from exam-oriented instruction toward communicative, context-relevant English teaching. At that time, ESP courses remained limited to a few pioneering institutions, with most universities continuing to offer General English. A decade later, the 2017 College English Teaching Guide marked a turning point by formally advocating for the incorporation of ESP across higher education curricula. This policy alignment with national development priorities significantly accelerated the institutionalization of ESP in Chinese universities.

Research into ESP teaching approaches reveals various perspectives on effective methodologies. Dou et al. (2023) introduced the Contrastive Approach as part of their research on ESP teaching methods, drawing from actual teaching practices. They argued that ESP instruction is applicable in the Chinese context and should be made available to English learners in China. For instance, Xue et al. (2022) explored the relationship between Content-Based Instruction (CBI) and ESP, highlighting how ESP programs can adopt CBI strategies to foster learner autonomy and enhance interactive reading skills in ESP reading classes. Ruan&Jacob (2009) observed a significant shift in Chinese university English courses, moving away from solely teaching language skills toward content-centered instruction, advocating for subject-specific training as the most productive approach.

The considerable variation in students' English proficiency across institutions highlights the need for situational language learning programs, tailored through needs analysis to reflect real workplace communication. As ESP gains prominence in Chinese higher education, interest in ESP course design and development has increased among Chinese

scholars, particularly concerning English for medical purposes. However, many scholars have also identified challenges in ESP courses from real target needs (Rose et al., 2021). They have recommended strategies such as focusing content on students' needs, enhancing the authenticity of materials, carefully selecting appropriate difficulty levels, and placing greater emphasis on class evaluation.

2.3 Communication Skills Essential for Medical Students

Effective communication is a cornerstone of clinical competence. Medical students are expected to communicate clearly, empathetically, and professionally with patients, their families, and other healthcare providers. The UK General Medical Council emphasizes the integration of communication training into both undergraduate and postgraduate medical curricula, underscoring its role in ensuring patient safety and ethical practice (Budakoğlu et al., 2021). Empathetic listening, collaborative decision-making, and interpersonal clarity are not ancillary skills, but central to the practice of medicine. Achieving this level of communicative proficiency requires well-structured instruction, carefully curated materials, and facilitation by educators experienced in both language teaching and clinical settings (Burgess et al., 2020).

Since the 1970s, a robust body of research has demonstrated that physician– patient communication significantly affects healthcare outcomes (Taylor et al., 2023). Effective clinical communication has been linked to improvements in diagnosis accuracy, pain management, treatment adherence, and patient satisfaction. In this context, medical English instruction must encompass both verbal and non-verbal components, such as active listening, showing empathy, and delivering sensitive information with clarity and cultural appropriateness (Croft et al., 2022). Furthermore, students must be trained to uphold ethical standards of professional interaction, including the safeguarding of confidentiality, informed consent, and respect for cultural diversity (Kaplan, 2020).

In addition to one-on-one communication with patients, modern healthcare increasingly requires strong interprofessional communication skills. Medical students are expected to collaborate effectively with nurses, pharmacists, specialists, and administrative staff. These interactions involve a range of communicative tasks, including giving concise oral case presentations, writing handover notes, participating in ward rounds, and coordinating care across disciplines (Jung et al., 2020; Meeuwissen et al., 2021). In the digital era, proficiency in electronic communication platforms— such as using electronic health records (EHR), engaging in teleconsultations, and managing email correspondence—is also essential. Digital literacy must be coupled with an understanding of e-professionalism and patient data privacy standards (Nazeha et al., 2020; Farsi, 2021).

Written communication is equally vital in clinical practice. Medical students must learn to draft referral letters, clinical summaries, SOAP notes (Subjective, Objective, Assessment, Plan), and research abstracts. This form of writing is governed by strict conventions of clarity, precision, and objectivity, requiring fluency in medical terminology, standard abbreviations, and documentation structure (Barach et al., 2020). These writing tasks are not only technical but also highly functional, contributing directly to the continuity and quality of patient care.

English for Medical Purposes (EMP) programs are specifically designed to meet these multifaceted communication needs. However, the focus areas may vary depending on learners' academic level, intended specialization, and the healthcare systems for which they are being Hennegan (Hays et al., 2020). Therefore, continuous updates to EMP courses remain relevant and practical; advancements in healthcare communication should continually inform them. Such updates should be informed by empirical research, guided by the input of subject-matter experts, and responsive to local clinical realities (Hennegan et al., 2021).

3.   Needs Analysis

Needs analysis is widely recognized as a foundational process in the design and implementation of English for Specific Purposes (ESP) courses. It serves as the basis for identifying learners' communicative requirements and aligning instructional content with real-world language use. Although not exclusive to ESP, needs analysis is considered an essential feature of ESP course development due to its emphasis on contextual relevance and learner-centered design. Maher (1986) emphasised its importance in specialised language instruction, particularly due to its focus on the linguistic features of scientific discourse. Hennegan et al. (2021) argue, any form of professional language instruction must begin with a systematic understanding of what learners need to accomplish using the target language. Similarly, Jordan (1997) contends that the success of ESP and English for Academic Purposes (EAP) programs depends on accurate and thorough needs assessment.

Over the years, various models of needs analysis have been developed to support the design of ESP curricula. Despite differences in terminology and approach, these models share a common goal: to bridge the gap between learners' current competencies and the language demands of their target environments. One of the most influential frameworks was proposed by Dudley-Evans and St. John (1998), who described needs analysis as a process for determining both the content and methodology of a course. They emphasized that this process distinguishes Language for Specific Purposes (LSP) from general language instruction or internally driven training initiatives.

The rationale for conducting needs analysis is grounded in the reality that learners approach language study with specific purposes in mind, whether academic, professional, or both. Accordingly, the instructional language must reflect the discourse patterns, genres, and pragmatic expectations of those target settings (Asrifan et al., 2020). Effective needs analysis requires a holistic understanding of the learners' motivations and the communicative situations they are likely

to encounter. MacIntyre (2020), drawing on theories of motivation and willingness to communicate, highlights that learning success is shaped not only by cognitive factors but also by learners' emotional engagement and perceived communicative relevance.

ESP practitioners are responsible for collecting, analyzing, and interpreting needs data from a range of sources. According to Dudley-Evans and St. John (1998), reliable data can be obtained from students, content experts, alumni, employers, and existing ESP literature. Multiple tools are typically used to triangulate findings, such as questionnaires, text analysis, semi-structured interviews, group discussions, direct observations, and performance-based tasks (Hutchinson & Waters, 1987). Conducting needs analysis before curriculum planning ensures that instruction is goal-oriented, context-appropriate, and responsive to actual learner challenges. Without such analysis, an ESP course planning, teaching methodology selection, and other related tasks. In the absence of such analysis, a genuine ESP course cannot be developed. As the practice of needs analysis evolves within the ESP field, a more refined and flexible theoretical framework is emerging (Basturkmen, 2010). This evolving framework allows practitioners to adapt their approach based on specific research objectives and contextual needs, enabling them to choose the most appropriate model for their purpose.

As the field of ESP continues to evolve, so too has the concept of needs analysis. More recent scholarships have emphasized the importance of flexible, context-sensitive frameworks that can adapt to local educational cultures and specific instructional goals. Wang (2024), for instance, advocates for an adaptive model of needs analysis that accounts for the dynamic interaction between institutional constraints, student expectations, and instructional feasibility. Such developments underscore the role of needs analysis not merely as a planning tool, but as an ongoing research-informed practice that informs curriculum innovation, materials development, and assessment design.

3.1 Needs Analysis of Medical Students

Within the context of English for Medical Purposes (EMP), needs analysis must account for the distinctive communicative demands faced by medical students. Hutchinson and Waters' (1987) tripartite model, necessities, lacks, and wants, offers a valuable framework for understanding learner needs from both objective and subjective perspectives. Necessities refer to the essential language skills required for effective performance in clinical and academic medical environments, such as interpreting case notes, understanding medical lectures, or conducting patient interviews. However, identifying necessities alone is insufficient; it is equally important to determine what students are currently unable to do. These skill gaps represent their lacks, which may include limited mastery of medical vocabulary, low confidence in oral communication, or insufficient academic writing proficiency.

In contrast to these externally observable dimensions, wants describe learners' self-perceived priorities and interests. Medical students may, for instance, express a strong desire to improve spoken English to communicate with foreign patients, or to publish papers in English-language journals. While these perceived needs may not always align with institutional goals, they are critical for maintaining learner motivation and long-term engagement. As Belcher (2006) notes, acknowledging learners' imagined futures and individual aspirations is central to the effectiveness of ESP instruction.

Beyond target needs, learning needs must also be considered. These refer to the preferred pathways through which students acquire language competence, such as group-based simulations, task-based instruction, or content-integrated materials. In the medical field, where both cognitive load and emotional demands are high, the learning process should be scaffolded with authentic input, meaningful interaction, and explicit feedback. Designing EMP courses without reference to these pedagogical dimension's risks producing linguistically accurate but pedagogically ineffective instruction.

Medical students' needs are also shaped by contextual variables, including their academic year, clinical exposure, institutional expectations, and career intentions. First-year students may require support in mastering general academic reading and listening, while more advanced learners may prioritize clinical communication or research writing. Furthermore, the local healthcare context, such as whether students expect to serve domestic or international populations, affects the kinds of English tasks they must prepare for. Therefore, a robust needs analysis should integrate both vertical differentiation (i.e., across proficiency levels) and horizontal variation (i.e., across communicative domains).

4.   Course Design

Course design in English for Specific Purposes (ESP) involves the structured development of learning environments and instructional sequences that directly respond to identified learner needs. It encompasses decisions regarding curriculum content, teaching methodology, task sequencing, assessment strategies, and learning outcomes (Zohar, 2023). In ESP, the objective is not merely to improve general language competence but to equip learners with the specific communicative skills required to function effectively in real-world disciplinary or professional contexts. Thus, course design must be both needs-driven and context-sensitive.

In the Chinese educational system, English instruction is stratified across primary, secondary, and tertiary levels, each with distinct instructional goals. At the primary level, language education emphasizes basic communicative skills and oral fluency (Hu et al., 2021). Middle school English focuses more heavily on grammatical structures, reading comprehension, and foundational writing skills. By high school, instruction transitions toward academic literacy,

preparing students for standardized tests and advanced academic discourse (Song, 2019). These levels contribute to wide variation in English proficiency among university entrants, necessitating differentiated course design at the tertiary level to accommodate learners with diverse backgrounds and expectations (Corbisiero-Drakos et al., 2021).

To supplement formal curricula, many institutions in China offer extracurricular English learning opportunities such as English corners, thematic clubs, study abroad programs, and online modules. These activities can enhance language exposure, build intercultural awareness, and promote learner autonomy. However, they are often disconnected from mainstream ESP instruction, leading to fragmented learning experiences. Effective ESP course design should aim to integrate such activities into formal pedagogy to ensure coherence and cumulative learning.

Historically, General English (GE) has dominated college-level English education in China, with an emphasis on grammatical accuracy, vocabulary acquisition, and text translation (Li et al., 2020; Guo & Yu, 2022). While these components remain important, they are insufficient for preparing students to meet the language demands of academic and professional environments. In response, many Chinese universities have begun adopting more communicative and content-oriented instructional models. Among these, Communicative Language Teaching (CLT) and Content-Based Instruction (CBI) are two widely promoted frameworks. CLT encourages the use of authentic language in meaningful contexts to build pragmatic competence, while CBI integrates subject-matter content into language instruction to enhance relevance and learner engagement (Toro et al., 2019).

A noteworthy innovation in Chinese curriculum reform is the adoption of the"3+X"model. In this framework, English instruction is divided into three formal stages— primary, secondary, and tertiary— with specific proficiency targets aligned to each stage. The"X"component represents discipline-specific English instruction tailored to professional fields such as medicine, engineering, or law (Mai, 2023). This model not only facilitates vertical alignment of language instruction across educational levels but also institutionalizes ESP as an integral component of higher education.

Overall, effective ESP course design must reflect a careful alignment of identified needs, instructional resources, institutional objectives, and learner profiles. In the context of English for Medical Purposes (EMP), this entails balancing general medical discourse, discipline-specific language forms, task realism, and communicative authenticity. A well-designed EMP course does not simply replicate textbook content but actively prepares students to participate in the discursive practices of medical education, clinical practice, and professional communication.

4.1 Current Status of EMP Course Design

EMP course design in China is increasingly shaped by the integration of English language learning with medical content, aiming to prepare students for real-world communication in clinical and academic medical settings (Ji&Zheng, 2023). This integrated approach helps learners develop both linguistic competence and domain-specific knowledge, ensuring they are able to comprehend and use medical English effectively in professional environments. Instructional materials and activities are carefully tailored to reflect the specialized vocabulary, discourse patterns, and communicative functions required in the medical field, such as taking patient histories, writing case reports, and participating in clinical discussions.

Choi (2021) emphasized the importance of conducting a thorough needs analysis in the development of EMP curricula. Through surveys, interviews, and language proficiency assessments, the specific linguistic requirements of both medical students and professionals were identified. Based on the results, curriculum designers created targeted content and activities that address critical language skills, including reading and interpreting medical texts, presenting medical research, and engaging in patient communication. The outcome was a more focused and effective course that directly supports students' academic and professional development. Hattani (2020) examined the incorporation of task-based language teaching (TBLT) in EMP course design. The study found that TBLT enhances learners' engagement and facilitates the acquisition of practical communication skills by simulating real-life medical tasks, such as explaining diagnoses, giving instructions for treatment, or collaborating with a healthcare team. By emphasizing meaningful use of language in context, TBLT proved to be highly effective in developing learners' fluency, accuracy, and confidence in using English in professional scenarios.

In China, English for Medical Purposes (EMP) is increasingly viewed as a strategic component of medical education reform, particularly in response to the demands of internationalization and interdisciplinary integration. Over the past decade, a number of Chinese universities have launched EMP programs tailored to the communicative needs of medical students in clinical and academic contexts. In a separate initiative, Ji and Zheng (2023) explored the implementation of a blended learning model for EMP. This model combined traditional classroom instruction with digital learning components, such as online modules, interactive quizzes, and multimedia case studies. Evaluation through assessments, surveys, and interviews revealed that the blended format not only enhanced learners' satisfaction and engagement but also improved language retention and application. It allowed flexibility in learning pace and provided additional exposure to authentic language use, which is especially beneficial for students with varying English proficiency levels. The growing role of technology in both education and healthcare has further influenced EMP course design. Modern EMP programs in China increasingly incorporate digital tools, including medical simulations, virtual patient consultations, and specialized language learning software. These technological resources expose students to authentic and varied forms of medical English, preparing them to navigate the types of digital communication and documentation they will encounter in clinical settings.

Despite significant variability in curriculum structure and delivery models, several common trends can be observed across institutions. First, many medical universities have shifted away from purely exam-oriented General English instruction toward discipline-specific English courses. These EMP courses are typically offered as elective or semi-compulsory modules during the second or third year of undergraduate study, following the completion of general English requirements. Course content commonly includes medical terminology, doctor– patient communication, clinical case discussion, and medical literature reading. Instruction is usually delivered by English instructors with support from medical faculty, enabling interdisciplinary integration (Zhang et al., 2021). Second, task-based and content-based approaches are increasingly adopted to enhance classroom authenticity and learner motivation. For example, students may be required to conduct simulated medical interviews, present case studies in English, or write reflective reports based on English-language medical articles. Assessment formats have also diversified to include oral presentations, case-based role plays, and short writing assignments, in addition to traditional quizzes and final exams (Li, 2020).

However, the implementation of EMP programs remains uneven across regions and institutions. Some universities, especially those in eastern and tier-one cities, have access to more resources, experienced faculty, and institutional support for EMP course development. In contrast, medical colleges in central or western China often struggle with underqualified instructors, limited materials, and lack of standardized teaching frameworks. This geographic disparity limits the scalability and consistency of EMP implementation nationwide.

Overall, although EMP course development in China has gained momentum and produced promising examples of localized innovation, significant work remains to ensure that such programs meet both pedagogical and professional benchmarks. Continued investment in teacher training, instructional materials, cross-disciplinary collaboration, and systematic course evaluation will be critical for improving EMP quality and equity across institutions.

5. Evaluation of ESP Courses

Incorporating evaluation as a part of course development proves to be a practical approach for pinpointing areas of weakness and identifying potential issues (Rashid&Yadav, 2020). Through evaluation, educators and academic institutions can gain meaningful insights into both the advantages and shortcomings of a course, enabling data-driven improvements in curriculum planning, instructional strategies, and learner achievement (Perrotta&Bohan, 2020). The use of both qualitative and quantitative evidence plays a key role in this evaluative process (Gates&Schwandt, 2023). As Martin et al. (2019) explain, course evaluation involves a structured process of collecting student feedback in order to measure the effectiveness of an educational program and to understand learners' experiences throughout the course better.

Common tools for course evaluation include surveys, interviews, and observations, which collect data

on various course components such as clarity of objectives, content organization and delivery, assessment effectiveness, and overall learner experience (Wei et al., 2021). Preston et al. (2020) highlight the value of integrating student viewpoints into the evaluation process, noting that learners' reflections offer crucial information about their experiences, expectations, and suggestions for course enhancement. To ensure that course evaluation yields meaningful and trustworthy results, it must be executed with methodological rigor. According to Hamilton et al. (2021), a balanced use of both qualitative and quantitative evaluation techniques is essential for generating thorough and dependable feedback that can guide informed improvements in teaching and learning practices. Evaluating a course's effectiveness involves a product-oriented approach that collects both quantitative and qualitative data. Conversely, assessing a course's appropriateness requires a process-oriented evaluation, also utilizing quantitative and qualitative data (Lam, 2020). In ESP, prioritizing the course's appropriateness is essential, as the primary focus is on addressing learners' needs. A program is considered appropriate when its methods and stated objectives align consistently with these needs, which are generally determined by the demands of relevant stakeholders.

5.1 Past research on the Assessment of ESP Courses

In recent years, a growing body of research has focused on evaluating English for Specific Purposes (ESP) programs across a range of academic and professional disciplines, utilizing a variety of research designs to determine their effectiveness and impact. These evaluations typically aim to assess improvements in language proficiency, alignment with learners' needs, and the overall quality of instructional practices. For example, Ahmadi-Javid et al. (2017) investigated the effectiveness of a business English course for university students by adopting a mixed-methods design. Their study involved pre- and post-course surveys, observational data, and student interviews to evaluate linguistic progress and the degree to which the course addressed the learners' occupational and academic requirements. In a similar vein, Mostafavi et al. (2021) conducted a comprehensive evaluation of an ESP program for engineering students. They applied a combination of standardized tests, structured questionnaires, and qualitative interviews to examine gains in technical language use and student satisfaction, as well as to refine teaching strategies.

In the healthcare field, English for Medical Purposes (EMP) has also been the subject of targeted evaluation studies. Lodhi et al. (2018) assessed an EMP course developed for international medical students enrolled in programs abroad. Their multi-faceted evaluation method included pre- and post-course assessments of English language proficiency, clinical communication performance, and student feedback surveys. The results showed notable improvements in students' command of medical terminology, cross-cultural communication skills, and practical language use in clinical settings. Similarly, Choi (2021) evaluated an EMP program offered at a medical university in China. This study used a

triangulated approach, combining pre- and post-instructional testing, role-playing scenarios simulating clinical interactions, and in-depth interviews with participants. Findings highlighted significant enhancements in students' medical English vocabulary, verbal communication abilities, and their confidence in interacting with patients in professional contexts. Collectively, these studies underscore the importance of systematic course evaluation in ESP. They demonstrate that applying diverse methodologies—quantitative assessments, learner feedback, and real-world performance tasks, provides a robust foundation for understanding instructional efficacy and guiding course improvements tailored to the specific demands of learners' academic or professional domains.

In recent years, China has taken initial steps toward standardizing EMP assessment. A notable example is the Medical English Test System (METS), initiated by the National Health Commission. METS aims to benchmark the medical English proficiency of students and professionals through tiered testing in reading, writing, listening, and speaking. While METS represents a commendable move toward national standardization, its integration into EMP curricula across universities remains limited. Many institutions continue to rely on internally developed tests, classroom performance assessments, or traditional exams, which often lack alignment with professional communicative needs. Most evaluations of EMP courses in Chinese universities focus primarily on student performance in mid-term and final exams, supplemented by class participation and assignment submissions. While such methods provide quantitative measures, they often fail to capture students' ability to apply English in real clinical or academic settings. In some cases, oral exams and project-based assessments are used, but these tend to be inconsistently implemented due to limited instructor training or resource constraints.

From the instructor's perspective, one of the major challenges in evaluating EMP effectiveness is the absence of unified rubrics that reflect both language accuracy and professional appropriateness. For instance, while a student may write grammatically correct patient notes, their use of terminology or tone may still fall short of clinical standards. This reveals the need for multi-dimensional rubrics that assess linguistic form, functional appropriateness, and medical discourse conventions. Student feedback further highlights a gap between evaluation tasks and perceived learning outcomes. Many students report that they feel unprepared for real-world communication despite achieving passing grades, suggesting a misalignment between assessment formats and communicative objectives. This reinforces the need for more authentic, task-based assessments that mirror real clinical communication, such as simulated doctor– patient dialogues, case report presentations, and collaborative problem-solving activities (Norris, 2016).

Overall, the evaluation of EMP courses in China remains an evolving process. While efforts like METS signal progress toward professionalization and benchmarking, there is an urgent need to build comprehensive, context-sensitive evaluation frameworks. Such frameworks should triangulate quantitative test scores with qualitative measures such as portfolios, peer evaluations, and reflective journals. Equally important is the ongoing training of EMP instructors in assessment literacy to ensure that evaluation practices reflect both language pedagogy and disciplinary norms.

6. Conclusion

This review has mapped the evolving landscape of English for Medical Purposes (EMP) in China through a synthesis of theoretical paradigms, pedagogical practices, and empirical findings. Framed within the broader discourse of English for Specific Purposes (ESP), the review reaffirmed the discipline' score tenet: that language instruction must be context-sensitive, learner-centered, and task-oriented. In applying these principles to the medical domain, the paper revealed a persistent gap between the communicative demands of healthcare settings and the current state of EMP course design, delivery, and assessment across Chinese institutions.

Several key insights have emerged. First, while the theoretical underpinnings of ESP, such as needs analysis, genre-based pedagogy, and task-based learning, are increasingly acknowledged in Chinese EMP discourse, their application remains partial and inconsistent. Second, despite national efforts such as the Medical English Test System (METS), there is still no unified framework guiding course development or evaluating learner performance across regions. Third, challenges in faculty expertise, curriculum coherence, and authentic assessment have limited the effectiveness of many EMP initiatives, particularly in under-resourced settings. Notably, the review highlighted how localized instructional strategies, though often improvisational, have generated pedagogical innovations that could inform broader reforms if systematically documented and evaluated.

Looking forward, the future of EMP in China depends on a dual transformation: pedagogical and institutional. On one hand, EMP programs must integrate disciplinary content and communicative function through dynamic, genre-informed curricula that reflect real-world clinical discourse. On the other hand, systemic change is needed in teacher training, cross-departmental collaboration, and quality assurance mechanisms. Research must also move beyond anecdotal reporting toward longitudinal, mixed-methods studies that capture the impact of EMP instruction on students' professional identity, communicative competence, and academic mobility.

Ultimately, the development of EMP in China represents more than a linguistic endeavor; it is a strategic response to the globalization of healthcare, the internationalization of education, and the professionalization of medical training. To realize its full potential, EMP must be treated not as an auxiliary skillset but as a core component of future-ready medical education.

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Conflict of Interest

The authors declare no conflicts of interest.

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