

## English Needs for Medical Students: Implications For English Course Design

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### ABSTRACT

*The purpose of this paper is to review theories and related studies that informed the formulation of the framework for the experiment. This review first takes a broad look at ESP and its use in English classrooms. It then discusses the needs of medical students in language learning. After that, it explains the perceptions of the instructors and learners, the challenges of ESP classrooms, and various approaches to ESP teaching and learning. It then discusses the importance of ESP course design for medical students. The review further ventures into language learning in the China education context and discusses the interactions in Chinese ESL classrooms by giving special attention to communicative skills for medical students' career development. Finally, it concludes by highlighting the studies done on the use of the ESP approach in universities and colleges by emphasizing the gap.*

*Keywords: communicative skills; course design; EMP module; medical student; need analysis*

### INTRODUCTION

It is widely recognized that English has become a global language leading to a growing number of professionals seeking to learn it. Their goal is to gain access to various documents and references and communicate effectively in diverse work settings. The medical field, known for its focus on the latest scientific advancements, particularly needs enhanced access to information and research in English. Given the rapid pace of global integration and economic globalization China has made educating internationalized medical professionals who are fluent in English, possess a global perspective, excel in medical knowledge, and can adapt to international competition a top priority.

The ability to read and understand documents, publish articles, and participate in international conferences where English is the primary language of communication is crucial for medical students and practicing doctors. Many medical universities, however, provide general English courses as opposed to those designed to meet medical students' needs. This frequently falls short of meeting the student's needs for social contact and effective communication in the medical area.

### THEORETICAL FRAMEWORK

ESP (English for Specific Purposes) is a method of teaching languages that places a high value on the objectives of the students. ESP is based on the learners. The language needed and the learning situations all of which are governed by the basic needs in ESP ( Hutchinson and Waters, 1987). ESP is characterized by its emphasis on addressing the particular requirements of the learners while utilizing activities and methodologies pertinent to the chosen discipline. The learner's objective for learning should serve as the compass for all decisions made in ESP regarding methods and material (Hutchinson & Waters, 1987).

Within the needs analysis (NA) paradigm, Hutchinson and Waters (1987) distinguish

between Target and Learning Needs Analysis. Target needs analysis examines the learners' objectives, drivers, and language usage requirements with an emphasis on the beginning point and the desired result. While stressing the educational method or the way to achieve the goals, Learning Needs Analysis seeks to identify the linguistic knowledge and abilities that learners must acquire to communicate in their future learning or professional situations effectively.

In the literature, target needs and learning needs are frequently cited. Learning needs are what the learner must do to achieve learning goals, whereas target needs are what the learner must accomplish in the target circumstance. The process of analyzing a target's needs entails identifying the linguistic characteristics of the target circumstance or the learner's needs (what English is required for), knowledge gaps (what the learner lacks), and wants (what the learner feels and requires) (Hutchinson & Waters, 1987). According to Hutchinson and Waters (1987), wants, needs, and necessities are:

1. **Necessities:** These are the requirements of the target situation, i.e., what learners must understand to perform well in the target setting (e.g., linguistic features: discoursal, functional, structural, lexical). Necessities represent the destination.
2. **Lacks:** It's crucial to compare the learners' current and target proficiency. For instance, the learner lacks space between them to read texts in a particular subject area. Lacks are viewed as the beginning of a trip to the destination above.
3. **Wants:** The goal competency must be compared to the learners' proficiency. What the student lacks, for instance, to read the text in a specific subject area is the space between them.

Matching the learners' current proficiency to the intended competency is crucial. What the learner needs, for instance, is the ability to read texts in a particular subject area, which lies in the space between them. Lacks is considered the starting point of a journey to the destination above. While the model put forward by Hutchinson and Waters (1987) lacks some needs-related components and neglects to take into account means analysis, language analysis, discourse analysis, and genre analysis, which (Dudley-Evans & John, 1998).

In light of the preceding explanations, it has been stated that ESP is a method of teaching languages in which all choices regarding the syllabus's contents and instructional techniques are based on the student's motives. Due to the diverse needs of speaking English, language needs appear to be considered as a negotiation between the learners and their society. After determining the target situation, it is necessary to decide on the requirement for a particular segment and the learners' needs and examine both the target situation and the learners' actual situation. It also appears that wants to represent subjective requirements, whereas necessities and lacks represent objective needs. Additionally, it is essential to recognize learners' potential and the abilities and information needed to accomplish the desired situation while keeping in mind limitations like aptitude, time, and technological resources.

### ENGLISH FOR SPECIFIC PURPOSES (ESP)

ESP is the abbreviation for English for Specific (or Special, Specified, Specifiable) Purposes. The English for Specific Purposes program is a method of teaching and studying English for academic and professional purposes. The teaching materials in the ESP syllabus are adapted to the unique objectives of the learners. In applied linguistics, ESP is a relatively new field that offers a novel learner-centred model for teaching English based on the student's needs.

Stevens (1988) considers ESP and English for General Purposes (EGP) as opposing concepts. Stevens (1988) states that ESP courses are those in which the aim and the content are determined by the learners' practical and actual English requirements, not by the criteria of

general English. At an international seminar, Strevens (1988) proposed that ESP has two variables and four absolute characteristics.

Two variable characteristics refer to:

1. The language skills that ESP can develop, like reading abilities, may be limited.
2. Any teaching strategy can be used when teaching ESP.

Four absolute characteristics refer to:

1. The ESP course is created to address the unique needs of students.
2. The information in ESP is connected to certain fields of study, professions, and activities.
3. Lexis, discourse, semantics, and other areas should be the emphasis of ESP.
4. General English should be contrasted with ESP.

The purpose of this description is to define ESP in relation to General English. Therefore, the focus is on Specific English, a component of certain fields, jobs, or pursuits. According to Hutchinson and Waters (1987), ESP is a technique of teaching languages where decisions about the content and methodology are made with the learners' goals in mind. No specific language, curriculum, or teaching approach was used in ESP. Hutchinson and Waters later added that ESP was a subject formed in the 1960s and a branch of linguistic teaching.

Based on Strevens' definition of ESP, Dudley-Evans and John (1998) noted the idea of a methodology. "In our definition, we stress two aspects of ESP methodology: all ESP teaching should reflect the methodology of the disciplines and professions it serves, and in more specific ESP teaching the nature of the interaction between the teacher and the student may be very different from that in a general English class. This is what we mean when we say that specific ESP teaching has its methodology". They clarified and updated ESP descriptions consisting of absolute and variable characteristics.

Absolute characteristics:

1. ESP is defined in terms of the unique requirements of the learners.
2. ESP uses the fundamental practices and procedures of the discipline it supports.
3. ESP focuses on the grammar, lexis, register, study skills, discourse, and genres of language relevant to these tasks.

Variable characteristics:

1. ESP might be connected to or created for particular specialties.
2. ESP may employ a different approach to teaching than General English in particular contexts.
3. ESP is probably intended for adult learners, either in a professional job setting or at a university of tertiary level. However, it might be appropriate for high school students.
4. ESP is often created for students at the intermediate or advanced level.
5. The majority of ESP courses offer some fundamental understanding of the linguistic structure, but beginners can also use them.

This definition acknowledges that ESP is developed to satisfy student needs but omits Strevens' (1988) difference between ESP and English. This revised definition has widened the scope of ESP by allowing students who do not typically belong to a given industry or discipline to address their special needs.

In addition to these three scholars, other scholars have also put forward their views. Carver (1983) defined ESP as English relevant to a certain profession or subject and a kind of English course offered to some specific purposes and needs of learners. This definition also

accepts that ESP is created to meet the needs of the students, but it omits the way that, according to Strevens (1988), ESP differs from English in general. By making it possible for students who do not traditionally fall under the purview of a specific subject or discipline to address their particular needs.

#### ESP AND ENGLISH FOR GENERAL PURPOSES (EGP)

English Language Teaching (ELT) has two divisions: English for Specific Purposes (ESP) and English for General Purposes/General English (GE). ESP is contrasted with EGP. English language proficiency (EGP) is achieved when English is taught to learners alongside other disciplines for educational reasons in the future. There is typically no immediate demand for the students in this learning style to utilize English for meaningful communication. In contrast, ESP occurs when English is taught to specialized students with a specific career or educational goal. ESP refers to an English learning and teaching situation where the learning environment and teaching strategies are distinct from those utilized in general English.

According to Hutchinson and Waters (1987), what sets ESP apart from EGP is knowledge of the need rather than the awareness of the requirement itself. The learners and their goals for learning English distinguish ESP and EGP the most. ESP learners are typically adults who are already acquainted with English and learn the language to express a specific set of professional skills and carry out certain profession-related tasks (Guo & Yu, 2022). Therefore, an ESP course is developed to evaluate purposes, needs, and activities for which English is required. However, EGP is taught without a specific communicative purpose for various social or cultural reasons. One may argue that ESP is a learner-centred method to need analysis, yet all EFL enterprises have unique goals and needs. Therefore it is not just ESP that has a specific need.

ESP varies from General English (GE) in that it focuses on the learners' goals for learning English and providing the language they need for their careers (Farahian & Rajabi, 2022). Additionally, ESP teachers are more aware of their students' "wants" than others, whereas GE suggests English-related public issues. ESP learners have already acquired some linguistic competence in the target language and are not always beginners (Lertchalermtipakoon et al., 2021). ESP is different from General English (GE) in that it focuses on the learners' motivations for learning English and the language required for their careers (Farahian & Rajabi, 2022). Additionally, ESP teachers are more aware of their students' "wants" than others, whereas GE suggests English-language discussions on current events. ESP students are not necessarily at the beginning because they have previously mastered some language skills in the target language (Lertchalermtipakoon et al., 2021).

All four language abilities—listening, reading, speaking, and writing—are equally prioritized in general English instruction. However, with ESP, a needs analysis identifies the language skills the learners most urgently want, creating the syllabus in response (Rahman, 2015). For instance, an ESP program would strongly emphasise writing proficiency improvement for students preparing for graduate work in business administration. Students learning English to become tour guides may benefit from an ESP program by improving their oral communication abilities.

#### TYPES OF ESP

The four language abilities of hearing, reading, speaking, and writing are all equally valued in general English instruction. However, with ESP, the syllabus is created in accordance with the requirements analysis, which identifies the language abilities that the learners most urgently want (Rahman, 2015). A considerable emphasis on writing abilities might be placed by an ESP program for students aspiring for graduate careers in business administration. An ESP program

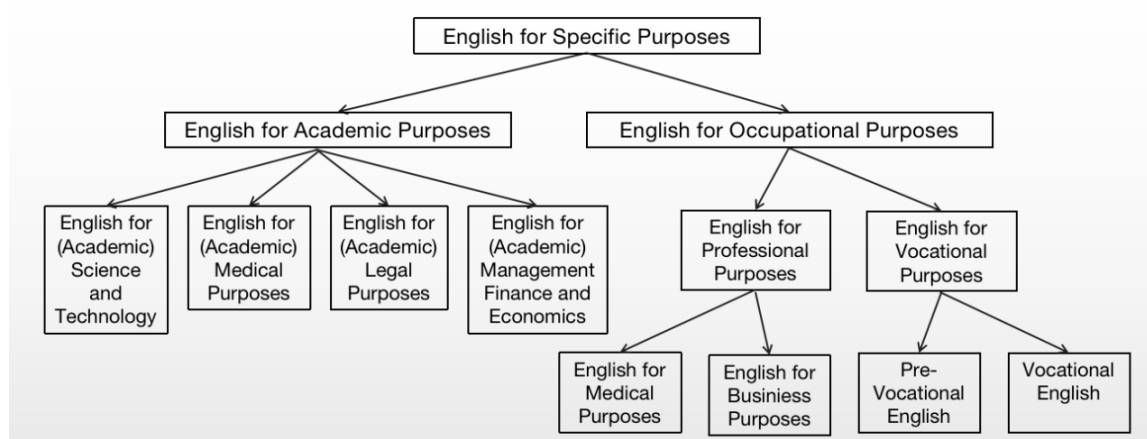
that promotes the development of speaking talents may be helpful for students studying English so they may work as tour guides. David Carter (1983) defined three types of ESP:

1. English as a restricted language
2. Use of English in academic and professional contexts (EAOP)
3. Topic-specific English.

The first kind of ESP is relatively constrained in its form and application, which aids pupils in learning English for specific tasks and studying particular situations. Students who receive this type of ESP education are only taught a small number of phrases, and they are only permitted to use the language in the contexts given to them.

English for Academic and Occupational Purposes was the second form of ESP recognized by Carver (1983). The group appears to concur with Hutchinson and Waters' assessment of EOP and EAP as occurrences that are not entirely distinct (1987). Hutchinson and Waters (1987) put forward their classification in the Tree of ELF (English Language Teaching) based on the learner's discipline or occupational area. ESP is divided into three categories: English for Science and Technology (EST), English for Business Economics (EBE) and English for the Social Sciences (ESS). Also, the EAP and the EOP were included by Dudley-Evans and St John (1998).

FIGURE 1.. The Categories and Subcategories of ESP (Dudley Evans and John, 1998)



The English Language Teaching (ELF) Tree by Hutchinson and Waters (1987) maintained the same distinction. Since students can work and study simultaneously, they claimed that the boundary between EAP and EOP is not entirely clear. Perhaps this explains Carver's (1983) rationale for categorizing EAP and EOP under the same type of ESP. It seems that Carver suggested that employment was the same goal for EAP and EOP. Nevertheless, despite having the same goal, the approaches used to get there were very different. Maybe this explains why Carver (1983) grouped EAP and EOP under the same category as ESP. Carver seemed to imply that EAP and EOP have employment as their primary objective. Even if the goals were the same, the approaches used differed extensively.

While Hutchinson and Waters (1987) maintained the same divide in their Tree of ELF (English Language Teaching), since students can work and study simultaneously, they claimed that the boundary between EAP and EOP is not entirely clear. This may clarify Carver's (1983) justification for grouping EAP and EOP under the same category of ESP. Carver may have been implying that the purpose of both EAP and EOP was employment. However, the steps chosen to accomplish the goal were very different, despite the intent being the same.

EOP refers to the use of English for purposes other than academic ones. These uses include those for administration, medicine, law, and business professionals and non-

professionals in pre- and workplace settings (Dudley-Evans & John, 1998). As a result, EOP is frequently strongly tied to students' jobs or lines of work because students are almost certainly expected to have a specific degree of English proficiency at work, which is a sign of good work performance (Kamil & Muhammad, 2021). In other words, EOP courses frequently aim to enhance language proficiency in the workplace. Depending on whether students are taking these courses before, during, or after receiving training for their job or profession, there may be variances in the content of these courses (I et al., 2020). EOP can be further separated into English for Professional Purposes (EPP) and English for Vocational Purposes (EVP), often known as Vocational English (Dudley-Evans & John, 1998).

According to Carver (1983), the third type of ESP is English with Specific Topics. He mentioned conferences, international organizations, and postgraduate reading studies as possible scientific demands. Before developing ESP materials, this kind of ESP enables students to identify their language demands precisely. Instead, it is a crucial part of ESP classes or programmes emphasising situational language. This situational language has been created based on interpreting the results from the needs analysis of the language used in the target working scenarios (Daulay, 2020).

#### ESP TEACHING IN CHINA

In China, the teaching of ESP advanced slowly. College and university ESP curricula equip students with the skills they'll need to adapt to China's social and economic changes. In the late 1970s, ESP teaching first appeared in China. Chinese academics at the time concentrated on English for science and technology. As a result, teaching mechanical, electrical, medical, and agricultural English at universities gained popularity.

The demand for individuals with strong foreign language skills and a solid professional background has drastically expanded in the 21st century due to the rapid integration of China's society and economy with the rest of the globe. In 2007, the Chinese Ministry of Higher Education launched College English Curriculum Requirements, which required that college English teaching be transformed from traditional examination-oriented teaching to practical English teaching, focusing on language application. At the time, a few universities and colleges offered ESP classes for students, but most universities and colleges concentrated on teaching General English. In 2017, The Chinese Ministry of Higher Education released the College English Teaching Guide, which modified and improved the overall structure of the College English Curriculum. ESP courses were included in the new college English curriculum to meet the needs of China's national and strategic development. It demonstrates how the emphasis on teaching college English is shifting from EGP to ESP courses. Following that, research on teaching ESP has started to develop, particularly at universities, and it now covers every teaching area.

Regarding the ESP teaching method study, Dou et al. (2023) proposed the Contrastive Approach based on ESP teaching practice. They pointed out that ESP teaching can be implemented in China, so ESP teaching should be provided for Chinese English learners. According to Wang et al. (2021), who examined the condition of ESP teaching in Chinese universities, the absence of research on teaching methods, imprecise teaching positioning, and uneven understanding of the nature and principles of teaching are the main causes of the field's immaturity. Huang et al. (2022) summarized three primary teaching methods for ESP teaching and further explained ESP research's basic methods and ideals based on pertinent sociolinguistic and pragmatic theories. These authors were guided by linguistics theories and combined them with their own ESP teaching practices. Xue et al. (2022) discussed Content-Based Instruction (CBI) and compared the teaching principles and the characteristics of CBI and ESP. She proposed that ESP can draw lessons from the rather developed CBI for

developing and discussing ESP reading classes based on the theory of autonomous learning and interactive reading teaching. According to Ma (2021), the emphasis of Chinese college English courses is shifting from language skills to content, and the academic community has agreed that the best way to teach college English is through subject-based training. Additionally, he emphasized that English proficiency levels among students at various Chinese universities vary, so this situational language was created based on how the results of the needs analysis of the actual language used in the target workplace settings were interpreted.

With the ESP gradually becoming the focus of English courses in Chinese colleges and universities, the study of ESP course design and development has gradually attracted the attention of Chinese scholars, most of which are about the study of English medical classes. At the same time, most scholars have noticed the problems of ESP courses, such as lack of theoretical guidance, inaccurate positioning, lack of authenticity of class materials, difficulty, and disconnect from target needs (Rose et al., 2021). They also put forward some strategies and suggestions. For example, the teaching content should be concentrated on the student's needs, the authenticity of the content should be improved, the difficulty of teaching materials should be selected carefully, and the evaluation of the ESP class should be given full attention. Li and Fu (2021) analyzed the current problems that exist in China's ESP course development, and they suggested that a learner-centered approach should be taken in English for Specific Purposes (ESP) course development and some important principles were proposed.

### ENGLISH FOR MEDICAL PURPOSES (EMP)

A particular branch of ESP can be thought of as EMP. EMP has its own set of medical discourse, which sets it apart from other ESP areas. (Maher, 1986). Abugohar et al. (2019) believe that EMP focuses on the language and communication skills required in the field of medicine and healthcare. It encompasses a range of language functions, including medical terminology, patient communication, academic reading and writing, and professional discourse. Jiang et al. (2021) claimed that medical discourse is a specific phrase used to accomplish a communicative goal in healthcare settings efficiently and precisely. Jiang et al. (2021) claimed that medical discourse is a specific phrase used to accomplish a communicative goal in healthcare settings efficiently and precisely.

### ENGLISH FOR MEDICAL PURPOSES AND ENGLISH LANGUAGE TEACHING AND LEARNING

English for Medical Purposes (EMP) serves as a valuable language learning tool for healthcare professionals aiming to improve their English language skills (Choi, 2021). EMP courses are designed to fulfil the unique needs and objectives of learners in various specialized disciplines, and they are based on medical language rather than the rules or structures of the English language (Abugohar et al., 2019). Additionally, EMP courses allow learners to interact with individuals from different cultural backgrounds, preparing them for global professional environments.

EMP courses focus on teaching the language and terminology specific to their professional field. Learners will also be exposed to and practice medical vocabulary, expressions, and discourse patterns relevant to their work as healthcare professionals (Pavel, 2020). They would learn how to accurately describe symptoms, conduct patient interviews, and explain medical procedures using appropriate terminology. EMP should be developed based on students' needs, requirements, and deficiencies, similar to ESP courses (Ibrahim, 2020). EMP courses incorporate workplace-related tasks that mirror real-life professional scenarios. These tasks and simulations allow learners to practice their communication skills in authentic contexts. By working with authentic materials, learners develop their understanding

of the language, discourse structure, and communication conventions used in their specific professional domain (Salmani-Nodoushan, 2020). Through the training of EMP courses, learners develop their ability to interact with colleagues, express ideas, respond to emergencies, and handle common workplace situations effectively. Besides, learners can receive immediate constructive feedback on their language use, communication strategies, and intercultural competence in their EMP courses, which helps learners identify areas for improvement and refine their communication skills within their professional contexts (Akdere et al., 2021).

The most important thing for EMP teachers is to increase their understanding of the terms and grammar utilized in medical books. Their understanding of the field aids them in completing EMP educational goals. (Tun, 2019). It is proposed that good educational methods are necessary for language learning in the setting of EMP (Heist & Torok, 2020). Task-based, content-based, or problem-based learning are all used in EMP courses. For example, Task-based learning (TBL) has been widely employed in EMP programs, which engage learners in authentic medical tasks, such as role-plays and simulations, to develop learners' language skills in real contexts (Masuram & Sripada, 2020). Additionally, current research shows that teachers can improve their students' comprehension of medical English by asking them frequent and difficult questions.

Many medical school students, in particular, currently lack English communication in their fields of specialization (Khasawneh, 2021). They are ignorant of the value of English and the necessity of language proficiency for their future employment. Besides, medical professionals and students often have limited time for language learning due to their demanding work schedules, and the complex nature of medical terminology can be challenging for them (Jiang et al., 2021). Recent studies have proposed strategies such as blended learning, online resources, and tailored EMP courses to address these challenges. For example, Ramalingam et al. (2021) explored the effectiveness of blended learning in EMP, combining face-to-face instruction with online resources, and reported positive outcomes in language learning.

#### THE IMPORTANCE OF EMP FOR MEDICAL STUDENTS' PROFESSIONAL DEVELOPMENT

EMP plays a crucial role in facilitating effective communication between healthcare professionals, patients, and other stakeholders, thus ensuring the delivery of quality healthcare services in multilingual and multicultural settings (Ramalingam et al., 2021). In an increasingly globalized world, effective communication is fundamental to healthcare provision, ensuring accurate diagnosis, appropriate treatment, and patient satisfaction. Language barriers can impede the delivery of quality care, lead to misdiagnoses, and medication errors, and compromise patient safety (Mustafa et al., 2023). EMP equips healthcare professionals with the necessary language skills to overcome these challenges and foster meaningful communication with patients and colleagues, contributing to better patient outcomes and improved doctor-patient relationships (Kamau et al., 2022).

EMP plays a pivotal role in enhancing medical students' language proficiency, particularly in medical terminology, academic writing, and professional communication (Choi, 2021). Research by Huang and Zhang (2020) demonstrated that EMP interventions significantly improved medical students' vocabulary knowledge and writing skills. By developing a strong command of medical English, students can effectively navigate complex healthcare settings, comprehend specialized literature, and engage in collaborative teamwork. They highlighted the positive impact of EMP on medical students' communication skills, emphasizing the development of active listening, rapport-building, and patient-centered communication strategies.

EMP has a crucial function in preparing medical students for the demands of their future professional roles (Jiang et al., 2021). It gives them the essential skills to navigate professional



environments, such as medical conferences, research presentations, and academic writing. A study by Findyartini et al. (2020) underscored the significance of EMP in developing students' professional readiness, including their ability to analyze medical literature critically, contribute to research discussions, and disseminate findings effectively. Besides, EMP equips medical students with cultural competence and facilitates culturally sensitive care, contributing to better patient outcomes and improved doctor-patient relationships (Dillard et al., 2021).

Through enhancing language proficiency, promoting intercultural competence, cultivating practical communication skills, developing professional readiness, and fostering reflective practice, EMP equips medical students with the necessary skills and competencies to succeed in their future careers (Malau-Aduli et al., 2019). By integrating EMP into English courses, educational institutions can better prepare students for the challenges of providing quality healthcare in diverse contexts.

### COMMUNICATIVE NEEDS FOR MEDICAL STUDENTS

The ability to communicate with patients, their families, and coworkers in a clear, sensitive, and effective manner is a requirement for students., according to the UK General Medical Council, which supports communication skills training as an important part of the curriculum in undergraduate and postgraduate medical education (Budakoğlu et al., 2021). Students should be able to communicate effectively, empathize with others, and collaborate with patients, their families, and coworkers. In-depth preparation is needed for this type of small-group instruction, along with a variety of materials and teachers with relevant experience (Burgess et al., 2020).

Since the 1970s, qualitative and quantitative researchers have extensively researched the value of patient-physician communication (Taylor et al., 2023). In the healthcare sector, when individuals explore the uncharted territory of their own health and disease, effective communication skills can positively affect a number of health outcomes. In the healthcare sector, when individuals explore the uncharted territory of their own health and disease, effective communication skills can positively affect a number of health outcomes. These outcomes include improved mental and physical health, higher symptom resolution, better pain control, greater treatment compliance, and higher patient satisfaction (Kyaw et al., 2019). Empathy, understanding, active listening, and the capacity to address patients' worries, meet patients' needs, and convey emotionally charged information are all characteristics of effective communication (verbal and nonverbal) (Croft et al., 2022). Medical students should also develop the ability to communicate ethically and sensitively, respecting patient confidentiality, informed consent, and cultural differences. The development of the doctor-patient relationship requires these communication abilities (Kaplan, 2020).

Medical students need to collaborate and communicate effectively with other healthcare professionals, such as nurses, pharmacists, and specialists (Jung et al., 2020). They should be able to contribute to interdisciplinary teams, present research findings, share case studies, deliver presentations, provide and receive feedback, and engage in discussions to coordinate patient care (Meeuwissen et al., 2021).

In today's healthcare landscape, medical students must be proficient in digital communication methods, including the use of electronic medical records, telemedicine platforms, and other digital tools for communication with patients and healthcare professionals (Nazeha et al., 2020). They have to learn how to develop skills in written communication through digital channels and adapt to the specific customs and privacy requirements of digital communication in the healthcare industry (Farsi, 2021).

Accurate and clear medical documentation is crucial for effective healthcare delivery (Barach et al., 2020). Medical students must develop skills in writing medical reports, progress notes, and referral letters. They need to understand the conventions of medical terminology,

abbreviations, and formatting used in medical records and be able to convey information concisely and objectively.

In an EMP context, medical students have specific communicative needs that are crucial for their professional development (Abugohar et al., 2019). It's crucial to remember that medical students may have different communication needs depending on a variety of factors, such as their level of education, specialization, and the healthcare system they are preparing to work in (Hays et al., 2020). In order to effectively address the changing communicative needs of medical students, the design and implementation of EMP courses can also be further informed by keeping up with recent developments in healthcare communication research and by consulting with experts in the field and medical professionals (Hennegan et al., 2021).

## NEEDS ANALYSIS

The needs Analysis stage of ESP is crucial. The cornerstone of ESP is needs analysis, which results in a focused course. Although ESP is not the only educational organization that uses it, needs analysis is typically viewed as essential to ESP, according to Robinson (1991). Strevens (1988) noted that requirements analysis is a crucial initial stage for language education for specialized purposes since it focuses more on the characteristics of scientific discourse. Hennegan et al. (2021) suggested that needs analysis should be the foundation of any language training. Jordan (1997) opines that a fundamental part of an ESP/EAP approach to course design is needs analysis.

There are several needs analysis models used in the field of ESP, including those developed by Hutchinson and Waters (1987), Robinson (1991), West (1994), Jordan (1997), and Dudley-Evans and John (1998). These theoretical approaches are comparable in that they both seek to identify the learners' English language needs. According to Dudley-Evans and St. John (1998), needs analysis is the procedure used to determine the "what" and "how" of a course. They contend that needs analysis is specific to Language for Special Purposes (LSP), which is ESP, and not to language teaching-needs assessment or inside language training.

The rationale behind needs analysis is rather simple: people learn a foreign language for various reasons and need it to do various tasks (Asrifan et al., 2020). The kind of language used depends on the needs of the learners. Therefore, it is essential to understand a learner's motivations for studying a second language and the contexts in which they will use it to create an effective language course (MacIntyre, 2020).

ESP practitioners should undertake the Needs Analysis (NA). According to Dudley-Evans and John (1998), the primary sources for NA include students, professionals, former students, papers pertinent to the field, clients, employers, colleagues, and ESP research in the area. The key instruments used to carry out needs analysis studies are the questionnaire, analysis of real spoken and written texts, discussions, structured interviews, observations, and assessments (Hutchinson & Waters, 1987; Robinson, 1991; Dudley-Evans & John, 1998). ESP practitioners must conduct a needs analysis study before establishing and organizing an ESP syllabus, a course, selecting a teaching strategy, and other pertinent processes that need analysis. When there is no requirements analysis, there is typically no ESP course.

As needs analysis continues to advance in the ESP environment, a more sophisticated and adaptable theoretical framework for needs analysis is beginning to take shape (Wong, 2020). In the context of ESP, needs analysis frameworks should be versatile to satisfy the investigator's goals. They can select the model or framework best suited to their needs.

The needs of learners in the target setting are highlighted in target needs. According to (Hutchinson & Waters, 1987), relying solely on the target objectives is not prudent. They also noted that the target needs include necessities, lacks, and wants. The ability to apply properly in the target context is necessary, and the lack refers to the discrepancy between the target and current levels of ability. Wants are just the needs or eagerness of learners.

Necessities are what medical school students need to know in order to have a good performance in their job. Identifying necessities alone is not enough because what medical school students already know is also crucial. In other words, the existing language competency of medical school students must be compared to the target language ability. The lacks are the spaces left between the two. In other words, the shortages are the discrepancies between what medical school students already know and what they need to know. The term "wants" describes how medical students see their needs. Although it is entirely likely that their perspective differs from that of other interested parties, their motivation is crucial to the learning process. As a result, their alleged desires cannot be disregarded.

The linguistic information and abilities that learners must acquire in order to communicate effectively in their future academic or professional development are referred to as learning demands (Hutchinson & Waters, 1987). It emphasizes analyzing the learners' learning route. Learning needs refer to the language information and abilities that medical students must acquire in order to succeed in their future careers in ESP classes for medical students. It has been demonstrated in practice that the idea of learning demands and their examination is helpful.

Learning needs refer to the language information and abilities that medical students must acquire in order to succeed in their future careers in ESP classes for medical students. It has been demonstrated in practice that the idea of learning demands and their examination is helpful. As a result, these three factors must work well together to reach a consensus during the learning process. Otherwise, the conflicts may have a negative impact on the student's motivation.

#### PREVIOUS STUDIES OF NEEDS ANALYSIS IN UNIVERSITY CONTEXT

Due to the importance of needs analysis, various techniques to incorporate it in real curriculum development and review have been developed. In this regard, Munby (1981) was a pioneer who paved the way for subsequent thinkers. He put forth his sociolinguistic paradigm to modernize and enhance ESP classes in the 1960s and 1970s. He divided his model into two parts. The assessment of the learners' communication needs came in the first stage, and the second stage involved incorporating the derived needs into the curriculum design in the form of micro-skills and micro-functions.

It was suggested that other approaches to needs analysis include a systematic approach (Carvalho et al., 2019), a learning-centered approach (Hutchinson & Waters, 1987), a learner-centered approach (Zagallo et al., 2019) and a task-based approach (Iizuka, 2019). The systematic approach was more adaptable and useful than Munby's work. However, it did have a flaw in that it emphasised the learners' conceptions of their needs rather than their actual requirements in the real world. In response to Munby's work, a learning-centered approach was presented. Munby overstated the significance of language requirements and ought to have paid more attention to how learners learn. Instead, they talked about two categories of demands: learning needs and target needs (Hutchinson & Waters, 1987).

In Malaysia, Kashinathan and Abdul Aziz (2021) used questionnaires and semi-structured interviews to administer language needs analysis study. The results showed that undergraduates had trouble speaking and listening throughout their first two years of study. Therefore they were urged to employ efficient learning techniques to advance their skills. In

Canada, Ghahari et al. (2020) used interviews, observations, and questionnaires to explore students' needs, and a healthcare communication course was developed for immigrant students. Role plays and authentic learning materials were used in the course, and the training goal of the course was achieved.

Zou et al. (2021) proposed that need analysis should be included in the Business English curriculum in China to ensure course efficacy. Their study investigated the perspectives of non-English-major college students in Wuhan during the pandemic and figured out challenges to derive conclusions for upcoming English-language learning in colleges online. They used questionnaires and interviews to investigate non-English majors' readiness and summarized six categories of challenges. Besides, they also discovered that students were demotivated due to previous negative learning experiences, low language proficiency, learning environment and efficiency and effectiveness.

Additionally, empirical research has emphasized the significance of needs analysis in actual teaching and learning situations. Alerten and Efeoglu (2021) discovered that using learners' requirements as the major data was more beneficial when constructing ELT programs in their investigation of two ESP programs. Another study discovered that courses would be successful in the future if they could meet the demands of the students if they were in line with the perceived needs (Fidalgo et al., 2020).

The empirical studies on needs analysis in university context mainly focused on the students' theoretical development and needs. However, there was a lack of research on the target needs of the interns or employees.

## COURSE DESIGN

The process of developing engaging learning settings and experiences for students is known as course design (Hege et al., 2020). Curriculum designers use a variety of instructional aids, techniques, skills, and activities at this stage. The questions of "what to teach," "how to teach," and "what teaching objectives to reach" can all be discussed in order for pupils to acquire new knowledge and experience various levels of thought (Zohar, 2023). Meeting the needs of the students is the main objective when designing courses. Students' participation and interaction are reflected in effective and useful courses.

The English curriculum in China is divided into primary school, middle school, and high school levels. The primary curriculum focuses primarily on oral communication and basic grammar (Hu et al., 2021). The middle school curriculum focuses on more complex grammar, reading comprehension, and writing skills, while the high school curriculum emphasizes advanced grammar, critical thinking, and academic writing skills (Song, 2019). The curriculum is designed to meet the needs of learners from different socioeconomic backgrounds and levels of ability (Corbisiero-Drakos et al., 2021). Apart from the national curriculum, many schools in China offer English language courses that cater to the needs of their students (Tun, 2019). These courses include extracurricular activities such as English clubs, study tours, and exchange programs. Such programs aim to enhance student's ability to communicate in English, improve their confidence and self-esteem, and promote intercultural communication.

Historically, English courses in China have focused primarily on grammar and vocabulary, with little emphasis on communication skills (Du, 2021). General English (GE) approach has been heavily influencing English instruction for Chinese college students in China for a very long period. Teaching college English in China still places a great emphasis on the breadth of general information with little relevance on disciplinary or professional expertise, and the course is still seen as a GE course to convey basic language knowledge and skills (Li et al., 2020). As a result, a lot of class time has been devoted to teaching grammar, differentiating words and phrases, and paraphrasing and translating the text into Chinese (Guo

& Yu, 2022). Since GE is the foundation of all ESP disciplines, more scholars are arguing that typical college English instruction falls woefully short of addressing the demands of medical students.

However, this has changed in recent years with the adoption of communicative language teaching (CLT) in English curriculum design (Toro et al., 2019). CLT emphasizes the development of communicative competence in learners and encourages the use of authentic language in meaningful contexts (Otuna & Tatiana, 2023). One of the most significant recent developments in English curriculum design in China is the adoption of the "3+X" model (Mai, 2023). This model divides English language education into primary, secondary, and tertiary stages. Each stage has a specific set of language proficiency goals, and the "X" refers to additional language proficiency requirements that are tailored to the needs of different professions or industries.

### CURRENT STATUS OF EMP COURSE DESIGN

EMP course design in China often emphasizes the integration of language learning with medical content (Ji & Zheng, 2023). This approach aims to develop students' language proficiency while simultaneously building their knowledge and understanding of medical terminology, concepts, and practices. Course materials and activities are designed to reflect the specific language and communication needs of medical professionals in China.

Choi (2021) explored the process of designing an EMP course through a needs analysis approach. The researchers identified the language needs of medical students and professionals, and based on the findings, developed course content and materials that target specific linguistic skills required in medical contexts. In another study, Hattani (2020) investigated the integration of task-based language teaching (TBLT) in the design of an EMP course. The researcher examined the impact of TBLT on learners' language proficiency and their ability to perform medical tasks effectively. Ji and Zheng (2023) explored the integration of blended learning in the design of an EMP course. The researchers developed a blended learning course model, incorporating face-to-face sessions and online activities, and evaluated its effectiveness through learner assessments, surveys, and interviews to gauge students' satisfaction and learning outcomes.

With the increasing use of technology in healthcare, EMP courses in China have incorporated technology tools and resources to enhance learning. This can include medical simulations, online resources, virtual patient platforms, or language learning software. These tools and some authentic materials expose learners to real-world medical language and help them become familiar with the types of texts they will encounter in their professional practice. Integrating technology into EMP course design aims to provide learners with realistic and interactive experiences that reflect the use of technology in modern medical practice.

### MEDICAL ENGLISH TEST SYSTEM (METS)

METS is a national professional English test program for medical and health professionals in China, and the METS test standard was established in accordance with the actual work needs of hospitals in China, focusing on the test taker's ability to learn and work proficiently in a professional language in a medical environment. METS certificates are divided into four levels, Level I is the initial level and Level IV is the highest level. METS Levels I-IV certificates correspond to the four levels of junior vocational school, senior vocational college, bachelor, and master and doctor (Cai & John Kunnan, 2019).

TABLE 1. METS Level Proficiency Standards

Level	Brief description of competence standards
Level I	Be able to meet the English requirements of junior medical and health positions in foreign-related interactions, such as directing medical consultations, taking medical histories, filling out medical records, writing simple letters or notes, etc.
Level II	Be able to meet the English language requirements for mid-level medicine and health positions in foreign-related interaction, such as reporting medical conditions, reassuring patients, writing emails, etc.
Level III	Be able to meet the English language requirements of senior and middle-level medical and health positions in foreign-related interactions. For example, learners are able to communicate effectively in professional areas and write accurate English summaries, etc.
Level IV	Be able to meet the English requirements of senior medical and health positions in foreign-related interactions, such as communicate effectively in social, academic or clinical communication, deliver academic lectures, write academic papers, etc.

China has not yet established a standardized teaching and evaluation standard system for medical and nursing professional English, and the introduction of METS examination standards has filled the gap in the assessment and evaluation of medical and nursing professional English in China (Cai & John Kunnan, 2019). The METS expert group comprises first-class domestic and foreign experts in medical education, English education, language testing, clinical medicine, nursing, and educational psychology. The current METS standard was formed through research on the competency and professional English needs of relevant positions in hospitals such as Peking Union Medical College Hospital, Sichuan Huaxi Hospital and Beijing Chaoyang Hospital, and the use of advanced language assessment technology at home and abroad (Ge et al., n.d.).

After more than ten years of development, the METS examination program has played a good role in promoting the teaching of professional foreign languages in medical schools in China and has trained a number of teachers specializing in medical English. Through teaching, assessment and evaluation, a number of medical students with professional English application abilities have been cultivated (Su et al., 2021).

## ESP COURSE EVALUATION

Incorporating course evaluation into its creation can be a useful technique for identifying the weak points and issue areas (Rashid & Yadav, 2020). Evaluation provides valuable insights into the strengths and weaknesses of courses, enabling instructors and institutions to make informed decisions regarding curriculum design, instructional strategies, and student learning outcomes (Perrotta & Bohan, 2020). Both qualitative and quantitative data can be used as evaluations (Gates & Schwandt, 2023). However, Martin et al. (2019) claim that course evaluation is the process of collecting feedback from learners, usually to assess the quality of a training course or program and get a better look at their learning experiences. According to Wei et al. (2021), course evaluation instruments such as surveys, interviews, and observations are commonly used to collect feedback. These instruments gather data on various aspects of the course, including the clarity of course objectives, the organization and delivery of content, the effectiveness of assessment methods, and the overall learning experience. Additionally, Preston et al. (2020) highlight the importance of considering student perspectives in course evaluation, as they can provide valuable insights into their experiences, preferences, and suggestions for improvement. Course evaluation processes must be rigorous, reliable, and valid, employing both quantitative and qualitative methods to ensure comprehensive and accurate feedback (Hamilton et al., 2021).

The investigation of a course's effectiveness requires a product-oriented evaluation and the gathering of both quantitative and qualitative data. In contrast, investigating its appropriateness calls for a process-oriented evaluation and gathering quantitative and qualitative data (Lam, 2020). A course's suitability must come first, especially in ESP, where the focus is mostly on meeting the needs of the learners. When the course's techniques and declared objectives are consistent with those aims, which are typically based on the demands of the stakeholders, the entire program is deemed appropriate.

#### EMPIRICAL STUDIES ON ESP COURSE EVALUATION

In recent years, many studies examined and provided insights into evaluating ESP courses in different domains and highlighted various research methodologies used to assess the outcomes and effectiveness of such courses.

Ahmadi-Javid et al. (2017) focused on evaluating a business English course for university students. They employed a mixed-method approach involving pre-course and post-course surveys, interviews, and observations to assess the effectiveness of the ESP course in improving students' language skills and meeting their specific needs. (Mostafavi et al., 2021) evaluated the outcomes of an ESP course designed for engineering students. The study uses pre- and post-course tests, questionnaires, and interviews to measure students' language proficiency development and assess their satisfaction with the course content and teaching methods.

Concerning the medical area, Lodhi et al.'s (2018) study aimed to evaluate an EMP course designed for international medical students studying abroad. The researchers used pre- and post-course language assessments, clinical skill evaluations, and student feedback surveys. The findings indicated significant improvement in students' medical English proficiency, cultural competence, and clinical communication skills. In Choi's (2021) study, they evaluated the effectiveness of an EMP program implemented in a Chinese medical university. The researchers employed pre- and post-course tests, clinical role-playing simulations, and student interviews. The results demonstrated notable enhancement in students' medical vocabulary, speaking and listening skills, and ability to interact with patients in English.

#### CONCLUSION

This paper explores various theories and relevant studies that have influenced the development of the experimental framework. The review begins by providing a comprehensive overview of English for Specific Purposes (ESP) and its application in English classrooms. It then delves into the specific language learning requirements of medical students. Furthermore, it discusses the perspectives of both instructors and learners, the challenges encountered in ESP classrooms, and different approaches to teaching and learning ESP. The importance of designing ESP courses tailored to the needs of medical students is also emphasized. The review expands its focus to language learning in the context of Chinese education, particularly examining the dynamics within Chinese ESL classrooms and highlighting the significance of communication skills for the career advancement of medical students.

#### REFERENCES

- Abbas, J. (2020). Service quality in higher education institutions: Qualitative evidence from the students' perspectives using Maslow hierarchy of needs. *International Journal of Quality and Service Sciences*, 12(3), 371–384. <https://doi.org/10.1108/IJQSS-02-2020-0016>

- Abugohar, M. A., Al-Hnifat, M. A., Al-Smadi, O. A., Rashid, R. A., & Yunus, K. (2019). English Language Speaking Skill Issues in an EMP Context: Causes and Solutions. *International Journal of English Linguistics*, 9(3), 211. <https://doi.org/10.5539/ijel.v9n3p211>
- Ahmadi-Javid, A., Seyedi, P., & Syam, S. S. (2017). A survey of healthcare facility location. *Computers & Operations Research*, 79, 223–263. <https://doi.org/10.1016/j.cor.2016.05.018>
- Ahmed Alsamadani, H. (2017). Needs Analysis in ESP Context: Saudi Engineering Students as a Case Study. *Advances in Language and Literary Studies*, 8(6), 58. <https://doi.org/10.7575/aiac.all.v.8n.6p.58>
- Akdere, M., Acheson, K., & Jiang, Y. (2021). An examination of the effectiveness of virtual reality technology for intercultural competence development. *International Journal of Intercultural Relations*, 82, 109–120. <https://doi.org/10.1016/j.ijintrel.2021.03.009>
- Anderman, E. M. (2020). Achievement motivation theory: Balancing precision and utility. *Contemporary Educational Psychology*, 61, 101864. <https://doi.org/10.1016/j.cedpsych.2020.101864>
- Asrifan, A., Vargheese, K. J., T, S., & Amir, M. (2020). Esp Course Design: The Need Analysis On Tourism Department In Indonesia Vocational High Schools. *Journal Of Advanced English Studies*, 3(2), Article 2. <https://doi.org/10.47354/jaes.v3i2.85>
- Awad Ahmed, F. R., Ahmed, T. E., Saeed, R. A., Alhumyani, H., Abdel-Khalek, S., & Abu-Zinadah, H. (2021). Analysis and challenges of robust E-exams performance under COVID-19. *Results in Physics*, 23, 103987. <https://doi.org/10.1016/j.rinp.2021.103987>
- Barach, P., Fisher, S. D., Adams, M. J., Burstein, G. R., Brophy, P. D., Kuo, D. Z., & Lipshultz, S. E. (2020). Disruption of healthcare: Will the COVID pandemic worsen non-COVID outcomes and disease outbreaks? *Progress in Pediatric Cardiology*, 59, 101254. <https://doi.org/10.1016/j.ppedcard.2020.101254>
- Bloomfield, J., & Fisher, M. J. (2019). Quantitative research design. *Journal of the Australasian Rehabilitation Nurses Association*, 22(2), 27–30. <https://doi.org/10.3316/informit.738299924514584>
- Brandt, J. (2022). Towards better evaluation methods for Controllable Affective Natural Language Generation [Master Thesis]. <https://studenttheses.uu.nl/handle/20.500.12932/41522>
- Budakoğlu, I. İ., Sayılır, M. Ü., Kıyak, Y. S., Coşkun, Ö., & Kula, S. (2021). Telemedicine curriculum in undergraduate medical education: A systematic search and review. *Health and Technology*, 11(4), 773–781. <https://doi.org/10.1007/s12553-021-00559-1>
- Burgess, A., van Diggele, C., Roberts, C., & Mellis, C. (2020). Feedback in the clinical setting. *BMC Medical Education*, 20(2), 460. <https://doi.org/10.1186/s12909-020-02280-5>
- Cai, Y., & John Kunnan, A. (2019). Detecting the language thresholds of the effect of background knowledge on a Language for Specific Purposes reading performance: A case of the island ridge curve. *Journal of English for Academic Purposes*, 42, 100795. <https://doi.org/10.1016/j.jeap.2019.100795>
- Carvalho, T. P., Soares, F. A. A. M. N., Vita, R., Francisco, R. da P., Basto, J. P., & Alcalá, S. G. S. (2019). A systematic literature review of machine learning methods applied to predictive maintenance. *Computers & Industrial Engineering*, 137, 106024. <https://doi.org/10.1016/j.cie.2019.106024>
- Carver, D. (1983). Some propositions about ESP. *The ESP Journal*, 2(2), 131–137. [https://doi.org/10.1016/0272-2380\(93\)90003-P](https://doi.org/10.1016/0272-2380(93)90003-P)
- Casula, M., Rangarajan, N., & Shields, P. (2021). The potential of working hypotheses for deductive exploratory research. *Quality & Quantity*, 55(5), 1703–1725. <https://doi.org/10.1007/s11135-020-01072-9>



- Chambers, F. (1980). A re-evaluation of needs analysis in ESP. *The ESP Journal*, 1(1), 25–33.  
[https://doi.org/10.1016/0272-2380\(80\)90007-4](https://doi.org/10.1016/0272-2380(80)90007-4)
- Choi, L. J. (2021). Implementing English for Medical Purposes (EMP) in South Korea: Nursing students' ongoing needs analysis. *Nurse Education Today*, 104, 104989.  
<https://doi.org/10.1016/j.nedt.2021.104989>
- Chuang, S. (2021). The Applications of Constructivist Learning Theory and Social Learning Theory on Adult Continuous Development. *Performance Improvement*, 60(3), 6–14.  
<https://doi.org/10.1002/pfi.21963>
- Corbisiero-Drakos, L., Reeder, L. K., Ricciardi, L., Zacharia, J., & Harnett, S. (2021). Arts Integration And 21st Century Skills: A Study of Learners and Teachers. *International Journal of Education & the Arts*, 22(Number 2). <http://www.ijea.org/v22n2/index.html>
- Croft, R. L., Byrd, C. T., & Kelly, E. M. (2022). The influence of active listening on parents' perceptions of clinical empathy in a stuttering assessment: A preliminary study. *Journal of Communication Disorders*, 100, 106274.  
<https://doi.org/10.1016/j.jcomdis.2022.106274>
- Daulay, E. (2020). THE HISTORICAL OF GROWTH ENGLISH FOR SPECIFIC PURPOSE. *VISION*, 15(2), Article 2. <https://doi.org/10.30829/vis.v15i2.624>
- Dillard, V., Moss, J., Padgett, N., Tan, X., & Kennedy, A. B. (2021). Attitudes, beliefs and behaviors of religiosity, spirituality, and cultural competence in the medical profession: A cross-sectional survey study. *PLOS ONE*, 16(6), e0252750.  
<https://doi.org/10.1371/journal.pone.0252750>
- Dou, A. Q., Chan, S. H., & Win, M. T. (2023). Changing visions in ESP development and teaching: Past, present, and future vistas. *Frontiers in Psychology*, 14, 1140659.  
<https://doi.org/10.3389/fpsyg.2023.1140659>
- Dudley-Evans, T., & John, M. J. S. (1998). *Developments in English for Specific Purposes: A Multi-Disciplinary Approach*. Cambridge University Press.
- Dunn, T. J., & Kennedy, M. (2019). Technology Enhanced Learning in higher education; motivations, engagement and academic achievement. *Computers & Education*, 137, 104–113. <https://doi.org/10.1016/j.compedu.2019.04.004>
- Ekayati, R., Manurung, I. D., & Hasibuan, S. H. (2022). Innovation Of Esp Design To Improve Students' English Learning Achievements In Non-English Department. *Language Literacy: Journal of Linguistics, Literature, and Language Teaching*, 6(1), Article 1.  
<https://doi.org/10.30743/ll.v6i1.5149>
- Farahian, M., & Rajabi, Y. (2022). Quality of ESP Courses for nursing Students: Expectations and Challenges. *Future of Medical Education Journal*, Online First.  
<https://doi.org/10.22038/fmej.2022.50503.1346>
- Farsi, D. (2021). Social Media and Health Care, Part I: Literature Review of Social Media Use by Health Care Providers. *Journal of Medical Internet Research*, 23(4), e23205.  
<https://doi.org/10.2196/23205>
- Fidalgo, P., Thormann, J., Kulyk, O., & Lencastre, J. A. (2020). Students' perceptions on distance education: A multinational study. *International Journal of Educational Technology in Higher Education*, 17(1), 18. <https://doi.org/10.1186/s41239-020-00194-2>
- Findyartini, A., Anggraeni, D., Husin, J. M., & Greviana, N. (2020). Exploring Medical Students' Professional Identity Formation through Written Reflections during the Covid-19 Pandemic. *Journal of Public Health Research*, 9(1\_suppl), jphr.2020.1918.  
<https://doi.org/10.4081/jphr.2020.1918>
- Fulmer, B. P., Fulmer, S., & Liu, Y. (2021). Communication Roulette: Engaging Students in the Practice of Tailored Communication. *Issues in Accounting Education*, 36(4), 231–251. <https://doi.org/10.2308/ISSUES-19-078>
- Gates, E., & Schwandt, T. (2023). *Valuing In Evaluation*.preprint.

- Ge, W., Li, W., Liu, G., & Wu, S. (n.d.). The Implementation of a Competency-Oriented Transcultural Nursing Education Program.
- Ghahari, S., Burnett, S., & Alexander, L. (2020). Development and pilot testing of a health education program to improve immigrants' access to Canadian health services. *BMC Health Services Research*, 20(1), 321. <https://doi.org/10.1186/s12913-020-05180-y>
- Guo, J., & Yu, K. (2022). Effects of ESP Courses on Chinese Health Vocational College Students' English Proficiency. *The Korean Association of General Education*, 16(5), 189–202. <https://doi.org/10.46392/kjge.2022.16.5.189>
- Hamilton, D., McKechnie, J., Edgerton, E., & Wilson, C. (2021). Immersive virtual reality as a pedagogical tool in education: A systematic literature review of quantitative learning outcomes and experimental design. *Journal of Computers in Education*, 8(1), 1–32. <https://doi.org/10.1007/s40692-020-00169-2>
- Hattani, H. A. (2020). The Implementation of Task-based Approach in ESP Instruction: Teachers and Students' Perceptions. *International Arab Journal of English for Specific Purposes*, 3(1), Article 1.
- Hays, R. B., Ramani, S., & Hassell, A. (2020). Healthcare systems and the sciences of health professional education. *Advances in Health Sciences Education*, 25(5), 1149–1162. <https://doi.org/10.1007/s10459-020-10010-1>
- Hege, I., Tolks, D., Adler, M., & Härtl, A. (2020). Blended learning: Ten tips on how to implement it into a curriculum in healthcare education. *GMS Journal for Medical Education*, 37(5), Doc45. <https://doi.org/10.3205/zma001338>
- Heist, B. S., & Torok, H. M. (2020). Japanese International Medical Graduates and entrance into US clinical training: Challenges and methods to overcome them. *Journal of General and Family Medicine*, 21(4), 102–108. <https://doi.org/10.1002/jgf2.332>
- Hennegan, J., Winkler, I. T., Bobel, C., Keiser, D., Hampton, J., Larsson, G., Chandra-Mouli, V., Plesons, M., & Mahon, T. (2021). Menstrual health: A definition for policy, practice, and research. *Sexual and Reproductive Health Matters*, 29(1), 31–38. <https://doi.org/10.1080/26410397.2021.1911618>
- Huang, L., Kern, M. L., & Oades, L. G. (2020). Strengthening University Student Wellbeing: Language and Perceptions of Chinese International Students. *International Journal of Environmental Research and Public Health*, 17(15), Article 15. <https://doi.org/10.3390/ijerph17155538>
- Huang, Q., Pun, J., & Huang, S. (2022). Using a Mixed-Methods Needs Analysis to Ensure the Sustainability and Success of English for Nursing Communication Courses: Improving Nurse-Patient Engagement Practices in Globalized Health Care. *Sustainability*, 14(21), Article 21. <https://doi.org/10.3390/su142114077>
- Huang, Y., & Jun Zhang, L. (2020). Does a Process-Genre Approach Help Improve Students' Argumentative Writing in English as a Foreign Language? Findings From an Intervention Study. *Reading & Writing Quarterly*, 36(4), 339–364. <https://doi.org/10.1080/10573569.2019.1649223>
- Hutchinson, T., & Waters, A. (1987). *English for Specific Purposes*. Cambridge University Press.
- I, N., Aryati, K., Susanta, I., & Anggayana, I. W. (2020). The Development of Syllabus and Lesson Plan Based on English for Occupational Purposes. *International Journal of Psychosocial Rehabilitation*, 24, 290–300. <https://doi.org/10.37200/IJPR/V24I4/PR201009>
- Ibrahim, H. H. (2020). Needs Analysis as a Prerequisite for Designing an ESP Course for Medical Students. *Open Journal of Modern Linguistics*, 10(2), Article 2. <https://doi.org/10.4236/ojml.2020.102006>
- Iizuka, T. (2019). Task-based needs analysis: Identifying communicative needs for study

- abroad students in Japan. *System*, 80, 134–142.  
<https://doi.org/10.1016/j.system.2018.11.005>
- Ji, H., & Zheng, S. (2023). Designing Blended Learning Model for Medical English Course Based on POA. In C. S. González-González, B. Fernández-Manjón, F. Li, F. J. García-Peñalvo, F. Sciarrone, M. Spaniol, A. García-Holgado, M. Area-Moreira, M. Hemmje, & T. Hao (Eds.), *Learning Technologies and Systems* (pp. 491–501). Springer International Publishing. [https://doi.org/10.1007/978-3-031-33023-0\\_46](https://doi.org/10.1007/978-3-031-33023-0_46)
- Jiang, Z., Wu, H., Cheng, H., Wang, W., Xie, A., & Fitzgerald, S. R. (2021). Twelve tips for teaching medical students online under COVID-19. *Medical Education Online*, 26(1), 1854066. <https://doi.org/10.1080/10872981.2020.1854066>
- Jordan, R. R. (1997). *English for Academic Purposes: A Guide and Resource Book for Teachers*. Cambridge University Press.
- Jung, H., Park, K. H., Min, Y. H., & Ji, E. (2020). The effectiveness of interprofessional education programs for medical, nursing, and pharmacy students. *Korean Journal of Medical Education*, 32(2), 131–142. <https://doi.org/10.3946/kjme.2020.161>
- Kamau, S., Koskenranta, M., Kuivila, H., Oikarainen, A., Tomietto, M., Juntunen, J., Tuomikoski, A.-M., & Mikkonen, K. (2022). Integration strategies and models to support transition and adaptation of culturally and linguistically diverse nursing staff into healthcare environments: An umbrella review. *International Journal of Nursing Studies*, 136, 104377. <https://doi.org/10.1016/j.ijnurstu.2022.104377>
- Kamil, M. A., & Muhammad, A. M. (2021). Professional Communication Competence in English for Occupational Purposes (EOP) Courses: A Systematic Literature Review and Proposal of a Framework. *Journal of Teaching and Learning for Graduate Employability*, 12(2), 260–278.
- Kaplan, B. (2020). REVISITING HEALTH INFORMATION TECHNOLOGY ETHICAL, LEGAL, and SOCIAL ISSUES and EVALUATION: TELEHEALTH/TELEMEDICINE and COVID-19. *International Journal of Medical Informatics*, 143, 104239. <https://doi.org/10.1016/j.ijmedinf.2020.104239>
- Kashinathan, S., & Abdul Aziz, A. (2021). ESL Learners' Challenges in Speaking English in Malaysian Classroom. *International Journal of Academic Research in Progressive Education and Development*, 10. <https://doi.org/10.6007/IJARPED/v10-i2/10355>
- Khasawneh, M. A. S. (2021). Language skills and their relationship to learning difficulties in English language from the students' point of view. *Science and Education*, 2(9), Article 9.
- Kyaw, B. M., Posadzki, P., Paddock, S., Car, J., Campbell, J., & Car, L. T. (2019). Effectiveness of Digital Education on Communication Skills Among Medical Students: Systematic Review and Meta-Analysis by the Digital Health Education Collaboration. *Journal of Medical Internet Research*, 21(8), e12967. <https://doi.org/10.2196/12967>
- Lam, R. (2020). Investigating Assessment as Learning in Second Language Writing: A Qualitative Research Perspective. *International Journal of Qualitative Methods*, 19, 1609406920938572. <https://doi.org/10.1177/1609406920938572>
- Lertchalermtipakoon, P., Wongsun, U., & Kawinkoonlasate, P. (2021). Need Analysis: English Language Use by Students in the Tourism and Hospitality and Industry. *English Language Teaching*, 14(3), 59–71.
- Li, W., Liu, C., Liu, S., Zhang, X., Shi, R., Jiang, H., Ling, Y., & Sun, H. (2020). Perceptions of education quality and influence of language barrier: Graduation survey of international medical students at four universities in China. *BMC Medical Education*, 20(1), 410. <https://doi.org/10.1186/s12909-020-02340-w>
- Lodhi, M. A., Shamim, M., Robab, M., Shahzad, S., & Ashraf, A. (2018). English for Doctors: An ESP Approach to Needs Analysis and Course Design For Medical Students. *International Journal of English Linguistics*, 8(5), 205.

- <https://doi.org/10.5539/ijel.v8n5p205>
- Ma, J. (2021). The Trend of College English Teaching Reform Based on Content-based Instruction. 2299–2304. <https://doi.org/10.2991/assehr.k.211220.397>
- MacIntyre, P. (2020). Expanding the theoretical base for the dynamics of willingness to communicate. *Studies in Second Language Learning and Teaching*, 10(1), 111–131.
- Maher, J. (1986). English for Medical Purposes. *Language Teaching*, 19(2), 112–145. <https://doi.org/10.1017/S0261444800012003>
- Mai, Z. (2023). A Comparative Study of College Entrance Examination between China and the UK. *Journal of Education, Humanities and Social Sciences*, 8, 874–881. <https://doi.org/10.54097/ehss.v8i.4375>
- Malau-Aduli, B. S., Ross, S., & Adu, M. D. (2019). Perceptions of intercultural competence and institutional intercultural inclusiveness among first year medical students: A 4-year study. *BMC Medical Education*, 19(1), 346. <https://doi.org/10.1186/s12909-019-1780-y>
- Malouka, S., Mayhew, A. J., So, H. Y., Raina, P., Beauchamp, M., Richardson, J., & Kuspinar, A. (2023). Sex-stratified reference values for the life-space assessment in the Canadian longitudinal study on aging. *Aging Clinical and Experimental Research*, 35(5), 1073–1080. <https://doi.org/10.1007/s40520-023-02382-2>
- Marcu, N. A. (2020). Designing Functional ESP (English for Specific Purposes) Courses. *Procedia Manufacturing*, 46, 308–312. <https://doi.org/10.1016/j.promfg.2020.03.045>
- Martin, D. J. (2012). *Elementary science methods: A constructivist approach*. Cengage. Learning.
- Martin, F., Ritzhaupt, A., Kumar, S., & Budhrani, K. (2019). Award-winning faculty online teaching practices: Course design, assessment and evaluation, and facilitation. *The Internet and Higher Education*, 42, 34–43. <https://doi.org/10.1016/j.iheduc.2019.04.001>
- Masuram, J., & Sripada, P. N. (2020). Developing Spoken Fluency Through Task-Based Teaching. *Procedia Computer Science*, 172, 623–630. <https://doi.org/10.1016/j.procs.2020.05.080>
- Meeuwissen, S. N. E., Gijssels, W. H., van Oorschot, T. D., Wolfhagen, I. H. A. P., & oude Egbrink, M. G. A. (2021). Enhancing Team Learning through Leader Inclusiveness: A One-Year Ethnographic Case Study of an Interdisciplinary Teacher Team. *Teaching and Learning in Medicine*, 33(5), 498–508. <https://doi.org/10.1080/10401334.2021.1887738>
- Mohammed, I. J. (2022). The Development of ESP Approaches. *Journal of Tikrit University for Humanities*, 29(1, 1), Article 1, 1. <https://doi.org/10.25130/jtuh.29.1.1.2022.23>
- Mostafavi, S., Mohseni, A., & Abbasian, G. (2021a). A Learning-Centered Analysis of the ESP Needs of Engineering Students. *Journal of Language and Translation*, 11(3), 151–178. <https://doi.org/10.30495/tlt.2021.683484>
- Mostafavi, S., Mohseni, A., & Abbasian, G.-R. (2021b). The pedagogical efficacy of ESP courses for Iranian students of engineering from students' and instructors' perspectives. *Asian-Pacific Journal of Second and Foreign Language Education*, 6(1), 6. <https://doi.org/10.1186/s40862-021-00109-2>
- Munby, J. (1981). *Communicative syllabus design: A sociolinguistic model for designing the content of purpose-specific language programmes*. Cambridge university press.
- Mustafa, R., Mahboob, U., Khan, R. A., & Anjum, A. (2023). Impact of Language Barriers in Doctor – Patient Relationship: A Qualitative Study. *Pakistan Journal of Medical Sciences*, 39(1), Article 1. <https://doi.org/10.12669/pjms.39.1.5805>
- Nazeha, N., Pavagadhi, D., Kyaw, B. M., Car, J., Jimenez, G., & Car, L. T. (2020). A Digitally Competent Health Workforce: Scoping Review of Educational Frameworks. *Journal of Medical Internet Research*, 22(11), e22706. <https://doi.org/10.2196/22706>
- Otuna, S., & Tatiana, A. (2023). Communicative language teaching for improving writing skills in the English language [BachelorThesis, Quito : UCE].

- <http://www.dspace.uce.edu.ec/handle/25000/29932>
- Pavel, E. (2020). Language Learner Motivation and Strategies in English for Medical Purposes. *Philobiblon. Transylvanian Journal of Multidisciplinary Research in the Humanities*, 25, 125–138. <https://doi.org/10.26424/philobib.2019.25.1.08>
- Perrotta, K. A., & Bohan, C. H. (2020). A Reflective Study of Online Faculty Teaching Experiences in Higher Education. *Journal of Effective Teaching in Higher Education*, 3(1), Article 1. <https://doi.org/10.36021/jetthe.v3i1.9>
- Preston, R., Gratani, M., Owens, K., Roche, P., Zimanyi, M., & Malau-Aduli, B. (2020). Exploring the Impact of Assessment on Medical Students' Learning. *Assessment & Evaluation in Higher Education*, 45(1), 109–124. <https://doi.org/10.1080/02602938.2019.1614145>
- Rahman, M. (2015). English for Specific Purposes (ESP): A Holistic Review. *Universal Journal of Educational Research*, 3(1), 24–31.
- Ramalingam, S., Yunus, M. M., & Hashim, H. (2021). Exploring ESL Learners' Blended Learning Experiences and Its Effectiveness through Web-Based Technologies. *International Journal of Evaluation and Research in Education*, 10(4), 1436–1445.
- Rashid, S., & Yadav, S. S. (2020). Impact of Covid-19 Pandemic on Higher Education and Research. *Indian Journal of Human Development*, 14(2), 340–343. <https://doi.org/10.1177/0973703020946700>
- roasRichards, J. C. (2013). Curriculum approaches in language teaching: Forward, central, and backward design. *Relc Journal*, 44(1), 5–33.
- Robinson, P. (1991). Needs analysis. *ESP today*.
- Rose, H., McKinley, J., & Galloway, N. (2021). Global Englishes and language teaching: A review of pedagogical research. *Language Teaching*, 54(2), 157–189. <https://doi.org/10.1017/S0261444820000518>
- Salem, A. A. M. S. (2019). A Sage on a Stage, to Express and Impress: TED Talks for Improving Oral Presentation Skills, Vocabulary Retention and Its Impact on Reducing Speaking Anxiety in ESP Settings. *English Language Teaching*, 12(6), 146–160.
- Salmani-Nodoushan, M. A. (2020). English for specific purposes: Traditions, trends, directions. *Studies in English Language and Education*, 7(1), 247–268. <https://doi.org/10.24815/siele.v7i1.16342>
- Simonton, K. L., & Garn, A. C. (2020). Control–value theory of achievement emotions: A closer look at student value appraisals and enjoyment. *Learning and Individual Differences*, 81, 101910. <https://doi.org/10.1016/j.lindif.2020.101910>
- Skivington, K., Matthews, L., Simpson, S. A., Craig, P., Baird, J., Blazeby, J. M., Boyd, K. A., Craig, N., French, D. P., McIntosh, E., Petticrew, M., Rycroft-Malone, J., White, M., & Moore, L. (2021). A new framework for developing and evaluating complex interventions: Update of Medical Research Council guidance. *BMJ*, 374, n2061. <https://doi.org/10.1136/bmj.n2061>
- Song, W. (2019). A Study on the Influence of Teachers' Questioning in High School English Reading Class on Students' Critical Thinking. *Theory and Practice in Language Studies*, 9(4), 424. <https://doi.org/10.17507/tpls.0904.09>
- Spake, R., Bellamy, C., Graham, L. J., Watts, K., Wilson, T., Norton, L. R., Wood, C. M., Schmucki, R., Bullock, J. M., & Eigenbrod, F. (2019). An analytical framework for spatially targeted management of natural capital. *Nature Sustainability*, 2(2), Article 2. <https://doi.org/10.1038/s41893-019-0223-4>
- Stevens, P. (1988). Learning English better through more effective teaching: Six postulates for a model of language learning/teaching. *World Englishes*, 7(1), 51–61.
- Su, B., Zhang, T., Yan, L., Huang, C., Cheng, X., Cai, C., & Cui, D. (2021). Online Medical Teaching in China During the COVID-19 Pandemic: Tools, Modalities, and Challenges.

- Frontiers in Public Health, 9.  
<https://www.frontiersin.org/articles/10.3389/fpubh.2021.797694>
- Symonenko, S. (2020). Complementing content of English courses for enhancing communication of IT-professionals for sustainable development. <https://doi.org/10.1051/e3sconf/202016610008>
- Tang, K. N. (2019). Beyond Employability: Embedding Soft Skills in Higher Education. *Turkish Online Journal of Educational Technology - TOJET*, 18(2), 1–9.
- Taylor, L. A., Nong, P., & Platt, J. (2023). Fifty Years of Trust Research in Health Care: A Synthetic Review. *The Milbank Quarterly*, 101(1), 126–178. <https://doi.org/10.1111/1468-0009.12598>
- Thepseenu, B. (2020). Needs Analysis for ESP Course Development: Thai Civil Engineering Students' Perspectives. *Asian Journal of Education and Training*, 6(3), 433–442.
- Toro, V., Camacho-Minuche, G., Pinza-Tapia, E., & Paredes, F. (2019). The Use of the Communicative Language Teaching Approach to Improve Students' Oral Skills. *English Language Teaching*, 12(1), 110–118.
- Tun, S. (2019). Fulfilling a new obligation: Teaching and learning of sustainable healthcare in the medical education curriculum. *Medical Teacher*, 41(10), 1168–1177. <https://doi.org/10.1080/0142159X.2019.1623870>
- Wang, L., Yuan, G., & Ren, H. (2021). A Study on the Construction of Behavioral Medicine ESP Corpus Resources in the Context of Big Data. In M. A. Jan & F. Khan (Eds.), *Application of Big Data, Blockchain, and Internet of Things for Education Informatization* (pp. 13–18). Springer International Publishing. [https://doi.org/10.1007/978-3-030-87903-7\\_2](https://doi.org/10.1007/978-3-030-87903-7_2)
- Wang, W. (2022). Reflections on Online EFL Teaching during COVID-19: A Case Study of Yunnan University in China. *Journal of NELTA*, 27(1–2), Article 1–2. <https://doi.org/10.3126/nelta.v27i1-2.53190>
- Wei, L. (2022). Translanguaging as a political stance: Implications for English language education. *ELT Journal*, 76(2), 172–182. <https://doi.org/10.1093/elt/ccab083>
- Wei, L.-W., & Chang, C.-C. (2022). Insights from a Survey into Chinese University Graduates' Perceptions toward University-Level English Courses. *English Language Teaching*, 15(5), 32–42.
- Wei, X., Saab, N., & Admiraal, W. (2021). Assessment of cognitive, behavioral, and affective learning outcomes in massive open online courses: A systematic literature review. *Computers & Education*, 163, 104097. <https://doi.org/10.1016/j.compedu.2020.104097>
- West, R. (1994). Needs analysis in language teaching. *Language Teaching*, 27(1), 1–19. <https://doi.org/10.1017/S0261444800007527>
- Widiastuti, I. A. M. S., Mukminatien, N., Prayogo, J. A., & Irawati, E. (2020). Dissonances between Teachers' Beliefs and Practices of Formative Assessment in EFL Classes. *International Journal of Instruction*, 13(1), 71–84.
- Wilson, S., Tan, S., Knox, M., Ong, A., Crawford, J., & Rudolph, J. (2020). Enabling cross-cultural student voice during COVID-19: A collective autoethnography. *Journal of University Teaching & Learning Practice*, 17(5). <https://doi.org/10.53761/1.17.5.3>
- Wong, C. K. (2020). A needs analysis of oral communicative skills in Mandarin by Malaysian hotel attendants / Wong Chih Khuan [Masters, Universiti Malaya]. <http://studentsrepo.um.edu.my/12729/>
- Xue, M., Saffari, N., & Motevalli, S. (2022). English for Specific Purposes Research and Practice in the Past 20 Years (2001-2020) in China: A Literature Review. *English Language Teaching*, 15(8), 13–22.
- Zagallo, P., McCourt, J., Idsardi, R., Smith, M. K., Urban-Lurain, M., Andrews, T. C., Haudek, K., Knight, J. K., Merrill, J., Nehm, R., Prevost, L. B., & Lemons, P. P. (2019). Through

- the Eyes of Faculty: Using Personas as a Tool for Learner-Centered Professional Development. *CBE—Life Sciences Education*, 18(4), ar62. <https://doi.org/10.1187/cbe.19-06-0114>
- Zhang, W., Bolton, K., & Botha, W. (2019). English in the People's Republic of China. In *The Handbook of World Englishes* (pp. 266–280). John Wiley & Sons, Ltd. <https://doi.org/10.1002/9781119147282.ch15>
- Zohar, A. (2023). What and How to Teach in Twenty-First-Century Schools: Common Confusions Regarding Knowledge, Thinking, Pedagogy, and the Curriculum. In A. Zohar (Ed.), *Scaling-up Higher Order Thinking: Demonstrating a Paradigm for Deep Educational Change* (pp. 21–45). Springer International Publishing. [https://doi.org/10.1007/978-3-031-15967-1\\_2](https://doi.org/10.1007/978-3-031-15967-1_2)
- Zou, C., Li, P., & Jin, L. (2021). Online college English education in Wuhan against the COVID-19 pandemic: Student and teacher readiness, challenges and implications. *PLOS ONE*, 16(10), e0258137. <https://doi.org/10.1371/journal.pone.0258137>

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