Teaching English for Medical Purposes (EMP): Analysis of Course Design in the College of Dentistry / University of Mosul

M N Ahmed, [ID] ✉

Department of Translation, College of Arts- University of Mosul, Mosul, Iraq

Article information	Abstract
	The paper analyzes the essential elements of teaching non-native speakers English for Medical Purposes (EMP). The prescriptive and descriptive patterns of teaching EMP are an analytical framework of course design to help teaching English at the College of Dentistry and enhance English skills. The paper's premise has been applied to examining the EMP curriculum, which covers medical terminology and English in the first, second, and third years of English courses. The goals, prerequisites, and genre have all been treated while analyzing the EMP course's teaching curriculum. Additionally, it demonstrated how effective these techniques are in helping students learn English and hone their communication skills. Finally, it is concluded that other dentistry colleges may improve quality assurance by including the EMP as a course design within their curriculum. The study also reveals that students need the possibility of ongoing evaluation to realize their English performance potential.

تدريس اللغة الإنجليزية للأغراض الطبية: تحليل تصميم المقررات الدراسية في كلية طب الأسنان / جامعة الموصل

محمد نهاد أحمد [ID] ✉
قسم الترجمة، كلية الآداب، جامعة الموصل، الموصل، العراق

المستخلص :

تُحلل هذه الورقة البحثية العناصر الأساسية لتدريس اللغة الإنجليزية للأغراض الطبية (EMP) لغير الناطقين بها. تُمثل الأنماط التوجيهية والوصفية لتدريس EMP إطارًا تحليليًا لتصميم المقررات الدراسية، مما يُسهم في تدريس اللغة الإنجليزية في كلية طب الأسنان وتعزيز مهاراتها. طُبقت فرضية الورقة البحثية على دراسة منهج EMP ، الذي يغطي المصطلحات الطبية واللغة الإنجليزية في السنوات الأولى والثانية والثالثة من دورات اللغة الإنجليزية. وقد عولجت الأهداف والمتطلبات الأساسية والنوع الدراسي أثناء تحليل منهج تدريس EMP. بالإضافة إلى ذلك، أظهرت الورقة مدى فعالية هذه التقنيات في مساعدة الطلاب على تعلم اللغة الإنجليزية وصقل مهارات التواصل لديهم. وأخيرًا، خلصت إلى أن كليات طب الأسنان الأخرى يُمكنها تحسين ضمان الجودة من خلال تضمين EMP كتصميم للمقررات الدراسية ضمن مناهجها. كما كشفت الدراسة عن حاجة الطلاب إلى إمكانية التقييم المستمر لتحقيق إمكاناتهم في اللغة الإنجليزية.

الكلمات المفتاحية: اللغة الإنجليزية للأغراض الطبية، تصميم الدورة، ضمان الجودة التعليمية.

1.Introduction

Learners aim to utilize English in a specific field of knowledge, like medicine, to communicate and interact with the medical community. There are several aspects of English for specific purposes (ESP), including English for Business Purposes (EBP), English for Agricultural Purposes (EAP), English for Medical Purposes (EMP), English for Science and Technology (EST), English for Vocational Purposes (EVP), and English for Veterinary Medicine (EVM) may be included in English for Special Purposes (ESP) (1). The following are the main features of the ESP course (1 - 4) :

1.The teaching objectives and contents of the ESP course are tailored to the unique needs of the students in a particular field of study .

2.As a result, the primary focus of the ESP course is on the linguistic proficiency, genres, and abilities relevant to the particular tasks that the students must complete in English .

3.tudents in ESP are usually adults who are learning. They frequently consist of homogeneous groups .

4.The course duration may be constrained, and students typically possess a minimum degree of competency, usually upper intermediate or above .

2.Aims and Hypothesis of Quality Assurance in EMP :

The general goal of the (EMP) course approach is to offer advantageous quality assurance for language learning for specific objectives. Numerous efforts are made to establish the best accessible learning strategy and quality assurance situations. The learners are generally provided with valuable inputs in the form of exposure to the target specialized language and capabilities for pupils to interact with the nature of the genre. Sufficient quality assurance of Learning and engagement is beneficial for language learning. Therefore, the teaching objectives should be linked to the quality assurance of learning EMP :

1.Students have linguistic and cognitive competence regarding the study materials .

2.The character of style and linguistic inputs are essential for Learning.

3.In EMP, learners modify the meaning of input to make it more understandable .

4.Classroom information is tailored to each learner's unique developmental stage in the dental program; it becomes increasingly valuable through conversation .

5.As a result, input that is negotiated to meet the demands of each unique dental student may become intake .

3.Theoretical Background

English for Medical Purposes (EMP) instruction began in the 1960s, mostly in response to the requirement for students in many fields of study - medicine, pharmacology, anatomy, physiology, biology, pathology, etc.- to communicate across linguistic variety. The first (EMP) classes concentrate on the sentence level, including topics like research papers in English for science and technology, and the usage of passive construction and simple present tense . The medical and scientific languages operate to provide succinct explanations of concepts and ideas based on the functional theory of language. Teaching this language in the real world necessitates knowledge of the facts, such as case studies, medical theories, ideas, recommendations, etc. Typically, medical language addresses any subject related to science and knowledge; that is, it concentrates on the information included in textual concepts that may serve as scientific explanations rather than the text's diversity (2-4) .

Medical and scientific texts, such as textbooks, technical reports, journal articles, research papers, abstracts, etc., frequently follow a standard structure. The technical, non-emotional manner, severe, scientific, straightforward terminology, and standardized terms for medical and scientific reports characterize the nature of medical and scientific functions. The use of present, past, and passive constructs distinguishes it. It has a Latinized vocabulary, is straightforward and literal, lacks figures of speech, and uses multi-noun compounds with empty verbs. Texts about science and medicine are composed of specialist vocabulary. It is rational, objective, and packed with graphs, figures, and diagrams. The use of passives, the transition of grammatical functions like the usage of the present tense, and the summary are examples of grammatical features. Phrases are often created and re-created, and outdated phrases that have attained some correctness are swapped out for more recent, accurate terms; in other words, the term is recognized by its users (5,6) .

In EMP classrooms, the new wave of quality assurance learning functions from the 2000s, such as compare/contrast, cause/effect, and problem/solution, moved the emphasis from the phrase to a broader unit of texts. Three analytical methodologies used in EMP classrooms are referred to as learning quality. They are as follows :

1.Target analysis: This approach became popular in the late 1970s and early 1980s. Its relevance to the teaching of EMP began with the module that outlined the fundamental objectives of instruction. Understanding the makeup and cognitive capacities of the students holds great promise for achieving the main objective of teaching. The fact that technology develops more rapidly on an exponential scale, accompanied by new terminology, is one element that forms a goal criterion and an integral component of medical language (7) .

2.Requirements analysis: This method attempts to connect learners' motivations for studying medicine to examine the language teachers in a particular subject. Students must understand the medical genre as a specific, meaningful thing representing facts, procedures, conclusions, and outcomes. It is not simple, however, to draw absolute generalizations on the variety and register of medical texts because they span diagrams, histograms, timetables, graphs, tables, illustrations, and figures (7) .

4.Genre analysis

According to Dudley-Evans and St. John's (1980) study of grammatical and structural characteristics of a particular genre of medical texts, they span the text type and its place in a community. Subsequently, genre studies investigate the features of medical writing styles and terminology in medical texts. The main goal of teaching is to provide students with the information, abilities, and skills necessary to execute specific spoken and written genres .

The EMP syllabus comprises a list of knowledge requirements, including academic essays, case studies, workshops, pilot studies, medical reports, and marketing representations with pertinent terminologies, language-level features, styles, and contextual information (7-8). Utilizing a computer database, the quality of teaching approach analyzes extensive text samples to pinpoint lexical and grammatical patterns typical of specific course genres. (9-10). Researchers are concerned that the classical methods did not sufficiently prepare students for the kinds of language fields they need to be able to generate, and the circumstances they need to participate in have led to a more recent focus on EMP instruction (8,11). The fundamental tenet of these tactics was that learners derive the structures and orientations of stylistic functions and extract meaning from texts by using standard processes independent of surface forms. Here, the emphasis is on techniques that help students read and listen to specialist medical materials :

5.Teaching Needs of EMP

One possible component of the EMP course design is the examination of classroom demands. According to Hutchison and Waters (1987) (12), the understanding demands in the classroom activity are associated with distinguishing EMP from General English studies. The analysis of classroom requirements involves two essential elements: situational and learning needs. The analysis of situational needs connects the future responsibilities of English language learners and aims to identify the information and communicative skills to fulfil the tasks. Learning requirements analysis looks at the student's abilities at the start of the course and provides details on the cognitive needs, process-oriented, and reaction-oriented (13,14).

6.Methodology of EMP Analysis

Assessments of students' language competency and previous study records were examined, along with surveys, interviews, and methods of collecting learner information. Evaluating the sample of medical texts that students are expected to study, if feasible, is crucial. It is crucial to employ several methods rather than just one to obtain this data, even though it is not feasible or required to apply every one of these data-collecting techniques to EMP. The examination of these sources is made more comprehensive and in-depth by using many sources (14,15) .

6.1Genre and EMP Course Design

When used as an organizational element for EMP courses, the concept of genre shifts the focus of the classroom from vocabulary, grammar, and functions to broader communicative components that serve as the foundation for instruction. A genre-based approach to EMP course design incorporates all other linguistic elements that one might anticipate to find in a communicative syllabus, such as functions, terminologies, word parts, and (4) skills, but begins with language text type as the main driving force of the syllabus (14,16). It is important, therefore, that the course's approach to genres be descriptive rather than prescriptive .

1.Prescriptive Approach: EMP is a genre-based teaching method that suggests that all students grasp fundamental textual structures to produce a genre that satisfies the standards of a specific community. Educators must also understand what they teach, rather than rigid patterns or forms. Therefore, the goal is not to provide students with inflexible models that all texts must fit into .

2.Descriptive Approach: EMP relates to the idea that the medical genre serves an informational purpose and expresses situations in specific medical or dental instances by interjecting itself into the context of scientific and academic settings. Therefore, when it comes to applying medical texts, it is just a subset of scientific language that uses medical styles to refer to specific cases (3). For students to use this material for their own rhetorical and communicative aims, it should motivate them to comprehend the decisions they make while producing medical texts .

6.2 Language and EMP Teaching

According to Hutchison and Walters (12), language used for specific reasons does not always suggest a particular format for language structures or a distinct genre from others. According to Biber (17), many types of particular texts are complicated in various ways (3). The complexity level varies according to the genre; for example, the present tense and passive structures are frequently used in medical writing since they convey scientific information. Word components (i.e., suffixes and prefixes), fewer figures of speech, and straightforward language are all used in this writing

style. It is rational, objective, and packed with graphs, figures, and diagrams. The text itself, the number of intricate structures, and the usage of highly specialized vocabulary can all impact how complicated a book is (3). According to Water and waters, 2001 (5), the patterns and linguistic characteristics of different languages used in medical specialties are related to the quality of EMP; hence, language needs to be considered while educating for specific purposes .

7.Teacher's Knowledge and ESP Teaching

The instructor should know about a student's requirements in a recurrent topic of EMP literature. There are situations where it could be so important for the instructor to understand the conventions, standards, and expectations of academic writing in general, such as pre-university EMP classes. At a higher level, it could be necessary to discuss the course material with a subject-matter expert and, possibly, participate in the course in some capacity (1) .

The instructor must also be able to read medical formats and become familiar with the many medical text categories (anatomy, physiology, histology, pathology, haematology, etc.). These kinds have the quality of being highly structured because of the writing style and the various genres and Latin and Greek terms used. When addressing this matter, medical English instructors frequently refer to themselves as trainers, coaches, or consultants (18) .

8.Methods of EMP

A variety of methodologies are used in many courses. Nonetheless, it is critical to select resources that involve both the requirements and learning objectives (15). The content must achieve sufficient communication, apply to various situations, and be adaptable to the demands of the students. In other words, the teacher's selection of resources and techniques must be "requirement responsive" (1). A teacher can use many measures to oversee the evaluation of their classroom, including the following

1 .Modify the published materials to fit the needs of the dental program's student body .

2 .The chosen teaching strategies are the main point of contact in the medical field .

3 .An EMP program heavily relies on teaching and learning strategies .

9.Evaluation of EMP Course

It is not always the case that the EMP course includes the assessment. Evaluations might be more formal in some situations and casual in others. Supporting the student's Learning is a goal of evaluation in an EMP course, examining how effectively the learners have been prepared for their intended scenario in the course. A formal exam might not be able to determine this (19). Nonetheless, some course evaluation forms must be considered essential assessments for the incoming data. The teacher has personal goals for this. It is crucial to

think about the elements of teaching and learning that will be assessed. Together with the evaluation's date, another crucial factor is the criteria that will be applied. The post-course is utilized to assess the overall effect (summative assessment) or during the course and inform the present teaching and learning (formative evaluation).

Additionally, a decision must be made on the source and method of the assessment data (20). The data are collected using tests, interviews, surveys, learner diaries and journals, instructor records, student logs, student assessments, and classroom observations. Like needs analysis, cross-validating and verifying the evaluation's conclusions requires using many data sources (21).

10.Data Analysis and Discussion :

1.Course Design and Needs of EMP in the College of Dentistry

This part of the paper is currently applied at the University of Mosul- College of Dentistry – Department of Basic Sciences. The English and Dental Terminologies have been distributed into three academic years: the first academic year, the second academic year, and the third academic year. The courses are distributed according to the students' situational and Learning needs in the College. The main target of the course is to facilitate the scientific contact between the student and the medical environment as a means of communication. The students should be in contact with the medical genre and communication skills to meet the demands of the study and work fields in medicine and dentistry. Each academic year, the course is distributed into 60-hour courses over 15 weeks for the first and second semesters. This course allows incoming students to face the Dental Curriculum in a communicative environment. The students' competence (learning needs) in basic language skills at the College of Dentistry / University of Mosul is systematically addressed through a genre-based analysis of the dental curriculum (situational needs) .

A.The Situational Needs for 1st Year Dentistry Students

1.An intensive English environment is created for groups of students to generate critical thinking in the word parts, articulate their ideas and reasoning, and manage interpersonal communication .

2.Opportunities for applying the target communication skills are built into the learning tasks through reading in medicine, and immediate feedback on students' performance is provided on terminology (22).

B. The Learning Needs of 1st Year Dentistry Students

1.A pre-test and a post-test on medical terminology enable students to assess their medical vocabulary development .

2.Opportunities for independent Learning are provided through the Medical Terminology Web and other English

Center resource websites.

3.Target Analysis of Course for 2nd Year Dentistry Students: The analysis of the targets in this course should enable the

students to manifest at the end of the course :

1 .The analysis of the student's ability to apply communication skills in discussions and express anatomical and physiological aspects of the human body expressively .

2 .Analyzing effective presentations and educational debates in classrooms and labs .

3 .The analysis of applying word formation skills and demonstrating knowledge of essential word components of Greek and Latin words used in medicine .

4 .The analysis of using pronunciation strategies with unfamiliar medical terms in discussing some issues.

3.Requirements Analysis of the Course for 3rd Academic Year: The outcomes of the course requirements should be formed in :

the rest of the class, who are encouraged to question the presenters, ask for clarification or elaboration, and generally participate actively as an audience.

2.Students are asked to use the medical vocabulary and elaborations and participate actively in the audience .

1.Student feedback through course evaluation questionnaires.

2.Continuous assessment of students' performance.

3.Teacher feedback.

4.Faculty feedback.

11.Conclusions

Technical terms have been utilized in EMP research to help comprehend the intricacies of the curriculum and course design, where students must use them for communication. Clarifying the examination of the techniques connected to the communication practices of different academic subjects and comprehending how language is used in specific contexts is crucial. English in international research initiatives is one of the other significant research strands that has consequences for ESP classrooms. EMP research has received more attention in advanced academics and essential requirements in course design at the College of Dentistry. The idea of identity in the study of EMP in dental programs is another significant topic being investigated in EMP research. Psychologically, the well-structured EMP allows students to discuss ideas in a particular area of interest and communicate realistically in the language of society. Students participate more in specific communities of practice, where their identity is negotiated and formed .

1 .Practicing independently to promote language proficiency regarding the specific requirements and preparing a case sheet for diagnosis and pharmaceutical prescriptions.

2 .Prepare and give an oral discussion about describing diseases and pathogenic issues, and a preclinical dental program.

3 .Understanding and appropriately using technical dental and medical vocabularies in written and oral formats.

4 .Group discussions, oral presentations, debates, and continuous medical vocabulary development skills.

4.Genre Analysis of the Course for all Academic Years: The material provided in the classroom gradually demands an increasing synthesis of information and ideas that can make a satisfactory presentation. This encourages discussion amongst the students in preparing their presentations :

1.Students are asked to prepare outcomes of small group tasks for diagnosis, in pairs or small groups, to

Learners' attention to detail while consuming medical-themed content influences their language intake; that is, a language form or use is integrated into the learner's evolving EMP in proportion to the degree of quality control. For learning terminology, English language proficiency learners must be aware of linguistic aspects. The ramifications of quality assurance in EMP include the importance of instructors emphasizing course design, including forms, routines, and patterns, so students may become proficient in them. This may be achieved by incorporating student feedback into the course design and identifying their requirements

3.A class focused on vocabulary-learning strategies is reinforced through self-study of medical/dental terminology.

4.Understand and appropriately use the technical, medical, and dental vocabulary in written and oral formats .

5.Students' Performance Evaluation

1.Teachers observed and assessed two presentations: general health science and preclinical dental topics.

Teachers' judgments are based on their participation in discussions and debates .

2.Testing the ability to understand the information of linguistic structures within the medical genres .

3.Teachers' and students' evaluations of independent study portfolios.

4.Pre- and end-of-course vocabulary testing.

a. Evaluation of EMP Course in the Dentistry College/University of Mosul

References

1.Blecher D. What ESP is and can be: An Introduction. In D. Belcher (ed.). English for Specific Purposes in Theory and Practice (pp. 1–20) University of Michigan Press. 2009.

2.Littlejohn A. The Analysis of Language Teaching Materials: In: Trojan Horse. Materials development in language teaching, Tomlinson (ed.), Cambridge University Press, England. 1998; pp:190–216.

3.Ahmed M. Lecture Notes on English in Dentistry. Lambert Academic Publishing. 2011.

4.Giler R, Sotomayor K, Salmerón J. The Post-Method Teacher in the AI Age: Adapting, Collaborating, Evolving. N J H. (2024);2(4).

5. Waters A, & Waters M. Designing Tasks for Developing Study Competence and Study Skills in English. In J. Flowerdew &M. Peacock (Eds.), Research perspectives on English for Academic Purposes, Cambridge University Press. 2001; pp: 375–389

6.Ahmed M. The Different Realization of Discourse Analysis in Translating Dentistry Abstracts into Arabic. Buhuth Mustaqbaliya 2005; 10:7-21

7. Ahmed M. A Neurolinguistic Evaluation of Translators' Performance: A Cognitive Introspective Study. Lambert Academic Publishing. 2012

8.Paltridge B. Genre and the Language Learning Classroom. University of Michigan Press. 2001

9.Pica T, Young R, & Doughty C. The Impact of Interaction on Comprehension. Teaching English to Speakers of Other Languages Quarterly. 1987;21(4), 737–758.

10.Najim S. & Ahmed M. Effect of Competence in the Translation of Safety Manuals: Assessment Study. N J H. 2024;1(1):15 – 30.

11.Pennycook A. Critical Applied Linguistics. In A. Davies & C. Elder (Eds.). 2003.

12.Youare P. A Course in Language Teaching. Cambridge: Cambridge University Press. 1996.

13.Partridge B. Teaching English for Specific Purposes. In Burns, A. and Richards, J. (eds.). "A Cambridge Guide to Pedagogy and Practice in Second Language Teaching" (P.p. 179–185). Cambridge University Press. 2012.

14.Jordan R. English for Special Purposes: A Guide and Resource Book for Teachers. Cambridge University Press. 1997

15.Johns A. Text, Role, and Context: Developing Academic Literacies. Cambridge University Press. 1997.

16.Hutchinson T. & Waters,A. PML English for Specific Purposes: A Learning-Centered Approach. Ambridge University Press 1987.

17. Biber D. Variations across Speech and Writing. Cambridge University Press. 2000.

18.Loewen S, & Basturkmen H. Interaction, Focus on Form, and Group Writing Tasks in an EAP Classroom. J Asian Pacific Commun 2005; 15 (1): 171–190

19. Douglas D. Assessing Languages for Specific Purposes. Cambridge University Press 2000.

20.Samraj B. Introductions in Research Articles: Variations across Disciplines. English for Specific Purposes Journal. 2002; 21(1):1–17.

21.Richards C, & Rodgers S. Approaches and Methods in Language Teaching. Cambridge: Cambridge University Press. 1986

22.Suliman A, Al-Jarrah R, and Ahmed M. The Technology Standards among Dentistry Faculty Members in the University of Mosul. Tanmyat AL-Rafidain Journal. 2008; 91:30:43-60).