UNIVERSITY OF EL SALVADOR
SCHOOL OF ARTS AND SCIENCES
FOREIGN LANGUAGE DEPARTMENT

Universidad de El Salvador
Hacia la libertad por la cultura

TOPIC:

TEACHING ENGLISH FOR SPECIFIC PURPOSES: CONTENTS AND METHODOLOGIES THAT COULD BE IMPLEMENTED IN THE ENGLISH FOR MEDICAL PURPOSES (EMP) COURSE FOR THE DOCTOR OF MEDICINE MAJOR AT THE UNIVERSITY OF EL SALVADOR.

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ABSTRACT

English for Medical Purposes (EMP) is currently one of the fields in which the teaching and learning of English has become essential. Certainly, the use of this language brings significant advantages to medical students in the development of their academic studies and future professional activities. Thus, in this research, the study program of medical English courses of four Latin American Universities serves as reference in that regard. These universities have been selected on the basis of their commitment to provide medical students opportunities to learn this language. Therefore, the methodology of the present bibliographical research consists of a systematic review of primary and secondary sources like medical syllabi of these four universities, as well as authors' opinions and theories found in different academic papers. The findings based on the analysis of these sources have shown that, the teaching of contents of these four medical English syllabi are specifically related to medical topics and that are presented in context and in a sequenced manner. In respect to methodologies and teaching activities, they are oriented to the use of student-centered approaches. These results have the purpose of serving as suggestions to improve the current and future practices for teaching medical English at the University of El Salvador.

Key words: Content, Methodology, English for Medical Purposes (EMP), Teaching activities.

INTRODUCTION

English language is an international means of communication in constant expansion. This fact is reflected in different fields and domains like medicine, where English is considered an instrument for the professional work and scientific development. Currently, English is considered the lingua franca of medical international communication as medical conferences are held in this language and most of the medical information is found in English, Kang (2004). For that reason, learning such language is without doubt essential for medical students to develop specific language skills and vocabulary that allow them to carry out different activities in their academic major and working environment.

On account of the relevance of English in this study field, some Latin American Universities such as the University of Medical Sciences of Havana, Cuba; University of Atacama, Chile; National University of Caaguazú in Paraguay; and Del Valle University in Colombia have become an example in the teaching and learning process of English since it plays an important role in the curricula of medical students where English is taught as a compulsory subject.

It is worth pointing out that these four universities have introduced English for medical Purposes (EMP) courses through English for Specific Purpose (ESP) which is described as the teaching of English used in academic studies or the teaching of English for vocational or professional purposes (Antony, 1997). English has been consolidated as one of the most distinctive branches within the teaching of English as a Foreign Language (EFL) being EMP one of its special specifications that aims to fulfill students' needs. EMP courses have been the mean through which these institutions have been making constant contributions in the medical English programs.

In fact, students' competencies have been potentiated by prioritizing their interests through the teaching of medical related contents, methodologies, and activities that provide scenarios for students to practice specific English skills like reading and speaking that are helpful in medicine. Besides that, these universities have included two or more English courses during the entire major. However, in the case of the Doctor of Medicine Major at the University of El Salvador, a single course of Medical English is taught during the whole major.

At the University of El Salvador, the Medical English course is developed at the first semester of the first study year and it lasts sixteen weeks with four theoretical classes and two practical ones per week. The course is divided into the following three learning units: morphology and syntax of English; the use of complex sentences in medical texts; and reading and translation of Medical English. The first unit consists of five contents; the second unit contains one content; and the last unit has three readings for practicing, they include: the process of digestion, epithelial tissue, and the thoracic cavity.

Considering the units taught, the EMP course at the University of El Salvador seems not to be paying enough attention to the teaching and learning of medical English for students to be updated and at the forefront of the necessary knowledge and skills they demand to perform in the medical field. For that, the necessity of providing students opportunities in which they can put into practice not only grammar but other skills that seek to develop reading and communicative competences.

Therefore, this bibliographical research aims at analyzing relevant literature in order to provide contents, teaching methodologies, and activities that could be implemented in the

English for Medical Purposes course for the Doctor of Medicine Major at the University of El Salvador to contribute to the teaching and learning of Medical English.

Based on the information previously mentioned. It is essential to consider the following research question:

What kind of contents and methodologies could be implemented in the teaching and learning of Medical English at the Doctor of Medicine Major at the University of El Salvador?

This question leads to consider the following subsidiary questions:

1. What are the contents used for the teaching of Medical English in four LatinAmerican universities?

2. What are some of the existing methodologies applied in the teaching of Medical English in certain Universities of Latin America?

3. What are the contents, methodologies and teaching activities that can be suggested to contribute to the teaching of medical English for the Doctor of Medicine major at the University of El Salvador?

OBJECTIVES

General objective:

To analyze contents and methodologies implemented in EMP courses of some Latin American Universities in order to contribute to the teaching and learning of Medical English for the Doctor of Medicine Major at the University of El Salvador.

Specific objectives

1. To identify contents used for the teaching of Medical English in four Latin American universities.

2. To determine some of the existing methodologies applied in the teaching of Medical English in four Universities of Latin America.

3. To make suggestions about contents, methodologies, and teaching activities to contribute to the teaching and learning of Medical English for the Doctor of Medicine Major at the University of El Salvador.

IMPORTANCE

"English has emerged as the predominant lingua franca in medicine", Maclean & Maher (1994). In fact, English plays a leading role in international medical meetings, and it is the mean for medical textbooks, journals and indexes, Maher (1986). This accounts for the need of teaching and learning Medical English in higher education, where students require knowledge of the language, its special features and the use of terminology. Latin American Universities are aware of the importance of English for medical learners and for that reason have included more than one Medical English course as a compulsory subject in their curricula. For example, Caaguazú University and Atacama University teach two courses, other universities such as: El Valle and Havana include more than two courses; they teach three and four, respectively.

Due to the fact that English has become the universal language of science and technology medical students demand activities that reflect real medical situations in order to succeed in both academic and professional areas. Academic activities include reading medical texts about past and current diagnoses, talking about symptoms, procedures, and findings, listening comprehension activities, and the practice of dialogues about specific medical topics. In the professional context, doctors could be exposed to situations in which they have to communicate in English with patients, or colleagues. Also, doctors may need English to attend conferences abroad. Taking into consideration the syllabus of English implemented for the Doctor of Medicine Major at the University of El Salvador, which is based on the teaching of grammar, reading and translation, (see appendix A) it is necessary to mention that English should be addressed to prepare students for the current demands not only for the development of academic activities but also for the professional practices.

Considering the value of English for medical learners, it is vital to evaluate contents, methodologies, and teaching activities as they constitute a crucial part of any educational syllabus that seeks to fulfill the specific needs of learners. For that, four study programs of Latin American universities are presented with the purpose of inquiring about what types of contents, methodologies and teaching activities are implemented there. The aspects mentioned above are key elements for students to reach specific outcomes in terms of Englishlanguage skills. Therefore, it is expected to contribute with the educational practices being used in these universities, and that could be also considered for the Doctor of Medicine Major at the University of El Salvador.

THEORETICAL FRAMEWORK

Contents and methodologies that could be implemented in the Medical English course for the Doctor of Medicine Major at the University of El Salvador

Hutchison & Waters (1987) said, ESP is an approach in which all decisions as to content and method are based on students' specific needs of learning. These needs are the result of the current demand in both academic and professional context, where the goal of learners is to use English in a particular domain (Paltridge & Starfield 2013:2). At university level, the teaching and learning of English in specific study fields play a central role today, being medicine one of the fields where the English language has come into prominence. This is evident at Latin American universities where there is a constant concern about the present demands of medical learners. For that, English syllabi are adapted in terms of contents and methodologies that best suit learners' needs. It is notorious that, the teaching of EMP courses represent a crucial part in the curricula of the major of medicine since in some of them, Medical English courses are addressed not only to the teaching of English for Specific Academic Purposes (ESAP) but also English for Vocational Purposes (EVP). In this regard, the University of El Salvador could take into consideration some current practices of these universities in respect to the teaching of contents, methodologies, and teaching activities for the teaching of medical English.

University of Medical sciences of Havana

The Cuban reform of Higher Education in 1962 allowed English to become part of all the university majors in Cuba, including the School of Medical Sciences in which Medical English went through different stages. Initially, the teaching of English was based on grammar, translation, and comprehension of scientific texts. At a later stage, reading skill was paid more attention so that students were updated with scientific-technical information. Besides that, the use of the Kernel book series represented a revolution in the teaching of English because it got closer to the communicative approach. Later, the transformations continued at the curricular and methodological level which assumed the use of English as an instrument of study and professional work.

Currently, English constitutes a key element not only for the professional and scientific development of medical students but also for facilitating Cuban medical cooperation in order that Cuban doctors go to offer international solidarity missions to other parts of the world. According to the Cuban government over the past nearly 60 years, Cuba has deployed over 40,000 health workers across 164 countries where English language is used either as the official language or the second language. In that sense, the Cuban Ministry of Higher Education, Ministerio de Educacion Superior (MES) stresses the importance of foreign languages, particularly, English to be able to fully participate in a globalizing world (MES, 2013).

For all the above reasons, Havana University includes English during the entire professional education of medical students (see appendix B). Teaching general English in the first three years of study and Medical English in the last two years. These two English together seek to

prepare students for both academic and professional areas.

Contents of these courses include all the morpho-syntactic and lexical forms of English language, which are taught according to the level and skills that students are expected to develop in each course. Badawi (2012) pointed out that, language learners that possess morphological knowledge or comprehension of English words formation: prefixes suffixes, and roots improve their English proficiency level. On the other hand, many linguistics agreed that knowledge of lexical chunks is an effective tool to meet learners' communication needs.

Besides that, communicative competences, and its components: sociolinguistic, strategic, and linguistic competences are also part of the contents to be taught in these courses.

- Sociolinguistic competence is concerned with sociocultural rules of language use. The knowledge of social rules is essential for producing and understanding utterances that are appropriate to the context in which language is used.

- Strategic competence consists of verbal and non-verbal communication strategies used to compensate for breakdowns in communication.

- Linguistic competence refers to the knowledge of lexical items, rules of morphology, syntax, grammar, and phonology.

Apart from contents used for teaching medicine, methodologies also constitute a crucial aspect to be considered when teaching English for Specific Purposes, since methodologies

determine the selection and sequencing of tasks and activities that lead students toward the achievement of their objectives (Nunan, 1988). The methodologies applied in the Doctor of Medicine at Havana university are characterized by being learner centered. Collins and O'Brien (2003) explained that student-centered or instructional methodology is an approach in which students influence the selection of contents, material, activities, and pace of learning (as cited in Larasati, 2018). Because students are the center of this learning model, the teacher provides opportunities for students to practice the skills they need to develop. In the Medical English syllabus of this institution the 4 skills of language (listening, speaking, reading, and writing) are emphasized. During the courses, all of the language skills are prioritized with the purpose of developing students' professional communication. This implies that, the teaching of English in this university is based on the integrated skills approach. According to Richards & Schmidt (2002) in such approach the four skills of language serve as the medium for developing communicative skills (as cited in Parlindungan, 2019).

Kebede (2013) stated seven advantages of this approach:

First, Integrated skill teaching provides more purposeful and meaningful learning at any proficient level. Second, it offers consistent teaching and better communication. Third, this teaching methodology, enables teachers to bring variety into the classroom by integrating language skills cooperatively. Fourth, it approaches language learning to real life. Fifth, it helps students develop their communicative competence. Sixth, this approach provides students opportunities to interact with authentic language. Seventh, it is helpful for developing students' critical thinking (as cited in Parlindungan, 2019).

This explains why at Havana University the two types of integrated language skills approach (content-based language teaching and task- based language teaching) are implemented for teaching medical English there.

As claimed by Richard & Rodgers (2001) Content Based Instruction (CBI) is "an approach to second language teaching in which teaching is organized around the content or information that students will acquire rather than around a linguistic or other type of syllabus (as cited in Alkhateeb, n.d.). It means that, the application of this methodology focuses on the teaching of a subject matter like medicine and the teaching of grammar aspects of the language are disregarded or minimized. At Havana University, for instance, the teaching of English for Medical Purposes is emphasized during the last two academic years of the major.

Striker (1997) stated that CBI should consider students' needs by making use of authentic language, as well as activities based on the subject matter so that students have the opportunity to use real language in a communicative way (as cited in Alkhateeb, n.d.). In relation to this, medical students at the university in question use authentic scientific texts such us medical journals and articles for practicing reading skills. They also develop authentic learning activities for practicing other language skills. For example, writing of medical case reports, and performance of role plays.

In fact, the head of the Department at Medical School at Havana University reported that the most important tool for learning medical English is real-life experience where theory and practice can be connected.

According to Richards and Rodgers (2001:208) CBI is based on the following language learning assumptions: 1) language is text -and discourse based; 2) it is purposeful; and 3)

language use consists of several skills (as cited in Canbay, 2006). The first assumption refers to the fact that in CBI meaningful content is utilized through discourse or texts, not through single sentences. About second assumption, the authors in question stated that "language is purposeful" Learners may have academic, vocational, social, or recreational purposes, and they can be motivated depending on how much they concentrate on achieving them, and here is where communication plays a crucial role since it is considered the main purpose of learning the language. The final assumption makes reference to the practice of the four skills of language in activities developed in classroom.

Based on the above, it can be said that content-based instruction implemented in Havana University is an effective approach that seeks to prepare medical students for real life by integrating the teaching of medical terminology, and English language skills.

As in the case of content-based instruction, task-based learning considers the use of authentic language essential to teach English. In fact, task-based learning combines natural language and communicative tasks. Nunan (1989) defined communicative tasks as activities that require comprehending, producing, manipulating, or interacting in authentic language while attention is principally paid to meaning rather than form (as cited in Parlidungan, 2019). In other words, students are assigned a specific task to work in pairs or groups for promoting communication in the target language. In this kind of learning, tasks serve to unify two or more language skills together to facilitate meaningful learning. (Nunan, 1989; long and crookes, 19992; Parrot, 1993).

The following are centered learning activities developed by medical students at the university under discussion.

- ✓ conversations

- ✓ role-plays

- ✓ medical interview

- ✓ Case study: Intervention, Treatment, and patient's response

Conversations allow students to communicate with their partners imitating real-life situations related to the medical field. Conversational techniques that "promote oral language" include small group discussions, interviews, simulations, and role plays. Role-plays are common activities in EMP classes in which students act out medical scenarios like interviews. This, engage students in using English in a communicative way at the same time, that increases students' motivation and self-confidence (Milova, 2015).

Cases studies represent a vital component in medicine as a form of publishing as well as an instrument of learning language (as cited in Antic y Natasa, 2014). In case- based learning, students work in pairs or groups so as to "apply their knowledge to reach a conclusion about an open-ended real-world situation" (as cited in Michigan State University,n.d.). Teachers provide students a clinical case and related questions that need to be answered.A case study involves: the presentation of signs and symptoms, conducted examinations, investigations, or interventions, presenting diagnosis, treatment, and evaluation (see appendix C). Consequently, students apply their knowledge, improve their critical thinking, and communicative competence.

University of Atacama Chile

The University of Atacama is one of the public institutions of higher education located in the city of Copiapo, specifically in the region of Atacama Chile. This university was founded in 1981. It is currently accredited by the National Accreditation Commission (Chile) and it is also among the 25 Chilean Universities that appear in the Scimago Institution Rankings (SIR) 2020 ranking. A study carried out by the Ministry of Health, in the Atacama region found that there would be 4,6 specialist doctors for every 10,000 inhabitants, the lowest figure in the country's regions (MINSAL, 2016). That is why, as part of a commitment to regional development and with the purpose of improving the quality of medical assistance; the University of Atacama along with the help of government institutions decided to create the Faculty of Medicine in 2018 and implement the Medicine major in March of the same year.

In this sense, under the vision of different health professionals, and considering the needs of students in the medical field; Atacama University has integrated English in the major of Medicine due to the fact that teaching and learning of English is considered essential in terms of preparing students for the current demand of English in academic and professional areas.

In view of this, English is incorporated in four levels that are based on the CEFR (Common European Framework of Reference for Languages) as follows: English I (Semester II, communicative skills level A1) English II (Semester III communicative skills level A1+) English for Medicine I (Semester VI, communicative skills level A2) and English for Medicine II (Semester VII communicative skills level B1).

At Atacama University, English is seen as a generic competence that provides students skills that allow them to perform their profession with success.

The Australian Higher Education Council (1992) described generic competence as those which: … should be acquired by all graduates regardless of their discipline or field of study… they include such qualities as critical thinking, problem solving, logical and independent thought, effective communication, and related skills in identifying and managinginformation.

As can be noted, these four English courses provide an important contribution to the professional training of medical students since they are expected to develop specific macro and micro competencies that students can use during their training and future professional practices. Also, they are expected to use vocabulary and grammatical structures to deliver personal information.

Description of the English course I and II (second and third semester)

These subjects constitute the 1st and 2nd stage of a sequence of 4 levels where students individually and cooperatively develop communication skills of the English language at an A1, A1 + level, according to the Common European Framework (CEFR). These courses aim to develop autonomous learning skills and efficient application of technological resources as a way to facilitate the teaching and learning process of the English language.

In regard to the level A, no prerequisite is needed. The course I is focused on developing students´ understanding and use of everyday expressions of basic use as well as simple phrases designed to satisfy immediate needs. In terms of teaching content, students learn general English. Then, they practice specific English based on Medical English.

To take the course II, English course I is a prerequisite. Like the first course of English, this subject seeks to develop vocabulary and grammatical structures in order that students deliver personal information and information about their immediate environment.

Besides at an A1+ level students are able to introduce themselves and others, request and give personal information about their address, belongings, family and the people they know.

Both English courses are divided into 5 learning units. In each unit, aspects of grammar, vocabulary, writing, phonetics (pronunciation) and daily English are developed. In addition to an autonomous work focused on reading texts related to medicine. It means that students learn basic general knowledge of English that will be of benefit to complement the use of Medical English.

Learning units of the General English course I (Second semester)

Unit 1: New Friends

1.1 Grammar: Verb To be (am-is-are) + affirmative sentences. Pronouns, and possessive adjectives: I/my; you/your; he/his; she/her; it/its; we/our; you/your/they/their. -Articles a/an; -Plural nouns: -s; - es; -ies;

1.2 Vocabulary: Cardinal numbers. Countries and cities: Italy, Brazil, Australia, Milan, Tokyo…-The alphabet. Things around: a chair, a table, a computer, a camera, a TV, a car, a bag…

1.3 Writing: Describe a picture. What is your name? (first/last). What is his/her name? (first/ last). Where are you from? (country/city). Where are they from? (country/ city)

1.4 Phonetics: -/æ/ - /ə/ - Face to face (Pronunciation in Use - U6; Headway pr. p11-12). -s/ - /z/ - /iz/ - Headway (Pronunciation in Use). Contractions of to be

1.5 Everyday English: What is your name? (First name/ last name); Where are you from? How are you?; What is this in English? -Excuse me; Thank you, Nice to meet you; Hello/Goodbye. 1.6 Autonomous Work: Reading on the origins of the term Medicine. (Task 1)

Unit 2: Personal information

2.1 •Grammar: Plural pronouns and possessive adjectives: you/we/they; your/our/their. To be: am/is/are + negatives, questions and short answers. Wh questions: How, How old, What, Where.

2.2 Vocabulary: Nationalities: Italian, Brazilian, American, Chinese, Japanese Jobs: a doctor, an actor, a shop assistant, a teacher, a police officer…. Cardinal numbers. Personal Information: address, age, married/no. The alphabet: how do you spell…?

2.3 Writing: What is your name? Where are you from? What is your home address/phone? How old are you? What is your job? Are you married? – if yes: write about your spouse. if not: write about your best friend.

2.4 Phonetics: - /i/ - /i:/

2.5 Everyday English. Good morning/afternoon/evening/night. Pardon; don't understand; don't know, sorry. "What are you?" vs. "Who are you?"

2.6 Autonomous Work: Project Development. Work on the structure of the human body and match the vocabulary corresponding to the head, the trunk and the upper and lower extremities and some internal organs (Task 2)

Unit 3: Family and Friends

3.1 Grammar: Verb to be: present and past. Affirmative, Negative, Interrogative. Possessive case ('s)+ possessive adjectives. Questions with how much + to be. Irregular plurals. Adjective + noun combination (a good job). Adjectives (word order)

3.2 Vocabulary: Family members: mother/father/ /brother/sister/wife/husband… Describing a town. Food and drink (Likes/dislikes). Alphabet and spelling the names.

3.3 Writing: Create your family tree and write about your family (best friend); write about a town you've visited lately. Who are you? Where are you from? Where do you live? What is your job? /What do you do? Where is it? Are you married? Tell about your parents/ siblings/pets.

3.4 Phonetics. /ɒ/ - /ʌ/ - Face to face (Pronunciation in Use - U.4-5)

3.5 Everyday English. Phone conversations: Can I help you? How much is/are…? Money and prices. **3.6 Autonomous Work:** Read about medical specialties (Task 3)

Unit 4: My world

4.1 Grammar: The Present Simple: affirmative and negative forms. General questions, Wh-questions, Yes/No questions. Short and long answers. Demonstratives: this, that, these, those

4.2   Vocabulary: Languages and nationalities (review). Phrases with like/have/live/work/study. Daily routine. Time words: a day, a year, an hour, a second, a month, a minute, a week.

4.3 Writing: H/w: Workbook + Your daily routine (1st, 3rd person singular). get up/ go to work/ have lunch/ watch TV/ listen to music. Describe your life in Chile: Likes/dislikes. Favorite food. Is it cheap/expensive to live in Chile?. Your work/education.

4.4 Phonetics. /θ/ - /ð/ - Face to face (Pronunciation in Use – U.15)

4.5 Everyday English. Telling the time: past, to, half past, quarter to. Days of the week.

4.6 Autonomous Work: Develop a Project. Vocabulary building exercise with words organized into semantic sets/vocabulary associated with containers and modes of presentation of some drugs (Task 4)

Unit 5: Day – to – day Life

5.1 Grammar. The Present Simple (question form). Adverbs of frequency: usually, sometimes, never, always, every. Prepositions of time: at, on, in. Object pronouns: I/me; you/you; she/her; he/him; it/it; we/us; you/you/; they/them. Wh- questions and answers: Why – because.

5.2 Vocabulary. -Days of the week/months. Telling the time. Time phrases: on, in, at. Food and drink: in the restaurant.

5.3 Writing. H/w: Work book + Describe your day off (Saturday/Sunday). Hobbies. Friends. Habits. Going out.

5.4 Phonetics. /w/ - /v/ - Face to face (Pronunciation in use – U. 14, 23)

5.5 Everyday English. Make a request: Can I…? Can you…? Make a suggestion: Would you like…? **5.6 Autonomous Work:** Students develop some exercises to raise consciousness on the use of the definite and indefinite article in Medical English (Task 5)

Learning units of the General English course II (Third semester)

Unit 1: Where I live

1.1 Grammar: There is/are + any: positive, negative, questions and short answers. Quantifiers: a, some, a lot of. Prepositions of place: in, on, under, next to.

1.2 Vocabulary: Rooms in a house: a bedroom, a living room, a kitchen... Furniture in a house: a cooker, a sofa, a lamp, a book…. Places in a town/city: a museum, a theatre, a park, a river.

1.3 Writing: h/w: Workbook + describe your house and your favorite room: How many rooms are there? Is it big or small? What furniture do you have? Do you like it or not?

1.4 Phonetics:/dʒ/ - /tʃ/ Face to Face (Pronunciation in Use – U.18)

1.5 Everyday English: Directions: turn right, go straight on, turn left…Tourist information: when is the Museum open/close? What time…?

1.6 Autonomous Work: Reading about Health and Illness.

Unit 2: Days to remember

2.1 Grammar. Past simple: positive, negative sentences; questions and short answers; was/were born; regular and irregular verbs.

2.2 Vocabulary. Events and experiences: New Year's Eve, a party, a match…Years and past time phrases: ago, last week, last month, yesterday. Famous people: artist, writer, princess, painter…

2.3 Writing: h/w: Workbook + Write about the best day in your life: When was it? Where did you go? What did you do? How many people were there? Were you alone?

2.4 Phonetics: / ɔ:/ - /ɜ:/ Face to Face (Pronunciation in Use – U.7; 5)

2.5 Everyday English: Birthday: months, ordinal numbers, years, dates. When were you born? What day is it today?

2.6 Autonomous work: Parts of the body- describing radiation of pain.

Unit 3: Leisure time

3.1 Grammar. Past Simple Irregular verbs: positive, negative sentences; questions and short answers.

3.2 Vocabulary. Transport: a car, a bus, a train, a taxi, a bike, a plane…Leisure activities: go to the cinema, see my friends, theatre…At the station: a ticket office, a platform, a customer…

3.3 Writing: h/w: Workbook + My last holiday: When did you go? What did you do? Where did you go? Where did you stay? What did you eat? Did you like?

3.4 Phonetics. /l/ - /r/ Face to Face (Pronounce in Use - U.21-22)

3.5 Everyday English: Filling in forms: name, address, postcode, nationality…

3.6 Autonomous work: Reading- Parts of the body: The abdomen, the chest, the pelvis…

Unit 4: We can do it!

4.1 Grammar: Can/can't: positive, negative and question forms. Verb and noun collocations: love, like and hate + noun/-ing. Prepositions of place: in, near, next to, opposite, on.

4.2 Vocabulary: Giving directions: in the, near the, next to, opposite, on the left/right. Things people do online: send, sell, watch, listen, and music…Abilities: swim, cook, drive, sing, ski, play basketball, play the piano, speak English, ride a bike.

4.3 Writing: h/w: Workbook + Write about you and your best friend: Do you like the same type of music? Do you like the same type of food? Do you like the same type of films? Sports? Hobby?

4.4 Phonetics: /s/-/ʃ/ Face to Face (Pronunciation in Use – U. 16-17)

4.5 Everyday English. Expressing requests and offers: Can you…? Can I….?

4.6 Autonomous work: Reading about Functions of the body- eating and the five senses.

Unit 5: My future

5.1 Grammar. Future: Will/Be going to: positive, negative, questions and short answers forms. Question words revision. Review of tenses – present, past, and future + modal can/can't.

5.2 Vocabulary: Future plans: pack, book, catch, have, arrive, go. Emotions: excited, tired, happy, sad, bored, scared, hungry, angry.

5.3 Writing: h/w + Workbook. Review all covered topics.

5.4 Everyday English: Wishing a great time: Have a good one! See you! Good luck with…!

5.5 Autonomous work: Reading about Medical Practitioners.

Description of the English for Medicine I (sixth semester)

This course constitutes the 3rd stage of a sequence of 4 levels. It enhances the development of comprehensive reading skills. This course has as a prerequisite English II. At this stage, students are able to understand frequently used phrases and expression related to areas of expertise that are specifically relevant to them such as basic personal and family information, shopping, places of interest, occupations and others. Moreover, students know how to communicate when carrying out simple and daily tasks that are familiar or habitual to them. They also describe aspects of their past and surroundings as well as matters related to their immediate needs.

Previous Learning: It is desirable that students possess competences regarding comprehensive reading, syntax and vocabulary dealt with at the previous level. They must also possess attitude of dialogue, responsible participation in group work and autonomous work.

This course is divided into 4 learning units. In each unit aspects of grammar, vocabulary and every day English are studied, by making emphasis on medical context.

Unit 1 Visiting the Medical School

Modal verbs: may, might.
Pronouns and relative adverbs.
Simple conditional
Prepositions at the end of sentences.

Grammar:

Use of adjectives. Comparatives and Superlatives:
-use with short adjectives (-er/-est)
-adjectives that end in –y (-ier/-iest)
-use of more/most with longer adjectives
-Irregular adjectives
-Verb collocations with: play, have, write, go, study
-Can/can't for possibility; Have and have got for possession

Vocabulary:

Human body description: height, build, hair, face, eyes, nose, looks
Parts of the human body: body, head, face, cheek, eye, mouth, finger, foot…
Eye, skin and hair colors: green, brown, blue, pale, blond, black…
Types of cells: muscle, red blood, nerve, sperm, egg, new….
Skin layers: epidermis, dermis, fat cells…

Everyday English

Getting a patient's information: name, occupation, Date of birth, gender, reason for visit.
Expressing personal desires: I'd rather…I'd like…I want…Can.

Unit 2 Understanding the body

Grammar

Review Simple Past Tense
Present continuous: positive and negative forms, questions and short answers
Present continuous vs Present Simple
"Whose "+positive pronoun (who's vs whose)

Vocabulary

Medieval diseases: diptheria, typhoid, fever, leprosy, influenza, bubonic plague
Types of bones and muscles
Breathing system
Everyday English

Everyday English

Booking an appointment: I need to… How can I help you? … you can count on…
I'll get back to you, Can I speak to…
Linking words: although, but

Unit 3: Get Healthy

Grammar:

Relative clauses

Present Perfect Simple- Active and Passive Infinitives for reasons
It's+adjectives+to
Modals

Vocabulary

Connecting words
Lexis related to health: surgeon, GP, an operating theatre, a surgery, an infection, asthma, specialist, prescription, ward, allergy, migraine

Everyday English

Use of phrasal verbs

Unit 4: At the doctor's

Grammar:

Review: Future: will, may and might
Present continuous and going to for the future
Clauses
Linking words

Vocabulary:

Health problems, symptoms and treatment
Review of vocabulary concerning parts of the body and illnesses
Review of relative clauses

Everyday English

Make offers and promises with will
Talk about plans and organizing events
Discuss about different medical activities
Making polite request

Description of the English for Medicine II (seventh semester)

This course constitutes the 4th and last stage of a sequence of 4 levels where students at a level B1 develop communication skills in the English language (Listening, Reading, Speaking, Writing).

This course has as a prerequisite English for Medicine I. At this level students are able to understand the main points of texts dealing with familiar issues, whether in work, study or leisure situations. They know how to handle most of the situations that may arise during a trip through areas where the language is used. They are able to produce simple and coherent texts on topics that are familiar to them or in which they have a personal interest. They can describe experiences, events, wishes and aspirations, as well as briefly justify their opinions or explain their plans.

Previous Learning: It is desirable that the student possesses competences regarding comprehensive reading, syntax (simple verb tenses - present, past, and future, use of adjectives and others). General use and medical lexicon.

This course is divided into 3 learning units where each unit presents the expected learning results. Unit 1 is about presenting complaints and it develops aspects of listening, reading, speaking, writing, language spot, vocabulary, pronunciation, and a culture project. Unit 2 is about working in general practice, and it has the same organization as unit 1. Unit 3 has to do with instructions and procedures and as well as unit 1 and 2 develops aspects of the four macro-skills including just a language spot and vocabulary.

Unit 1 Presenting complaints

Listening: Personal details, presenting complaints.
Reading: Dr. Gillian Henderson. (Skimming and scanning Techniques)
Speaking: Diagnosing, presenting complaints
Writing: A case Report

Language Spot: Asking short and gentle questions.

Verbal tenses in presenting complaints. Can you tell me what/who + noun + verb?What's your surname/family name?
Can you tell me what your surname/family name is?
Understanding the difference between the Present Simple, Present Continuous, Present Perfect and Present Perfect Continuous.

Vocabulary:

Describing pain
Pronunciation: Medical terms, Word Stress.
Culture Project: Use of body Language

Unit 2 Working in General Practice

Listening: Description of a GP's job, A case history and short questions in the general history.
Reading: Social factors in general practice
Speaking: GP statistics, case history, role-play
Writing: A referral letter

Language spot: Present Perfect and Simple Past

Vocabulary:

Medical jobs
Signs and symptoms
non-technical language

Pronunciation

Medical jobs: main stress
Questions: falling and raising intonation

Culture Project: Research into general practice in the UK.

Unit 3 Instructions and procedures

Listening: Preparing for the first ward round. Giving instructions.
Reading: Direct observation of Procedural Skills
Speaking: Explaining a process (hand washing)
Explaining procedure. Case presentation

Writing: Case notes

Language spot: Giving instructions, explaining procedures, making polite request. Using the imperative, using the present simple with ` you`, use of linking words, use of modal verbs to ask questions.

Vocabulary:

Instructions for a procedure (withdraw, drain, mark, wash, obtain, sterilize, prepare, attach)

Both English for Medicine I and II are oriented to potentiate language reading skills and communicative skills. Some of the activities that students practiced in these courses are role plays, simulations, and oral presentations.

With role play, students assume different characters and act out scenarios. Students must use creativity and critical thinking to further get "into" their role. Role play is used as training method, to acquire knowledge, attitudes, and skills in a range of disciplines. In medicine, role play activities can be performed in different ways, there are many variations on this theme.

✓ Role-play can be fully scripted (all players act from verbatim scripts) or partially scripted (players have certain prompts – often an opening line).

✓ Alternatively, one player (e.g., patient) is given a description of their role while the other (e.g. student) is provided with their task.

✓ Players can further rotate through roles within a single role-play (switching) with the intention of gaining insight into other roles or perspectives or players can be substituted

at various points in the role-play by observers.

✓ Some role-play activities use role cards as a way of inserting new information into a role-play.

<u>Simulation</u> has been used as a teaching tool for many years. It is widely used in education and training in different professions and disciplines, including medicine. Recently, the curricula of medical students in different universities include clinical skills training, since it provides students a particular set of conditions that allow students experience possible situations in real life. Simulation can be defined as any educational activity that utilizes aides to replicate clinical scenarios. Unlike experiential learning, teaching, and learning using old fashion way by using texts and lectures did not give students opportunities to apply their knowledge into practice while they are in real situations (Raymond, 2010). Learning from experience is a part of the definition of simulation, it is an active process in which the learner constructs knowledge by linking new information and new experience with previous knowledge and understanding. It involves the use of clinical scenarios as the bases of learning. Thus, simulation is considered a modern methodology that will be of benefit in the medical field, Cobb (2000).

Role plays and simulations significantly contribute to students learning as they are able to consider more other options within a challenging environment. Moreover, teachers are able to cover more complex course topics in a way that moves students from passive to active learners as they attempt to problem-solve within these next contexts. These activities are widely used in medical education (Nestel & Tierney, 2007). They are used to practice the necessary skills needed in the field allowing students to exercise skills such as giving physical exams, giving medical news, or overall patient communication. Then there are simulations

that use life-like mannequins so students can work on clinical skills in a regulated, safe environment.

Scaffolding (Graduated accompaniment from teacher to student)

Over the past few decades, scaffolding has been a promising technique used for teaching and learning language. This technique is learner-centered teaching where students' needs, and experience are central to the educational process. It means that scaffolding is a specific just in time support that enable students to work at a higher-level specific activity. However, O'Neil (1991) on his article entitled *The Plausible Myth of Learner* said that "letting students do the learning on their own with teachers only intervening when and if needed might amount to a form of neglect" On the contrary some scholars argued that learners are more likely to succeed in learning language when teachers, as well as their peers provide targeted support, when necessary, (Donato, 1994; De Guerrero & Villamil, 2000; Walqui, 2006). In contrast with this (Harmer, 2001, p. 57) believed that scaffolding can facilitate the process of acquiring medical terminology, and communicative competencies within the specialized linguistic domain of English for Medical Purposes.

Scaffolding can be applied in several ways with English language learners, but one of the most salient instructional scaffolding techniques used at Atacama University is modeling (Walqui, 2006).

Providing students with models and worked examples can help students to learn to solve problems faster, *(Rosenshine 2012)*. Modeling is a technique that provides medical learners with representative examples of what is expected from them, providing students concrete

guidelines, tasks, and activities, where teachers can model proper language patterns and the vocabulary that learners may need to use when they complete specific tasks and activities. Scaffolds can result in higher levels of students' achievement. This is a very demanding form ofinstruction (Pressley, Hogan, Wharton-McDonald, Mistretta, & Ettenberger 1996). Lipscomb, Swanson, and West (2004) have identified specific challenges that must be addressed if teachers are not successfully scaffolding students' learning:

Need for appropriate modeling of the desired behaviors, strategies, or activities, because if the teacher has not fully considered the individual students´ needs, predilections, interests and abilities, the scaffolds will not help.

In this regard, this challenge can be overcome. For instance, Ms. Conroy interacts with her class, they have been examining cell structure, starting with building background knowledge from thewebsite "How Stuff Works"

She starts playing students the video about blood cells from the website and shares her thinking aloud with them. As part of her modeling, she makes connections between the information about red blood cells and the plant and animal cells they have already studied. She also asks herself questions and records these questions for later investigation. Following her modeling, Ms. Conroy uses whole class guided instruction to determine students' level of understanding and readiness for the lab. She starts by asking them to draw a bacterial cell of their choice and to label the internal structures accordingly. They take out their dry-erase boards and get to work. Bradley chooses to draw the E. *coli bacterium* and has labeled the cell membrane, cytoplasm, flagella, DNA, and mitochondria. Noticing his error (bacteria do not have mitochondria), Ms.

Conroy reviews the work of a few other students to see if they have added structures that do not belong. Chelsea has incorrectly included Golgi bodies in her *streptococcus pneumoniae cell.*

Ms. Conroy interrupts the class to say, "Remember, these are bacteria. They are more basic than human cells. Check your work". Several students look at their dry-erase boards and remove incorrect structures. Bradley does not, so Ms. Conroy says to him. "Think about each structure you have labeled and if it is appropriate for bacterial cell." Bradley doesn't change anything on his board, so Ms. Conroy says, I know that E. *coli*, as a bacteria, has a membrane. That's a common feature, as cells need a structure to contain their contents. And cells carry DNA. Well done. Ah, yes, and you have the flagella, a telltale sign of bacteria. Not all bacteria have them, but they are pretty common. What about the other structures you have labeled?

At this point, Bradley recognizes his error and erases *mitochondria*. While doing so, he says to Ms. Conroy, "You never just tell us the answer; you make us think for ourselves."
And there it is- the interaction that changed Bradley's understanding of cellular structure. Of course, it will not always happen this fast. But when we are careful and we pay attention to students and their developing understanding, saying or doing the just-right thing will ensure that they do the cognitive work, not the teacher.

The reminder of this book focuses on specific tools that you can use to guide students to greater levels of understanding. Taken together, this teacher moves from questioning to checking for understanding to prompting, cueing, explaining, and modeling providing a structure to realize the vision Vygotsky had for education in which students become themselves through their interactions with members of the learning community.

Oral presentations: Presentation is another common activity in Atacama University, it plays a role in students' acquisition of knowledge and are often a mode of assessment in all disciplines. Research confirms that in order that students acquire English they must engage in oral language practice and be given the opportunity to use language in meaningful ways for social and academic purposes (Williams & Roberts, 2011).

Some of the well-known methodologies that are applied in these courses are student-centered approaches like problem-based learning (PBL) and task-based learning. Problem-based learning has its implementation roots in the field of medical education starting in the 1950s (Savery & Duffy 1995). PBL is essential to help medical students learn basic sciences knowledge as well as to help them develop their clinical skills. In this instructional methodology students' learning occurs in the context of solving an authentic current problem. As it is highlighted in the English for medicine I **unit 4: at the doctor's,** students practice identifying possible diseases, and symptoms presented in patients. After that, students suggest treatment as solution. Besides, as a way to practice English, students simulate the resolution of a health problem in patients to indicate treatment according to the symptoms presented in patients

In task-based approach, learners learn by doing. The development of medical courses at Atacama University involves a wide variety of specific Medical English topics that provide medical learners practice real situations presented in the field of medicine, as for instance, understanding the body, presenting complaints, working in general practices, instructions, and procedures. Task based activities are means of practicing the four skills of language as well as skimming and scanning techniques so as to develop: reading comprehension; writing

skills through the practice of grammatical structures and the lexicon of the study area and for developing speaking skills to prepare dialogues or role-plays and ask a patient for personal information.

National University of Caaguazu

The National University of Caaguazú is one of the eight public universities of Paraguay, and one of the most recently founded, being established in 2007. It is considered a very respected educational institution; every year it manages to enter the rank of the top 30 universities of the countries. This institution is certified by the National Agency for Evaluation and Accreditation of Higher Education, Paraguay. This implies that, majors like the Doctor of Medicine are committed to offer their students high quality education. For that reason, with the purpose of providing future doctors the necessary tools to meet the present demands of our globalized world, English language has become part of the study program of this major and medical students take 2 English courses during the second year of study.

In this sense, the objectives described in the English medical syllabus of the first course are:

- To develop students' reading, writing, and communicative skills so they can effectively perform different academic and professional activities that require the use of English in their subject area.

- To provide opportunities for students to develop reading comprehension skills in order to facilitate the reading of medical publications as well as practice of communication skills for patient-doctor interaction.

Besides, as any syllabus, contents and methodologies are main parts of the medical English

syllabi of the university of Caaguazu.

Firstly, English I is divided into 4 units of study in which medical topics are taught in a structured manner starting from the basic to the complex.

Unit 1 is made up of the following topics:

- parts of the body
- main blood vessels
- body systems
- musculoskeletal system
- medication: antibiotics
- medical prescription

case studies: communicative skills:

- personal and professional presentation

vocabulary:

medical conditions, medical history, organ systems, medical specialties.

Reading comprehension:

Reading comprehension of Articles about asthma

Unit 2

- parts of the body
- parts of the hand
- parts of the mouth
- parts of the foot

Communicative skills:

- to recount duration of pain
- to describe pain location – medical equipment (needle, syringe, scalpel, tourniquet, thermometer, etc)

Reading comprehension:

- in the hospital
- doctors on duty

Unit 3

- Sense organs
- nervous system

Communicative skills:

- to ask about other symptoms
- Medical history
- to describe medical equipment: needle, syringe, scalpel, tourniquet, thermometer.

Reading comprehension

- in the hospital
- doctors on duty

Unit 4

- digestive and respiratory system
- excretory system
- vision problems

Communicative skills

Prepare and inform the patient.

Secondly, English II is also divided into four units of study, and it aims to achieve the following objectives:

- To respond to students' demands of English language so that it meets their general and specific interests.

- To develop students' linguistic skills so that they can develop the communicative skills that allow them to interact in personal, professional, and academic settings.

Unit 1

Domestic accidents
Citizens at home
Physical exam

Case studies: Communicative skills
Myth and facts
Jobs in a hospital
Daily task and activities

Reading comprehension:

Article about nursing

Unit 2

Pain report
Evaluation questionnaires about symptoms
Make a diagnosis

Comprehension of texts

Description of different forms of pain
The role of the auxiliary medical staff.
Describe the different activities of the hospital departments
Identify the main departments in a hospital
Understand and give directions

Unit 3

Vitamins and Minerals
Food consumption
Blood types

Comprehension of texts

Aspirin history
Procedure for admitting a patient
Patients' medical history
Medical abbreviations
Patients' personal information

Unit 4

Medical terminology, verbs
Nouns related to medicine
Prepare the patient

Inform the patient
Symptoms of shock

As it can be seen the present syllabi focuse on the teaching of important medical contents, communicative and reading skills that are essential in the medical practice. For example, medical students at Caaguazu may find themselves in situations in which they will need communication skills for "first contact patient interviews, probing for associated and additional problems, counseling the patient, explaining treatment options, its implications and advising follow-up" (Choudhary & Gupta,2015). On the other hand, they may need reading skills for reading medical information such as laboratory results, radiology, and imaging results. Moreover, reading is useful in the medical field for reading instruction manual of medical devices, and for using computer programs.

The importance given to these skills denotes the implementation of modern methodology or communicative language teaching. Brown (2007) defined the communicative approach as "a methodology that emphasizes authenticity, interaction, student-centered learning, task-based activities, and communication for the real world, meaningful purposes.'' (Brown, p,378).

This kind of approach is known for being student-centered which means that unlike traditional methodology students' needs and purposes of learning are prioritized. The teacher's main role here is to facilitate learning "by enabling them to work at their own speed, by not giving long explanations, by encourage them to participate, talk, interact, do things, etc." (Scrivener 18,19). Another important characteristic of the communicative approach is that activities have a real purpose. For instance, in the syllabi of the English courses of medical students' case studies and medical history are two activities that reflect real medical practice.

A case study is a method used for teaching different disciplines like medicine. According to

''Using Case Studies to Teach,'' dictionary (2013) ''Case studies can be used in any discipline when instructors want students to explore how what they have learned applied to real world situations… (and) require students to answer an open-ended problem with multiple potentialsolutions'' (as cited in kelch & Malupa-kim, 2014, P. 10).

In medical education, information about clinical issues is presented so that students can come to an appropriate conclusion or result. In relation to this, Barners, (1994) stated that case studies are helpful for students enhance their self-management, improve their communication skills as well as their ability to solve problems and make decisions (as citedin Johanson, 2016) In other words, through this approach medical students have the opportunity to get prepared to deal with real medical situations at the same time that they practice the English language.

When it comes to clinical or medical history, it is defined as ''a record information about a person's health. A personal medical history may include information about allergies, illnesses, surgeries, immunizations, and results of physical exams and tests.'' (National Cancer Institute Dictionary of Cancer Terms, 2017). It also includes the inquiry of aspects such as past medical history, medication, family, and social history (Tidy, 2019). In this sense, having good communication skills is essential to make a diagnosis and it may even become more challenging if doctors have to communicate with English speaker patients. The search engine dictionary (Basicmedical key) defines the following communication skills needed when taking a patient's medical history: listening skills, eliciting, or 'facilitating' skills, use of appropriate questions and appropriate language. The previous definition and characteristics described, show us that the implementation of medical history in the classroom may help medical learners make satisfactory improvements in both their speaking

and listening skills of the English language as well as on the performance in their future professional jobs.

Del Valle University

It can be clearly noted the effort made for providing an effective teaching and learning of medical English at some Latin American Universities. Del Valle University also knows the importance of helping their students achieve their needs. In the field of Medicine, it is evident how necessary and vital is for students the training in the learning of a L2 to achieve their academic purposes and for their future performance as health professionals. This training brings benefits for students as they become capable to read textbooks, search for information on the internet, to interact with teachers and study abroad. That is why, in the syllabus of English courses at the Doctor of Medicine Major the reading skill is seen as a priority. This is because reading is one of the skills students urge to develop since most of the information of medicine is published in English, Kang (2004). In fact, new developments in medicine require students to keep updated with current information of their study field. For that reason, at Del Valle University, learners take 3 medical English courses addressed to develop the skill in reference.

Teaching of reading skills is a particularly important aspect of language learning in the medical field. This is because, as it was previously mentioned, main contributions of Medicine and Science are published in the English language in a written form. Reading is beyond the mere recognition of words or decoding the meaning of letters. It is a conscious

and unconscious thinking process where the reader applies various strategies to infer the intended meaning of the writer. Words worth, English language lab (2019).

Medical learners, hence, need to learn to think in English to be able to effectively read this language. Some reading skills like previewing and predicting the outcome of a text, questioning the intentions of the author, or identifying relationships between ideas need to be taught to the learners. These skills and other strategies for reading comprehension are the ones that Del Valle University teach to medical students along with interactive activities where they work upon one skill and discuss their thinking with each other.

These methodologies are based on an interactive reading model that helps students understand scientific texts and interact with the writer and classmates to create meaning from the written text. The interactive class is defined as a formative, communicative and integrative process, with a strong cognitive base in which a group of students enjoy the solution of tasks in a context of socialization and cooperation, allowing them to self-actualize and experience changes enduring in attitude, action and thought (Acosta, 2010) All of this is reflected in the description of each course as follows.

Description of the course "Reading of academic texts in English I"

Firstly, students take the course named "reading of academic texts in English I" in the first semester. The study program of this subject was developed by the professors of the ESP section from the School of Language Sciences of Del Valle University and coordinated by Professor Asnoraldo Cadavid R., in August 2006.

This course is the first of three levels, and it is based on the scientific discourse. This course

seeks to prepare students in the reading of scientific or technical academic texts so that they can recognize the linguistic and discursive aspects as well as the types of discursive texts. The richness and variety in written texts offer various benefits for language teaching and learning contexts. This structure of texts could lead to successful learning opportunities. It is known that a large variety of texts can be used in classes; however, scientific texts play a larger role in educational settings. That is why scientific texts contain important properties that help medical students to get knowledge about the advances in the medical field through the written means.

Properties of academic scientific texts.

Scientific texts enable readers to get knowledge on a specific scientific issue. By this way, readers can get the required information on what they need. They are part of informative texts as they provide information for their readers. The purpose of such texts is to discuss a scientific problem which forms the subject of their study. Therefore, in a scientific text, the problem should be stated clearly in order to make the readers comprehend the crucial point of the research (Şenöz-Ayata, 2005). Scientific texts provide meta-language and readers should have background knowledge to understand them. In a scientific text, it is also possible to come across some technical terms which can only be understood by target readers, in this case medical students.

In addition to these properties, target readers also may need the ability of interpretation while reaching to a conclusion during the reading process. For this reason, at Del Valle University, during the first EMP course students received training in vocabulary interpretation strategies that they put into practice during the learning process. Ögeyik (2004) stated that the degree

of interpretation of texts is defined as a reader centered approach which is common in written texts. However, scientific texts do not permit different interpretations since they include a precise message for the readers. In each course, English language is taught from a reading perspective. Reading is developed as an interactive teaching and learning process to build meaning from written text. That is to say, the readers make use of linguistic resources that have an argumentative or expository structure like monographs, definitions, instructions, journals, technical dictionary, encyclopedias, essays, etc., that allow them to access written academic scientific speeches and help them to get updated information related to the medical field.

In addition to linguistic resources, students make use of discursive resources. Discursive resources are forms or procedures used for the organization of texts. The discursive resources that students make use of are definition or argumentation, concepts, exemplification, quotes, the analogy, the interrogation, and the enlargement which are useful tools to create a coherent and organize oral or written text so that it has its own style. This helps students to comprehend global and particular aspects of argumentative and expository scientific texts of academic publications which will allow them to develop specific competences to become a critical and autonomous reader.

The course "reading of academic texts in English I" is developed in 18 weeks and it comprises 5 hours of work per week. Apart from reading skills students are also expected to develop basic skills for audiovisual understanding of scientific information available on recordings or on videos to complement written material. Noticeably, getting knowledge of the English language to comprehend, interact and treat people all over the world is necessary.

That is why this university invests time in teaching English throughout academic contents focusing on reading skills, grammar, and vocabulary in context by putting into practice different techniques and strategies to help students in their ongoing learning process. The contents that are taught in this course are described below:

Teaching contents of the subject "Reading of academic texts in English I":

The students have access to authentic scientific texts. Relevant to the health area.

1. Reading strategies

- ✓ Text type and reading purpose
- ✓ Skimming
- ✓ Scanning
- ✓ Intensive reading
- ✓ Critical reading

In order to understand the scientific basis of clinical practices, medical students are required to read and comprehend primary scientific literature. Reading comprehension strategies are "cognitive or behavioral actions that are executed under particular contextual condition, with the goal of improving some aspects of comprehension" (Graesser, 2007, p. 6). At del Valle University, specific strategies are applied where students first identify the type of text and the reading purpose; such strategies are skimming, scanning, intensive reading, and critical reading which are used to teach this skill.

What is skimming?

Skimming involves quickly glancing through a text to get a general sense of what it is about. The students do not actually read the whole piece; they simply look through it, reading things like headings, bolded words, topic sentences, etc. This strategy helps students get a feel for a text before they read it, and the learners will know what to expect as they do a more detailed reading. Ayesha Kamal, Fall (2009)

Healthcare professionals also need to be able to read quickly (scanning) to understand content while they are still retaining key information. Whether a doctor is reading through a patient's medical records, or a nurse is trying to identify care instructions, being able to scan text is important.

What is scanning?

Stanton (1996) defines scanning as the method of reading that enable readers to get abroad insight into a complete material, according to the author it provides two advantages in the process of reading which are: finding key words and introducing grammar structures.

Scanning is reading a text quickly to find specific information such as reading to answer certain types of test questions or chapter review questions. It involves rapid eye movements and keywords to advance quickly through a text. The occupational English test (OET 2018) stated that depending on what the student is reading, this can be:

Dates

Names

Care instructions

Drug dosages

Ann Marris, in Essay "*Writing for Students in the Health Sciences*"suggests the following steps in order to scan.

1. Read the questions to determine the exact information you are looking for. Then, decide what form that information might take. For example, to look for when a certain discovery was made, you would search for a date.

2. Decide where the information might be located. For example, if you want to know how a disease may be treated, you look in the treatment paragraph.

3. Scan the text by moving your eyes as quickly as possible down the pages.

4. Once you have found the information, read it carefully. Do not read further.

Both skimming and scanning involve reading through a text quickly; however, they involve searching for different kinds of information.

Let's look at an example to help show the difference:

- 11/5: Mr Brown attended a consultation for a foot ulcer.

- 13/5: Mr Brown was diagnosed with Type 2 Diabetes.

Skimming would lead to the conclusion that this is information about Mr Brown's medical history. Scanning, on the other hand, would lead you to a number of key details such as:

- Name: Mr Brown

- Dates: 11/5 and 13/5

- Symptom: Foot ulcer

- Diagnosis: Type 2 Diabetes

The information you scan for will depend on the question or the type of information you are searching for.

What is intensive reading?

Day & Anderson (2006) defined reading as an active and smooth process that involves the connection between both the reader and the reading material or text in order to construct the meaning of what has been read. As the name suggests, intensive reading refers to reading short texts with clear goals, such as to answer reading comprehension questions or to identify how sentences are linked. Unlike extensive reading, the goal of intensive reading is not to read many texts for fluency, but rather to read a shorter piece of text to gain a deeper understanding of that text. *Dr Jeremy Koay, (2016).*

Although reading comprehension can be one goal of intensive reading, its goals may include learning subject matter, vocabulary learning and studying the authors' intentions. In other words, the goal of intensive reading is not limited to reading comprehension.

In intensive reading, learners usually read texts that are more difficult, in terms of content and language. To help learners make sense of texts that may present a significant challenge in terms of vocabulary, grammar and concepts, teachers should focus on reading skills, such as identifying main ideas and guessing the meaning of unfamiliar words from context. (Macalister, 2011).

According to Macalister, (2011) the four learning goals for intensive reading are:

1. Focusing on new **language** such as vocabulary and grammar.

2. Focusing on **ideas** such as themes and topics.

3. Learning new **skills** such as making inferences and identifying main ideas.

4. Paying attention to **text features** such as genre structure and cohesion.

Reading comprehension instructions can focus on understanding the content/topic or on reading strategies (Liang & Dole, 2006). Teachers can use images or videos as a means of introducing medical learners to the reading text topic. An alternative pre-reading activity is to have students complete a true/false statements activity and then have them discuss their responses in groups. The goal of this activity is to prompt learners to think about and explore the topic, drawing on their background knowledge.

When focusing on reading strategies, teachers can introduce the idea of skimming (reading rapidly for overall idea) and scanning (reading rapidly to find specific information). Before reading a text to practice these skills, teachers can ask students to speculate about the content and confirm their speculations after reading the text. The speculation activity provides a sense of direction and purpose for the reading practice.

What is critical reading?

Critical reading or appraisal of medical articles is the assessment of evidence by systematically reviewing its relevance, validity, and results to specific situations. Chambers, R. (1998). Critical reading involves presenting a reasoned argument that evaluates and analyses what you have read. Being critical; therefore, in an academic sense, means advancing your understanding**.**

Both reading and thinking critically do not mean being 'critical' about some idea, argument, or piece of writing, claiming that it is somehow faulty or flawed. Critical reading means engaging in what you read by asking yourself questions such as, 'what is the author trying to say?' or 'what is the main argument being presented?

Critical Reading

1) Is intentional.

2) Requires focus and concentration.

3) Involves thinking, understanding, interpretation, and reflection of the text.

As a critical reader students should reflect on:

- **What the text says:** after critically reading a piece learners should be able to take notes, paraphrasing, in their own words, the key points.

- **What the text describes:** students should be confident that they have understood the text sufficiently to be able to use their own examples and compare and contrast with other writing on the subject in hand.

- **Interpretation of the text:** this means that medical students should be able to fully analyze the text and state a meaning for the text.

Critical reading means being able to reflect on what a text says, what it describes and what it means by scrutinizing the style and structure of the writing, the language used as well as the content.

2. Vocabulary recognition and interpretation strategies

- ✓ "Transparent words" or cognates, structural, general, and specific words.

- ✓ Derived words, interpretation of prefixes and suffixes, recognition of the grammatical category.

- ✓ Compound words

- ✓ Interpretation of meaning by context

✓ Using the dictionary

During this EMP course (which at Del Valle University is a compulsory subject) medical students are prepared for the use of the English language in their target situations, that is, the situations they will encounter during their studies and at their future work. In relation to this, the designing of this course is oriented to fulfill the students' current language needs. That is why vocabulary recognition and interpretation strategies are part of the teaching contents. Vocabulary development is a major area of concern in ESP courses, which is consistent with Saville-Troike's, (1984).

Medical students are expected to recognize and interpret vocabulary in context by means of different strategies. These strategies include getting knowledge about cognates (transparent words), derived words. Interpretation of prefixes and suffixes, recognition of the grammatical category, compound words in the medical lexis, interpretation of meaning by context and using the dictionary.

Research on cognates has strongly indicated that there is a close relationship between cognates management and reading comprehension success (e.g. DeSouza, 2000; Moss, 1992; Nash, 1970; Holmes, 1986). Holmes (1986) defined a cognate in L2 as "a word which is derived from the same source as a word which has a similar meaning in L1" (p.15).

Considering vocabulary knowledge and reading comprehension to be closely related, one may infer that cognates management may be a powerful strategy to enhance vocabulary acquisition and, consequently, to promote more efficiency in the reading process. The importance of cognates in the reading process has been well investigated and there is agreement that these elements do favor reading comprehension (e.g., Holmes, 1986; Matas, 1990; DeSouza, 2000). Holmes and Matas carried out their studies in a university context

with subjects reading specific-domain texts. Their results confirm the hypothesis that cognates play a relevant role in reading.

Agreeing with Nation (1993, p.118) that "the focus of teaching initially needs to be on increasing the size of the learners' recognition vocabulary", it follows that cognate should be emphasized at the beginning of reading courses because they contribute to vocabulary acquisition and thus, if the relationship between vocabulary and reading comprehension discussed before holds true, they contribute to reading comprehension.

It is very important that future doctors have knowledge of false cognates since it will avoid affecting patients' care, diagnosis and outcome.

For example, the family of an eighteen years old patient told the doctors that the boy was "intoxicado", meaning that he had ingested something that made him ill; however, he was suffering from a brain hemorrhage. As a result of the untreated hemorrhage, the patient became quadriplegic. This is a case where the use of a false cognate led to a disastrous result.

In other case, a bilingual housekeeper helped to interpret since there were no interpreter available at that moment. The provider asked the housekeeper to interpret that a newborn baby had passed a hearing test, but the housekeeper interpreted this as "the baby passed". Fortunately, the baby was in the room during this conversation, so it was immediately evident that the baby was alive.

Other examples of false cognates in English and Spanish include.

- Constipado vs. constipated in Spanish means "resfriado". It is a false cognate in English the word constipated means "estreñido"

- "molestar vs. molest". In Spanish "molestar" means to bother or annoy. In English the word "molest" means assault or abuse someone sexually.

- "Carbon vs. carbón". The Spanish word carbón is translated as coal while in English the word carbon is translated as carbono.

- "embarazada vs. embarrassed". The correct translation of the word embarazada is pregnant; however, many tend to confuse the meaning of this word.

English	Spanish	while Spanish	English
Nouns			
influenza	Gripe	INFLUENCIA	Influence
Injury	lesión herida, traumatismo, daño	INJURIA	insult,offence, slanderous allegation
Parent	Progenitor	PARIENTE	Relative
physician	Medico	FÍSICO	Physicist
Adjectives			
Actual	real, verdadero, efectivo, concreto, propiamente dicho	ACTUAL	present, current
Major	importante, principal, grave, serio	MAYOR	greater, larger, bigger, older
consistent	constante, coherente, indicative	CONSISTENTE	solid, sound, firm
Eventual	final, definitivo, permanente	EVENTUAL	possible, casual, temporary

Verbs			
to remove	extirpar, quitar, sacar, extraer	REMOVER	to stir, bring up again
to stretch	extender, estirar, forzar	ESTRECHAR	to make (...) narrower
to rest	Descansar	RESTAR	to subtract, deduct
to record	anotar, registrar	RECORDAR	to remember, remind
Adverbs			
ultimately	en última instancia, finalmente, llegado el momento, en el fondo	ULTIMAMENTE	recently, lately
Currently	actualmente, hoy en día	CORRIENTEMENTE	Ordinarily

In addition to this, 23 cognates have been considered of high importance in vocabulary acquisition especially in building up the students' confidence in reading (Scaramucci, 1995). Furthermore, Holmes (1986) advocates that, cognates are very important in skimming a text for general comprehension.

The first one is that proposed by Sindermann (1982, p.6), where she identifies six groups of cognates, which are listed below:

Group 1: Words which add affixes (e.g., INcomplete).

Group 2: Words with one initial or final letter missing in the English word (e.g., important –importantE).

Group 3: Words which correspond to verbs and their inflections (e.g., occur – ocurrIR).

Group 4: Words whose final letter is different in English and Spanish (e.g., CurvE – CurvA).

Group 5: Words with different spelling in English and Spanish (e.g., posiTion - posiCion).

Group 6: Words which are identical in both languages (e.g., idea – idea)

The second classification of cognates is given by Rose Nash (1970, pp.159-164). Upon studying what she coined Englañol, that is, the "Spanish-influenced English", she comes to classify them into five categories, as shown below:

Category 1 - True cognates: The English and Spanish words are etymologically related, and their semantic ranges completely or almost completely overlap, for example, famous and linguist.

Category 2 - Deceptive Cognates: The semantic ranges of the two words partially overlaps, for example, IBM actions for acción- stock share.

Category 3 - False Cognates: "The semantic ranges of the words in contemporary languages do not overlap, for instance, auditorium for audience.

Category 4 - Accidental Cognates: "There is no obvious etymological relationship between the pairs, but a striking similarity in form, either orthographic or phonological or both, for instance, fabric for factory.

Category 5 - Phantom Cognates: "Coined words on a Spanish model, believing that they exist in English, for example, actitude for actitud – attitude.

Medical terminology is used in international language, and it is also necessary for communicating with other medical personnel and with patients. Understanding terminology involves breaking words down into their separate components of prefix, suffix, and root word and having a good working knowledge of those parts.

A prefix appears at the beginning of a word and generally describes location and intensity. Prefixes are frequently found in general language as well as in medical and scientific terminology. When a medical word (ventilation) contains a prefix (hyper), the meaning of the word is altered (hyperventilation). Not all medical terms have prefixes. By learning to recognize a few of the more commonly used medical prefixes, the professionals in medicine can figure out the meanings of terms that may not be immediately familiar to them. (See appendix A).

On the other hand, suffixes are placed at the end of words to change the original meaning. In medical terminology, a suffix usually indicates a procedure, condition, disease, or part of speech. A commonly used suffix is -itis, which means "inflammation." When this suffix is paired with the prefix arthro-, meaning joint, the resulting word is arthritis, an inflammation of the joints. Sometimes it is necessary to change the last letter or letters of the root word or prefix when a suffix is added to make pronunciation easier. (See appendix D)

Recognition of compound words in the medical lexis.

Compound words are frequently encountered in the medical domain. That is why it becomes necessary to include them in the teaching and learning process.

During the development of the topics the teacher helps and accompanies the students so that they can understand the grammatical aspects integrated in the different types of texts. By means of a permanent joint construction work. In this way, students can recognize the grammatical category of the text type they are working on.

The grammatical aspects that the teachers teach to medical students include verb phrase, verb

tenses, passive voice recognition, nominal phrase, and functions of the suffix -ing. That means, the students recognize lexical and syntactic aspects during the reading of different text types by interpreting the meaning of the words and grammatical structures in context and using the dictionary which is an essential part of successful language learning to get meaning ofan unknown medical word or phrase.

3. Cohesion and coherence organization styles

- ✓ Coherence and cohesion markers: connectors and reference.
- ✓ Identification of logical relationships within the text.

Coherence comprises the components of the surface of the text in a meaningful andsequenced order, cohesion deals with the order of the sentences and their interrelatedness. Cohesion and coherence are standards of an organized text to put the writer and reader in a mutual interaction Günay,(2003). A text is cohesive if its elements are linked together, and coherent if it makes sense. These are not necessarily the same thing. That is, a text may be cohesive (i.e., linked together), but incoherent (i.e. meaningless).

4. Interpretation of tables and graphs

This is for a better understanding of scientific academic texts. These are graphic aids that accompany the academic texts and constitute an integral part.

Tables and graphs are visual representations of data used to organize information to show patterns and relationships**.** Researchers and scientists often use tables and graphs to report findings from their research. More specifically, in a Health Science context, the first stage in the process of making evidence-based decisions is to collect accurate data and to describe,

summarize, and present it for analysis.

for example: electronic personal health records offer a promising way to communicate medical test results to patients and medical students must be able to interpret the data (See appendix E).

5. Introduction to discursive typologies

✓ Description of structure, function, and operation

✓ Scientific news

The discursive typology starts from the differentiation between text and discourse. The latter, as an analytical category, has a theoretical existence (it is a conceptual construction, it is a unit of oral or written communication). The discourse covers different textual modalities that allow grouping particular and concrete texts. In this sense, they are called textual modalities.

Van Dijk recognizes at least three greats general categories of discourses or discursive typology - narrative discourse, argumentative discourse and poetic discourse. Other authors (Ruth, 1989; Slater and Graves, 1989; Sánchez Miguel, 1995; Cervera,1999) also admit the expository discourse and the one that they called expository-argumentative discourse.

6. Throughout the development of the topics, the pertinent and integrated grammatical aspects of the different types of text will be worked on, such as:

✓ Verb phrase, verb tenses, passive voice recognition

✓ Nominal phrase

✓ Functions of the suffix –ing

Description of the course "Reading of academic texts in English II"

Secondly, students take "reading of academic texts in English II", This course is the second of three levels of English, it is developed in 18 weeks, and it comprises 5 hours of work peer week which are divided into 3 hours of lectures and 2 hours of laboratory work.

At this level students are already familiarized with academic reading strategies, so they can use them for the reading of scientific and technical texts. In the reading of scientific and technical texts students recognize unknown words using cognates and affixes. Also, they develop activities such as: asking questions, choosing the correct answer, expressing the point of view, writing small reports, summaries e.g., with further activities concerning to comprehension of a text (diagrams, following instructions e.g.).

In this course the teaching and learning English methodology is highly interactive where students and teachers create a joint construction work through the development of three learning Units. Each unit is focused on the interpretation of the content of the scientific text based on the rhetorical analysis of it. That means students read carefully to examine the interactions between the text, the author, and the audience. This allows students, through a process of reasoning, get to know the discursive strategies that the author uses to communicate content through particular linguistic forms.

Contents

First unit

Prefaces and introductions: Contain a selection of prefaces and introductions of texts that highlight the main components such as the purposes, the audience, the description of the contents, etc.

Second unit

Rhetorical functions: It is made up of a set of total or partial chapter developments. Emphasis is on integration of rhetorical functions, such as: definitions, classifications, descriptions, processes, and instructions in different combinations.

Third unit

Periodical Publications (Journals): A series of texts related to the structure of popular science journals is presented: editorial, articles and news (short), abstracts, book reviews, advertisements, and letters from readers.

Description of the course "Reading of academic texts in English III"

This course is the last of three levels of English, it is developed in 18 weeks, and it comprises 5 hours of work peer week which are divided into 3 hours of lectures and 2 hours of laboratory work.

In this level students carry out a reinforcement of the knowledge acquired in levels I and II. They systematically work the typical texts of specialized magazines (articles, research reports, scientific news, etc.) and analyze the subtexts that appear in these publications: scientific abstracts or summaries, reviews of specialists, structure of the articles and their parts (introduction, methodology, results, conclusions). Basically, students take this course which is developed like a workshop where they are oriented by the professors who help them solve the doubts that arise during the process of understanding and interpreting the text. Besides that, students are provided with audio or video texts to practice listening to promote note-taking and summary writing.

METHODOLOGICAL DESIGN

Based on the nature of this research study and the data needed to complete it successfully, the type of research used is qualitative since it involves collecting and analyzing non-numerical data. The data gathered have made possible to analyze all of the information previously presented in depth, such as describe activities, analyze contents and methodologies used in the four Latin American Universities. The research design is bibliographic because the information of this study was obtained from published materials, including primary and secondary sources such as EMP study programs, PDF documents, websites, online books, magazines, journals, newspapers, reports, and blogs in order to present new theories and experts' opinions about educational practices that these universities are applying. For that, a systematic review of literature has been carried out by identifying, selecting, and evaluating all of these relevant sources. The sampling technique applied is convenience since the four universities considered in this study represent the relevance that English language has for medical students in Latin America; besides, they were the most accessible sample to collect the data about the current educational practices to teach English in the medical field.

RESULTS

The present study attempts to obtain the following results:

➤ To provide contents implemented at four Latin American Universities for improving the teaching and learning of medical English at the University of El Salvador.

➤ To contribute with existing methodologies that are being applied for teaching Medical English courses at universities of Latin America and that could be of help in the current teaching practices for the major of Doctor of Medicine at the University of El Salvador.

➤ To present teaching activities that may be developed for students to practice specific language skills.

➤ To raise teacher's awareness about the significance of selecting contents, methodologies and teaching activities that contribute to medical students' needs regarding to thelearning of English language in the Doctor of Medicine Major.

CONCLUSION

Being updated with scientific knowledge, interact with teachers and classmates, and participate in conferences abroad are just some of the academic and professional activities that future doctors can perform by learning English language. This explains the necessity of revising current educational practices applied at the University of El Salvador.

The current study program of the only one EMP course that the University has at the Doctor of Medicine major is teacher centered, since it mainly focuses on identifying grammar structures on readings and translation of Medical English. This helps students in agood way. However, relevant topics, skills and activities related to the medical area are not reflected in the description of the study program. For that reason, a reorganization of the program could be considered by taking away some contents and adding some others that provide students with basic but useful terminology used in real life situations, through the implementation of specific English language skills such as reading and translation techniques as well as speaking. Besides that, the time invested at the Doctor of Medicine major when teaching English is not enough to cover aspects and clarify doubts of different topics developed in the classroom. Moreover, the time invested to practice reading and speaking skills that will help students to practice academic and professional activities is too short. Therefore, the implementation of more than just one English course could be considered in the curricula being the student the centered of the learning and teaching process. This could be, one General English course and another EMP course.

For that, this bibliographical research presents contents, methodologies, and activities being implemented for teaching medical English in four universities of Latin America that may be

considered for improving the teaching and learning of medical English at the University of El Salvador. The relevance of English subject in the four universities studied is clearly noticeable not only because of the number of courses implemented but also because medicalcontents, methodologies and teaching activities of medical courses have been refined overtime in order to meet the current demands of medical learners by putting into practice real-life situations where theory and practice can be connected.

For instance, **the University of Medical Science at Havana Cuba** went from teaching grammar, translation and reading to teach medical English for real communicative purposes. Besides, this university has adapted its curriculum so that students can learn General English during the first three years of study and medical English in the last two years**.** In case of **Atacama and Caaguazú universities** medical students take two medical English courses in which the four skills of language are practiced, focusing especially on speaking and reading. Aspects like grammar and vocabulary are taught in context. Also, contents are organized in a sequenced manner; that is to say, from general-to-specific. For example, parts of the bodyare included in the first unit of study while in the following unit more specific topics like parts of the hand are considered. On the other hand, at **Del Valle University** the teaching of medical English is mainly addressed at developing students' reading skills that allow them to access written academic scientific speeches and help them to get updated information related to the medical field.

In respect to methodologies, it was found that they are student-centered being content based instruction, task –based, and problem-based learning the most common among these four universities. These kinds of approaches involve students in the practice of activities and skills that reflect real medical practices. This means that students develop medically related

activities such as discussion of case studies, role-playing, and readings of medical texts that allow students to be prepared with reading and speaking skills for academic and professional settings with precision and confidence.

Based on the above, the study program of Medical English at the university of El Salvador could be addressed to the teaching of specific medical contents and reading techniques like scanning and skimming so students can develop reading comprehension and reading with a purpose for students being able to read any material from medicine. Also speaking skills could be taught in order that medical students can be prepared to break up the gap and interactwith English speakers.

RECOMMENDATIONS

These recommendations have been elaborated based on the relevance that English language has for medical students in four Latin American Universities that could contribute to the teaching and learning of Medical English at the University of El Salvador. These universities implement EMP courses making a careful selection of aspects such as contents, methodologies, and activities that seek to meet the current demands of medical students. Therefore, the result of this bibliographical research leads us to state the following suggestions:

Contents.

The University of El Salvador may consider a revision of the medical English syllabus in order to integrate more contents related to the medical field, key vocabulary of medicine and specific language skills that encourage students' participation in different activities in the classroom that will benefit their progress as future professionals. It should be also considered that aspects like key vocabulary of medicine and grammar could be presented in context.

This is a series of General and Medical English contents that could be considered for the teaching of English for medical students at the University of El Salvador. General English contents as it is seen in these four Latin American study programs are meaningful for providing the basis of a general level of English proficiency to medical students. Then, students receive medical English contents which are useful and merely adapted to the medical field.

GENERAL ENGLISH	MEDICAL ENGLISH
CONTENTS	CONTENTS
To request and give personal information	Diseases
Verb "be"	Symptoms
To talk about family	Treatments options
Present Simple	Medical specialties
Past Simple	Making diagnosis
Describing people	Review (Present Perfect, Past tense, modal verbs)
Modals	Understanding the body
Object Pronouns	Talking about patients' medical history
Possessive adjectives	Medical equipment
Demonstrative pronouns	Jobs in a hospital
Present Perfect	Medical Cognates
Time words	Medical abbreviations
Wh-Questions and Answers	Infinitive for reasons
Ordinal and cardinal numbers	
Making polite requests	
Learning linking words	
Verbs and noun collocations	

- ✓ **Methodologies.** Communication is one of the most essential skills for medical students to accomplish different activities. In this sense content-based instruction, problem based, and task based are some of the main approaches applied in most of the universities studied that provide meaningful learning experiences for students to practice speaking skill. Reading is also a necessary skill in medicine since most medical information is published in English. At the University of El Salvador instructional methodologies could be applied to provide real communication skills in classroom. Reading skills could also be potentiated through the implementation of different authentic materials like books, articles, magazines, blogs, and newspapers.

- ✓ **Activities**. The Doctor of Medicine major at the University of El Salvador might consider some useful teaching and learning activities that involve and encourage students' participation through the practice of real medical situations such as simulations, case studies, role plays, medical history, oral presentations, audios, and videos.

  - Simulations will help students replicate clinical scenarios where they can feel they are experiencing clinical cases and it will help linking the vocabulary with real scenarios. In that way it will help students understand the language.

  - Case studies should be about clinical cases that students will be presenting with and that they need to discuss symptoms, diagnosis, and possible treatments in order to practice the vocabulary they are learning in each course.

- Role plays can be used for students to practice how to communicate with patients, how to talk about possible diseases based on their symptoms and treatment.

- Oral presentations are also great activities to have students practice the language and what they have learned.

- Also, audios and videos based on articles, research reports, scientific news and science journals can be implemented for developing listening skill.

For the development of these activities an efficient application of technological resources might be considered to facilitate the teaching and learning process of the English language.

✓ **Authorities.** An evaluation of the Medical English curriculum could be considered to increase the number of courses. Integrating one General English course and two Medical English courses. In General English course students can have the opportunity to learn the basic language skills integrating listening, reading, writing and speaking as well as learning language in context. Then students will be ready to focus on medical English in order to emphasize reading skills for being updated with scientific research as well as speaking skills which are one of the main purposes of medical English.

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APPENDICES

Appendix A

Study program of the University of El Salvador

UNIVERSIDAD DE EL SALVADOR
FACULTAD DE MEDICINA
UNIDAD DE INGLÉS TÉCNICO

PROGRAMA DE INGLÉS TÉCNICO PARA DOCTORADO EN MEDICINA

I. INFORMACION GENERAL

AÑO: 2021

CICLO: I

UNIDADES VALORATIVAS: 4.U.V

TIEMPO DE DESARROLLO: 64 H. TEÓRICAS

                                        16 H. PRÁCTICAS

PROGRAMA POR SEMANA: 4 H. TEÓRICAS

                                        1 H. PRÁCTICA

EVALUACIONES: 3 PARCIALES 60%

                                        LABORATORIOS ESCRITOS/PRÁCTICOS 40%

DERECHO A EVALUACIONES: 75% DE ASISTENCIA A CLASES
(Art. 147 del Reglamento de Gestión Académico-Administrativa)

COORDINADOR DE UNIDAD: LIC. MARCO TULIO BARRERA

DOCENTES RESPONSABLES: LICDA. ELDY YANIRA PACHECO
                                                LIC. MARCO TULIO BARRERA
                                                LIC. JORGE ALBERTO CARRANZA

II. DESCRIPCION DEL CURSO.

A través de esta asignatura los estudiantes de la carrera de Doctorado en Medicina, desarrollaran la habilidad de traducción y lectura comprensiva de textos relacionados con medicina y áreas afines. Es necesario que los estudiantes tengan un conocimiento básico de la oración y sus elementos para comprender cómo los patrones de la oración son utilizados en la escritura médica para expresar sus conceptos y descripción de estructuras, sistemas y procesos del cuerpo humano.

El curso se enfoca exclusivamente en el aprendizaje del inglés médico tanto teórico como práctico, la práctica se desarrollará utilizando recursos visuales y actividades para reforzar el conocimiento adquirido; además se cuenta con material didáctico visual, ejercicios escritos y literatura para orientar al estudiante a ciertas características del inglés médico para proveerlo de una estrategia que le permita leer, traducir y comprender los textos con eficacia. Los elementos básicos del lenguaje están contenidos en la unidad de la morfología y sintaxis del inglés.

En el curso se desarrollan tres unidades fundamentales y una de comprobación.

I. MORFOLOGÍA Y SINTAXIS DEL INGLÉS

II. EL USO DE LA ORACION COMPLEJA EN TEXTOS MÉDICOS

III. LECTURA E INTERPRETACIÓN DEL INGLÉS MÉDICO

III. OBJETIVOS

OBJETIVO GENERAL

Desarrollar las habilidades de traducción y lectura comprensiva de textos médicos escritos en inglés a una velocidad moderada, proporcionando al estudiante las estrategias fundamentales para la lectura y comprensión del Inglés utilizado en la medicina y la ciencia médica con ejercicios de prácticas del Idioma en su área de desarrollo, a fin de romper la barrera de esperar textos traducidos al español para conocer el avance de la ciencia en general y la medicina en particular.

OBJETIVOS ESPECÍFICOS

Al completar el curso de Inglés Técnico, el estudiante será capaz de:

• Identificar las ideas principales y secundarias contenidas en los textos y/o artículos sobre medicina, así como también el uso del vocabulario en su contexto

y las estructuras gramaticales más complejas, a través de prácticas de lectura comprensiva, traducción y ejercicios de aplicación del inglés en la medicina y áreas afines.

- Desarrollar las habilidades de:
  1. Conceptualizar el tópico de cada párrafo identificando las ideas principales y subordinadas.
  2. Despersonalizar los textos y reconocer el uso y los tiempos en inglés más utilizados en documentos científicos.
  3. Reconocer el uso, la puntuación y la posición de las estructuras gramaticales que son la base para la correcta comprensión de texto científico.

APÉNDICE
1. Vocabulario Especializado Médico Científico.
2. Algunas palabras y combinaciones de palabras médicas asociadas con términos.

IV. BIBLIOGRAFIA.

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PROGRAMA DE INGLES TECNICO

UNIDAD	CONTENIDO	EXPERIENCIAS DE APRENDIZAJE	TIEMPO	EVALUACION
I.MORFOLOGÍA Y SINTÁXIS DEL INGLÉS	A. Los elementos de la oración y los patrones básicos: 1.Sujeto 2.Predicado 3. Partes de la oración 3.1. Artículo 3.2. Sustantivo 3.3. Preposiciones 3.4. Adjetivos 3.5. Adverbios 4.Complementos 5.Patrones	El profesor presentará al estudiante oraciones relacionadas con la medicina. El estudiante identificará las diferencias entre el sujeto y el predicado como componentes de una idea completa u oración. Dominado el tema, el estudiante conocerá la estructura de la oración y los elementos que la conforman. A partir de esto el estudiante dominará los 9 patrones básicos de oración que se utilizará en el curso.	16 Horas	
	B. Formas y frases verbales en: 1. Infinitivo como: Nombre Adjetivo Adverbio 2. Gerundio como: Nombre 3. Participio como: Adjetivo	A este nivel el estudiante ya domina la mayor parte de elementos que intervienen en la oración. Las formas verbales se utilizan ampliamente en la ciencia médica. Es acá donde el lector confunde y pierde la conceptualización de una idea general. Para evitar éste problema, el profesor dedicará eficientemente el tiempo que el grupo requiera para dominar el uso y formación de los infinitivos, los gerundios en inglés y los participios como modificadores.	12 Horas	
	C. Concordancia (sujeto – predicado)	El estudiante identificará la oración compuesta mediante la adición de palabras conectoras. Así, la concordancia dependerá de la persona	2 Horas	

I.MORFOLOGÍA Y SINTÁXIS DEL INGLÉS	1. Sujeto y predicado simple
	2.Sujeto y predicado compuesto
	3.La oración compuesta
		y número del sujeto. Se utilizará para este contenido las conjunciones:
		for
		and
		nor
		but
		or
		yet
		so
		       either ….. or
		       neither…. nor…		

	D. La frase preposicional PREP+NOUN 1. Como nombre 2. Como adjetivo 3. Como adverbio 4. Como prefijos locativos 5. Adjetivos compuestos 6. Sustantivos médicos plurales	Para el contenido 3 se explicará el uso, puntuación y posición de las conjunciones, conectores y el punto y coma. Con una lectura y ejercicios el profesor orientará a los estudiantes sobre el uso de la frase preposicional no sólo como elemento de enlace de la oración sino también como aporte explicativo. De esta manera, el estudiante reconocerá la importancia de la misma en la composición médica y sus usos como nombre, adjetivo y como adverbio. Además se conocerá el uso y formación de los prefijos médicos más comunes a partir del conocimiento de la frase preposicional. Se realizarán ejercicios de comprobación. El estudiante obtendrá los conocimientos suficientes para estructurar adjetivos compuestos, además conocerán las reglas de pluralización de vocabulario médico y desarrollará ejercicios de aplicación.	10 horas	PRIMER PARCIAL 20 y 21 de marzo

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	E. La voz pasiva 1. Voz activa 2. Formas del verbo. 3. Tiempos del verbo. 4. Voz pasiva	Se recorrerá sistemáticamente el aprendizaje de la voz activa, y los tres tiempos del verbo más utilizados en el inglés científico, combinado con la voz pasiva.	8 horas	SEGUNDO PARCIAL 24 y 25 de abril
II.EL USO DE LA ORACION COMPLEJA EN TEXTOS MÉDICOS	La oración compleja Patrones de subordinación. 1. Cláusula Adverbial 2. Cláusula adjetival o relativa	permitiéndole al estudiante reconocer que la misma está compuesta de dos oraciones, una principal y una subordinada, convirtiéndose la última en cláusula subordinada, se conocerá el uso, la posición y la puntuación, además se profundizará en las formas y estructuras gramaticales en los textos médicos. El programa profundiza en las cláusulas adjetival y adverbial por su gran relación con la ciencia médica, así como también para indicar el lugar, tiempo y razón de dónde, cuándo y cómo ocurren los procesos en el cuerpo humano.	16 Horas	
III. LECTURA E INTERPRETACION DEL INGLÉS MÉDICO	1. The process of digestion 2. Epitelial tissue 3. The thoracic cavity	Las lecturas están diseñadas para que el estudiante aplique todos los conocimientos adquiridos	16 Horas	TERCER PARCIAL 27 y 31 de mayo

Appendix B

Organization of the teaching of English at the Havana University

ASIGNATURAS	SEMESTRES	AÑOS	TOTAL HORAS	No. Semanas
INGLÉS I	1 er	1 ro	64	16
INGLÉS II	2 do	1 ro	64	16
INGLÉS III	1 er	2 do	64	16
INGLÉS IV	2 do	2 do	64	16
INGLÉS V	1 er	3 ro	64	16
INGLÉS VI	2 do	3 ro	64	16
INGLÉS VII	1er	4to	64	16
INGLÉS VIII	2do	4to	64	16
INGLÉS IX	1er	5to	64	16
INGLÉS X	2do	5to	64	16

Appendix C
Case studies

ECE AP PCG1 © Michigan State University 2 ## CASE 1: JASON BARKER Jason is a 4 year old with a history of intermittent diffuse abdominal pain for a few months. The pain seems worse after meals. It does not wake him up from sleep and does not seem worse when lying down. He has no nausea/vomiting/diarrhea. He has a "normal" stool pattern. He reports no fever, weight loss, sore throat, headache or sour taste in his mouth. DISCUSS: What are the important cues? Create a differential diagnosis utilizing these cues. What does his mother mean by "normal" stool pattern? What additional questions would you ask?	Give small groups of 3-4 students time to consider responses, circulating to ask questions and provide help as needed. Provide opportunities for groups to share responses.
ECE AP PCG2 © Michigan State University 14 ## CASE 2: JANET JONES • Ms. Jones is a 24 year old medical student presents with gradually worsening right lower quadrant pain over the last few days, now so severe that she cannot walk. She has been studying for her step 1 exam and tried to ignore the pain. It started around her umbilicus and is now mostly located in RLQ. She mentions that on the car ride to the hospital, every bump caused excruciating pain. She feels very nauseated and has no appetite. She has not been having diarrhea or constipation. She had a fever this morning (101.8 on her thermometer). • She has no past medical history. She takes oral contraceptive pills. She is sexually active with 1 male partner. She does not drink alcohol, smoke or use any illicit drugs. **Which cues from the patient history are important? Why?** **What areas of the physical examination would you focus on? Why?**	If cases aren't provided to you, think about cases you have encountered in your practice (keep patient anonymous) and work students through the case you had by giving them a patient history, results of physical examination, and asking them questions such as these (left).

Appendix D

Common Medical Prefixes and Suffixes

Table A-1 — Common Prefixes

Prefix	Meaning	Prefix	Meaning	Prefix	Meaning
a-	without, lack of	cyst(o)-	pertaining to the bladder or any fluid-containing sac	inter-	between
ab-	away from	cyt(o)-	pertaining to a cell	intra-	within
abdomi(n)-	abdomen	de-	down from	iso-	equal
acr(o)-	pertaining to an extremity	dermat(o)-	pertaining to the skin	latero-	side
ad-	to, toward	di-	twice, double	leuk(o)-	pertaining to anything white or to leukocytes (white blood cells)
aden(o)-	pertaining to a gland	dia-	through, completely	lith(o)-	pertaining to a stone
an-	without, lack of	dys-	difficult, painful, abnormal	macro-	large
ana-	up, back, again	ect(o)-	out from	mal-	bad or abnormal
angio-	vessel	electro-	pertaining to electricity	medi-	middle
ante-	before, forward	end(o)-	within	mega-	large
anti-	against, opposed to	enter(o)-	pertaining to the intestines	melan-	black
arteri(o)-	artery	epi-	upon, on	mening(o)-	pertaining to a membrane, particularly the meninges
arthro-	pertaining to a joint	erythr(o)-	pertaining to anything red or to erythrocytes (red blood cells)	micro-	small
auto-	self	eu-	easy, good, normal	mono-	one
bi-	two	ex(o)-	outside	myel(o)-	pertaining to the spinal cord, the bone marrow, or myelin
bi(o)-	pertaining to life	extra-	outside, in addition	my(o)-	pertaining to muscle
blast(o)-	germ or cell	gastr(o)-	pertaining to the stomach	nas(o)-	pertaining to the nose
blephar(o)-	pertaining to an eyelid	glyc(o)-	sugar	ne(o)-	new
brady-	slow	gynec(o)-	pertaining to females or the female reproductive organs	nephr(o)-	pertaining to the kidney
calc-	stone; also heel	hemat(o)-	pertaining to blood	neur(o)-	pertaining to a nerve or the nervous system
cardi(o)-	pertaining to the heart	hemi-	half	noct-	night
cephal(o)-	pertaining to the head	hem(o)-	pertaining to blood	olig(o)-	little, deficient
cerebr(o)-	pertaining to the cerebrum, a part of the brain	hepat(o)-	pertaining to the liver	oophor(o)-	pertaining to the ovary
cervic(o)-	pertaining to the neck or the uterine cervix	heter-	other, different	ophthalm(o)-	pertaining to the eye
chole-	pertaining to bile	hom-	same or like	orchid(o)-	pertaining to the testicles
chondr(o)-	pertaining to cartilage	hydr(o)-	water	orchi(o)-	pertaining to the testicles
circum-	around, about	hyper-	over, excessive	oro-	pertaining to the mouth
contra-	against, opposite	hypo-	under, deficient	ortho-	straight or normal
cost(o)-	pertaining to a rib	hyster(o)-	pertaining to the uterus	oste(o)-	pertaining to bone
cyan(o)-	blue	infra-	below	ot(o)-	pertaining to the ear

▼ continues

Table A-1   Common Prefixes, continued

Prefix	Meaning	Prefix	Meaning	Prefix	Meaning
para-	by the side of	pseud(o)-	false	semi-	half or partial
path(o)-	pertaining to disease	psych(o)-	pertaining to the mind	sub-	under, moderately
per-	through	pulm(o)-	pertaining to the lung	super-	above, excessive, or more than normal
peri-	around	pur-	pertaining to pus	supra-	above
phag(o)-	pertaining to eating, ingesting, or engulfing	pyel(o)-	pertaining to the kidney or pelvis	tachy-	fast
pharyng(o)-	pertaining to the throat, or pharynx	py(o)-	pertaining to pus	therm-	pertaining to temperature
phleb(o)-	pertaining to a vein	quadr(i)-	four	thorac(o)-	pertaining to the chest
pneum(o)-	pertaining to respiration, the lungs, or air	quar-	four	trans-	across
poly-	many	quat-	four	tri-	three
post-	after, behind	retr(o)-	backward or behind	uni-	one
pre-	before	rhin(o)-	pertaining to the nose	vas(o)-	vessel
pro-	before, in front of	salping(o)-	pertaining to a tube		
proct(o)-	pertaining to the rectum	scler(o)-	hard; also means pertaining to the sclera		

Table A-2   Common Suffixes

Suffix	Meaning	Suffix	Meaning	Suffix	Meaning
-algia	pertaining to pain	-emia	pertaining to the presence of a substance in the blood	-ology	science of
-asthen(o)	weakness	-genic	causing	-oma	tumor
-blast	immature cell	-gram	record	-osis	pertaining to a disease process (see also -sis)
-cele	pertaining to a tumor or swelling	-graph	a record or the instrument used to create the record	-ostomy	surgical creation of an opening, or hole
-centesis	pertaining to a procedure in which an organ or body cavity is punctured, often to drain excess fluid or obtain a sample for analysis	-itis	inflammation	-otomy	surgical incision
-cyte	cell	-lysis	decline, disintegration, or destruction	-pathy	disease or a system for treating disease
-ectomy	surgical removal of	-megaly	enlargement of	-phagia	pertaining to eating or swallowing

▼ continues

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Table A-2   Common Suffixes, continued

Suffix	Meaning	Suffix	Meaning	Suffix	Meaning
-phasia	pertaining to speech	-rrhage	abnormal or excessive flow or discharge	-sis	a process, action, or condition
-phobia	pertaining to an irrational fear	-rrhagia	abnormal or excessive flow or discharge	-taxis	order, arrangement of
-plasty	plastic surgery	-rrhaphy	suture of; repair of	-trophic	pertaining to nutrition
-plegia	paralysis	-rrhea	flow or discharge	-uria	pertaining to a substance in the urine or the condition so indicated
-pnea	pertaining to breathing	-scope	instrument for examination		
-ptosis	drooping	-scopy	examination with an instrument		

Appendix E

Electronic Personal Health Records

Abnormal results have a * in the Flag column

Test Date	Test Name	Result	Flag	Units	Normal Range
6/1/06	BMI	23	-	mg/dl	18.5-30
6/1/06	White blood cell	7.75	-	$10^9/l$	4.5-11.0
6/1/06	Hemoglobin	16.7	-	$10^9/l$	13.5-17.5
6/1/06	Platelets	208	-	$10^9/l$	150-440
6/1/06	Systolic blood pressure	111	-	MMHg	90-140
6/1/06	Diastolic blood pressure	71	-	MMHg	50-90
6/1/06	Glucose	103.8	-	mg/dl	80-199
6/1/06	Total cholesterol	260	*	mg/dl	0-240
6/1/06	LDL Cholesterol	173	*	mg/dl	0-160
6/1/06	HDL Cholesterol	32	*	mg/dl	40+
6/1/06	Creatinine	1.28	-	mg/dl	0.8-1.4
6/1/06	Sodium	140	-	mmol/l	135-145