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TEMA:

ELABORATION AND IMPLEMENTATION OF A DIDACTIC GUIDE WITH TECHNICAL MEDICAL VOCABULARY ACTIVITIES THROUGH THE MOODLE PLATFORM TO ENHANCE READING COMPREHENSION AT THE THIRD LEVEL OF THE FACULTY OF MEDICINE AT THE UNIVERSITY OF CUENCA DURING THE SCHOOL YEAR 2015-2016.

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CERTIFICACIÓN DEL TUTOR

Certifico que el presente trabajo de investigación previo a la obtención del Grado de Magíster en LINGÜÍSTICA APLICADA A LA ENSEÑANZA DEL IDIOMA INGLÉS con el tema: "Elaboration and Implementation of a Didactic Guide with Technical Medical Vocabulary Activities through The Moodle Platform To Enhance Reading Comprehension at the Third Level of the Faculty of Medicine at the University of Cuenca during the school year 2015-2016" ha sido elaborado por Sandra Noemí Segarra Lazo, con el asesoramiento permanente de mi persona en calidad de Tutor, por lo que certifico que se encuentra apto para su presentación y defensa respectiva.

Es todo cuanto puedo informar en honor a la verdad.

Riobamba, agosto de 2016

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AUTORÍA

Yo, Sandra Noemí Segarra Lazo con cédula de identidad No. 0102713435 soy responsable de las ideas, doctrinas, resultados y lineamientos realizados en la presente investigación y el patrimonio intelectual del trabajo investigativo pertenece a la Universidad Nacional de Chimborazo.

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Deseo dedicar este gran reto a mi Dios y a la Virgen, a mis queridos hijos Nathaly, Francisco, y mi pequeño Juan José mi centro de vida quienes siempre a la expectativa me alentaban cada instante, a mi querido y amado esposo Eddy, mi complemento ideal, gracias por tu amor, comprensión y apoyo en todo momento de un triunfo más en mi vida personal, te amo mucho. Una dedicación especial a mis papitos y a mis hermanos por darme fuerza y tomar mi lugar en el cuidado de mis amores.

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GENERAL INDEX

TABLES

FIGURES

RESUMEN

El presente estudio de investigación tiene por objetivo establecer la efectividad de la elaboración e implementación de la guía didáctica con estrategias de aprendizaje de vocabulario y actividades a través de la plataforma de aprendizaje virtual Moodle para incrementar la comprensión lectora para estudiantes de nivel intermedio de Medicina de la Universidad de Cuenca. El estudio exploró varias de las estrategias que fueron empleadas para aprender vocabulario técnico médico a través de la lectura comprensiva y se concentró en tres estrategias específicas: estrategias por contexto, de inferencia y de la formación del vocabulario médico. A fin de investigar las necesidades del lenguaje de Inglés académico de los estudiantes de Medicina, una investigación de métodos combinados se llevó a cabo por medio de una pre-evaluación, una post-evaluación, y de fichas de observación. La recolección de datos fueron analizados cuantitativamente y cualitativamente. El idioma Inglés fue considerado altamente importante para llevar a cabo varias actividades en temas del campo médico. Los resultados plasmaron que las actividades de vocabulario técnico médico incrementaron la destreza de comprensión lectora en temas médicos, por lo tanto es importante incluir los mismos en los cursos de Inglés para impulsar las necesidades de los estudiantes en estudios futuros en el exterior. Además, los resultados aportaron con recomendaciones para que se integre en el diseño de los contenidos de los cursos un enriquecido conocimiento de las cuatro destrezas del idioma Inglés con un especial enfoque en la destreza receptiva de la comprensión lectora.

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THEME: "ELABORATION AND IMPLEMENTATION OF A DIDACTIC GUIDE WITH TECHNICAL MEDICAL VOCABULARY ACTIVITIES THROUGH THE MOODLE PLATFORM TO ENHANCE READING COMPREHENSION AT THE THIRD LEVEL OF THE FACULTY OF MEDICINE AT THE UNIVERSITY OF CUENCA DURING THE SCHOOL YEAR 2015-2016"

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ABSTRACT

The present study established the effectiveness of the elaboration and implementation of a didactic guide with vocabulary learning strategies and activities through the Moodle platform to enhance reading comprehension of medical intermediate students at the University of Cuenca. The study explored the various strategies that were employed to learn medical vocabulary through the reading comprehension and concentrates on three specific strategies: contextual guessing, inferring and word formation of medical vocabulary. In order to investigate academic English language needs of medical learners, a mixed-method research was conducted by means of pretest, posttest and observation templates. Data were analyzed both quantitatively and qualitatively. English was considered highly important to carry out various activities in the medical field. The findings portrayed that Technical medical vocabulary activities improve the reading comprehension skill in medical topics; therefore, it is important to include medical topics in the English courses to meet students´ needs in their future studies abroad. The findings provided recommendations for designing course contents that integrate with enriched knowledge of all four skills of the English language with a close emphasis on the receptive skill reading comprehension.

Mgs.Myriam Trujillo B.
DELEGADA DEL CENTRO DE IDIOMAS

INTRODUCTION

English language has become a significant tool in the last 30 years, and it is now a fundamental requisite for communication in every field. The use of the Internet, and especially the virtual learning environment, in combination with the learning process, benefits many students and teachers, and it has become a necessary implement in today´s life. Aware of this, the University of Cuenca uses information and communication technology as a supplementary means, such as L2 through the Moodle Platform, to improve the four skills of learning.

The Faculty of Medicine, together with the Department of Languages, because of the high number of hours in other subjects in the curriculum, have decided to reduce the six hours of English classes a week to four face to face class hours and two hours of self-study using the Moodle Platform. The proposals of the Department of Language in working for reinforcing specific areas, such as speaking, listening, reading, and writing through the Moodle Platform are interesting. The main problem, especially in reading, is that there are not enough didactic alternatives to adapt the Teaching Learning Process to the needs of students in the Faculty, one of which is technical medical vocabulary in reading articles for comprehension.

The profession of teaching English as a second language claims to have, first of all, well prepared teachers. In addition, a great number of teaching aids, materials and well-conceived methods enhance the learners´ enjoyment of lessons, and what is more important teachers search for suitable materials for further studies. Therefore, the author of this investigation has perceived that, in the specific case of the University of Cuenca, there is a need to implement didactic material related to medical terminology with techniques and teaching methods because of the following problems:

The students´ learning is weak because there exist few activities related to word formation processes even considering the fact that medical terms are coined in English from Latin and Greek root words, prefixes and suffixes.

The book and readings used at present in class do not explain the technical language in other texts. Didactic materials in the future need to be more oriented to medical terminology.

As an English teacher of the Department of Languages of the University of Cuenca, I have found myself involved in the process of teaching English in the Faculty of Medicine. I can say that many times I have felt frustrated in the process of teaching English because of the fact that the book used is not appropriate for the specific purpose –Medicine. The Open Mind, the book they use now, is a book specialized to interact effectively with others in English in a wide variety of communicative situations: environment, at work, when traveling, online, and so on. It is focused on grammar aspects and on readings according to the topics of each unit. These units do not provide a meaningful framework within which the students can improve their knowledge and their skills in English for Specific Purposes, in this case Medicine. They do not have the opportunity to be in contact with medical terminology that will be used in their future profession. Of course this has been a disadvantage, and at the moment, students have to read articles outside of the book about medicine.

The Educative Models most frequently used are Educational Models that are Content-Centered and Educational Models that are Results-Centered. However, what is needed is the implementation of Educational Model Centered on the Process whereby the students play an active role and the professor is a facilitator in the teaching-learning process. The present curriculum of study at Cuenca University is the teaching of English for general purposes. This focus does not pave the way to develop applied English to Technical Medical issues. Another weakness of the present syllabus is that when graduate professionals are carrying out studies abroad they are not prepared in background knowledge such as technical medical vocabulary.

The investigation carried out in this work was in the form of a survey given to the students of the third level of the School of Medicine. The results showed the necessity of this study. In addition, an interview was performed with one specialized doctor, one medical intern student and one undergraduate student of medicine. Dr. Boris Calle, pediatric neurologist, Dr. Jorge Abril, graduate student, and a last year medical student, Gabriela Fernández de Córdova, affirmed the need to have knowledge of specialized

English to help students of Medicine to be familiar with the terminology used in their field. The results of these interviews have served as a basis of this study.

After having made the diagnosis of the weaknesses to be investigated and having declared the main problems of the Teaching-Learning Process at the Medical School of the University of Cuenca, it was necessary to elaborate a Guide with relevant Technical Medical Vocabulary Activities to enhance the Reading Comprehension that supports English for Specific Purposes, through the Moodle Platform used at present.

Vocabulary learning is an important step in a language learning process, and for Specific Purposes in the ESL classroom it is necessary to develop effective teaching strategies which could help learners in their language acquisition and in understanding written articles in their field of medicine.

English courses in the universities of Ecuador are being designed to help the students learn General English including syntax and grammar. However, the textbooks are not selected in relation to any particular profession, the texts of the passages, the vocabulary, and the skills emphasized are not designed taking into account specific needs of the students when they finish their majors.

After having specified the previous problems, it can be seen that there is a necessity for the elaboration of a didactic guide intrinsically designed for the Faculty of Medicine of the University of Cuenca. This didactic guide would contain the material of the syllabus of the Moodle Platform. Part of the material would entail technical medical vocabulary and activities to improve reading comprehension.

Moreover, the Moodle Platform would be the means to focus on Academic Medical Vocabulary to be applied during the two hours per week that the students would be expected to use the platform. For many medical students, reading comprehension of English medical texts for obtaining information about the latest technological and scientific developments in different areas of their major, would be of great benefit towards their future needs. Therefore, the Didactic Guide would provide interesting

material for the instructors to use on the Moodle Platform. Students would gain solid understanding to improve their knowledge of technical medical vocabulary.

The didactic guide would not only constitute a vehicle for developing reading skills through the implementation of technical medical vocabulary, but would also develop knowledge in the field of medicine. The activities would entail the presentation of texts encouraging the use of medical terminology and the students would become familiar with such technical medical terms. In addition, the didactic guide would serve as a digital support for the development of extracurricular activities.

This investigation would lead to the benefits derived from theoretical and practical knowledge for both students and teachers. Some of the exercises would concentrate on answering questions, checking the key words and main ideas, and reading a passage again to find mistakes in order that the students can have a deeper understanding of the passages they have read.

The purpose of this thesis is to help teachers to be facilitators, to create conditions and opportunities through interactive readings, and most important of all to raise the students' motivation. This research is important because the design of a didactic guide will help medical students to understand new information and to achieve better comprehension of technical medical texts in the future, through the acquisition of technical medical words by means of activities on the Moodle Platform.

This investigation was quasi-experimental because it was applied to an intervention group of 18 students from the third level of Medicine School. A pretest, posttest and observation templates determined the results of this investigation.

Finally, this thesis is based on five chapters. Firstly, chapter one begins with a necessary theoretical foundation that is the scientific basis of this work. The second chapter boards the methodology that was employed in the project´s development. The third chapter contains the alternative guidelines to be considered in the elaboration of the didactic guide. In the fourth chapter deals with the final results that were analyzed and discussed. To the end, the last chapter comprises the conclusions and recommendations.

CHAPTER I

1. THEORETICAL FRAMEWORK

1.1 BACKGROUND

Revising the literature from abroad, it was found that there are multiple studies in regard to Didactic Guide. First, it was found a study of Needs of the First Year Pre-Medical Students at Sebha University, Libya that attempts to investigate the English language needs of the pre-medical students of the University of Sebha in order to understand students´ language needs and to check if these needs are fulfilled with the existing syllabus and program used with them for teaching English (Ergaya, 2010: 3).

A second study deals with Developing a Practical Guide for Teaching Histology which consist of an evaluation of the didactic components as a valuable tool complementing and making learning more dynamic, using creative didactic strategies that simulate the presence and generates a dialogue in order to offer students different possibilities to improve their understanding and self-discovery learning in medical histology (Garzón, 2013: 5627 - 5633).

A Didactic Guide, in the national field of Ecuador was scarcely found.

Then, a study in learning investigation done is a Didactic Guide for Promoting Self-Study. The UTPL´S open and distance department´s quality assessment and improvement at the University Particular of Loja, UTPL, to open and distance system pedagogical model (1998-1999) texts (compilations). This didactic guide is a valuable tool complementing and making the basic text more dynamic in order to offer students different possibilities to improve their understanding and the self-study process (Aguilar, 2006:179).

Another study done in Ecuador is a Didactic Guide with Methodological Strategies Based at Unidad Educativa Particular Evangélica ¨4 de Julio¨, Ibarra. This guide with methodological strategies are based on the Multiple Intelligences Verbal-Linguistic,

Visual-Spatial, Bodily-Kinesthetic and Musical, helps to the daily labor of the English Teachers, in the same way to students to achieve the best success to learn the English language (Cuchala & Padilla, 2011).

Finally, one more research done comprises a Didactic Guide for Teaching and Learning English through Web Sites oriented to communicative competence in English at the University of Cuenca. The guide includes a collection of classroom activities, selected websites, accuracy-oriented exercises, and electronic learning activities. It also includes sound and image as contributing factors to stimulate interest, concentration and attention (Tenemaza & Jarama, 2010: 1).

After having analyzed some of the existing bibliographies at web sites and editorials, the author of the present investigation states that a Didactic Guide, with emphasis on medical terminology and comprehension of medical texts has not been produced, neither with respect to books nor to the existing Moodle Platform. Therefore, this investigation involves an unprecedented tool for the Medical School at the University of Cuenca.

1.2 SCIENTIFIC FOUNDATIONS

Every investigation needs a scientific basis. The present investigation will relate philosophical, epistemological, psychological, pedagogical, sociological, and legal bases to reality through the analysis of the present course, syllabus, materials, teaching methods, programs, and the former Moodle Platform used for the teaching of pre-medical students, as a starting point to carry out a new proposal. For the development of the present research it is relevant to investigate how a Didactic Guide with Technical Medical Vocabulary through a Moodle Platform will enhance reading comprehension.

1.2.1. Philosophical foundation:

As stated by Gasper (2005) mentions what Marx and Engels wrote “the bourgeoisie cannot exist without constantly revolutionising the instruments of production, and thereby the relations of production, and with them the whole relations of society. Conservation of the old modes of production in unaltered form, was, on the contrary,

the first condition of existence for all earlier industrial classes. Constant revolutionising of production, uninterrupted disturbance of all social conditions, everlasting uncertainty and agitation distinguish the bourgeois epoch from all earlier ones" (p. 8-9).

The creation of a new and higher form of human society has been established by the development of capitalism. On the last years with the advance of industry, science, technology and the global economy requires career-specific language because the information comes to the receptor immediately. Since this point of view, most of the information and the knowledge come to the professionals in English, and, in this case, the medical professionals have to be prepared in relation with a technical language to enhance their production within the investigation; for this reason, this thesis plays a vital role by solving immediate needs of the medical students.

1.2.2. Epistemological foundation:

To Morin (1980), quoted by Porfírio da Silva, J., Garanhani, M. & Dantas, M. (2014) "According to the concept of complex thought of Edgar Morin, he says that it is not possible to conceive fragmented education when the whole is not learned. Knowledge must be separated from the inadequacy of disconnected and divided skills, since only the articulation and organization of skills allows an understanding of the whole. Therefore, knowledge becomes pertinent when education refers to the complex, to the context, in a multidimensional way and within the global concept" (129).

For Morin, the multidimensional aspect sees the human being and society as complex units in their different dimensions, but each part should be linked to the others in an interactive circuit. In education there is the need to find strategies that allow a meaningful learning as a global concept that provides the development of skills of all students and culminate in the provision of methodologies to let students to use English as a whole within the medical world they are involved.

1.2.3. Psychological foundation:

This work can be based on the theory of constructivism of Piaget, Jean Piaget (1896-1980) believed that children's play had an important role in constructivism and learning.

In his theory he suggests that all readers will use the content and the process of the communication in different situations where they will construct conceptual meanings from the information in the learner's knowledge. His theory expounds that we learn through assimilation and accommodation. According to Piaget's theory of constructivism if the children could mature psychologically, they could take on certain tasks presented in their lives and during their learning process. It is one of "Cognitive Constructivism".

The technical medical vocabulary activities in English take into account the needs of students´ that will be future professionals to locate them in a real context to work in an autonomous way; moreover, it will let the most effective use of the students´ time by defining their specific tasks, skills and activities, building their progress for achieving their learning objectives. The new texts to be applied must be focused on students´ needs, in this case as the researcher work for Medicine with medical terms to facilitate the students interpret medical content in a more profound way. For this reason, the didactic guide pretends to be a valuable tool which provides of meaningful practice to let students gain confidence.

1.2.4 Pedagogical Foundation

According to Howe, (1993) mentions the theory of Vygotsky that states language was central to the development of thought; words were the means through which thought was formed. It is important to go beyond direct experience in teaching scientific concepts and to mediate experience with words; experience alone is not enough since the experience is an isolated observation unless it is put into words and understood in a larger context.

For Vygotsky language skills take an important role for creating meanings and to join new ideas to past experiences in cognitive development. Here the medical students´ prior knowledge is essential for developing the meanings of new works that are learned when they read medical articles in this way the learners express their complex concepts through words. Learning is connected to external experiences that is transformed into internal processes through the use of the language.

As it was said before the technical medical literature comes in English, reason why undergraduate students and graduate students need much more understanding of English texts. The present research will help both undergraduate and graduate students to interpret texts through the implementation of technical medical vocabulary activities.

1.2.5. Sociological foundation:

As reported by Ritzer (2010), mentions what Durkheim believed "that society is the source of morality; therefore, the society could be reformed, especially through moral education, morality is composed of three elements: discipline, attachment, and autonomy. Discipline constrains egoistic impulses; attachment is the voluntary willingness to be committed to groups; and autonomy is individual responsibility. Education provides children with these three moral tools needed to function in society. Adults can also acquire these moral tools by joining occupational associations. According to Durkheim, these associations would include members of a particular occupation regardless of class position and could provide a level of integration and regulation, both of which tend to be weakened by the division of labor" (cap. 6, parr. 6).

In agreement with Durkheim, this work is based on that the human being interacts with discipline, attachment and autonomy in the society. The moral and ethics aspects go in hand with the knowledge and it leads to improve the medical professionals in all aspects of their personality knowing that a fundamental part of their profession is to have the knowledge of technical medical English to understand their medical information to be applied for the social benefit of their patients.

1.2.6. Legal Foundation:

This research is bases on the requirements dictated by the constitution as it is shown in the following article from the legal bases:

LOES. Art 9. Superior Education and good living. A superior education is an indispensable condition for the construction of the right of good living within the intercultural context, the respect for the diversity and harmonious coexistence with nature. Law. No. T. 4454-SNJ-10-1512, SAN-2010-672

Art 12. Principles of the System. The system of Higher Education will be governed of the principles of responsible autonomy, co-government, equal opportunities, quality, relevance, integrity and self-determination for the thought and knowledge production within knowledge dialogues, universal thought and global technological scientific production.

In UNACH Regulation, Organization of Master program studies establishes in one of his articles the following:

Art. 74. The Master studies will be based on the scientific research and will be aimed with scientific and academic purposes at deepening of an area of knowledge.

1.3 THEORETICAL FOUNDATION

If we start from the fact that the theme of this study is A Didactic Guide with Technical Medical Vocabulary Activities through Moodle Platform to enhance the Reading Comprehension, the following theoretical base is to be reviewed:

1.3.1. Vocabulary Instruction

To know Vocabulary is a fundamental process to reading comprehension; it is necessary to know what the words mean to understand a text. The proportion of difficult words in a text increase the text difficulty, and a reader's general vocabulary knowledge shows of how well that reader can understand text (Anderson & Freeboy, 1981, quoted by Naggy, 1988).

The effective vocabulary knowledge is an essential process of education and this should not become an obstacle for students on their learning process. Meanwhile, a learner must master a store of words in order to be instructed and operable.

The relationship between vocabulary and comprehension is essential to understand how the learning process works. Teachers must teach words meaningfully to search they understand texts better. Naggy (1988) mentions when teachers provide a good motivation for vocabulary instruction, they will help students in the comprehension of

what they are going to read. Teachers will know what to do if traditional instruction fails.

The purpose of this investigation is to establish a basis for the learner can improve reading comprehension with an effective vocabulary instruction through the Moodle Platform.

The term "vocabulary" should be defined as stages that a person pass for acquiring new words and new meanings. Therefore, to learn medical terminology becomes considered as one of the most difficult languages. Duan, (2005), quoted by Hassen (2014) recognizes that "it is essential for medical students to learn these terms, as they are a prerequisite to them being able to solve problems in their respective careers and disciplines" (p.4). For this reason, in relation to medical students, there are several studies to Vocabulary Learning Strategies (VLS).

For instance, the Oxford (1994), quoted by Büyükdurmuş (2006) states that learners use different actions, behaviors, or techniques as learning strategies applied consciously or unconsciously to learn a second language and its production. Thus, Oxford (1990, quoted by Büyükdurmuş, (2006) believes that when a student uses these strategies, learning becomes easier, active, gratifying, and effective to be used in new situations. Therefore, providing students with vocabulary learning strategies will lead them becoming successful in learning language and for medical students will help them understand and work in their field efficiently. Learning complex medical terms is essential for medical students in their work life progress later on, at the same time, teachers would be aware of what effective strategies to use for improving learning medical terminology.

What is a difficult word for learners of a Language?

Now let's do an analysis about what is a difficult word for learners of a language. According to the author of the book "Vocabulary", Ronald Carter, some problems of first language acquisiton (L1) interfere for studies of second-language (L2) Carter (2012) states:

What is a difficult word for learners of a language? Are some words easier to learn than others? Are there distinct stages which are passed through on the way to acquiring a knowledge of what and how a word means?. Ronald Carter distinguishes six essential aspects of difficult words:

1. Knowing a word implies to know what parts of a semantic space it occupies and this knowledge is acquired by the learner experimenting with words in diffrerent contexts.
2. A word is known when it is learnt both syntagmatically and paradigmatically and thus in a pragmatic knowledge, in other words to know it in context.
3. Producing a word is more different than comprehending it. Production means a more active but difficult process.
4. It is easier to retain and recall concrete words than abstract words because such grammatical words are encountered more frequently.
5. Words related with semantic groups are considered important in L2 learning.
6. These words are known in an independent way. Channell (1988) stresses the importance of learners first encountering words as independent units marked for stress and for phonological shape as an aid to retention. She points the need for much more vocabulary to be taught and learned as a separate activity rather than, say, as part of a grammar or reading lesson (p. 191).

Why is important to know vocabulary in the learning process?

A good word list and effective vocabulay learning strategies can help learners have a better understanding during the reading process and improve vocabulary knowledge. Here explicit and implicit instruction techniques take an important role for the vocabulary acquisition. Explicit instruction includes the intentional and planned instruction. In contrast, the implicit instruction is the spontaneous instruction that comes to new words in a text. As Ellis (1994), quoted by Carter (2012) states that implicit vocabulary teaching and learning method involves indirect or incidental, whereas the explicit method involves direct or intentional (p. 211).

1.3.1.1. Explicit Vocabulary Instruction

One of the good methods is to teach unfamiliar words in a text previous the reading activity, this allows learners to learn new vocabulary and its connotations as well as its denotation. Besides, the method, pre-teaching vocabulary words will provide him or her feedback in word comprehension and will read the text better after pre-learning vocabulary words.

Secondly, a repeated exposure of the vocabulary is a useful method where the learner needs to hear and apply the words seveal times both written and spoken production, this will grant her or him a solid comprehension.

Another effective method is "word clue" or keyword consists in introducing an illustrative image that makes the learner remember the meaning of a word easily before reading it in context.The relation between the meaning and the keyword will create a cognitive process during the reading development.

Among the explicit methods is scaffolding the vocabulary by means of word maps where the learner uses a graphic organizer for the word in three categories: classification, which is the group that the words belongs to, qualities which are the characteristics of the words, and examples.

The derivation of many English words in the Second Language are from Latin or Greek roots. Teachers focuses on the most commonly components of the word such as roots (the stem of the word), prefixes and suffixes that hold meaning. This will help learners to practice analyzing the roots and definitions of the words and be aware to determine their meanings.

Restructuring Reading Materials is a strategy that help readers to replace difficult words with "easier" synonyms to understand the whole text. The words should be included in a vocabulary guide and be highlighted to lead the reader to check their meanings.

1.3.1.2. Implicit Vocabulary Instruction

1.3.1.2.1. Incidental Learning

This learning instruction is based on the way how a word is used in a text, it will make easy to figure out its meaning or on what the rest of the sentence focuses on. Teachers must produce this sort of incidental vocabulary learning to help readers increase their own skills.

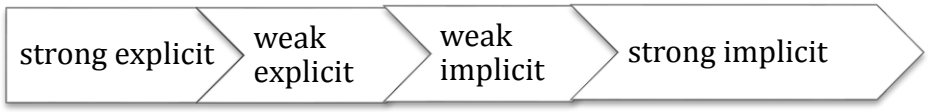
1.3.1.2.2. Context Skills.

These strategies are used by readers for incidental vocabulary learning in texts with "clues" about the meanings of words. Features as other words in sentence or paragraph, captions, illustrations and titles named "context clues" provide information about the text, as a result the learners can determine the meanings of unfamiliar words that are within the context of the written passage. Teachers should teach leaners to find and use them for learning new vocabulary words (Smith WP, Web).

Ronald Carter (2012) in his book Vocabulary mentions:
The Ellis´s continuum from explicit to implicit vocabulary learning. Ellis (1995) identifies four main points:

1. A strong implicit learning hypothesis holds that words are acquired largely by unconscious means.
2. A weak implicit learning hypothesis holds that words cannot be learned without at least some noticing or consciousness that it is a new word which is being learned.
3. A weak explicit learning hypothesis holds that learners are basically active processors of information and that a range of strategies are used to infer the meaning of a word, usually with reference to the context in which it appears.
4. A strong explicit learning hypothesis holds that a range of metacognitive strategies are necessary for vocabulary learning. In particular, the greater the depth of processing involved in the learning, the more secure and long term the learning is likely to be (p. 203).

Figure 1.1. The continuum from explicit to implicit vocabulary learning.



Source: book "Vocabulary", Ronald Carter
Elaborated: Sandra Segarra

When students are involved in constructing meaning means they learn vocabulary and not just memorize definitions or synonyms. Teaching vocabulary as a pre-reading step that must be an instructional intervention when readers lack of background knowledge to read in a content area.

Moreover, Carter (2012) agrees with "Sternberg (1987) who reports that "most vocabulary is learned from context" by means of strategies of inference, and on Hulstijn (1992) who also reports research in which learners retained better words learned by them in context rather than in marginal glosses" (p. 203).

We as teachers should provide word consciousness in all content area reading by instructing them in word-learning strategies and individual words in order to make them self-confident to understand what they read. Here direct instruction plays an important role. Integration, repetition, and meaningful use of vocabulary are active instruction strategies for learners´ retention.

In pre-reading strategies, vocabulary strategies and prediction strategies are important for accessing background information, relating prior knowledge to new knowledge, pre-teaching new vocabulary, and determining a purpose for reading.

1.3.1.2.3. Words in context

This section concentrates on strategies which learners can use to decode for themselves the meanings of words. Words learned in context means the more advance the learner and the more implicit becomes. It is necessary to wonder what we understand to learn words by context and what appropriate linguistic environment for a context is.
Carter (2012) mentions:

Nation (1990), the strategy is just a means of acquiring the unconscious skill that an efficient reader already has. He assembles the "steps" as follows:

Step 1 Look at the unknown word and decide its part of speech: a noun, a verb, an adjective, or an adverb.

Step2 Look at the clause or sentence containing the unknown word, for example what adjectives describe the noun, what verb is being used, etc.

Step 3 Look at the relationship between the clause or sentence containing the unknown word and other sentences or paragraphs.

Step 4 Use the knowledge mentioned above to guess the meaning of it.

Step 5. Check that your guess is correct.

1. See that the part of speech of your guess is the same as the par of speech of the unknown word.
2. Replace the unknown word with your guess.
3. Break the unknown word into its prefix, root, and suffix, to see if your guess is reasonable (p. 162).

Nation (1990) says it is not possible to use affixes and roots alone for guessing meanings. It is possible to guess the meaning of a word after analyzing its components for the interpretation of the context. So, the learner will develop the ability to interpret the context, even if he or she does not use affixes and root.

The skills of guessing and of using contextual clues to make inferences is important, especially in reading in a foreign language. Brown and Payne (1998), identified five steps for creating successful L2 learning of vocabulary, which are matched with the methods for learning vocabulary. The steps are:

1. Having sources for encountering new words
2. Getting a clear image, either visual or auditory or both.
3. Learning the meaning of the word through flash cards,
4. Making a memory connection between the form and the meanings of the words, and
5. These techniques of teaching are used for a good receptive and productive vocabulary.

1.3.2. Vocabulary Learning Strategies

As stated by Schmitt (1997) in his definition for Vocabulary Learning Strategies as actions that will affect in the definition of words and this process will allow them to understand and retain more vocabulary. With the comprehension of words, they will be able to construct meanings both verbal and printed.

Different researchers have developed a classification of Vocabulary Learning Strategies. In one of the research, it was found the Oxford´s strategy (1990), quoted by Büyükdurmuș, (2006) which classified the strategies into direct and indirect strategies. Direct strategies are considered as direct learning and they are classified into memory; for example, associating, using imagery or keywords; cognitive such as repeating, translating, taking notes), and finally, compensation; for example, getting help, avoiding communication, using mime and gesture. While, indirect strategies incorporate and help indirectly to learning, they are arranged into metacognitive; for instance some of these strategies are organizing and setting goals; affective, and social strategies by its nature asking for clarification or verification, helping with peers, asking for correction.

According to Schmitt (1997), quoted by Hassen, (2014-2015) divided vocabulary-learning strategies as discovery strategies and consolidation strategies which are those considered critical to mention for the purpose of this work. In Schmitt´s taxonomy, discovery strategies are used to discover the meaning of new words such as guessing from context, asking others for meaning, guessing from parts etc. Consolidating strategies refer to retention of a word since it has appeared in a text. There are several strategies to be considered inside the first ones as determination strategies are based on guessing from context, on structural knowledge, and using references. For the second ones, it can be found the social strategies classified in memory strategies, cognitive strategies, and metacognitive strategies.

Other classification stated in Jones´ study (2006), quoted by Hassen, (2014-2015) who classifies vocabulary learning strategies; for example, in terms of dictionary strategies, guessing strategies, study preferences, memory strategies, autonomy, note taking, selective attention and social strategies. The use of dictionaries both monolingual and bilingual play an important role to find and understand the meanings of new words.

More studies done by Schmitt (1997), quoted by Hassen, (2014-2015) found that study preferences are the strategies that show how the students like to study vocabulary in group of terms or individual terms. For his taxonomy, he related the new words to previous learned Knowledge. This is also called mnemonics. According to Thomson (1987), mnemonics use some well-known principles of psychology: the learner makes a plan for encoding and mental imaginary retention. For Schmitt´s study mentioned before, these strategies help learners in the integration of new material into existing cognitive units providing retrieval cues. Memory strategies also include note learning, repetitive use, etc., to use the words when they are required later.

For getting motivation and autonomy in the learners is important to use strategies that help in their own learning, As this work is focused in getting these fundamental conditions to train medical students in their self-study Among the useful strategies are note taking, and definition as cognitive strategies, they are concentrated on mechanical aspects of learning. These will help the students to build their own personal structure for the new words learned. At the moment they have to use them in writing, they will combine with the grammar information to elaborate new meanings giving them a broad knowledge of the terms.

Finally, other key strategies used for the students are social strategies because students can look for the help of others and also ask to native speakers in learning vocabulary.

1.3.3. Medical Terminology

To define medical terminology and according to Maher (1986) who considers the medical language as a specialized technical language and defines it as a store of words and expressions from a whole language within a well-defined context of medicine. Conforming to Gunnarson (2006) defines medical terminology, medical text, and medical text patterns as appropriate means in real situations for medical purposes.

The definition of Medical Terminology according to Gylys and Wedding (1983), quoted by Joshani, (2008), “a specific terminology used to achieve the purpose of communication in the health care field effectively and precisely, such as in writing diagnosis and doctors´ notes” (p. 27).

As stated by Dirckx (2006), Medical Terminology is a science that contains terms that describe the human body and other related segments, conditions and processes. Several words of English medical terminology have word roots from Latin or Greek. For example, in the word cardiology that is composed of English cardi- from the Greek kardia means heart, and that can be added by a suffix with different meaning (e.g., -ac (pertaining to heart, -ology (study of), -ist (specialist)).

1.3.3.1. Vocabulary Learning Strategies for Medical Terminology

There are many studies that look at specific strategies to help students in acquiring and retaining medical terms. The study of Al-Jarf (2010), quoted by Joshani, (2008) deals with a mind mapping software where it helped the students learn terms without difficulty. In his study, breaking the terms into their components, for instance prefixes, roots and suffixes designed in different types of software helped students to build mind maps, to understand the formation of the words and especially to predict the interpretation and translation of medical terms.

The games can be used to review most of the current and old unit's words as an excellent way to informally check for understanding. To support this, then Muller (2012), quoted by Joshani, (2008) introduced a video game that helped medical students learn terms in an enjoyable manner and easily at the same time. A study of Riahipour and Saba (2012), quoted by Joshani, (2008) stated about using games in the classrooms to improve students´ vocabulary and this study supported their theory that having interactive games helped students learn terms better and motivated them for language learning.

There are several other studies conducted by Malcolm (2004), quoted by Joshani, (2008) interesting to mention, she found out that watching TV in English, as well as reading books, magazines, and newspapers contribute in their input production of the foreign language. It can be a challenge, but media will provide teachers and students creative and practical ideas to use in class and also they will enable to meet several needs and interests of their students. A current study by Arani (2005), quoted by Joshani, (2008) among medical students at Kashan University in Iran, indicated that most students use written and verbal repetition of words and bilingual dictionaries to

find out the meanings of the terms. These strategies can become traditional but for some students can be a useful tool for learning new vocabulary. To conclude, using Vocabulary Learning Strategies allow students be more proficient and be more successful learners.

1.3.3.2. Reading Comprehension of L2 Medical Texts.

The coordination of visual, attentional, linguistic, logical, and pragmatic/ communicative faculties are required for being able to read written texts. This becomes a difficult and complex activity, even this process turns into more complex when the text has specialized fields of knowledge and human activity. Scientific and technical texts are usually written in so-called "languages for special purposes" (LSP). It is defined as: "A complete set of linguistic phenomena comprising terminological, syntactic, and stylistic features which are different from ordinary language and occur within a definite sphere of communication." (Baakes, 1994, p.1).

When the text is in their native language (L1), it becomes a challenge for the readers. The L1 reader must overcome certain knowledge gaps in order to gain a successful mental representation of the text. But when the LSP text is written in a second or foreign language reaches a higher level of difficulty and it is conceived as foreign to the reader, especially when the learner lacks of expertise in the specialized field. This is observed in university-level instruction in language courses for the professions such as medicine, law, business among others (quoted by Joshani, (2008).

The use of bilingual dictionaries turns into indispensable sources for second language readers in learning the meaning of words they do not know in reading classes or when they are reading long texts. However, as Huckin and Bloch (1993), quoted by Büyükdurmuş, (2006) point out, dictionaries, especially the popular small pocket-size ones which are used among second language readers, often do not provide more accurate information to the readers' needs. According to Cohen (1990), although to use dictionaries in excess becomes a problem, it cannot be considered as a last tool for learning word meanings. It is very good to check the difficult words from context and that is very important to the meaning of a text. When learners are reading in L2, they must acquire abilities to guess unknown words, in this way they will stop to look up

words in dictionaries and it does not interfere in the process of acquiring information. Here the skill of inferences will be of great importance for learners to find a solution on their own problems for understanding a text.

1.3.3.2.1. Definition of Inferencing

In agreement with Grellet (1981) suggests that inferencing means discovering the meaning of unknown elements in a process of logical, cultural, and syntactic clues. If these elements are words, word-formation and derivation are also used as clues for guessing a word. Stein (1993) defines inferencing as a process of constructing the meaning of words within a grammatical and pragmatic context through intelligent guesses or hypotheses. According to Haastrup (1987), inferencing procedures are cultural procedures which are applied in language learning and language use for language reaction. A learner combines his or her general knowledge with all available linguistic cues to make informed guesses in inferencing. Besides, the reading process is seen as an interaction between the information provided in a text and the previous knowledge of the readers where inferencing will become an essential aspect of reading comprehension recognized in the pshycholinguistic models of reading, as stated by Soria, (2001). According to Paribakth & Wesche (1999) one approach of inferencing is lexical inferencing which is useful in advancing comprehension in a reading context and will lead the retention of the vocabulary and the inferred meaning from the context (quoted by Büyükdurmuş, 2006).

Teaching and learning medical terminology is not an easy task because an expanding quantity of low-frequency words have produced new words, and the inferring learning strategies for the meanings of the words take place in very efficient and helpful.

As Nation (1994) suggested, and providing students strategies is necessary when they often find themselves with low frequency words. In addition to Nation suggested that high-frequency words will be taught when they have used strategies of learning low frequency words for determining their meaning.

1.3.3.2.2. The Importance of Context

In 2002, Eskey mentioned that a close relation between meanings and sentences, sentences in context give meanings to words and words do not provide meanings to sentences. The meanings of the words are learnt by the contexts in the sentences where they are used because the meaning is changed from one context to another (Nagy, 2001, quoted by Büyükdurmuş, 2006).

Drum and Konopak (1987) state that the meaning of a word depends on the group of words related each other within a sentence. Miller (1978) suggests four sources for confirming the meaning: the situational context that is the reader´s aim for reading, the discourse context that is the underlying conceptual structure for the topic of the text, the immediate linguistic context is the verbal contextp where is the word, and the reader´s knowledge about the discourse topic is the mental representation for the topic previous the reading (quoted by Büyükdurmuş, 2006).

1.3.4. English Medical Purpose (EMP) as genre of English for Specific Purposes.

According to Chalikandy (2013), quoted by Ulmane (2016) defines English for Specific Purpose (ESP) as another activity from English Language Teaching (ELT) that involves learner participation together with other disciplines with its own materials and methodology. The teacher will use different materials and methods according to the learner's specific needs such as designing the course, assessing the needs, and developing material with an appropriate instruction to satisfy in a better way the needs of the learners.

EMP is one of the genres in ESP. The reason why a medical learner needs to learn medical English is because she or he needs to read journals and books in their field, as a result they should master that specific vocabulary, as well as increase their ability to communicate in English in their own particular area of work. As this study focuses in learning medical vocabulary in reading skill is substantial to acquire expertise in general skimming, scanning, reading to comprehend, recognizing emotion or position, and applying word and sentence structure involved in the task of reading scientific medical papers and journals (quoted by Ulmane, 2016).

In terms of the objectives of medical English course, Shirvan (2008), quoted by Joshani (2008) has stated that the course must be planned to make medical students to read general and specific information. At the same time, they are enable to make conclusions from the given texts, use synonyms and antonyms of the words, guess the meaning of any unknown word by using the context clues, distinguish the correct lexical item related to medicine, make translations about medicine, get familiar with basic word parts in medicine; prefixes, suffixes, abbreviations, get familiar with medical topics, use translations in their special area; medicine, use the grammatical structures for communicative purposes and get familiar with medical terminologies. He has given the four following reasons for the use of English instruction:

1. To read academic materials in English,
2. To communicate with their colleagues from English speaking countries or non-English speaking countries for medical related purposes,
3. To study or work in English-speaking countries,
4. To use English largely in their future career, since it is widely used by medical professionals.

1.3.5. Didactic Guide

The origin of the word didactic comes from the Greek language “didaskein”. It means teaching and “tékne” means art; or “art of teaching”, as (Stöcker, 1964), quoted by Navarro & Pineiro (2012) defined this teaching methodology. This educational style is used to engage the student´s mind within the learning instruction with practical activities in a lesson plan where the teachers seek the students to learn by themselves and improve their knowledge.

A good teacher must focus in being prepared for the classes with many dynamic activities which motivate students to get involved in their active participation and cooperation to create a positive learning environment. This is confirmed on how Medina (2003), quoted by Navarro & Pineiro (2012) defines didactic, he says that is a discipline of pedagogical nature that centers its goal of making better human beings through an appropriate growth of the teaching and learning process.

Therefore, didactic strategies are an organization of the teaching and learning process where the students gain knowledge in specific contents that leads them to work responsible, creative and independent. In this instrument, a teacher should make sure to use the necessary information for the correct use of activities pointing to the independent study of the contents of their course (quoted by Navarro & Pineiro (2012).

Researchers concluded that a didactic guide is the compilation of readings with basic bibliography to work on what, how and when to use the language. For García (2002), quoted by Puco & Tapia (2012) the importance of providing this document for the study and bring the cognitive processes of the students let them as a result to work independently.

On the other hand, the role of the teacher is to be a conductor to aid students to incorporate the contents they are learning. Vadillo and Klingler (2005), quoted by Navarro & Pineiro (2012) affirmed that didactic strategies used in this learning style will consider not only students´ understanding of ideas but the connection between specific information and a particular activity as a deep input.

These current studies refer to the didactic guide as the most important tool to help increase the proficiency of the teaching-learning process and to achieve some specific goals in the educational field.

1.3.6. Reading Comprehension

Reading comprehension can be defined as the process of extracting and constructing meaning from text in order to help a reader to comprehend it (Snow & Sweet, 2003). If students have problems interpreting words, of course they will have difficulty with reading comprehension. When students reach out difficult texts, they will lose interest in reading, and much less if they are in a second language.

In fact, the aim of the teacher is to make sure that students understand why they are reading and the task they will have to do after reading that text. The students believe that they need to understand every word from the texts and if they do not develop the language skills and necessary reading strategies for becoming proficient readers, they

will feel frustrated. For this reason, it is substantial to ensure they have the necessary background information with appropriate strategies to apply them independently through students´ experiences.

1.3.6.1. Categories for developing building comprehension.

In a language classroom for creating independent readers, there are specific strategies to lead students to practice the comprehension and they are focused in these section as three categories: **pre-, during, and post-reading strategies**. The task of the teachers will be to organize instruction to achieve students´ outcomes.

Pre-Reading Strategies are strategies where students activate their comprehension prior to read and begin to discuss about the idea of what the author tries to say. These strategies will involve students in the themes, concepts, and of course vocabulary for storing information. They will include previewing headings, analyzing pictures, reading introductions and summaries, asking questions and making predictions that will build motivation.

When a teacher selects pre-reading strategies, she or he will help students´ self-sufficiency into the reading process using advance organizers or pre-reading outlines preparing them for any content area.

Students can record the terms that appear during the text into a list in a notebook that will assist students in a meaningful and relevant way and will not interrupt their reading. In this sense, they will connect their prior knowledge about a topic with what they are learning from the text, and predictions will be definitely made about what will happen next into mental data that are in their brains.

While Reading Strategies are strategies that are included in a process where the students will continue practicing and applying comprehension strategies in a subconscious way to keep in mind the prior connection, monitoring the comprehension, and asking questions that were originated before and using this information as a preparation to summarize what they are reading; in other words, these strategies will help students understand during reading stage by questioning, predicting, visualizing,

rereading, etc. While there are several during reading strategies to mention, all will be helpful to give students necessary practice for real comprehension.

A teacher must develop meaningful reading guides to be completed during reading time so she or he will require students ask and answer questions and summarize as they read. They will be compensated for the fact that students employ these strategies to be active engaged readers and to deal with comprehension successfully.

Post-Reading Strategies once the students have finished to read, the students will use these strategies to get back to the text, verify about its message and establish the possible conclusions that might be important. In other words, they are used to confirm what was learned in the pre-reading and during reading in order to acquire the ability to connect, summarize and evaluate their achievements.

These strategies will provide students´ recourses to share their final opinions and make reflections based on the content of the text. They will write and answer questions about what they have read to encourage them to discuss why they have written them as the most important points of the text (Lenz Keith, Ph.D., web).

1.3.6.2. Effective Strategies for Reading Comprehension

Besides the strategies mentioned above, there are other effective strategies that teachers should provide students for promoting comprehension skills during the reading process. The following are cognitive and metacognitive strategies:

Metacognitive Reading Strategies are all those mental processes that each person involves to achieve something. They have an important role in reading instruction because the reader´s conscious deals with a reasoning process where the readers plan for reading, monitor their comprehension and make a self-evaluation after they have read. These strategies are used to understanding the meaning of the text, here we have a list of steps such as monitoring comprehension, cooperative learning, graphic organizers, question answering and summarization.

Metacognition means "thinking about thinking" and metacognitive strategies are used by good readers to have control over their reading, monitor their understanding, and regulate the speed of their reading, especially in the difficult parts of the text; at the end they will solve comprehension problems during their reading experience.

Among strategies for text comprehension, there are graphic and semantic organizers which are used to help readers to illustrate concepts in a text. On the other hand, diagrams will help readers to organize concepts by creating maps, webs, charts, etc., some examples of kind of diagrams we have:

- **Venn-Diagrams** that are used to contrast information.
- **Storyboard or chain of events** order events within a text
- The **story maps** will be used to organize in charts the story structure into fiction and nonfiction texts.

Cause or effect diagrams are used to identify the causes for a problem (quoted by Büyükdurmuş, 2006).

Cognitive Reading Strategies are the mental processes that help learners think about and check their process for completing a task. They have to see with the direct manipulation of the materials in the learning process. The most common steps are the prediction of the text content through the titles, describing the illustrations and seeking their relation with the content, skimming, scanning, rereading, summarizing, translating, classifying the words and guessing the meaning of unfamiliar words among others (quoted by Büyükdurmuş, 2006).

A majority of the studies indicate that the most successful way to teach comprehension strategies is to use very direct instruction. Therefore, the most often stages of instruction are: students´ orientation for making concepts, description, modeling cognitive actions, verbal practice of the information, guided and controlled practice with feedback from teachers and peers, independent practice from the experiences and motivation in new different situations.

Cooperative learning can be involved in this strategy because students can work with partners or in small groups on clearly defined tasks. As Adler (2007) states that students

work in groups for understanding better a text, together they help each other to apply comprehension strategies. Teacher provides a model for getting students involve to work on these comprehension strategies. Besides, in this strategy the teacher can engage students´ participation, reduce their stress, and promotes student learning. Teachers might use cooperative learning frequently in classes and they should consider arranging their classroom to facilitate learning in groups of four (quoted by Büyükdurmuş, 2006).

One of the important effective strategies in reading instruction is scaffolding. It is an instruction where the teachers provide a tool for students reading abilities and begin to remember every part they have read. The teacher will be able to design several techniques to get students understand and the most important have independence.

The success for comprehension is to apply creative reading strategies to improve the ability to comprehend, for example if a teacher uses a brainstorming activity, later visualizes all the answers identifying the problems that require to correct and build a scaffold close to the correct answer, then students will interact with them at different responses in the text. In the classroom when the teacher gives a long passage to read, she or he encourages them in discussion, teaching them the previous vocabulary to complete the reading activity with assigned tasks. In addition, scaffold lessons are used when the teacher provides support modeling questions, using prompts to give responses in the target language, asking and answering questions about the content. To assess students´ progress in reading comprehension, the lessons must be well planned with specific exercises to meet students´ needs and provide an elaborated feedback (quoted by Büyükdurmuş, 2006).

Another text comprehension strategy is questions and answers which allow an effective interaction in teacher and students. Answering questions will help students to review content about what they learned and what they know. There are four different types of questions: questions that ask readers find the right answer in the passage, questions that recall facts in the text, questions that require to think and find the answer, questions that require relation to their previous knowledge and experience.

Recognizing story structure will aid students to identify characters, setting, events, problems and resolutions through the use of story maps to improve readers´ comprehension**.**

The last significant comprehension strategy has to be with summarizing, this will help readers write in their own words what is important to summarize what they read. This instruction will allow readers to identify and generate main ideas, to make a connection of main ideas or central ideas, to avoid irrelevant information and to remember what they read.

In summary, the preparation of reading instructions must devote sufficient time, high students engagement, authentic readings at all stages, a variety of more approximated reading materials to students needs to provide them opportunities to read easily and making the reading process really pleasant (Section 7: Instructional Strategies that Facilitate Learning Across Content Areas, web).

1.3.7. The Moodle Platform

A Moodle Platform is a virtual web site included in an educative environment learning. This self-help software resource supports exercises and activities for the learning acquisition in and outside the classroom.

All the online Moodle Platform exercises that appear are usually interpreted as an individual character task because students develop skills to work individually; on the contrary, these activities might be finished on clearly defined tasks at home through cooperative learning or by working together with partners or in small groups.

The use of Moodle Platforms only has thirteen years. It was in 2002 when Martin Dougiamas created it, at the Technological University of Curtin. It helps teachers to create on line learning communities also known as LCMS (Learning Content Management System). Dougiamas based his design on constructivism into pedagogy which states that knowledge is constructed on the mind of the student instead of being transmitted without changes from books or teachings. (08_chapter 1.pdf – Shodhganga, web).

There are many types of Moodle Platform:

- Distance Education Moodle Platform
- Education- Learning Moodle Platform
- Semi-face to face Learning Moodle Platform
- Blended learning Moodle Platform
- On Line Moodle Platform

There are several advantages of Moodle Platform Implementation:

- Activities are developed in an object-oriented dynamic learning environment
- A system that educational institutions use to deliver courses and learning material to students.
- The system is available at a relatively low cost.
- Group interaction and private conversation among students.
- Favor the development of final evaluation. The teacher prepares a set of questions to be discussed during examination schedule.
- All students answer and at the same time they can make observations about other students´ answers.

As well, there are certain disadvantages:

- The first big issue is the fact that Moodle is not fully developed to cope with big projects.
- The system might not work efficiently with larger schools or serve as a great way to conduct all classes in a city.
- The system might become slower.
- This can be stressed for students when they are trying to take quizzes or tests, or just simply trying to access the course content for time consuming.
- Websites can also shut down on occasion, blocking the opportunity for students to access course materials.
- This tool can only be used on line (internet access).
- Not all the learners can have computers.

- Moodle users frequently complain about the troubles they experience with customizations. Learners and teachers need to know how to program and have some type of knowledge when it comes to coding. (Tye Yorkshire, web)

CHAPTER II

2. METHODOLOGY

2.1. RESEARCH DESIGN

Once parts and elements have been analyzed it can be deduced that this investigation is quasi-experimental because it involves selecting groups, upon which a variable is tested. The method used is the scientific method because it guided the whole process until proving the hypothesis and the analytic method because it collected the information, compiled the facts, and evaluated the hypothesis.

The Scientific Method is a way of problem-solving by making a hypothesis and then testing it. It is a way of thinking that values observation and data instead of fanciful ideas about the order of things. It is sufficient to point out two types of reasoning process, namely deductive and inductive logic.

2.2. TYPE OF RESEARCH

This is study is a quantitative study because it begins with a problem statement and involves the formation of a hypothesis, a literature review, and a quantitative data analysis. “Quantitative research employs strategies of inquiry such as experiments and surveys, and collect data on predetermined instruments that yield statistical data” (Creswell, 2003, quoted by Williams (2007) p. 66).

Quantitative methods involve the processes of collecting, analyzing, interpreting, and writing the results of a study. Specific methods exist in both survey and experimental research that relate to identifying a sample and population, specifying the type of design, collecting and analyzing data, presenting the results, making an interpretation, and writing the research in a manner consistent with an experimental study

2.3. RESEARCH METHODS.

Methods influence in the accomplishment of the objectives that is why in this thesis the following methods were applied:

The Deductive Method is the process of reasoning from general conditions or premises using assumptions to specific conclusions. This method was used to elaborate the conclusions of this study.

The Inductive Method is reasoning form the specific outcomes to a generalized conclusions. This is usually done by observing many individual experiences and cases to formulate a general conclusion. It let to make a conclusion about the effectiveness of the implementation of the Didactic Guide and its incidence in Reading comprehension through Technical Medical Vocabulary activities.

2.4 DATA COLLECTION TECHNIQUES AND INSTRUMENTS

To collect the data a survey with a set of questions to get background information of the participants and with items about Reading Comprehension strategies were designed and applied.

Subsequently, a pretest and a posttest were tested when the research started and in the period that the research ended to conclude whether the elaboration of a didactic guide of technical medical vocabulary activities enhanced the reading comprehension skill. The tests were elaborated by the researcher with a multiple choice option exercises identifying medical terms and a word-formation, a vocabulary completion exercise, and matching meanings and terms in an organizing chart in a reading article. These tests were validated by the test U Mann Witney to prove the hypothesis. The statistical analysis was realized with the Software SPSS in its version 22.

The investigation started with the observations that another colleague performed at the beginning of the investigation and at the end of it, it was necessary using observation templates where all the observed items focused on the development of technical medical

vocabulary activities through reading comprehension such as: attitude, discovery meaning, interaction and participation, and performance of them.

2.5 POPULATION

The population for this work is 18 students of the third English level in the Medicine School engaged in the reading task. In this task they were asked to read a text and infer the meanings of target vocabulary in three categories: identification, completion, and organization. The following statistical information is verified in this chart

Table 2.1. Strata of the research

Strata	Frequency	%
Students	18	100
Total	18	100

Source: English Institute and Medical School
Author: Sandra Segarra

2.6. SAMPLE

The population of 18 students from the third English level of the Medicine School is considered a directed sample in this research.

2.7. DATA ANALYSIS PROCEDURE

The data were collected from the pretest and posttest, additionally from observation templates and the findings were analyzed and classified. Later, the results were tabulated by means of graphics of percentages to establish the conclusions and recommendations.

2.8 HYPOTHESIS

2.8.1. General Hypothesis

The elaboration and implementation of a Didactic Guide with Technical Medical Vocabulary Activities through The Moodle Platform enhances in a significant way the Reading Comprehension skill.

2.8.2. Specific Hypothesis

- The presentation of reading activities to identify the Word Formation Process of Technical Medical Vocabulary through readings enhances the reading comprehension.
- The application of appropriate vocabulary learning strategies in completion activities with technical medical vocabulary improves the reading comprehension skill.
- The organization of medical vocabulary in reading comprehension activities helps students to understand English texts.

CHAPTER III

3. ALTERNATIVE GUIDELINES

3.1 TOPIC

"Elaboration and Implementation of a Didactic Guide with Technical Medical Vocabulary Activities through The Moodle Platform to Enhance Reading Comprehension at the Third Level of the Faculty of Medicine at the University of Cuenca during the school year 2015-2016".

3.2 PRESENTATION

In the last decades there has been an increasing interest in vocabulary learning strategies applied to facilitate second and foreign language vocabulary for reading. Since, many students do not develop sufficient skill of the strategy range, explicit instruction on vocabulary learning strategies may help them to become more proficient with the extensive stock of strategies that they can use through their vocabulary learning process especially in specialist terms. A diagnosis applied to the Medicine students at the University of Cuenca indicated that they had a deficiency of medical vocabulary strategies for reading comprehension due to the limited exposure to medical readings, their weak practice in word formation process, and English learning background among other issues.

A major problem at the Medicine Faculty is that students generally demand medical texts additional to the required English texts. The main reason for the preference is because medical students receive all the information in English and also it takes longer to read the medical texts than to read English texts. Furthermore, much of their extra time needed for reading medical texts seems to go into looking for unfamiliar words in dictionaries. Reading seems a big problem for more advance medical students and for medical professionals because they have not been exposed to English medical texts to vocabulary instructional strategies.

On the other hand, some students think that reading English medical texts is an advantage because it helps them familiarize with this kind of texts for their future purposes.

The instructional strategies provided in this research focus on those strategies of vocabulary by guessing in context, predicting and inferring. The researcher found these as the most effective instructional strategies for her students used before, during and after reading, and to be used with students in an autonomous way; as well as, it requires students to use their medical background knowledge, make connections to what they know, make predictions about the text, establish their own purpose for reading, use the information in the text and then make their own evaluation.

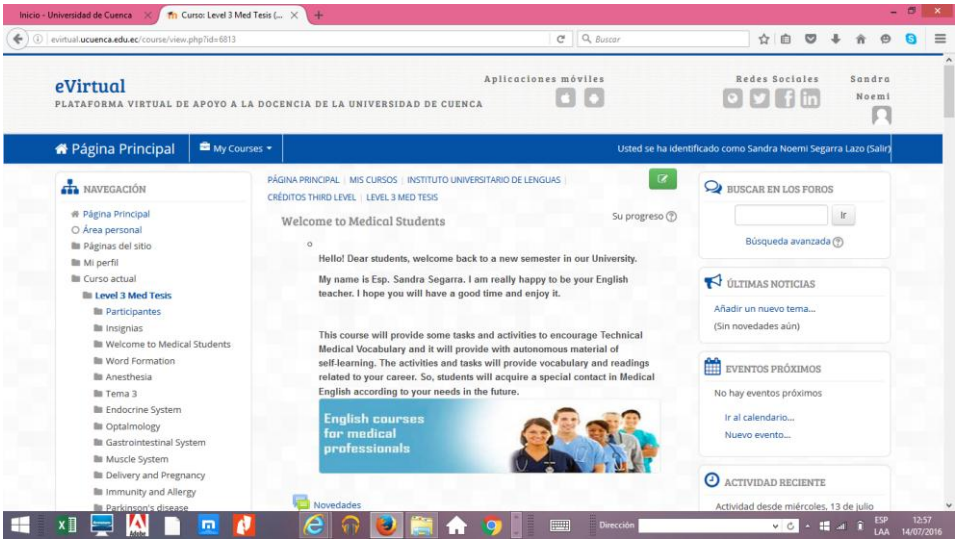
The present curriculum of study at Cuenca University is the teaching of English with a general purpose rather than to develop English for specific purposes on technical medical issues. For that reason, the discussion among medical professors and professionals is the increasing need to provide material related to their major.

Moreover, the use of internet and especially the virtual learning environment for many students and instructors has become an important tool in today´s life. Aware of this, the University of Cuenca uses communication technology as a supplementary aspect for the four skills of English as L2 through the Moodle Platform.

Finally, the Moodle Platform has contributed to prepare students for working out of class autonomously. Therefore, the Didactic guide provides students with interesting activities to use on the Moddle Platform to improve in this way their knowledge of technical medical vocabulary in reading comprehension.

The present research demonstrates the course in the Moodle platform in the following graphic.

Graphic No.3. 1 Course Presentation



Source: E-virtual Cuenca University, 2015
Author: Sandra Segarra

3.3 DESCRIPTION

The English of Medicine must be designed to promote interesting and motivating activities focus upon engaging students in the process of becoming active participants in reading medical information in their majors, capable of developing strategies for using medical vocabulary in medical articles once they graduate from university and face any specialization in the medicine area.

Therefore, it is very important to take into account the English program for Medicine and the need of creating, adapting and organizing material to promote the reading skill, in order to encourage the students´ interest, especially when it is destined to be used for a specific purpose, such as medicine.

The medical articles in this guide were taken from a free and open educational resource site for anyone with an interest in English for Medical Purposes. This site has been developed by the Department of International Medical Communications at Tokyo Medical University on the EMP undergraduate course for students in the third and four years of their medical course.

For the purpose of the didactic guide, it was necessary to select ten readings with different contents of different medical areas. The activities include pre-reading activities, while reading activities, and post-reading activities with clinical concepts of different areas, written exercises and pictures completion with medical terminology.

The pre-teaching vocabulary activities were elaborated by the researcher. It was necessary to make a request permission for the use of the 10 readings from the Tokyo Medical University to be applied in the design of the vocabulary activities.

The aim of this didactic guide is, therefore, to provide students with authentic material. The background material was designed to help students achieve English proficiency in medical vocabulary that is used in reading comprehension articles, so that they become capable of managing the language needed in a variety of target vocabulary, and to increase students´ confidence to understand better medical texts.

Teachers can be benefited at the same time because they can use the didactic guide as a support for classroom teaching, complementing in-class reading comprehension activities to improve the students´ knowledge of the important topics related to their major.

To sum up, I consider it essential for the English teachers in Medicine School of the University of Cuenca to be aware of the motivation of the students in their use of English for their future professional decisions.

3.4. CONTENT-BASED INSTRUCTION (CBI) AS A METHODOLOGICAL APPROACH

The Communicative Language Teaching (CLT) paradigm has among others, two current methodologies as extensions of the movement in order to develop learners´ communicative competence. These methodologies, it is referred, are content – based instruction (CBI) and task- based instruction (TBI), but this study was based on CBI. (Richards, 2006).

It was fundamental to point out these two types of instruction as process-based methodologies since many learners need English in order to use it in specific occupational or educational settings. The goal of this research was to teach medical students vocabulary strategies for reading comprehension so that English would be more efficient teaching the specific kinds of language and communicative skills needed for their particular roles, (e.g., that of doctor, nurse, physical therapist, etc) rather than just to concentrate on more general English.

Richards (2006) states
Content-based instruction is based on the following assumptions about language learning:

- People learn a language more successfully when they use the language as a means of acquiring information, rather than as an end in itself.
- CBI better reflects learner's needs for learning a second language.
- Content provides a coherent framework that can be used to link and develop all of the language skills (p.28).

Content-based instruction can be used as a course that prepares students for the use of English as a tool for teaching some school subjects in an EF (Richards 2006). Tsai (2010), quoted by Richards, (2006) stated that the Content-Based Instruction (CBI) method is beneficial to develop student´s reading comprehension. Using this method, the teacher designs different kind of strategies with students to help them involve actively to comprehend the reading text. It could improve learning by increasing interaction among students, enhancing their motivation, and attitudes.

Content-Based Instruction can be defined as a teaching method that emphasizes learning about something rather learning about language (Davies, 2003, parr. 1), which focused on the topic or subject matter (Peachy, 2003). Students can be more independent, autonomous, and confident to fulfill a real purpose and develop effective study skills with this method such as note taking, summarizing and extracting key information from texts (quoted by Richards, 2006).

3.4. OBJECTIVES

3.4.1 General Objective:

To apply a Didactic Guide with Technical Medical Vocabulary Activities through the Moodle Platform to enhance the reading comprehension.

3.4.2 Specific Objectives:

- To elaborate activities for the identification of the word formation process of technical medical vocabulary through readings to enhance the reading comprehension.
- To apply the appropriate vocabulary learning strategies to complete with technical medical vocabulary to improve reading comprehension.
- To organize the medical vocabulary in reading comprehension activities to help students to understand English medical texts.

3.5 THEORETICAL FOUNDATION

Students in English language learning recognize the importance of vocabulary because without sufficient vocabulary, students cannot understand others or express their own ideas. Another problem a student faces is not only related with their limited vocabulary, but it is in reading in L2. According to Soria (2001), quoted by Büyükdurmuş, (2006) claims that encountering some unknown words might not hinder the general comprehension of a text; however, if learners do not know enough words or the most essential ones, then, they will not understand the text.

The effective motivation for vocabulary instruction and vocabulary strategies will help students understand material they will read. While, Nagy (1988), quoted by Büyükdurmuş, (2006) explains that more intensive instruction, if done well, is also more interesting than memorizing definitions.

It is important to take into account the difference between “to know a word” and “to use a word”. That is to say, the purpose of vocabulary learning and acquisition must be the

ability to remember words and to use them automatically in different language contexts when learners need them (quoted by Büyükdurmuş, (2006).

First, Krashen (1982; 1989; 2003) believes that vocabulary acquisition occurs through comprehensible input. He states that "competence in vocabulary is most efficiently attained by comprehensible input in the form of reading" (1982, p 440) that "contains structure a little beyond our current level of linguistic competence (i + 1) (Krashen, 1982)". As he argues, the learner is able to use the textual context to fill in the gaps in understanding. In fact, one of the most commonly accepted views of vocabulary acquisition is that second language vocabulary acquisition occurs incidentally through comprehensible input (Krashen, 1989) while reading a text (Waring, 2001, quoted by Hemmati & Binti, (2015).

Second, how much the student is reading, and whether the new word is repeated. If the most important words for a student to learn are those that do occur repeatedly, reading will supply the necessary repetition. Providing several repetitions (ten to fifteen) of an unknown word "before it is learned" seems to be essential (Waring & Takaki, (2003), quoted by Büyükdurmuş, (2006).

Of course, in reading activity readers make meaningful use of words and reading is the best practice to boost reading. The acquisition and learning of a word depends on how a word is remembered, the time a word is remembered, whether it can be retained and in what circumstances it can be recalled, quoted by Büyükdurmuş, (2006).

Finally, to memory medical vocabulary requires that students practice specialist vocabulary so that they can use it more confidently and effectively.

For this reason, this didactic guide was structured on the basis of the interesting material on technical medical vocabulary activities to improve the reading comprehension skill. Moreover, the Moodle Platform became the means to focus on Medical Vocabulary and texts to be applied during the two hours per week that the students focused on their reading activity.

The Educative Models most frequently used are Educational Models that are Content-Centered and Educational Models that are Results-Centered. However, what is needed is the implementation of Educational Model Centered on the Process whereby the students play an active role and the professor is a facilitator in the teaching-learning process.

3.6. E-VIRTUAL CONTENTS.

To organize this part, it was necessary to start with an introduction of Medical Word Formation that is focused on the comprised of words, prefixes, word roots, and suffixes and the importance of knowing the component parts of a medical word and their meaning.

The following ten lessons start with different topics on the medicine area for the students at third level of the Medicine School. As mentioned before, the readings were developed by the Department of International Medical Communications at Tokyo Medical University on the EMP undergraduate course for students in the third and four year of their medical course. In addition, each topic has its own lesson with different activities and a homework chart where the students practiced breaking the words into parts and at the end of lesson eight they had an interactive site where they can practice a game with matching the parts of the words with their meanings in online as a feedback.

Topic 1. Word Formation

1. Introduction: Medical Terminology
2. Lesson 1. The Heart
   Pre-reading activity
   Vocabulary Activities
   While reading activity
   Post reading activity
3. Chart of Medical Terminology

Topic 2. Anesthesia

Lesson 2. Anesthesia
Pre-reading activity
Vocabulary activity
While reading activity
Post reading activity

Topic 3. Ear, Nose and Throat

Lesson 3. Ear, Nose and Throat
Pre-reading activity
Vocabulary activity
While reading activity
Post reading activity

Topic 4. Diabetes

Lesson 4. Introduction to insulin and diabetes
Pre-reading activity
Vocabulary activity
While reading activity
Post reading activity

Topic 5 Eye Diseases

Lesson 5. Cataract
Pre-reading activity
Vocabulary activity
While reading activity
Post reading activity

Topic 6. Peritonitis

Lesson 6. Acute Secondary Diffuse Suppurative Peritonitis
Pre-reading activity
Vocabulary Activity
While reading activity
Post reading activity

Topic 7. Musculoskeletal System

Lesson 7. Motor and Musculoskeletal System
Pre-reading activity
While reading activity
Post reading activity

Topic 8. Delivery and Pregnancy

Lesson 8. Cesarean Section
Pre-reading activity
Vocabulary activity
While reading activity
Post reading activity
Games with Medical Terminology

Topic 9. Immunity and Allergy

Lesson 9. Allergic Diseases
Pre-reading activity
Vocabulary activity
While reading activity
Post reading activity

Topic 10. Parkinson's disease

Lesson 10. Levodopa and the progression of Parkinson´s disease

Pre-reading activity

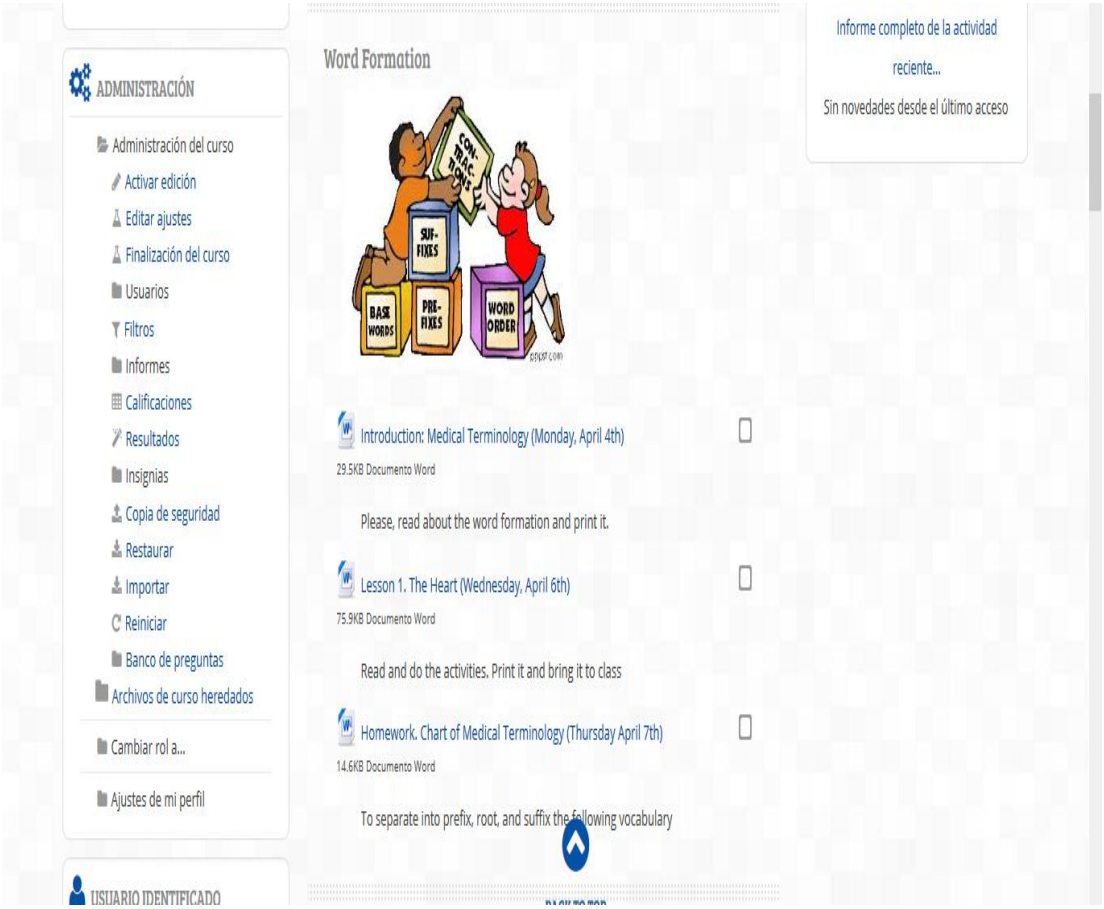
Vocabulary activity

While reading activity

Post reading activity

In the following graphics, we can observe how the topics were distributed in the Moodle platform for each planned week of the semester. They were presented in an attractive way with interesting medical headings.

Figure No.3. 1 Topic 1 Word Formation



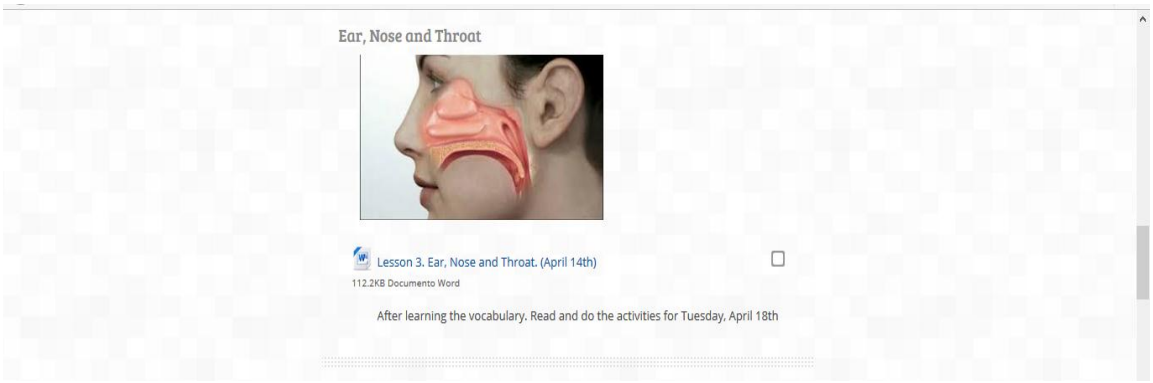
Source: E-virtual Cuenca University, 2015
Author: Sandra Segarra

Figure 3.3. Topic 2 Anesthesia

Figure No.3. 2 Topic 2. Anesthesia

Source: E-virtual Cuenca University, 2015
Author: Sandra Segarra

Figure No.3. 3 Topic 3. Ear, Nose, and throat

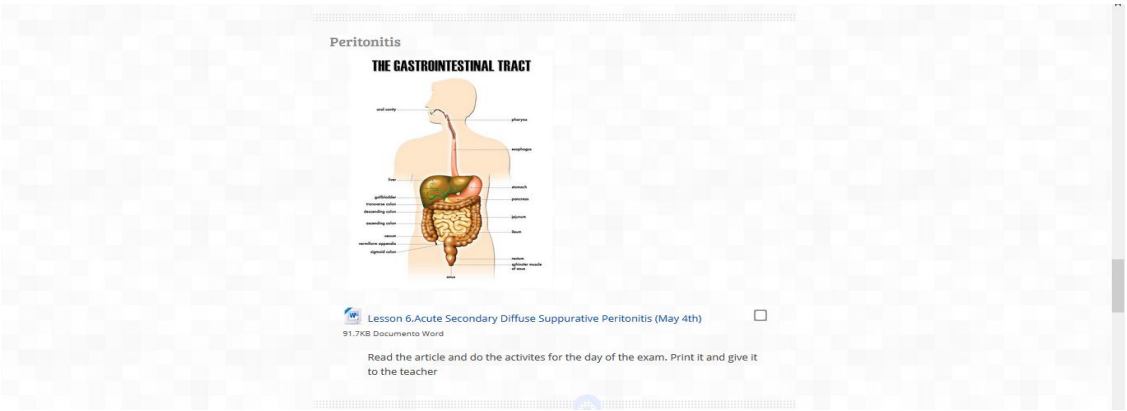


Source: E-virtual Cuenca University, 2015
Author: Sandra Segarra

Figure No.3. 4 Topic Diabetes

Source: E-virtual Cuenca University, 2015
Author: Sandra Segarra

Figure No.3. 5 Topic 5. Peritonitis



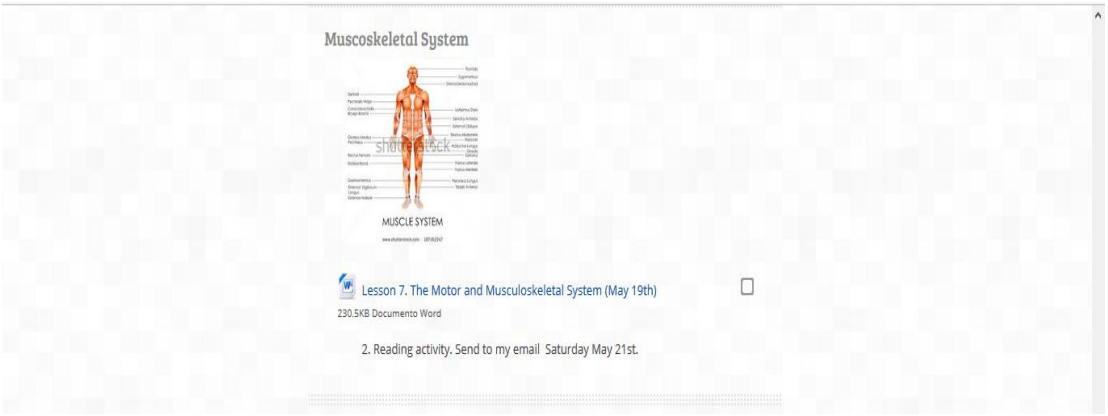
Source: E-virtual Cuenca University, 2015
Author: Sandra Segarra

Figure No.3. 6 Topic 6. Eye Diseases

Source: E-virtual Cuenca University, 2015

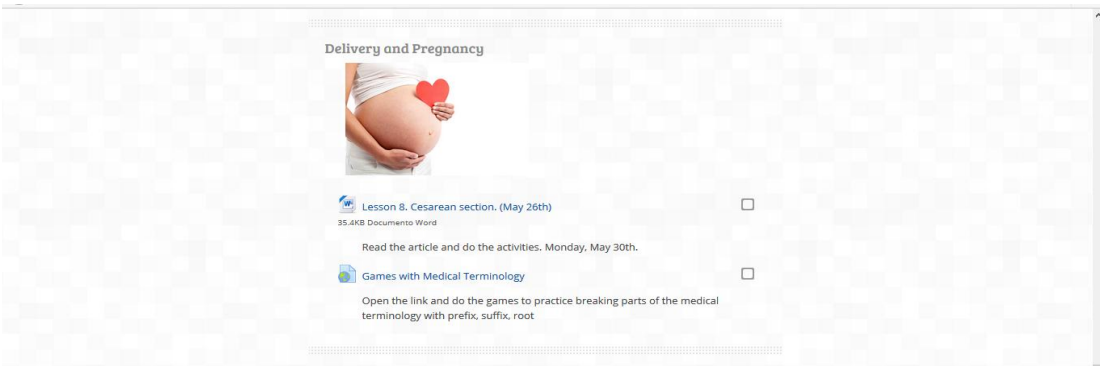
Author: Sandra Segarra

Figure No.3. 7 Topic 7. Muscoskeletal System



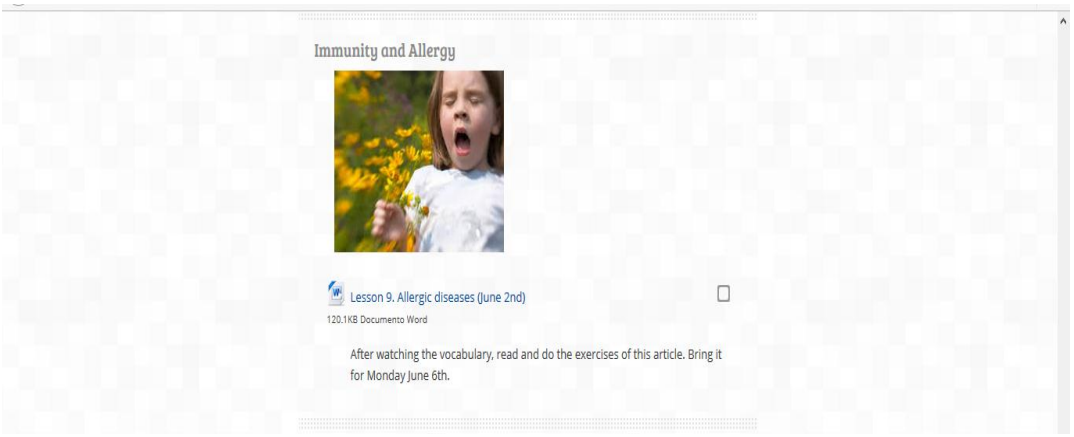
Source: E-virtual Cuenca University, 2015
Author: Sandra Segarra

Figure No.3. 8 Topic 8. Delivery and Pregnancy



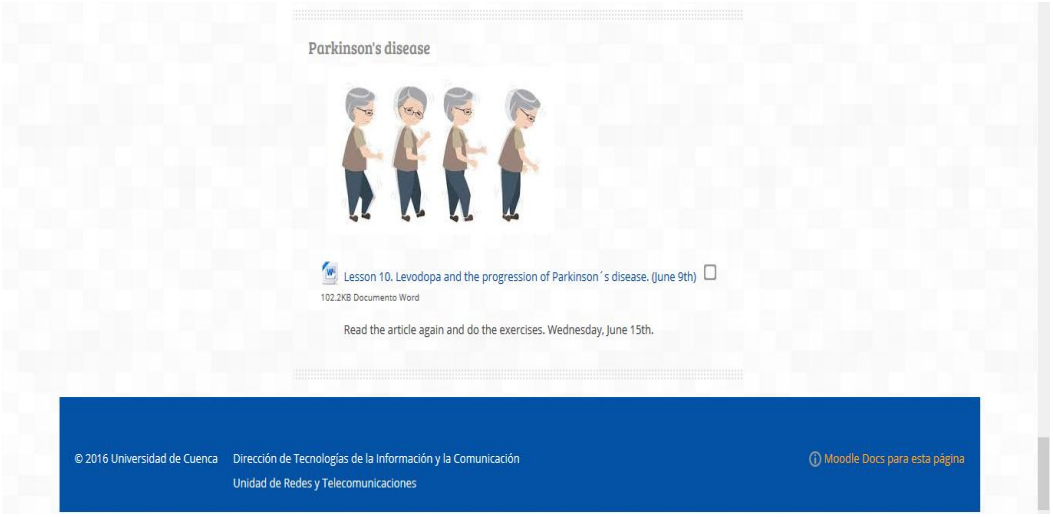
Source: E-virtual Cuenca University, 2015
Author: Sandra Segarra

Figure No.3. 9 Topic 9. Immunity and allergy



Source: E-virtual Cuenca University, 2015
Author: Sandra Segarra

Figure No.3. 10 Topic 10. Parkinson's disease



Source: E-virtual Cuenca University, 2015
Author: Sandra Segarra

3.7. OPERATIONAL ASPECTS

The third level syllabus is structured focusing on General English, and the didactic guide that was presented, focuses on reading activities among the rest of activities done in the course in relation to listening, speaking and writing skills. The Didactic guide was designed to focus on the reading skill specifically, and it includes 10 topics with adapted activities as worksheets after the reading texts and sent by means of the Moodle Platform. All the lessons were classified into three aspects such as pre-reading, while reading, and post reading.

Procedure:

1. The teacher makes the students preview the reading segment, examine the illustrations, headings and other clues to the content.
2. The teacher pre-teaches the vocabulary with images, checks the pronunciation, makes students produce oral and written sentences with the vocabulary presented.
3. The teacher motivates students interact by using the vocabulary in games.
4. The teacher presents vocabulary activities in order to get students can guess their meanings or terms in other contexts where they can identify and match them.
5. The teacher leads the students in thinking about what the topic they are going to read is about.

6. Students read the vocabulary activities and evaluate their predictions, comparing in pairs or groups.
7. Students work on the content of the reading on their computers through the Moodle platform in an autonomous way.
8. The teacher closes the lesson with a review of the content of the reading and grades their process based on the content of the text.

The vocabulary exercises were based on the different medical dictionaries to create examples with the medical terms that were presented in one hour of class previous to the reading. Many of the exercises and definitions in the didactic guide are taken directly from the dictionaries to help students understand the definition of the term, the terms and especially how to use them in context. Example sentences and quotations are used to show how the term is used in real life. These sentences were used for completing, organizing, and identifying with the appropriate terms. Using the dictionary was also an essential part to get a successful language learning.

3.8. EVALUATION

Firstly, each lesson of the guide consisted of the following three sections: Part 1. Pre-reading: answer questions to brainstorm the topic, Word Study: Definitions of technical medical words and general words. Word completion activities and word meanings matching in context. Part II: While reading: reading passage, answer comprehension questions, multiple-choice Items, complete illustrations, vocabulary exercises. Part III. Post-reading: summaries, Ven-diagram, chart completion, and contrasting exercises. It is important to mention each lesson was sent through the Moodle platform because they have 2 hours of e-virtual self-study and after receiving all the input of vocabulary activities during 1 hour of class.

Secondly, the treatment was performed during the semester march and august using the general English program from the syllabus at the same time the technical English proposed in this study. The students worked more on self-study rather than cooperatively due to the reading articles were uploaded in the Moodle platform.

Besides, the researcher assessed the e-virtual activity assisting students´ problems with regard to meaning and reading comprehension. To make sure of their proficiency, the instructor assessed the vocabulary acquisition with a surprised evaluations on matching the terms with the correct meanings, translating the terms and writing the definition of the terms. The results of these assessments were 90 % of the learners gained the 4.5 over 5 in the global score.

Regarding, reading comprehension the students were evaluated on the mid-term exam with an article that contained some of the medical terms seen before in order to verify the comprehension increasing. The items consisted in identifying the main idea, true or false, the correct meaning with the correct term, the correct meaning of the word formation, and multiple choice answers and the conclusion of the passage. The results of this assessment were 70% obtained 3.5 over 5 in the outcome of this skill.

Finally, the results of these evaluations were frequently monitored by the researcher during the intervention.

CHAPTER IV

4. RESULTS AND DISCUSSION

The results of this research are presented in this chapter, they have been distributed in three parts. The first one presents the profile of the participants who took part of this investigation. Secondly, the results of the pretest and the posttest are analyzed and interpreted with their corresponding reflection. In the third part, the hypothesis validation with an analysis to explain the effect of the treatment with a discussion are offered. It is important to mention the hypothesis were validated through U Mann Withney test.

4.1. General data

The profiles of the participants are shown in this section. Two parallel groups of the third level from third, fourth and fifth year classes of the Faculty of Medicine at the University of Cuenca participated in this study, so all of the students took this English course as a mandatory requirement in their curriculum. They have differences in their background making them heterogeneous groups. In addition, all the participants´ characteristics had no significant influence in the final results, but the researcher considered essential to know the lineaments of the participants.

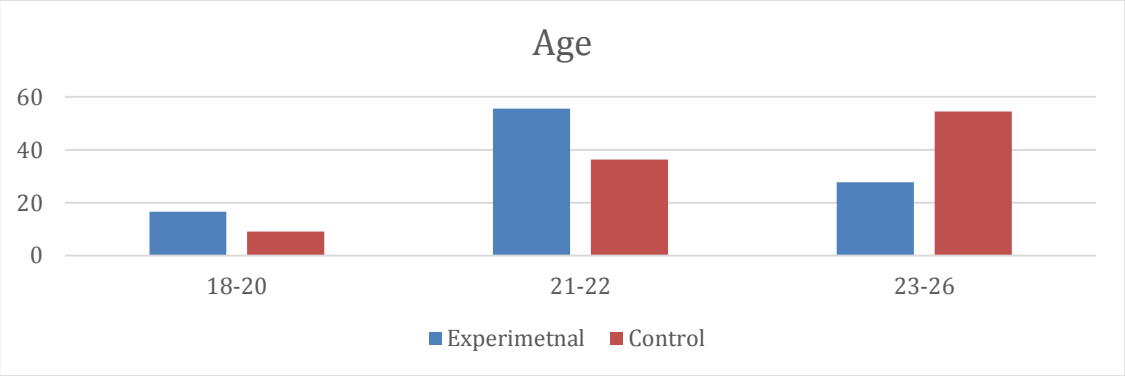
4.1.1. Background

Table No.4. 1 Students´ age

	Experimental		Control		Total	
	N	%	N	%	N	%
18-20	3	17	1	9	4	14
21-22	10	56	4	36	14	48
23-26	5	28	6	55	11	38
Total	18	100	11	100	29	100

Elaborated by: Sandra Segarra

Figure No.4. 1 Students´ age



Elaborated by: Sandra Segarra

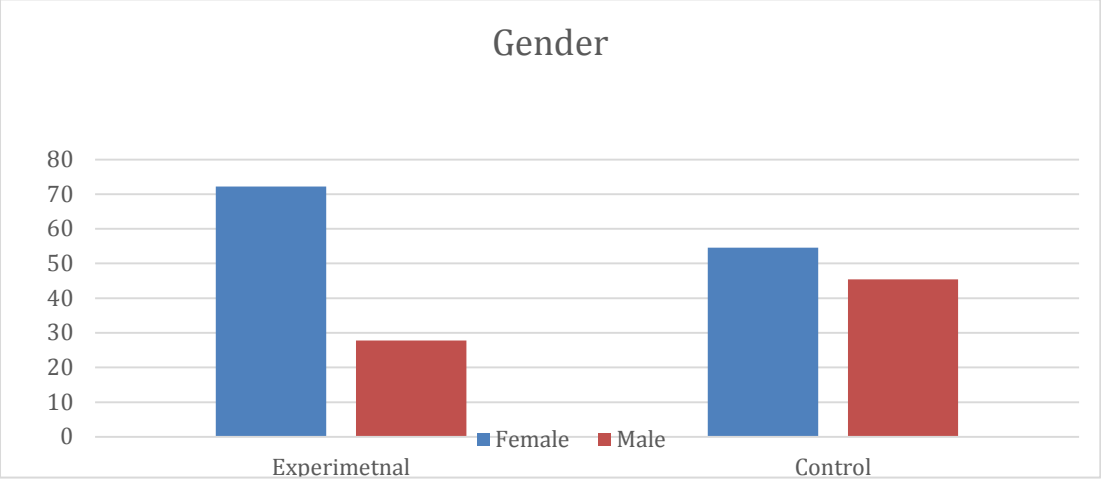
There were 29 participants in the two groups, most of them are ranging between 21 and 26 years in age. It was important to observe that the control group consisted of students who did not take English sequentially, they decided to take this course when they had more time and lower average hours of their major.

Table No.4. 2 Students´ gender

	Experimental		Control		Total	
	N	%	N	%	N	%
Female	13	72	6	55	19	66
Male	5	28	5	45	10	34
Total	18	100	11	100	29	100

Elaborated by: Sandra Segarra

Figure No.4. 2 Students` gender



Elaborated by: Sandra Segarra

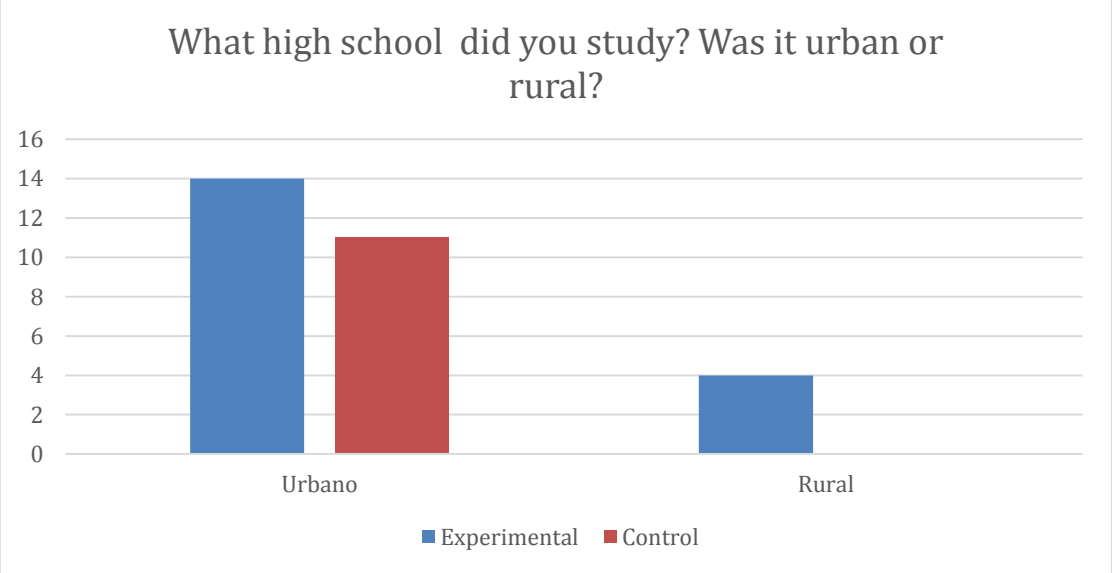
Likewise, the study was applied indistinctly both men and women. The control group consisted of 11 students; 6 females and 5 males, and the experimental group consisted of 18 participants, 5 males and 13 females.

Table No.4. 3 Students´ preparation.

	Experimental		Control		Total	
	N	%	N	%	N	%
Urban	14	78	11	100	25	86
157Rural	4	22	0		4	14
Total	18	100	11	100	29	100

Elaborated by: Sandra Segarra

Figure No.4. 3 Students´ preparation



Elaborated by: Sandra Segarra

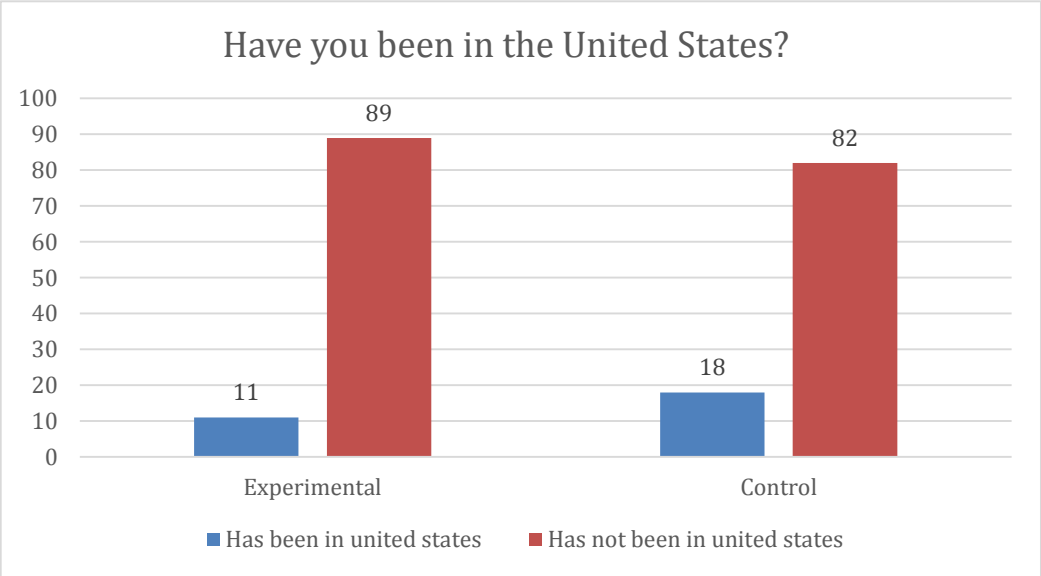
Most of the participants finished their studies in the urban area and a few of them did in the rural one, therefore, their studies have done in educative institutions where they had English subject in their curriculum.

Table No.4. 4 Students have been in the United States.

	Experimental		Control		Total	
	N	%	N	%	N	%
Has been in United States	3	11	3	18	6	14
Has not been in United States	15	89	8	82	23	86
Total	18	100	11	100	29	100

Elaborated by: Sandra Segarra

Figure No.4. 4 Students have been in the United States



Elaborated by: Sandra Segarra

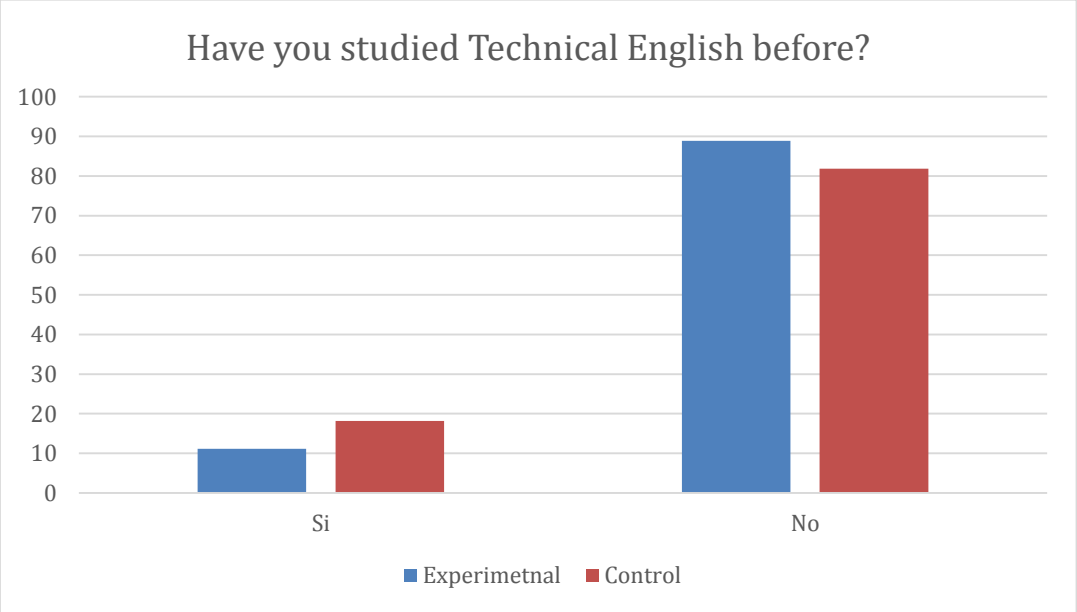
In the following graphic, we have the most of the participants have not been in the United States, as a result they have not had any kind of contact with English nor Technical English. Even though, the few participants who have been in the United States have gone there on vacation, for that reason they have not learned or used the target language for specific purposes.

Table No.4. 5 Students have not studied technical English before

	Experimental		Control		Total	
	N	%	N	%	N	%
Yes	2	11	2	18	4	14
No	16	89	9	82	25	86
Total	18	100	11	100	29	100

Elaborated by: Sandra Segarra

Figure No.4. 5 Students have not studied technical English before



Elaborated by: Sandra Segarra

All the participants approved English I and English II, and according to the syllabi, these courses take into account four basic skills: listening, reading, writing, and speaking. Besides, their curriculum includes a variety of activities and communicative tasks to acquire a level A2 of the Common European Framework. The courses offer to students lexical and grammatical contents, learning achievements, and learning indicators for life in general. Their contents do not take into account topics in Medical English; for this reason, it was necessary to survey them if they have taken Technical English in their courses before, and as a result they did not have English related to medicine.

4.1.1.1 Analysis and results interpretation

The elaboration and implementation of a didactic guide with technical medical vocabulary activities through the Moodle platform to enhance reading comprehension at the third level of the Faculty of Medicine at the University of Cuenca during the school year 2015-2016 was analyzed with an objective test. This test was structured by a total of twelve items grouped in three subgroups: to identify the word formation process of technical medical vocabulary that verifies the first specific hypothesis, to complete activities with technical medical vocabulary that verifies the second specific hypothesis and to organize the technical medical vocabulary in reading comprehension activities that verifies the third specific hypothesis. Moreover, it has generated the result from the general sum of the twelve activities allowing to verify the general hypothesis.

The sample was constituted by a total of 29 participants of the third level of the Faculty of Medicine at the University of Cuenca, eighteen of them belong to the experimental group and eleven of them to the control group.

The statistical analysis was realized with the Software SPSS in its version 22. Subsequently, it was done in groups to identify to complete and to organize the technical medical vocabulary, as well as to generate the grand total. To verify the data, distribution was made by means of the test Shapiro Wilk. It was found that the completion variable has a normal distribution, therefore, in it was used the statistical parametric named t by student, while in the sum for identification and organization was handled the non- parametric test named U of Mann Withney.

In order to validate the results of the four formulated hypothesis, the score of the pretest was subtracted from the score of the posttest, to obtain the Gained score for each variable. The hypothesis were verified contrasting the Gained score in the experimental group with the score in the control group.

The significance level selected for the study is 0.05; in this way, to accept that the control group is similar to the experimental group subsequently to the experiment, the statistical significance must be higher than 0.05. Whereas, whether the value is lower than 0.05 it is accepted that the control group is different to the experimental group.

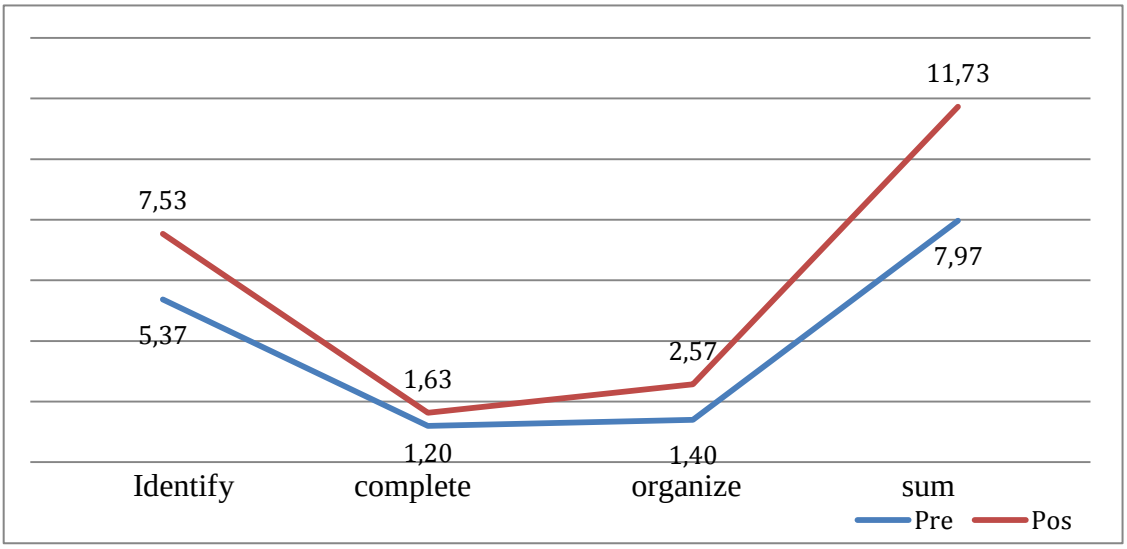
That is to say, with a value lower than 0.05, the hypothesis of the implementation of a Didactic Guide with Technical Medical Vocabulary Activities through the Moodle Platform has enhanced the Reading Comprehension in the students of the Medicine school will be accepted.

Table No.4. 6 Descriptive of the Experimental group

Variables	Moment	N	Media	Standard Deviation	Minimum	Maximum
Identify	Pre	18	5.37	1.57	2.4	8.4
	Pos	18	7.53	1.07	4.8	9.6
Complete	Pre	18	1.20	0.57	0.0	2.1
	Pos	18	1.63	0.64	0.6	2.4
Organize	Pre	18	1.40	0.50	0.6	2.4
	Pos	18	2.57	0.64	1.2	3.0
Sum	Pre	18	7.97	1.74	4.2	9.9
	Pos	18	11.73	1.62	8.1	14.7

Elaborated by: Sandra Segarra

Figure No.4. 6 Situation of the Experimental group before and after.



Elaborated by: Sandra Segarra

The situation that was found in the Experimental group shows that all the variables admit an improvement. The first is the student´s ability to identify, over a punctuation of 9.6, the students obtained a total of 5.37 initially, whereas, after the intervention the Experimental group scored 7.53. Likewise, in the variable complete, in which the maximum value is 2.4, the students obtained a punctuation of 1.20 initially, whereas the Experimental group, after the intervention gained 1.63. Additionally, in the variable organize, in which the average is 3 points, at the beginning the students obtained 1.40, whereas, after the intervention the Experimental group gained 2.57. Finally, the total

that is over 15 points, at first was 7.97 and with the process of the experiment achieved 11.73. In all cases, it is pointed out that Gained scores exist.

According to Krashen´s (1989) idea, quoted by Hemmanti & Binti, (2015) on full mastery of word knowledge through reading, different measures are required to measure full knowledge of vocabulary gained from reading. The word knowledge comes in different levels: Knowledge of identifying the form, completing with the correct term, and organizing the word with the recognition of meaning (p.73). As we can see, vocabulary learning and acquisition is a process and results are seen after the treatment. It is important to state that students can read and understand a text after applying effective vocabulary strategies.

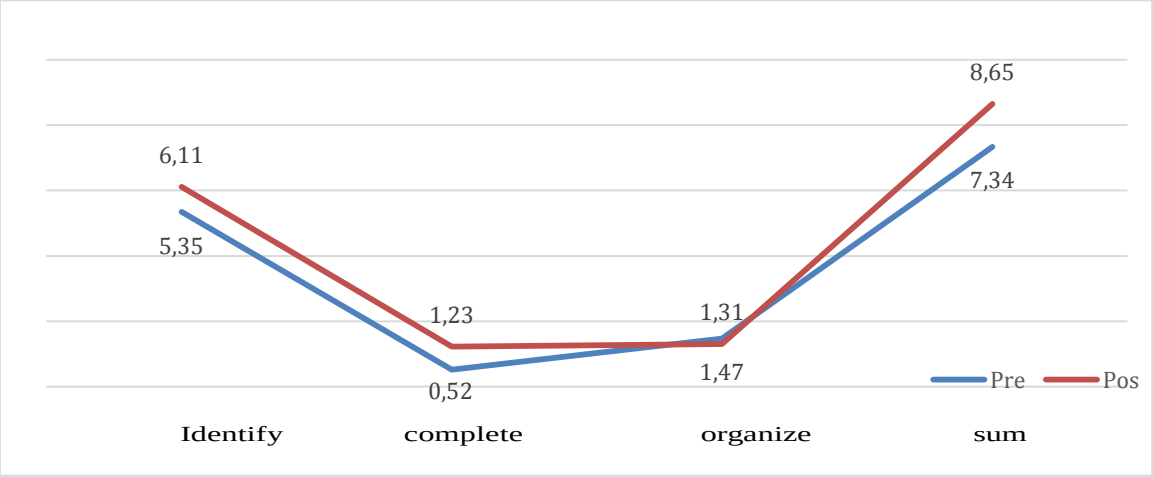
Also, an observation template done by another colleague at the beginning of the intervention allowed us to confirm with 100%, the students discover new words´ meaning doing the guessing activities in context with the teacher's instruction. In each case, it is not necessary they asked neither their partners nor the instructor. The second observation done by the same colleague at the end of the intervention allowed us to confirm with 75%, the students discover new words´ meaning doing the guessing activities in context with the teacher´s instruction. In this occasion, to discover new word's meaning, the students required the help of the partners with the 100% and by asking the instructor with 75%. The difference in the percentage is due to the strategy applied in the second observed class; it was required to interact in a cooperative task where the participants had to infer the correct term in the contexts.

Table No.4. 7 Descriptive of the Control Group

Variables	Moment	N	Media	Standard Deviation	Minim	Maxim
Identify	Pre	11	5.35	1.81	2.4	8.4
	Pos	11	6.11	1.56	4.8	9.6
Complete	Pre	11	0.52	0.55	0.0	1.2
	Pos	11	1.23	0.72	0.0	2.1
Organize	Pre	11	1.47	0.62	0.6	2.4
	Pos	11	1.31	0.36	1.2	2.4
Total	Pre	11	7.34	2.26	3.3	12.0
	Pos	11	8.65	1.74	6.9	12.9

Elaborated by: Sandra Segarra

Figure No.4. 7 Situation of the Control Group before and after



Elaborated by: Sandra Segarra

At first, in the Control Group the variable identify at the moment in which the other group was in the intervention, the value was 5.35; this group obviously was not intervened, it was subjected to the traditional form in class, so at the moment they were evaluated parallel to the other group, they obtained a total score 6.11. In the variable complete, the first evaluation was 0.52, whereas in the second evaluation the score was 1.23. Likewise, the variable organize showed 1.47 in the first evaluation and in the second evaluation was 1.31. Finally, the total score showed a sum of 7.34 in the first

evaluation and 8.65 in the second one. The exception was in the variable organize, which showed Gained scores in the control group.

To verify the hypothesis, a comparison between the Gained Scores in the Experimental group with the ones of the control group was conducted. If the scores are higher in the Experimental group, the work done with them is attributed.

4.2 HYPOTHESIS VALIDATION

4.2.1 General Hypothesis

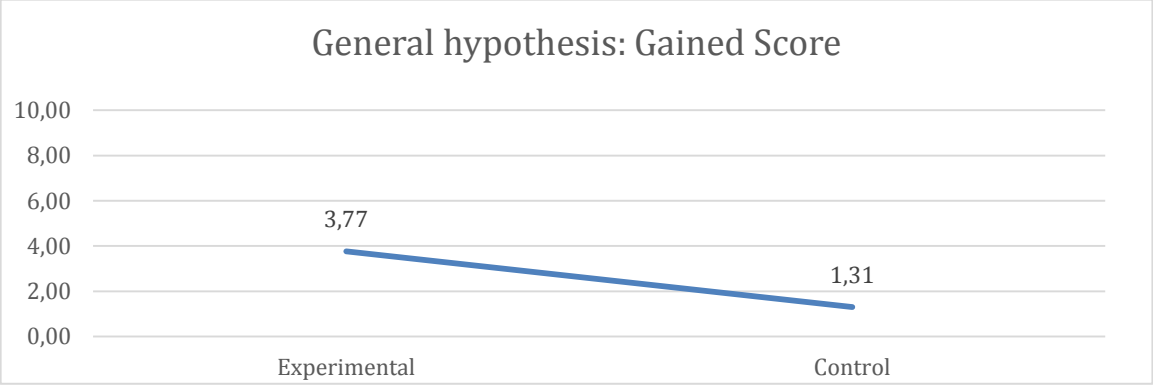
The elaboration and implementation of a didactic guide with technical medical vocabulary activities through the Moodle Platform enhances in a significant way the reading comprehension at the third level of the Faculty of Medicine at the University of Cuenca during the school year 2015-2016.

Table No.4. 8 Validation general hypothesis

Groups	Nº	Gained score	Standard Deviation	Range		Statistics	Sig. (accurate)
				Mínimo	Máximo		
Experimental.	18	3.77	2.09	.90	8.40	U= 29.500	0.001
Control	11	1.31	1.24	0.30	4.50		

Elaborated by: Sandra Segarra

Figure No.4. 8 Validation general hypothesis



Elaborated by: Sandra Segarra

The general hypothesis, which rises the possibility to improve Reading comprehension through a set of technical medical vocabulary activities, has been verified since the statistical test that was used (U of Mann Whitney) is interpreted with an statistical significance of 0.001 (< 0.05) which allows to confirm effectively that the Gained Score of 3.77 is better in the experimental group than in the control group that obtained an increase of 1.31 using the traditional method

4.2.2 First specific hypothesis about the ability to identify

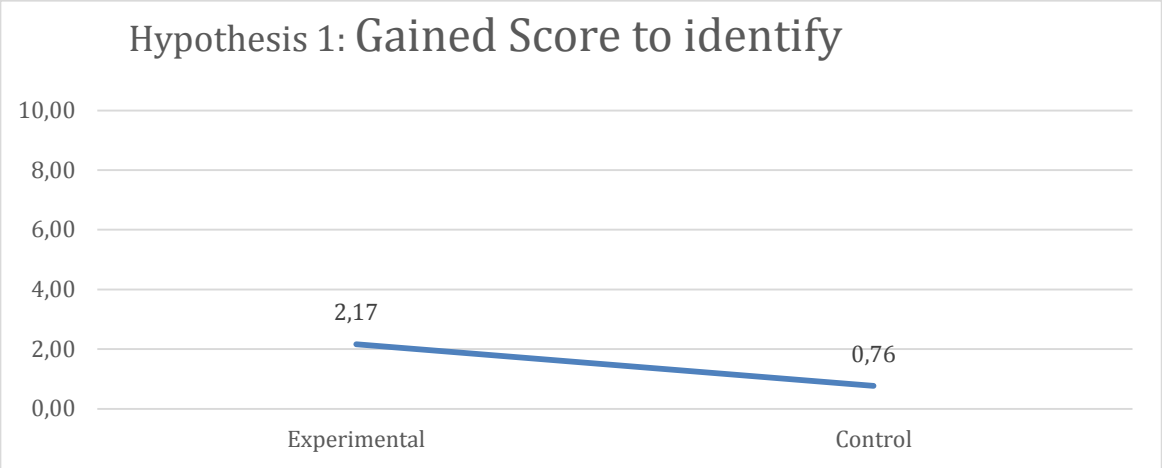
The presentation of reading activities to identify the Word Formation Process of Technical Medical Vocabulary through readings enhances the reading comprehension.

Table No.4. 9 Validation specific hypothesis 1

Groups	Nº	Gained score	Standard Deviation	Range		Statistical	Sig. (accurate)
				Minim	Maxim		
Experimental.	18	2.17	1.66	0.00	4.80	U= 54.000	0.044
Control	11	0.76	1.34	-1.20	2.40		

Elaborated by: Sandra Segarra

Figure No.4. 9 Validation specific hypothesis 1



Elaborated by: Sandra Segarra

The statistical test that was used to verify the relative hypothesis for whether identification activities enhance the technical medical vocabulary in the Medicine students in reading comprehension process has given as a result a value of 0.044 (< 0.05); that is to say, it is possible to affirm that the obtained result of 2.17 in the experimental group is higher than the obtained result of 0.76 in the control group. Therefore, it is attributed that the intervention process in the Moodle platform has improved the reading comprehension skill in a better way than by reading with the traditional method.

Cohen and DePetris (2014), quoted by Solati (2014) state, "medical vocabulary is vast, and learning it may seem like learning the entire vocabulary of a foreign language. Moreover, like the jargon that arises in all changing fields, it is always expanding" (p. 4). Therefore, the ability to identify the word parts and the processes of how most medical terms are formed with their correspondent meanings, will allow students to possess the tools to learn even other and more medical terms in the same way. In medical language it is necessary the use of roots, prefixes and suffixes because they keep the same meaning each time they appear in different contexts. In addition, students will analyze and remember many words increasing their vocabulary repertoire for future encounters. The hypothesis related to the use of identification activities for the word formation of medical words through the Moodle platform enhance the students´ reading comprehension skill has been proven and it is accepted according to the analysis explained in this research.

4.2.3 Second specific hypothesis about the ability to complete

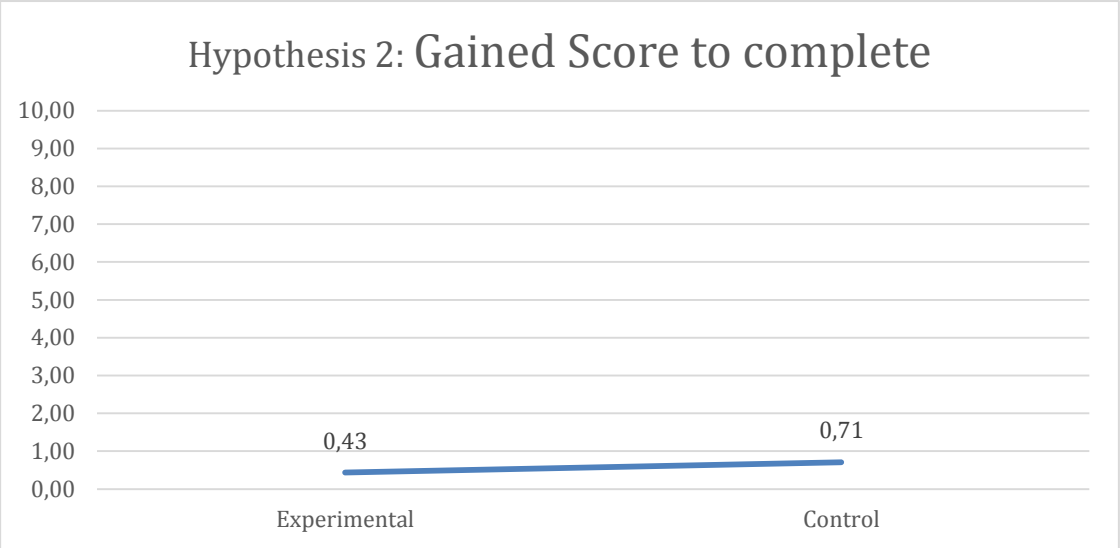
The application of appropriate vocabulary learning strategies in completion activities with technical medical vocabulary improves the reading comprehension skill.

Table No.4. 10 Validation specific hypothesis 2

Groups.	Nº	Gained score	Standard Deviation	Range		Statistical	Sig. (unilateral)
				Minim	Maxim		
Experimental.	18	0.43	0.95	-0.90	2.40	t= 0.832	0.413
Control	11	0.71	0.70	-0.30	1.80		

Elaborated by: Sandra Segarra

Figure No.4. 10 Validation specific hypothesis 2



Elaborated by: Sandra Segarra

The hypothesis that proposes that the completion activities that were generated by means of the didactic guide and implemented through the Moodle platform enhances the reading comprehension skills obtained a statistical test equal to 0.413 (≥0.05). With this result which it is not possible to accept the hypothesis have had an effect in this variable. The completion activity is not different between the experimental group (0.43) and the control group (0.71) since the significance level attributes the minimal differences that exist at random. In this sense, it is possible to interpret that completion activities as generators of a better reading comprehension process, have not had the expected effects but the same are the result of a traditional process (what is done in a regular class has just been transposed to the didactic guide). Maybe there was only a transposition of the same activities that the printed material carries to the platform.

With reference to this hypothesis, we can confirm that using word completion activities also called "Cloze procedure" shows the vocabulary learning in context is not significant. The use of distractors were handled to see to what extent participants could guess correctly, so that partial knowledge could be demonstrated. This showed no significant differences between the group that used this strategy and the group that did not use the experiment. Steinman (2002), quoted by Lu, (2006) describes "the use of cloze procedure as a teaching instrument for students to practice using context clues as a reading strategy and to encourage vocabulary improvement in teaching. In her teaching, the methods of teacher-made cloze texts, rational deletion and accepted word scoring

were combined with the negotiation of comprehension of the text and discussion of the word choice after the completion of cloze texts" (p. 21).

Some of the disadvantages of this process is when there are difficult words, the learners concentrate their mind in guessing the vocabulary instead of understanding the text. Also, the blanks that were required to fill had to fit with the grammar, so the learners concentrate in the correct form of verbs or nouns, since this study focuses on the vocabulary strategies rather than grammar learning. One detail that seemed interesting is the process of interpretation where the readers were using the input information in order to activate their background knowledge and complete what they were reading, because this background knowledge is important in reading comprehension. Another assumption might be that when they were reading, they tried to translate the text into Spanish, as a result, their completion ability was obstructed.

In conclusion, texts with difficulty to guess words are in general more difficult than other texts in many ways at all levels. Completing these texts will require critical thinking skills which is not the point of this study, since this method was used to determine how well students retained the vocabulary. Therefore, the Null Hypothesis (Completion texts with medical words has no significant effect on vocabulary learning strategies) is rejected.

4.2.4 Third specific hypothesis is the organization variable

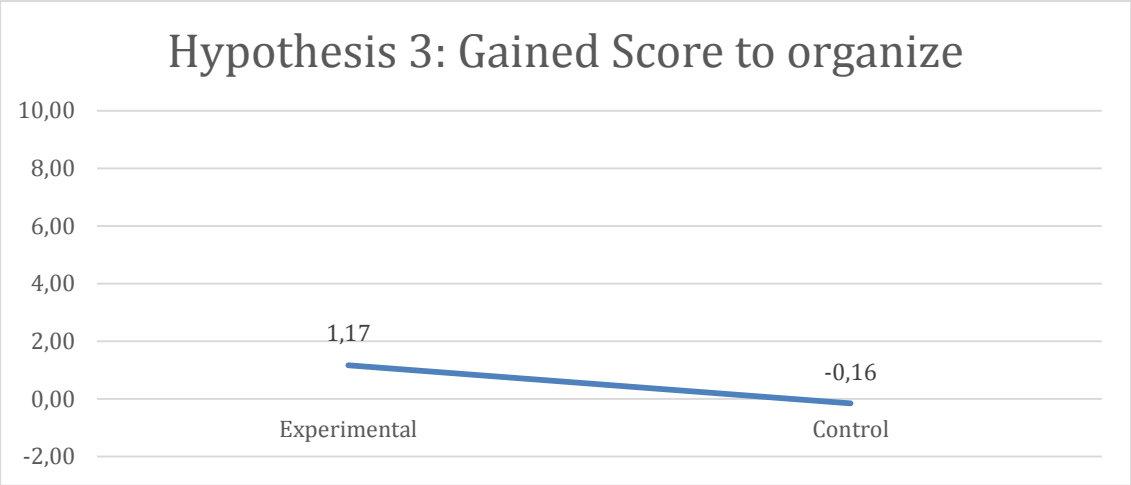
The organization of medical vocabulary in reading comprehension activities helps students to understand English texts.

Table No.4. 11 Validation specific hypothesis 3

Groups.	Nº	Gained score	Standard Deviation	Range		statistical	Sig. (accurate)
				Mínim	Maxim		
Experimental.	18	1.17	0.70	0.00	2.40	U= 17.500	0.000
Control	11	-0.16	0.76	-1.20	1.20		

Elaborated by: Sandra Segarra

Figure No.4. 11 Validation specific hypothesis 3



Elaborated by: Sandra Segarra

Finally, the hypothesis related to organizing the information has been confirmed as an advantage to enhance the reading comprehension skill in medicine students with a significance of 0.000, (<0.05). It is observed that the effective increasing of 1.17 points obeys to the intervention process and not at random. In this sense, it is better to use activities to organize the vocabulary in a didactic guide used in the Moodle platform as part of the reading comprehension because it obtains a better score than the one that is used as a traditional method. It has been proven and it is accepted according to the analysis explained in this research.

For this hypothesis the organization of information in the medical passage leads students to have a clear idea of understanding the meanings and identifying the words which are conceptualized in the passage. "Vocabulary development is both an outcome of comprehension and a precursor to it, with word meanings making up as much as 70-80 % of comprehension" (Bromley, 2002, quoted by Hassen, (2014-2015) p. 6). Using matching items and multiple choice items are effective ways of organizing activities when measuring the learner´s ability to identify the relationship between the meaning and the words, especially when they have parallel concepts such as: terms and definitions and cause and effects that the passage of the pretest and posttest had.

4.3 Discussion

As it was mentioned in the analysis section, the researcher was able to see students reading and experimenting with medical texts, and learning new medical words being taught through vocabulary strategies. Students were attempting to learn new words through identifying word formation and organizing meanings of medical words in reading medical texts through the Moodle platform fomenting in this way their own self-study. These observations correspond with the data collected on the pre and post assessments.

For the learning process, teaching vocabulary must be for comprehension and for production. Comprehension depends on effective strategies which help learners to understand lexical items and retain these in their memory. The function of production relies on strategies to help learners to activate their lexicon, recall it from their memory and use it in different contexts. Nation (1990), quoted by Mukoroli, (2011) states that "vocabulary items in the learners´ receptive vocabulary, might not become really available for productive purposes, since vocabulary reception does not guarantee production" (p.20). In addition, some teaching strategies were better for comprehension than for production, and vice versa.

Moreover, the researcher observed students were engaged through other activities such as the brainstorming vocabulary activity and game activities that were used during the pre-teaching class; the students´ motivation was very active and participative. These observation correspond with the data collected on the observation template done by a colleague.

The results showed clearly the success of the use of a Didactic guide with interactive activities which the researcher consider essential to implement in her classroom for effective incidental instruction on vocabulary strategies rather than continue working with the traditional instruction model. In this way, students were able to be involved with medical information that came from texts that will be shared with other colleagues in the future.

The results of the current study indicate that learners have gained vocabulary knowledge of the new medical words from reading which confirms a previous study quoted by Nagy (1988) discussed in the literature, he stated a major motivation for vocabulary instruction will help students understand information they are interested to read.

CHAPTER V

5. CONCLUSIONS AND RECOMMENDATIONS

5.1 CONCLUSIONS

To conclude the present study, it can be done in four aspects.

1. Vocabulary Knowledge is essential in reading comprehension especially in Medicine. Consequently, the aim of this study was to elaborate and implement a didactic guide with an effective direct vocabulary instruction and appropriate vocabulary strategies through the Moodle Platform to enhance reading comprehension at the third level of the Faculty of Medicine at the University of Cuenca

2. Essential activities to identify the word formation of the medical words affects in a positive way the students´ learning outcome, especially in understanding the meaning of word when reading medical texts and to increase their knowledge by using medical terms.

3. Activities to complete the texts with technical medical words help more to develop critical thinking skill and the student´s ability to relate the medical terms with their medical knowledge in the construction of medical word meanings. However, this hypothesis of completion activity was rejected and did not have the expected effect, since it seemed for the participants a difficult activity to guess the correct medical term, as a result it required more effort.

4. Substantial activities to organize meanings and terms improve the students´ reading comprehension especially by guessing and inferring vocabulary from the context, at the same time familiarizing students beforehand with the relevant technical terms. This study verifies that the success of the participants overcoming the reading comprehension improvement in two of the raised hypothesis and admits the guide as **a validated outcome tool**.

To sum up, as an English teacher in the Faculty of Medicine, I consider fundamental to provide students with appropriate instruction material and strategies to help them to gain self-confidence and autonomy in academic literacy. The lack of medical material in English motivated the researcher to contribute with her support to the Faculty of Medicine in looking for valuable strategies in teaching medical vocabulary. It is possible to conclude that efforts spent in developing the didactic guide were productive.

5.2. RECOMMENDATIONS

According to this study´s results, it is possible to recommend the following:

1. To achieve effective vocabulary instruction and meaningful vocabulary strategies instructors should be encouraged to use the didactic guide that facilitates students' learning process.

2. The Faculty of Medicine should require language instructors to increase the amount of medical language in the English courses and embed it in every skill such as reading, listening, writing, and speaking.

3. The design of the English medicine language curriculum should consider the students´ needs and interests. With this we will motivate, facilitate, attract the students´ attention, and help them become autonomous learners.

4. It is recommended to replicate similar studies in using new strategies with innovative tools such as the blended and flipped learning in teaching medical English now.

5. The researcher might consider spending some time evaluating how vocabulary is taught across the content areas. There is reading comprehension involved in all content areas, and although the researcher focused on vocabulary explicitly taught in the general medical field, it would be interesting to see if these strategies show an improvement of student´s academic achievement when they graduate and study their own specializations.

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ATTACHMENTS

Attachment 1. Approved Project

UNIVERSIDAD NACIONAL DE CHIMBORAZO

VICERRECTORADO DE POSGRADO E INVESTIGACION

INSTITUTO DE POSGRADO

PROGRAMA DE MAESTRIAS EN LINGÜÍSTICA APLICADA AL APRENDIZAJE DE INGLES

DECLARACION DEL PROYECTO DE INVESTIGACION

TEMA:

Elaboration and Implementation of a Didactic Guide with Technical Medical Vocabulary Activities through The Moodle Platform To Enhance Reading Comprehension at the Third Level of the Faculty of Medicine at the University of Cuenca during the school year 2015-2016.

PROPONENTE:

SANDRA NOEMI SEGARRA LAZO

RIOBAMBA-ECUADOR

2015

PROJECT GRADUATION

1. TOPIC.

Elaboration and Implementation of a Didactic Guide with Technical Medical Vocabulary Activities through The Moodle Platform To Enhance Reading Comprehension at the Third Level of the Faculty of Medicine at the University of Cuenca during the school year 2015-2016.

2. PROBLEM DEFINING.

2.1 Research Location

The investigation is going to be carried out in the Faculty of Medicine at the University of Cuenca. It is an Ecuadorian university located in Cuenca as the principal university of Azuay Province.

2.2 Problematic Situation

English language has become a significant tool in the last 30 years, and it is now a fundamental requisite for communication in every field.

The use of the Internet, and especially the virtual learning environment, in combination with the learning process, benefits many students and teachers, and it has become a necessary implement in today´s life. Aware of this, the University of Cuenca uses information and communication technology as a supplementary means, such as L2 through the Moodle Platform, to improve the four skills of learning.

The Faculty of Medicine, together with the Department of Languages, because of the high number of hours in other subjects in the curriculum, have decided to reduce the six hours of English classes a week to four face to face class hours and two hours using the Moodle Platform. The proposals of the Department of Language in working for reinforcing specific areas, such as speaking, listening, reading, and writing through the Moodle Platform are interesting. The main problem, especially in reading, is that there

are not enough didactic alternatives to adapt the Teaching Learning Process to the needs of students in the Faculty, one of which is technical medical vocabulary in reading articles for comprehension.

The profession of teaching English as a second language claims to have, first of all, well prepared teachers. In addition, a great number of teaching aids, materials and well-conceived methods enhance the learners´ enjoyment of lessons, and what is more important teachers search for suitable materials for further studies. Therefore, the author of this investigation has perceived that, in the specific case of the University of Cuenca, there is a need to implement didactic material related to medical terminology with techniques and teaching methods because of the following problems:

The students´ learning is weak because there exist few activities related to word formation processes even considering the fact that medical terms are coined in English from Latin and Greek root words, prefixes and suffixes.

The book and readings used at present in class do not explain the technical language used in the texts. Didactic materials in the future need to be more oriented to medical terminology.

As an English teacher of the Department of Languages of the University of Cuenca, I have found myself involved in the process of teaching English in the Faculty of Medicine. I can say that many times I have felt frustrated in the process of teaching English because of the fact that the book used is not appropriate for the specific purpose –Medicine. *The Open Mind*, the book they use now, is a book specialized to interact effectively with others in English in a wide variety of communicative situations: environment, at work, when traveling, online, and so on. It is focused on grammar aspects and on readings according to the topics of each unit. These units do not provide a meaningful framework within which the students can improve their knowledge and their skills in English for Specific Purposes, in this case Medicine. They do not have the opportunity to be in contact with medical terminology that will be used in their future profession. Of course this has been a disadvantage, and at the moment, students have to read articles outside of the book about medicine.

The Educative Models most frequently used are Educational Models that are Content-Centered and Educational Models that are Results-Centered. However, what is needed is the implementation of Educational Model Centered on the Process whereby the students play an active role and the professor is a facilitator in the teaching-learning process. The present curriculum of study at Cuenca University is the teaching of English for general purposes. This focus does not pave the way to develop applied English to Technical Medical issues. Another weakness of the present syllabus is that when graduate professionals are carrying out studies abroad they are not prepared in background knowledge such as technical medical vocabulary.

The investigation carried out in this work was in the form of a survey given to the students of the third level of the School of Nursing. The results show the necessity of this study. In addition, an interview was performed with one specialized doctor, one medical intern student and one undergraduate student of medicine. Dr. Boris Calle, pediatric neurologist, Dr. Jorge Abril, graduate student, and a last year medical student, Gabriela Fernández de Córdova, affirmed the need to have knowledge of specialized English to help students of Medicine to be familiar with the terminology used in their field. The results of these interviews have served as a basis of this study.

After having made the diagnosis of the weaknesses to be investigated and having declared the main problems of the Teaching-Learning Process at the Medical School of the University of Cuenca, it is necessary to elaborate a Guide with relevant Technical Medical Vocabulary Activities to enhance the Reading Comprehension that supports English for Specific Purposes, through the Moodle Platform used at present.

2.3 Problem Formulation

To what extent can the elaboration and implementation of a Didactic Guide with Technical Medical Vocabulary Activities through The Moodle Platform enhance Reading Comprehension?

2.4 Derived Problems

- The lack of reading activities to identify the Word Formation Process of Technical Medical Vocabulary through readings affects the reading comprehension.

- The inadequate use of vocabulary learning strategies in completion activities with technical medical vocabulary influences in the reading comprehension skill.

- The limited knowledge of organizing the medical vocabulary in reading comprehension activities affects students to understand English texts.

1. JUSTIFICATION

Vocabulary learning is an important step in a language learning process, and for Specific Purposes in the ESL classroom it is necessary to develop effective teaching strategies which could help learners in their language acquisition and in understanding written articles in their field of medicine.

English courses in the universities of Ecuador are being designed to help the students learn General English including syntax and grammar. However, the textbooks are not selected in relation to any particular profession, or are not designed taking into account specific needs of the students when they finish their majors. The texts of the passages, the vocabulary, and the skills emphasized are not based on the students´ needs.

For all of these reasons, the English language as taught at the Medical School of the University of Cuenca should be improved by focusing on the necessities of the students. As has been explained above, students of the medical school are taught English without sufficient emphasis on their career.

After having specified the previous problems, it can be seen that there is a necessity for the elaboration of a didactic guide intrinsically designed for the Faculty of Medicine of the University of Cuenca. This didactic guide would contain the material of the syllabus

of the Moodle Platform. Part of the material would entail technical medical vocabulary and activities to improve reading comprehension.

Moreover, the Moodle Platform would be the means to focus on Academic Medical Vocabulary to be applied during the two hours per week that the students would be expected to use the platform. For many medical students, reading comprehension of English medical texts for obtaining information about the latest technological and scientific developments in different areas of their major, would be of great benefit towards their future needs. Therefore, the Didactic Guide would provide interesting material for the instructors to use on the Moodle Platform. Students would gain solid understanding to improve their knowledge of technical medical vocabulary.

The didactic guide would not only constitute a vehicle for developing reading skills through the implementation of technical medical vocabulary, but would also develop knowledge in the field of medicine. The activities would entail the presentation of texts encouraging the use of medical terminology. The students would become familiar with such technical medical terms. In addition, the didactic guide would serve as a digital support for the development of extracurricular activities.

This investigation would lead to the benefits derived from theoretical and practical knowledge for both students and teachers. The implementation of a Didactic Guide would serve the students at the Faculty of Medicine to learn technical medical vocabulary. Some of the exercises would concentrate on answering questions, checking the key words and main ideas, and reading a passage again to find mistakes in order that the students can have a deeper understanding of the passages they have read.

The purpose of this thesis is to help teachers to be facilitators, to create conditions and opportunities through interactive readings, and most important of all to raise the students' motivation. This research is important because the design of a didactic guide will help medical students to understand new information and to achieve better comprehension of technical medical texts in the future, through the acquisition of technical medical words by means of activities on the Moodle Platform.

2. OBJECTIVES

4.1. General Objective

To determine the effect of the elaboration and implementation of a Didactic Guide with Technical Medical Vocabulary Activities through the Moodle Platform to enhance the reading comprehension at the third level of the Faculty of Medicine at the University of Cuenca during the school year 2015-2016.

4.2 Specific Objectives

4.2.1. To present reading activities to identify the Word Formation Process of Technical Medical Vocabulary through readings for enhancing the reading comprehension.

4.2.2. To apply the appropriate vocabulary learning strategies in completion activities with technical medical vocabulary for improving the reading comprehension skill.

4.2.3. To organize the medical vocabulary in reading comprehension activities to help students to understand English texts.

5. THEORETICAL FOUNDATION

5.1 Background

Revising the literature from abroad, it was found that there are multiple studies in regard to Didactic Guide: Needs of the First Year Pre-Medical Students at Sebha University, Libya attempts to investigate the English language needs of the pre-medical students of the University of Sebha in order to understanding students´ language needs and to check if these needs are fulfilled with the existing syllabus and program used with them for teaching English. (Ergaya, 2010)

Garzón I, C. Garzón et al Developing a Practical Guide for Teaching Histology. an Evaluation of the Didactic Components is a valuable tool complementing and making learning more dynamic, using creative didactic strategies that simulate the presence and

generates a dialogue in order to offer students different possibilities to improve their understanding and self-discovery learning.in medical histology. (Garzón, y otros, 2013)

A Didactic Guide, in the national field of Ecuador it was found little.
Aguilar Feijoo R. M (Didactic Guide for Promoting Self-Study. The UTPL´S Open and Distance Department´s Quality Assessment and Improvement) Universidad Técnica Particular de Loja, UTPL, to Open and Distance System pedagogical model (1998-1999) texts (compilations) The Didactic Guide is a valuable tool complementing and making the basic text more dynamic in order to offer students different possibilities to improve their understanding and the self-study process. (Aguilar, 2006)

Didactic Guide with Methodological Strategies Based. Unidad Educativa Particular Evangélica ¨4 de Julio¨, Ibarra. This guide with methodological strategies based on the Multiple Intelligences Verbal-Linguistic, Visual-Spatial, Bodily-Kinesthetic and Musical, helps to the daily labor of the English Teachers, in the same way to students to achieve the best success to learn the English language. (Cuchala & Padilla, 2011)

A Didactic Guide for Teaching and Learning English through Web Sites Oriented to communicative competence in English. The Guide includes a collection of classroom activities, selected websites, accuracy-oriented exercises, and electronic learning activities. It also includes sound and image as contributing factors to stimulate interest, concentration and attention. At Cuenca municipality. (Tenemaza & Jarama, 2010)

After having analyzed some of the existing bibliographies at web sites and editorials, the author of the present investigation states that a Didactic Guide, with emphasis on medical terminology and comprehension of medical texts has not been produced, neither with respect to books nor to the existing Moodle Platform. Therefore, this investigation involves an unprecedented tool for the Medical School at the University of Cuenca.

1.2 SCIENTIFIC FOUNDATIONS

Every investigation needs a scientific basis. The present investigation will relate philosophical, epistemological, psychological, pedagogical, and legal bases to reality through the analysis of the present course, syllabus, materials, teaching methods, programs, and the former Moodle Platform used for the teaching of pre-medical students, as a starting point to carry out a new proposal. For the development of the present research it is relevant to investigate how a Didactic Guide with Technical Medical Vocabulary through a Moodle Platform will enhance reading comprehension.

1.2.1. Philosophical foundations:

Marx and Engels wrote: The bourgeoisie cannot exist without constantly revolutionising the instruments of production, and thereby the relations of production, and with them the whole relations of society. Conservation of the old modes of production in unaltered form, was, on the contrary, the first condition of existence for all earlier industrial classes. Constant revolutionising of production, uninterrupted disturbance of all social conditions, everlasting uncertainty and agitation distinguish the bourgeois epoch from all earlier ones. (Marx and Engels, 1847).

The creation of a new and higher form of human society has been established by the development of capitalism. On the last years with the advance of industry, science, technology and the global economy requires career-specific language because the information comes to the receptor immediately. Since this point of view, most of the information and the knowledge come to the professionals in English, and, in this case, the medical professionals have to be prepared in relation with a technical language to enhance their production within the investigation; for this reason, this thesis plays a vital role by solving immediate needs of the medical students.

1.2.2. Epistemological foundations:

According to the concept of complex thought of Edgar Morin: It is not possible to conceive fragmented education when the whole is not learned. Knowledge must be separated from the inadequacy of disconnected and divided skills, since only the

articulation and organization of skills allows an understanding of the whole. Therefore, knowledge becomes pertinent when education refers to the complex, to the context, in a multidimensional way and within the global concept (Morin, 1980).

For Morin, the multidimensional aspect sees the human being and society as complex units in their different dimensions, but each part should be linked to the others in an interactive circuit. In education there is the need to find strategies that allow a meaningful learning as a global concept that provides the development of skills of all students and culminate in the provision of methodologies to let students to use English as a whole within the medical world they are involved.

1.2.3. Psychological foundation

This work can be based on the theory of constructivism of Piaget, Jean Piaget (1896-1980) believed that children's play had an important role in constructivism and learning. His theory expounds that we learn through assimilation and accommodation. Piaget's theory of constructivism is one of "Cognitive Constructivism". An example was his belief that children could not reach maturation, they cannot take on certain tasks until they mature psychologically.

The technical medical vocabulary activities in English take into account the needs of students´ that will be future professionals to locate them in a real context to work in an autonomous way; moreover, it will let the most effective use of the students´ time by defining their specific tasks, skills and activities, building their progress for achieving their learning objectives. The new texts to be applied must be focused on students´ needs, in this case as the researcher work for Medicine with medical terms to facilitate the students interpret medical content in a more profound way. For this reason, the didactic guide pretends to be a valuable tool which provides of meaningful practice to let students gain confidence.

1.2.4 Pedagogical Foundation

Vygotsky states language was central to the development of thought; words were the means through which thought was formed. It is important to go beyond direct

experience in teaching scientific concepts and to mediate experience with words; experience alone is not enough since the experience is an isolated observation unless it is put into words and understood in a larger context (Howe, 1993).

For Vygotsky language skills take an important role for creating meanings and to join new ideas to past experiences in cognitive development. Here the medical students´ prior knowledge is essential for developing the meanings of new works that are learned when they read medical articles in this way the learners express their complex concepts through words. Learning is connected to external experiences that is transformed into internal processes through the use of the language.

As it was said before the technical medical literature comes in English, reason why undergraduate students and graduate students need much more understanding of English texts. The present research will help both undergraduate and graduate students to interpret texts through the implementation of technical medical vocabulary activities.

5.2.3. Sociological foundation:

Durkheim believed that society is the source of morality; therefore, the society could be reformed, especially through moral education, morality is composed of three elements: discipline, attachment, and autonomy. Discipline constrains egoistic impulses; attachment is the voluntary willingness to be committed to groups; and autonomy is individual responsibility. Education provides children with these three moral tools needed to function in society. Adults can also acquire these moral tools by joining occupational associations. According to Durkheim, these associations would include members of a particular occupation regardless of class position and could provide a level of integration and regulation, both of which tend to be weakened by the division of labor. (1858-1917).

According to Durkheim, this work is based on that the human being interacts with discipline, attachment and autonomy in the society. The moral and ethics aspects go in hand with the knowledge and it leads to improve the medical professionals in all aspects of their personality knowing that a fundamental part of their profession is to have the

knowledge of technical medical English to understand their medical information to be applied for the social benefit of their patients.

1.2.6. Legal bases:

This research is bases on the requirements dictated by the constitution as it is shown in the following article from the legal bases:

LOES. Art 9. Superior Education and good living. A superior education is an indispensable condition for the construction of the right of good living within the intercultural context, the respect for the diversity and harmonious coexistence with nature. Law. No. T. 4454-SNJ-10-1512, SAN-2010-672

Art 12. Principles of the System. The system of Higher Education will be governed of the principles of responsible autonomy, co-government, equal opportunities, quality, relevance, integrity and self-determination for the thought and knowledge production within knowledge dialogues, universal thought and global technological scientific production.

UNACH Regulation
Organization of Master program studies:

Art. 74. The Master studies should be based on the scientific research, aimed at deepening of an area of knowledge with scientific and academic purposes.

5.2 Theoretical Framework

If we start from the fact that the theme of this study is A Didactic Guide with Technical Medical Vocabulary Activities through Moodle Platform to enhance the Reading Comprehension, therefore the following theoretical base is to be reviewed:

Vocabulary Instruction and Reading Comprehension.

Vocabulary knowledge is fundamental to reading comprehension; it is necessary to know what the words mean to understand a text. The proportion of difficult words in a text increase the text difficulty, and a reader's general vocabulary knowledge shows of how well that reader can understand text. (Anderson & Freeboy, 1981).

The effective vocabulary knowledge is an essential process of education and this should not become an obstacle for students on their learning process. Meanwhile, a learner must master a store of words in order to be instructed and operable.

The relationship between vocabulary and comprehension invite an analysis: if we simply teach students more words, they will understand text better. A major motivation for vocabulary instruction is to help students understand material they are about to read. If traditional instruction is not having this effect, teachers should know why not, and what to do about it. (Mezynski, 1983; Pearson & Gallagher, 1983; Stahl & Fairbanks, 1986).

The purpose of this investigation is to establish a basis for the learner can improve reading comprehension with an effective vocabulary instruction through the Moodle Platform.

The term "vocabulary" should be defined as stages that a person pass for acquiring new words and new meanings. Therefore, this study focuses on medical terminology which is regarded as one of the most difficult language. It is essential for medical students to learn these terms, as they are a prerequisite to them being able to solve problems in their respective careers and disciplines (Duan, 2005). There are several studies that relate to Vocabulary Learning Strategies (VLS) in relation to medical students.

Learning Strategies can be defined as specific actions, behaviors, steps, or techniques used consciously or unconsciously to improve their progress in apprehending, internalizing, and using a second language (Oxford, 1994). Oxford (1990) believes that these strategies can make learning easier, faster, more enjoyable, self-directed, effective, and transferable to new situations (quoted by. Therefore, providing students with

vocabulary learning strategies will lead them becoming successful in learning language and for medical students will help them understand and work in their field efficiently.

Learning complex medical terms is essential for medical students in their work life progress later on, at the same time, teachers would be aware of what effective strategies to use for improving learning medical terminology.

Vocabulary Learning Strategies

Schmitt (1997) defines Vocabulary Learning Strategies as "any action which affects this rather broadly-defined process" (p.203). Similarly, Cameron (2001) defines Vocabulary Learning Strategies as "actions that learners take to help themselves understand and remember vocabulary" (p. 92).

There have been several classifications of Vocabulary Learning Strategies developed by different researchers. The Oxford strategy (1990) divided all the strategies into *direct* and *indirect* strategies. Direct strategies involve direct learning and they branch into memory (e.g. associating, using imagery or keywords), cognitive (e.g. repeating, translating, taking notes), and compensation (e.g. getting help, avoiding communication, using mime and gesture). Whereas, indirect strategies contribute indirectly to learning and branch out into metacognitive (e.g. organizing, setting goals), affective (e.g. taking VLS for Medical Terminology risks), and social strategies (e.g. asking for clarification/verification, cooperating with peers, asking for correction).

Schmitt (1997) developed his taxonomy dividing vocabulary-learning strategies as *discovery* strategies and *consolidation* strategies. Discovery strategies are those which are used in discovering the meaning of a new word such as guessing from context, asking others for meaning, guessing from parts etc. In contrast, consolidating strategies deal with retention of a word once it has been encountered. The first one, determination strategies are based on guessing on structural knowledge, guessing from context, using references, etc., and social strategies are those based on asking for meaning of new words, whereas the latter includes social strategies, memory strategies, cognitive strategies, and metacognitive strategies.

The taxonomy in Jones´ study (2006) who classifies vocabulary learning strategies in terms of dictionary strategies, guessing strategies, study preferences, memory strategies, autonomy, note taking, selective attention and social strategies. Dictionary strategies deal with the use of dictionaries to find and understand new words, both monolingual dictionaries and bilingual dictionaries. According to Fan (2003), proficient students make use of dictionary strategies more often than less proficient students. Although, students depend more on the target language, they prefer bilingual dictionaries (Baxter, 1980; Hsien-Jen, 2001 as cited in Seddigh & Shokrpur, 2012). Guessing strategies on the other hand cover guessing the meaning of the words from the context or from knowledge of word structure.

Study preferences are the strategies that show how the students like to study vocabulary in terms of group study versus individual study. Memory strategies on the other hand involve relating the new word to some previously learned knowledge (Schmitt, 1997). This is also called mnemonics (Brahler & Walker, 2007). According to Thomson (1987), mnemonics work by utilizing some well-known principles of psychology: a retrieval plan is developed during encoding, and mental imagery, both visual and verbal, is used. They help individuals learn faster and recall better because they aid the integration of new material into existing cognitive units and because they provide retrieval cues (as cited in Schmitt, 1997). Memory strategies also include note learning, repetitive use, etc., to recall the words later.

Autonomy involves motivation of the learner´s own learning. Note taking strategies are a form of cognitive strategies focusing on mechanical aspects of learning (Seddigh & Shokrpur, 2012). This helps the students to create a personal structure for the newly learned words (Schmitt, 1997). The depth of information the students obtain depends on what they write down regarding the newly learnt word. It could as elaborate grammar information, collocation, meaning in both their native language as well as English giving them more deep knowledge of the word.

Social strategies are those that involve seeking the help of others in learning vocabulary. This involves asking someone for the meaning usually teachers or peers. It also includes interacting with native speakers (Seddigh & Shokrpur, 2012).

VLS for Medical Terminology

There are many studies that look at specific strategies to help students in acquiring and retaining medical terms. The study of Al-Jarf (2010) deals with a mind mapping software that will help the students learn terms easily. Here the study employs software that builds mind maps for prefixes, suffixes, common terms etc.

Another study is the one conducted by Brahler and Walker (2007) which uses a mnemonic strategy to teach medical terminology. The study posits that facilitating recall and retention of new terms can be done through linking the new material to an existing framework of knowledge which they call "illogical associations".

Muller (2012) introduced a video game that will help students of medicine and related health sciences learn terms easily and have fun at the same time. On a similar vein, Riahipour and Saba (2012) talked about using games in the classrooms to enhance students' vocabulary learning. Their study results support their theory that having different games in the classroom can help students learn terms better.

There are several other studies that have been conducted in the most frequently strategies used among students. In a study conducted by Malcolm (2004) to find out which strategies high achievers use to learn English in general, she found out that watching TV in English as well as reading magazines, books and newspapers ranked the highest. There are other studies that deal with the use of strategies by medical students focused in the current study. Arani (2005) conducted a study among medical students at Kashan University in Iran. His findings indicated that most students use written repetition, verbal repetition, and bilingual dictionary strategies. His study also indicated that high achievers use strategies more often than low achievers, but neither category was very good at using social strategies. Another study conducted along the same lines is that of Seddigh and Shokrpur (2012), which concluded that the most used strategies were dictionary and guessing strategies. To sum up, VLS social strategies for Medical Terminology has been one of the least used strategies in this study as well.

To conclude, using Vocabulary Learning Strategies allow students be more proficient and be more successful learners

Didactic Guide

The word didactic comes from the Greek language “didaskein”. It means teaching and “tékne” suggests art; “art of teaching”. Didactic refers to the principles, phenomena, forms, precepts, and laws of teaching with no subject in particular (Stöcker, 1964).

Medina (2003, p.7), defines didactic as: A discipline of pedagogical nature that focuses on the teaching goals and compromise with the aim of better human begins through the understanding and permanent change of the social communicative developments, and the receiving an appropriate growth of the teaching and learning process.

Therefore, didactic strategies are an organization of the teaching and learning process where the students gain knowledge in specific contents that leads them to work responsible, creative and independent.

For Alvarez, (1983) “a didactic guide is an instrument printed with technical orientation for the student, that you can include all of the necessary information for the correct use and beneficial handling of the learning activities for the independent study of the contents of the course” (p. 134).

Researchers conclude that a didactic guide is the compilation of readings with basic bibliography to work on what, how and when to use the language. For García (2002), “The Teaching Guide is "the document directed for the study, bringing the cognitive processes of the students to work independently” (p. 241).

Thus, a didactic guide is a text with dynamic didactic strategies in order to offer the students several possibilities to improve their understanding and self-study process. For Martínez (1998), "it is an essential tool to organize the work of students, and its goal is to collect all necessary guidance to enable the student to integrate the training elements for the study of the subject” (p. 109).

On the other hand, a didactic guide is an instrument to help the students to learn about the contents of the student’s book. For Martínez (2004), “the concept of didactic planning is to present all the spaces, from the institutional structure, its importance

establishes the moment that the adviser accomplishes his/her work of pedagogic support in front of an adult group." (p. 204).

This researcher refers to didactics as the most important tool to help increase the knowledge of the teaching-learning process and to achieve some specific goals in the educational field.

5.3.2. Definition of Reading Strategies

5.3.3.1. Reading Comprehension

Reading comprehension is the process of constructing meaning from text helping a reader comprehend text. It involves two people: the reader and the writer. The process of comprehending involves decoding the writer's words and then using background knowledge to construct an approximate understanding of the writer's message. (Keith Lenz, Ph.D., University of Kansas).

Students who have trouble learning to decode and recognize words also have difficulty with reading comprehension. Students have a chance to interact with more difficult text and often learn to dislike reading. As a result, these students do not have sufficient opportunities to develop the language skills and strategies necessary for becoming proficient readers.

Strategies for improving reading comprehension must be taught directly by teachers and this direct instruction needs to continue in different forms throughout students' experiences.

Reading Comprehension

Reading comprehension can be defined as the process of extracting and constructing meaning from text in order to help a reader to comprehend it. If students have problems learning to recognize words, they have difficulty with reading comprehension. As a result, when students interact with more difficult text, they are not motivated to read. In fact, they do not develop the language skills and strategies necessary for becoming

proficient readers. The aim of the teacher is to teach students these strategies and to continue in different forms through students´ experiences.

Categories for Developing Reading Activities

Reading activities can be divided into three categories: pre-reading, while reading, and post-reading. The task of the teachers will be to organize instruction to achieve students´ outcomes. For this reason, the most straightforward way of organizing comprehension strategies is to think about strategies that one might use *before reading, during reading, and after reading.*

Pre-reading Strategies are strategies that a student uses to get ready to read a text selection. These strategies help the student get an idea of what the author might be trying to say, how the information might be useful, and to create a mental set that might be useful for taking in and storing information. These strategies could include previewing headings, surveying pictures, reading introductions and summaries, creating a pre-reading outline, creating questions, and making predictions.

When a teacher introduces a reading selection to students, she or he helps the students read it through the use of advance organizers, or pre-reading outlines. Teachers will need to lead students in before-reading activities to ensure content area learning occurs.

Collecting and defining vocabulary terms from the text will assist students in understanding words that may interrupt their reading and increase their vocabulary in a meaningful, relevant way. Students can record the terms in a notebook or on flash cards. Another strategy involves having students preview comprehension questions so that they can focus on answering those questions as they read.

While Reading Strategies consist of those strategies that students learn to use while they are reading a text selection and help the student focus on what the author is actually trying to say and to match the information with what the student already knows. These strategies should be influenced by the Before Reading Strategies because students should be using or keeping in mind the previews, outlines, questions, predictions, etc. that were generated before reading and then using this information to digest what they

are reading. The During Reading Strategies help a student understands during reading and questioning, predicting, visualizing, paraphrasing, elaborating (i.e., comparing what is read to what is known), changing reading rate, rereading, etc.

A teacher must develop reading guides and outlines to be completed during reading, so she or he requires students ask and answer questions, summarize as they read, etc. They will be compensating for the fact that students have not read good During-Reading Strategies.

Post-Reading Strategies are strategies that students use when they have completed reading a text selection and they need to be gotten back to the text and think about its message and determine the possible meanings that might be important. These strategies are used to follow up and confirm what was learned from the use of before and during reading strategies. However, After-Reading Strategies also help the reader to focus on determining what the big, critical, or overall idea of the author's message was.

A teacher must review a reading selection with a discussion on what was important about the author's message, helping students summarize at what was read, providing a post-organizer, or asking students to complete a study guide over what was learned from reading text.

Multiple Strategies

This strategy is used to address students in different media—such as text, images, or video—to analyze or comment on a work of literature. For example, readers can follow a procedure like this one:

- ✓ Begin analyzing a text by using a worksheet listing the elements to be identified.
- ✓ Use word processors and instructional software to create and fill in graphic organizers.
- ✓ Refer to worksheets for definitions to be added to electronic graphic organizers.
- ✓ If students have access to video cameras and editing software, they can also create videos that offer commentary on a given work.

Effective Strategies.

Teachers should provide students skills for comprehending the text, so the following is a list of the eight most beneficial strategies:

- ✓ Comprehension monitoring
- ✓ Cooperative learning
- ✓ Graphic organizers
- ✓ Story structure
- ✓ Question answering
- ✓ Question generating
- ✓ Summarization
- ✓ Multiple Strategy

Strategies with a greatest amount of instruction.

- ✓ Before-Reading Strategies
- ✓ Before Reading Self-questioning
- ✓ During-Reading Strategies
- ✓ During Reading Self-questioning
- ✓ Paragraph Summarization
- ✓ Section Summarization
- ✓ After-Reading Strategies
- ✓ After Reading Self-questioning
- ✓ After Reading Summarization

A majority of the studies indicate that the most successful way to teach comprehension strategies is to use very direct and explicit instruction.

Strategy Stages Instruction Based:

The stages of instruction that are most often cited as being effective in helping a student The most often stages of instruction are: **students orientation**: guide students to key concepts, assess where students make a commitment to learn, **description**: describe the purpose, benefits, and the steps of the strategy, **modeling**: model the behavioral and

cognitive actions involved in using the strategy, **verbal practice and needed information**: lead verbal practice and elaboration of the key information related to the strategy, **guided and controlled practice:** provide for guided and controlled practice of the strategy with feedback from the teacher or peers, **independent and advanced practice**: independent and advanced practice of the strategy with feedback from the teacher and experienced peers, and **motivate students to apply strategies to new different situations**: posttest application of the strategy, and help students make commitments to generalize its use.

Effective comprehension strategy explicitly instructions

The most effective explicit teaching techniques for comprehension strategy instruction are:

- ✓ **Direct explanation:** the teacher explains to students why the strategy helps comprehension and when to apply the strategy.
- ✓ **Modeling: t**he teacher demonstrates how to apply the strategy, by "thinking aloud" while reading the text that the students are using.
- ✓ **Guided practice: t**he teacher assists students as how and when to apply the strategy.
- ✓ **Application: t**he teacher helps students practice the strategy until they can apply it independently.

Cooperative learning can be involved in this strategy because students can work with partners or in small groups on clearly defined tasks. Students work together to understand texts, helping each other learns and apply comprehension strategies. Teacher helps students to work in groups and provide modeling of the comprehension strategies (Adler, 2001).

Scaffolding: strategies for improving Reading Comprehension skills.

Patricia Babbitt (2015) states that scaffolding reading instruction has various strategies where teachers will improve the reading abilities of most students because readers begin learning to remember every part of that story.

The success is to apply reading strategies imaginatively, for example if a teacher uses a brainstorming activity, later visualizes all the answers identifying the problems that require to correct and build a scaffold close to the correct answer, students will interact with it at different responses in the text.

Cooperative learning

Cooperative learning is a strategy that gets students engagement, reduces class tensions, and promotes student learning. Teachers use cooperative learning frequently in classes, they should consider arranging their classroom to facilitate learning in groups of four.
The following are examples of how students can work cooperatively in a narrative work of literature:

- ✓ Each group uses a plot diagram to locate and summarize a stage of plot development.
- ✓ Group conference briefly with the teacher ensures their answers are correct.
- ✓ Students form new groups comprising one "expert" from each of the previous groups.
- ✓ These new groups pool their expertise to fill out every stage of the plot diagram.
- ✓ The session concludes with a class discussion of the novel, short story, play, or narrative poem.

Then, the teacher must ensure that students begin to transfer or generalize the strategy to new and different situations. This stage includes four distinct phases: (1) orientation and awareness of situations in which the strategy can be used, (2) activation by preparing for and practicing strategies in content-area classes, (3) adaptation of the strategy steps for use in other tasks, and (4) maintenance of the strategy for continued application in a variety of real-life learning and work place settings.

The key principles of reading instruction

To assess students´ progress in reading comprehension, the lessons must be well planned with specific exercises to meet students´ needs and provide an elaborated feedback. Systematic reading instruction is structured, connected, scaffolded, and

informative. Structured instruction is characterized by organized lessons presented in a clear manner. Connected instruction has lessons that show the learner connections between the segments and what is already known. Scaffolded lessons is characterized because the teacher provides a significant amount of support in the form of modeling, prompts, direct explanations, and targeted questions. Lessons where the teacher´s intention is to inform instructions by the explanation of purposes, and expected outcomes are required for learning and when and how that newly learned information will be useful.

The teaching of instructions must need sufficient time devoted, high student engagement, authentic reading at all stages, a variety of more approximated reading materials to students need, providing opportunities to read and making this activity be for pleasure.

In conclusion, the teaching of reading comprehension requires that teachers work with professionalism and the student success.

Strategies to teach students text comprehension

Adler. (2015) states that **comprehension strategies** are conscious plans — set of steps that good readers use to make sense of text. Comprehension strategy instruction helps students become purposeful, active readers who are in control of their own reading comprehension. These strategies are the following:

Monitoring Comprehension: **c**omprehension monitoring instruction teaches student to be conscious of what they understand, they do not understand and use effective strategies to resolve problems faced in comprehension.

Metacognition: can be defined as "thinking about thinking." These metacognitive strategies are used by good readers to have control over their reading. During reading they monitor their understanding, adjusting their reading speed to the difficult parts of the text and solving comprehension problems. After reading, they check their progress
Graphic and Semantic Organizers: illustrate concepts and relationships between concepts in a text or using diagrams, such as maps, webs, graphs, charts, etc. Among the

examples, we find: **Venn-Diagrams** used to compare information, **Storyboard/Chain of Events** used to sequence of events, **Story Map** used to chart the story structure. These can be organized into fiction and nonfiction text structures and C**ause/Effect** used to illustrate the cause and effects told within a text.

Another learning process is questions and answers which allow an effective teacher – student interaction.

Answering questions**:** questions that help students to think actively, encourage students to monitor their comprehension and review content according what they have learned and what they already know. There are four different types of questions: **"Right There"** questions found right in the text that ask students to find the one right answer as a word or a sentence in the passage, **Think and Search"** questions based on the recall of facts that can be found directly in the text, answers that require students to "think" and "search" through the passage to find the answer, **"Author and You"** questions require students understand the text and relate it to their prior knowledge before answering the questions. Finally, **"On Your Own"** questions are answered based on students' prior knowledge and experiences.

Generating questions**:** students become aware to ask themselves questions that require to combine information, to answer questions, and even they can be taught to ask main idea questions that relate to important information in a text.

Recognizing story structure: students learn to identify the categories of content (characters, setting, events, problem, resolution) and to recognize story structure through the use of story maps to improve students´ comprehension.

Summarizing: requires students put what is important in what they are reading into their own words. This instruction helps students in the following:

- Identify or generate main ideas
- Connect the main or central ideas
- Eliminate unnecessary information
- Remember what they read

- The Moodle Platform

A Moodle Platform is a virtual web site included in an educative environment learning. This self-help software resource supports exercises and activities for the learning acquisition in and outside the classroom.

All the online Moodle Platform exercises that appear are usually interpreted as an individual character task because students develop skills to work individually; on the contrary, these activities might be finished on clearly defined tasks at home through cooperative learning by working together as partners or in small groups.

The use of Moodle Platforms only has thirteen years. It was in 2002 when Martin Dougiamas created it, at the Technological University of Curtin. It helps teachers to create on line learning communities also known as LCMS (Learning Content Management System). Dougiamas based his design on constructivism into pedagogy which states that knowledge is constructed on the mind of the student instead of being transmitted without changes from books or teachings.

There are many types of Moodle Platform

- Distance Education Moodle Platform
- Education- Learning Moodle Platform
- Semi-face to face Learning Moodle Platform
- Blended learning Moodle Platform
- On Line Moodle Platform

There are several advantages of Moodle Platform Implementation:

- Activities are developed in an object-oriented dynamic learning environment
- A system that educational institutions use to deliver courses and learning material to students.
- The system is available at a relatively low cost.
- Group interaction and private conversation among students

- Favor the development of final evaluation. The teacher prepares a set of questions to be discussed during examination schedule.

All students answer and at the same time they can make observations about other students´ answers.

As well, there are certain disadvantages:

- The first big issue is the fact that Moodle is not fully developed to cope with big projects.
- The system might not work efficiently with larger schools or serve as a great way to conduct all classes in a city.
- The system might become slower.
- This can be stressed for students when they are trying to take quizzes or tests, or just simply trying to access the course content for time consuming.
- websites can also shut down on occasion, blocking the opportunity for students to access course materials.
- This tool can only be used on line (internet access).
- Not all the learners can have access to computers.
- In conclusion, Moodle users frequently complain about the troubles they experience with customizations. Learners and teachers need to know how to program and have some type of knowledge when it comes to coding.

6. HYPOTHESIS

6.1 General Hypothesis

The elaboration and implementation of a Didactic Guide with Technical Medical Vocabulary Activities through The Moodle Platform enhances in a significant way the Reading Comprehension skill.

6.2 Specific Hypothesis

6.2.1. The presentation of reading activities to identify the Word Formation Process of Technical Medical Vocabulary through readings enhances the reading comprehension.
6.2.2. The application of appropriate vocabulary learning strategies in completion activities with technical medical vocabulary improves the reading comprehension skill.
6.2.3. The organization of medical vocabulary in reading comprehension activities helps students to understand English texts.

7. HYPOTHESIS OPERATIONALIZATION

7.1 Specific hypothesis Operationalization 1.

INDEPENDIENT VARIABLE	CONCEPT	CATEGORIES	INDICATORS	TECHNIQUE INSTRUMENT
Use of the didactic guide through the Moodle platform with Technical Medical Vocabulary activities	Refers to creative didactic strategies that generate activities in order to offer the students different possibilities to improve their understanding and self-study process.	Design of activities	Vocabulary exercises	Survey Observation Templates
		Technical medical vocabulary didactic strategies	- Word formation of medical words. -vocabulary by context -vocabulary by inferring, -games, -complete vocabulary sentences, -word charts -word association	
		Time Studying	Two hours of the platform for reading	

DEPENDIENT VARIABLES	CONCEPT	CATEGORIES	INDICATORS	TECHNIQUE INSTRUMENT
The Reading Comprehension	The process of constructing meaning from text, helping a reader comprehend text, decoding writer's words to use background knowledge, to develop language skills and to be proficient readers through reading techniques	Develop Reading	Pre-reading activities -Brainstorming activities -answer questions While reading activities -Main idea -Answer questions -True-false -Complete illustrations -Complete sentences -Multiple choice answers -Matching meanings and terms -Breaking words into components Post-reading activities -Summaries -Venn-diagram -Contrasting charts -T-charts -Sequential episodic map -Problem-solution map -Main ideas chart	Pretest Posttest

8. METHODOLOGY

8.1 Type of research

There are four types of investigation: exploratory, descriptive, correlational or explicative Hernández (2010), after having done a deep analysis of each method the investigator of this thesis establishes that it is a descriptive and explicative study.

8.2. Research design.

Once parts and elements have been analyzed it can be deduced that this investigation is classified as quasi-experimental because it involves selecting groups, upon which a variable is tested. After this selection, the experiment proceeds in a very similar way to any other experiment, with a variable being compared between different groups, or over a period of time.

8.3 Study type

This is a transversal investigation because data will be gathered at once with the purpose of describing the variables and analyzing its interactions.

Therefore, as partial conclusion of this sub epigraph, this investigation is quasi-experimental- transversal- descriptive- explicative due to its purpose: to investigate the application of a Didactic Guide with Technical medical Vocabulary Activities and what is the variable manifestation Reading Comprehension through the Moodle Platform to measure a group of students, the experimental Group, to provide its description.

According with its components and parts, this investigation will be applied because it is going to let the researcher to make a systematic analysis about the before mentioned problems to describe and to explain the causes and effects, constituent factors with direct data collection on the educative sphere.

8.4 Population and sample

In the particular case of this investigation a survey will be applied to a group of students of the Third Level of Faculty of Medicine at the University of Cuenca in Azuay Province because within the General English curriculum, these students are in the higher level of their curriculum, but this will be the first time they have material related to medical terminology in readings through the Moodle platform. This group was selected for having an adequate number of students and also because they belong to different schools of the Faculty such as: Nursing, Medicine, and Dentistry; and according to their experiences and needs they will expand the investigation.

The objective of the survey is to diagnose the treatment given to technical medical vocabulary activities and reading comprehension and to determine the students´ satisfaction about the content of subjects on this regard. On the survey, the students will mark with an (**X**) the given situations, taking into consideration the type of answer that the students will assume before such situation. To answer the questions the students will consider four criteria **Always**, **Sometimes, Almost never** and **I don´t know** (**see Annex # 1**).

Strata of the investigation

Strata	Frequency	%
Students	25	100
Total	25	100

Source: English Institute - Medical School
Author: Sandra Segarra

8.5 Sample

Due to the population is small it is not possible to do any sample with only 25 students, it is a directed sample, considering that is a total population.

8.6. Research Methods

Methods will influence in the accomplishment of the objectives that is why in this thesis the following methods might be applied:

Scientific Method. The method will be used is the scientific method because it will guide the whole process until to prove the hypothesis.

Deductive Method. It will be used this method because it will analyze in a general way the use of the Didactic guide and will elaborate the conclusions of this study.

Inductive Method. This method will let to identify the application of the Didactic Guide and its incidence in the Reading Comprehension skill through Technical Medical Vocabulary Activities.

8.7. Techniques to collect data

To collect the data it will be used the observation and the surveys which will have a set of questions to get some background information of the participants their age, their level of English, and grades in English language. In a second part consists of items in Reading Comprehension strategies. The participants will be required to grade each item according to their use of them in terms of "never", "rarely", "sometimes", "often" and "always", as well as based on their usefulness in terms of "very useful", "useful" and "not useful", doing a recollection of the data and in this way to search a validity of the present study.

TECNIQUE	INSTRUMENT
Survey	Questionnaire for the survey
Direct Observation	Observation Form

Author: Sandra Segarra

Thus, this investigation will start from the moment of the observations that the researcher does in each session, using the observation forms where all the observed will

be registered focusing in the development of the linguistic competence as the Reading comprehension.

8.8 Techniques and procedures for the analysis results

After collecting the information that will get from the observation and the survey, the results will be analyzed and they will be classified. Later, the results will be tabulated by means of graphics for finally to establish the conclusions and recommendations.

9. HUMAN AND ECONOMICAL RESOURCES

The human resources will be the students and the instructor

The financial resources will be supplied by the researcher as the pay for impressions or copies that will be used to generate, process and to analyze the required information.

10. CRONOGRAM

Activity	September				October				Novemb er				Decemb er				January				February			
Plan Elaboration	X	X	X	X																				
Review of the plan				X																				
Chapter I The problema					X	X	X	X																
1.1 Investigation lines					X																			
1.2 Problem Statement						X																		
1.3 Objetives						X																		
1.4 Justification							X																	
Review of Chapter I								X																
Chapter II Theoretical Framework									X	X	X	X												
2.1 Moodle Definition									X															
2.2 Operating Platform									X															
2.3 Technical Requirements of platform										X														
2.Events Definition										X														
2.5 Importance of events published through the platform											X													
Review Chapter II												X												
Chapter III Methodology													X	X	X	X								
3.1 Variables Operationalization													X											

Activity	September				October				Novemb er				Decemb er				January				February			
3.2 Type of Research													X											
3.3 Research Methods														X										
3.4 Research Techniques used														X										
3.4.1 Research Techniques Results															X	X								
Review Chapter III																	X							
Chapter IV Proposal Development																		X	X	X	X	X		
4.1 Guide Development Proposal																		X						
4.1.1 Implementation anf Operation																			X	X				
4.2 Resources																					X			
4.3 Budget																					X			
Review ChapterIV																						X		
Chapter V Conclusions and recommendations																							X	
Review of the complete thesis																								X

11. LOGIC MATRIX

PROBLEM FORMULATION	GENERAL OBJECTIVE	GENERAL HYPOTHESIS
To what extent can the elaboration and implementation of a Didactic Guide with Technical Medical Vocabulary Activities through The Moodle Platform enhance Reading Comprehension?	To determine the effect of the elaboration and implementation of a Didactic Guide with Technical Medical Vocabulary Activities through the Moodle Platform to enhance the reading comprehension.	The elaboration and implementation of a Didactic Guide with Technical Medical Vocabulary Activities through The Moodle Platform enhances in a significant way the reading comprehension
DERIVED PROBLEMS	**SPECIFIC OBJECTIVES**	**SPECIFIC HYPOTHESIS**
The lack of reading activities to identify the Word Formation Process of Technical Medical Vocabulary through readings affects the Reading comprehension.	To present reading activities to identify the Word Formation Process of Technical Medical Vocabulary through readings for enhancing the reading comprehension.	The presentation of reading activities to identify the Word Formation Process of Technical Medical Vocabulary through readings enhances the reading comprehension.
The inadequate use of vocabulary learning strategies in completion activities with technical medical vocabulary influences in the reading comprehension skill.	To apply the appropriate vocabulary learning strategies in completion activities with technical medical vocabulary for improving the reading comprehension skill.	The application of appropriate vocabulary learning strategies in completion activities with technical medical vocabulary improves the reading comprehension skill.
The limited knowledge of organizing the medical vocabulary in reading comprehension activities affects students to understand English texts.	To organize the medical vocabulary in reading comprehension activities to help students to understand English texts.	The organization of medical vocabulary in reading comprehension activities helps students to understand English texts.

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Attachment II Survey

UNIVERSIDAD NACIONAL DEL CHIMBORAZO
INSTITUTO DE POSTGRADO

Sr. estudiante el presente cuestionario tiene como objetivo averiguar cuáles son sus necesidades en cuanto al inglés. Los resultados obtenidos serán de mucha importancia y la base para elaborar material didáctico para el Nivel III y para la tesis de Maestría en "Lingüística Aplicada al Aprendizaje del Inglés" de la Universidad Nacional del Chimborazo

1. **While you ´re developing *reading activities* does your teacher begin analyzing the text by using? Put a check mark**

Always sometimes almost never I don´t know

Diagrams
Flash cards
Graphic organizers
Scaffoldings
Story board
Story map
Software
Work sheet

While you ´re developing *reading activities,*

2. **Has your teacher used feedback before you´re reading?**
   YES NO

3. **Has your teacher used feedback while you´re reading?**
   YES NO

4. **Has your teacher used feedback after you have read?**

   YES **NO**

5. **Do you consider that texts you are reading now focus in Technical Medical Vocabulary?**

   YES **NO**

6. **Do you consider your teacher must use readings with Technical Medical Vocabulary to read**?

   YES NO

7. **Do you consider it is necessary to know Technical Medical Vocabulary in your career for reading articles?**

   YES **NO**

   Why?-

   _____

   _____

8. **Do you find the present curriculum convenient for your present and future profession?**

   YES **NO**

Attachment III. Students data

UNIVERSIDAD NACIONAL DE CHIMBORAZO

INSTITUTO DE POSTGRADO

Maestría Aplicada al Aprendizaje del Inglés

A DIDATIC GUIDE TO INCREASE TECHNICAL MEDICAL VOCABULARY THROUGH READING COMPREHENSION

Sr. estudiante llene el presente formulario. Los resultados obtenidos serán de mucha importancia y la base para establecer la recolección de datos. La información será utilizada únicamente para los propósitos de esta investigación. Gracias.

INSTRUCTOR: ……..

PERSONAL INFORMATION OF MEDICAL STUDENTS. ENGLISH III, THIRD LEVEL. Groups 2.3, 3.3

Complete Names	
Age	
Gender	
Marital Status	
WORK (place)	YES _____ NO _____
PROCEDENCE PLACE	Rural _____ Urban _____
PARENTS´ OCCUPATION	Father: _____ Mother:_____
Have you taken English courses in other institutions except the university? (PLACE)	Yes _____ No _____ Place _____
What high school did you study?	_____ Rural _____ urban: _____
Have you taken General English?	Yes _____ No _____
Have you taken Technical English?	YES _____ NO _____
Have you been to the United States? Where? Why?	YES _____ NO _____ PLACE _____

Attachment IV. Pre-test

A DIDATIC GUIDE TO INCREASE TECHNICAL MEDICAL VOCABULARY THROUGH READING COMPREHENSION

NAME:.....LEVEL: (English III, Credits) DATE: .....

INSTRUCTOR: ……..

Circulatory System Diseases

Atherosclerosis– Literally, "hardening of the fatty stuff." High fat diets can lead to formation of fatty plaques lining blood vessels. These fatty areas can become calcified and hard leading to arteriosclerosis, hardening of the arteries. When blood vessels become less stretchable, blood pressure rises and can result in heart and kidney damage and strokes.

****

Myocardial infarction (MI)– You know we are talking about heart muscle, right, myocardial? An infarction is blockage of blood flow resulting in death of muscle tissue. Layman's language for this is a "heart attack." The blockage occurs in one of the arteries of the heart muscle itself, a coronary artery. Depending upon how much tissue dies, a victim of an MI may survive and undergo cardiac rehabilitation, strengthening the remaining heart muscle, or may die if too much muscle tissue is destroyed.

Mitral prolapse, stenosis, regurgitation– Blood flows through four chambers in the heart separated by one-way valves. A major valve is the one separating the upper and lower chambers on the left side of the heart. The left side is especially important because freshly oxygenated blood returning from the lungs is circulated out of the heart to the rest of the body. The left valve, called atrioventricular, for the chambers it separates, is also called the mitral valve, because it is shaped like an upside down Bishop's hat, a miter. If the flaps of this valve tear away due to disease, the process is called prolapse, "a falling forward." This results in leakage and backward flow called

"regurgitation" (get the picture?). Sometimes a valve is abnormally narrow causing partial obstruction constricting flow. Stenosis means "a narrowing."

Angina pectoris– Literally, "pain in the chest." But, this is a special kind of pain associated with the heart and is distinctive as "crushing, vise-like", and often accompanied by shortness of breath, fatigue and nausea. Anginal pain indicates not enough blood is getting to the heart muscle, and the heart is protesting and begging for more. People with a history of angina often take nitroglycerine tablets to relieve the pain by increasing blood flow to the heart muscle.

****

Arrhythmia/dysrhythmia– Abnormal heart rates and rhythms all have special names like ventricular tachycardia, fibrillation, but generically are termed arrhythmias or dysrhythmia, meaning "no rhythm" and "abnormal rhythm." There are fine distinctions between the two, but they are often used interchangeably.

Ischemia– Sometimes the heart muscle is not getting enough blood flow, more importantly, the oxygen the blood carries is insufficient to sustain muscle which has a very high metabolic rate, and oxygen demand. The term loosely means "not quite enough blood." Typically, the patient suffers angina pain (see above) and they may think they are having a heart attack. And, they may be.

1. Circle the correct letter. The meaning of "myocardium" is:

   a. a disease of the heart and bone marrow.
   b. The middle layer of the wall of the heart, formed of heart muscle.
   c. Heart ailments caused by narrowing of the coronary arteries and therefore a decreased blood supply to the heart.

2. Mark with a X. Which shows disorders associated with coronary arteries.
   a. Atherosclerosis
   b. Angina pectoris
   c. Myocardial infarction.

3. What is "atherosclerosis"? Circle the correct answer.

a. a condition in which a blood vessel is blocked
b. an injured part of an artery, which is likely to rupture.
c. Accumulation of fatty deposits on the inner wall

4. Complete

Mitral valve prolapse (MVP) occurs when the _____between your heart's left upper chamber (left atrium) and the left lower chamber (left ventricle) _____ properly.

During_____, the leaflets of the mitral valve bulge (prolapse) upward or back into the left atrium as the _____ contracts.

Mitral valve prolapse sometimes leads to blood leaking backward into the left atrium, a condition called mitral valve regurgitation.

5. What happens to the flow of blood in the arteries as a result of atherosclerosis?

a. pressure increase
b. Obstruction
c. The formation of blood clots.

6. Choose the correct answer. **painful, difficult, bad is:**

1. ____itis
2. ____dia
3. ____ hypo
4. ____ dys

7. Circle the correct answer. "Myocardial infarction" is also known as:

a. Obstruction of coronary arteries
b. partial die of cardiac cells .
c. heart failure

8. A condition that may lead to a reduced supply of blood. What is this disease called?

a. stenosis
b. Heart attack
c. angina pectoris.

9. Bradycardia is a term describing an

a. abnormally fast heart rate

b. inflammation of heart muscle
c. enlarged heart
d. abnormally slow heart rate
e. abnormally small heart

10. Permanent damage to heart muscle due to a blocked artery is termed

    f. angina pectoris
    g. myocardial infarct
    h. cardiomyopathy
    i. cardiomegaly
    j. myocarditis

11. A physician determines that the heart murmur (abnormal heart sound) in a patient is caused by narrowing of a heart valve passageway. The term for this condition is

    a. ischemia
    b. prolapse
    c. regurgitation
    d. stenosis
    e. angina

12 Match the terms with the meanings.

1. Stenosis	_____ a. irregularity in the heart rate, rhythm, or beat.
2. arrythmia	_____ b. Narrowing of opening
3. myocarditis	_____ c. Deficient or decreased blood supply
4. ischemia	_____ d. Inflammation of the myocardium, the muscle layer of the heart.

Post-test

A DIDATIC GUIDE TO INCREASE TECHNICAL MEDICAL VOCABULARY THROUGH READING COMPREHENSION

NAME:.....LEVEL: (English III, Credits) DATE: .....

INSTRUCTOR: ……..

Circulatory System Diseases

Atherosclerosis– Literally, "hardening of the fatty stuff." High fat diets can lead to formation of fatty plaques lining blood vessels. These fatty areas can become calcified and hard leading to arteriosclerosis, hardening of the arteries. When blood vessels become less stretchable, blood pressure rises and can result in heart and kidney damage and strokes.

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2. Mark with a X. Which shows disorders associated with coronary arteries.

   a. ____Atherosclerosis
   b. ____Angina pectoris
   c. ____Myocardial infarction.

3. What is "atherosclerosis"? Circle the correct answer.
   a. a condition in which a blood vessel is blocked
   b. an injured part of an artery, which is likely to rupture.

c. Accumulation of fatty deposits on the inner wall

4. Complete with the words from the box.

Heart attack	mitral valve prolapse	clot	does not close	valve
Close	open	heart		

Mitral valve prolapse (MVP) occurs when the 1._____between your heart's left upper chamber (left atrium) and the left lower chamber (left ventricle) 2._____ properly.

During 3._____, the leaflets of the mitral valve bulge (prolapse) upward or back into the left atrium as the 4._____ contracts.

Mitral valve prolapse sometimes leads to blood leaking backward into the left atrium, a condition called mitral valve regurgitation.

5. What happens to the flow of blood in the arteries as a result of atherosclerosis?

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Attachment V. Observation templates

UNIVERSIDAD NACIONAL DE CHIMBORAZO

A DIDATIC GUIDE TO INCREASE TECHNICAL MEDICAL VOCABULARY THROUGH READING COMPREHENSION

OBSERVATION TEMPLATE

Instructor: Esp. Sandra Segarra School: Medical Sciences
Course: MED 2-3 Semester: March - August 2016 School year: 2015 - 2016
Class Date: March 31, 2016

Objectives:

- This form shall be checked by a cooperating teacher at the Medical School as a support visit.
- The information will serve as guide for the observation of a technical medical vocabulary class to provide a background for a Master´s Thesis.
- The filled up form shall be given back to the teacher for the respective analysis

CATEGORIES	ITEMS
Attitude	1. The students collaborate with the brainstorming activity. 100% ✓ 75% _____ 50 % _____ 25 % _____ 0 % _____ 2. The student's attention to the teacher's explanation is: 100% ✓ 75% _____ 50 % _____ 25 % _____ 0 % _____ 3. The students are very active and participative 100% _____ 75% ✓ 50 % _____ 25 % _____ 0 % _____ 4. The students are engaged in the activities 100% ✓ 75% _____ 50 % _____ 25 % _____ 0 % _____
Discovery Meaning	2. To discover new words' meaning, students do the matching activity with the teacher's help. 100% ✓ 75% _____ 50 % _____ 25 % _____ 0 % _____ 1. To discover new words´ meaning, students do the guessing activity in context. 100% ✓ 75% _____ 50 % _____ 25 % _____ 0 % _____ 3. To discover new word's meaning, students do by asking to the partner. 100% _____ 75% _____ 50 % _____ 25 % _____ 0 % ✓ 4. To discover new word's meaning, students do by asking the instructor. 100% _____ 75% _____ 50 % _____ 25 % _____ 0 % ✓

Interaction and Participation	1. The students participate in class. 100% ✓ 75% _____ 50 % _____ 25 % _____ 0 % _____ 2. The students use the Second Language to communicate when doing cooperative group. 100% _____ 75% _____ 50 % _____ 25 % ✓ 0 % _____ 3. The students make questions by interacting student-student. 100% ✓ 75% _____ 50 % _____ 25 % _____ 0 % _____ 4. The students get involved in the cooperative group. 100% ✓ 75% _____ 50 % _____ 25 % _____ 0 % _____ 5. The students use mechanical means to do the tasks (dictionary, internet, etc) 100% _____ 75% _____ 50 % _____ 25 % _____ 0 % ✓ 6. The students show interest in the individual activity. 100% ✓ 75% _____ 50 % _____ 25 % _____ 0 % _____
Performance of Activities	1. The instructor's instruction is clear and direct to do the task. 100% ✓ 75% _____ 50 % _____ 25 % _____ 0 % _____ 2. The time used to do the activities is the appropriated. 100% ✓ 75% _____ 50 % _____ 25 % _____ 0 % _____ 3. The students complete sentences in context with the correct term. 100% ✓ 75% _____ 50 % _____ 25 % _____ 0 % _____ 4. When students complete the mnemonic device with the didactic guide, they do it individually. 100% ✓ 75% _____ 50 % _____ 25 % _____ 0 % _____

Cooperating Colleague

Instructor

UNIVERSIDAD NACIONAL DE CHIMBORAZO

A DIDATIC GUIDE TO INCREASE TECHNICAL MEDICAL VOCABULARY THROUGH READING COMPREHENSION

OBSERVATION TEMPLATE

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Class Date: June 8, 2016

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