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Analysis of the Morphosyntactic Elements in Iraqi EFL Medical Students Written Corpora: A Corpus-based Approach

تحليل العناصرالصرفية-النحوية في كتابات طلاب الطب العراقيين دارسي اللغة الإنجليزية لغة أجنبية: طريقة قائمة على تحليل النصوص

A Dissertation Submitted to the Graduate College in Fulfillment for the Degree of Ph.D in Applied Linguistics.

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DEDICATION

This work is dedicated to:

My family for their love and support,

My supervisor and colleagues for their encouragement, perseverance and endless support,

All the educators and learners who took their time to respond honestly and

timeously to the questionnaires sent to them,

My students and colleagues in Iraq,

Those interested in improving teaching English to medical students who will be our future savers of any kind of disease or pandemic.

Abstract

This study is an attempt to investigate the written corpora of Iraqi EFL medical students at the level of morphosyntax. The study aims to identify, classify, and supply a plausible interpretation for the different morphosyntactic errors made by the learners. It is hypothesized that Iraqi EFL human and veterinary medical students face serious difficulties in the area of morphosyntactic elements at both recognition and production level.

To achieve the study aims, two types of procedures have been followed: theoretical and practical. Theoretically, a framework of morphosyntax is presented including its definitions, elements, uses, etc. Practically, a corpus of (200) English written compositions was collected from (100) human and (100) veterinary medical students at human and veterinary medicine colleges at the University of Diyala. They have experienced approximately the same number of years of education through primary and secondary education. All of the participants come from non-English speaking background and hardly communicate in English outside the school. The data used in the study are participants' written essays and their responses to 25 multiple choice items in an achievement test prepared for the purpose of the study. All of the errors in the essays and achievement test have been identified and classified into various categorizations using suitable statistical tools.

The results of the study show that Iraqi medical students face difficulties in using morphosyntactic elements in general, but they face less difficulties in recognizing morphosyntactic elements than producing them. However, human medical students prove to face less difficulties in recognizing and producing morphosyntactic elements than veterinary medical students. Moreover, there are some kinds of variations between human and veterinary medicine students at the level of difficulties in using morphosyntactic elements and even in using one morphosyntactic element from another. The most problematic morphosyntactic elements for human medical students are *gerund, future perfect, discourse organization & word order* among other (25) selected morphosyntactic elements in the study. Meanwhile, *discourse organization & word order, could have p.p, gerund* are the most problematic morphosyntactic elements for veterinary medical students among other (25) selected morphosyntactic elements. Analysis of the medical students' written corpora using pos tagging show that human medical students commit errors mainly in *base verb, wh pronoun, 3rd person participle, adverb, noun pl, number, conjunction, adjective, noun, pronoun, past tense verb,* etc. On the other hand, veterinary students commit more errors in *wh pronouns, base verb, noun pl, pronoun, number, conjunction, past tense verb, nouns, adverb, adjective, 3rd person participle,* etc. The results have also shown that both groups of medical students have not considerably developed their skills in using morphosyntactic elements in writing with some variations in favor of human medical students.

The study ends with some pedagogical implications to overcome the aforementioned problematic morphosyntactic elements and for a better writing performance. The findings suggest that Iraqi medical students are not fully aware how to use morphosyntactic elements in

recognition and in writing. Such an insight into language learning problems can be useful for teachers because it provides information on common trouble-spots in language learning which can be used in the preparation of more effective teaching materials for medical students.

المستخلص في اللغة العربية

هذه الدراسة محاولة لدراسة العناصرالصرفية-النحوية في كتابات طلاب كليات الطب العراقيين دارسي اللغة الإنجليزية لغة أجنبية. تهدف الدراسة إلى تحديد وتصنيف الاخطاء التي يرتكبها الطلبة في هذا المجال و ايجاد تفسير لاسباب هذه الأخطاء. وتفترض الدراسة بان طلاب الطب البشري و البيطري في العراق يواجهون صعوبات جسيمة في مجال العناصر الصرفية-النحوية على مستوى الادراك والإنتاج.

ولتحقيق أهداف الدراسة ، تم اتباع نوعين من الإجراءات: النظرية والعملية. نظريًا ، تم تقديم إطار نظري حول ظاهرة العناصر الصرفية-النحوية وتضمن هذا الاطار تعريفا بهذه العناصر واستخداماتها وانواعها وما إلى ذلك. اما عمليًا ، فقد تم اختيار مجموعة مكونة من ٢٠٠ نص انشائي مكتوب باللغة الإنجليزية من قبل١٠٠ طالب طب بشريا و ١٠٠ طالب طب بيطريا في جامعة ديالى. علما ان هؤلاء الطلبة تلقوا نفس العدد من سنوات التعليم في المرحلتين الابتدائية والثانوية.كما انهم جميعا من خلفيات لا تتحدث الإنجليزية وبالكاد يتواصلون باللغة الإنجليزية خارج المدرسة. تكونت البيانات المستخدمة في الدراسة من مقالات مكتوبة من لدن المشاركين وإختبار متكون من ٢٥ فقرة متعدد الخيارات في اختبار تحصيلي تم إعداده لغرض الدراسة. وتم تحديد جميع الأخطاء في المقالات والاختبار التحصيلي وتصنيفها باستخدام أدوات إحصائية مناسبة.

اظهرت نتائج الدراسة أن طلاب الطب العراقيين يواجهون صعوبات في استخدام العناصر الصرفية-النحوية بشكل عام وانهم يواجهون صعوبات اقل في التعرف على العناصر اللغوية من إنتاجها. بالرغم من ذلك ، أثبت طلاب الطب البشري أنهم يواجهون صعوبات أقل في التعرف على العناصر الصرفية-النحوية وإنتاجها مقارنة بطلاب الطب البيطري. وعلاوة على ذلك ، هناك نوع من الاختلافات بين طلاب الطب البشري والطب البيطري على مستوى الصعوبات في استخدام العناصر الصرفية-النحوية وحتى بين استخدام عنصر صرفي-نحوي وآخر. كما اظهرت نتائج الدراسة بان العناصر الصرفية-النحوية الأكثر إشكالية لطلاب الطب البشري من بين ٢٥ عنصر صرفي-نحوي تم اختياره في الدراسة هي *اسم الفعل، الصيغ الزمنية التامة، وتنظيم الخطاب وترتيب الكلمات واستخدام التركيب الذي يعني "كان يمكن القيام بالحدث لكنه لم يحدث"* . وأُظهر تحليل النصوص المكتوبة باستخدام تحليل النصوص لاجزاء الكلام (POS) أن طلاب الطب البشري بشكل أساسي يرتكبون أخطاء في *الفعل الرئيسي ، ضمير الاستفهام ، ضمير الشخص الثالث ، الظرف ، الاسم ، العدد ، الاقتران ، الصفة ، الاسم ، الضمير ، الفعل الماضي* ، إلخ. . ومن ناحية أخرى ، يرتكب طلاب الطب البيطري المزيد من الأخطاء في *ضمائر الاستفهام ، والفعل الرئيسي ، والاسم الجمع ، والضمير ، والعدد ، والاقتران ،الصفة ، الفعل الماضي ، والأسم ، والظرف ، والصفة ، وتصريف الشخص الثالث* ، وما إلى ذلك. وقد أظهرت النتائج أيضًا أن كلا المجموعتين من طلاب الطب لم يقوما بتطوير مهاراتهم بشكل كبير في استخدام العناصر الصرفية-النحوية في الكتابة مع بعض الاختلافات لصالح طلاب الطبب البشري.

وتخلص الدراسة الى بعض التوصيات التربوية للتغلب على صعوبة استخدام العناصر الصرفية-النحوية المذكورة قي أعلاه ولأداء كتابي أفضل. كما ان النتائج التي تشير الى أن طلاب الطب العراقيين ليسوا على دراية كاملة بكيفية استخدام العناصر الصرفية-النحوية في الادراك والكتابة يمكن أن تكون مفيدة للمدرسين لأنها توفر معلومات عن اهم المشاكل الشائعة في تعلم اللغة والتي يمكن استخدامها في إعداد مواد تعليمية اكثرفاعلية لطلاب الطب.

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List of Abbreviation

Abbreviation form: Its full form

ESP :English for Specific Purposes

EAP: English for Academic purposes

EOP: English for Occupational purposes

EST: English for Sceince & technology

EBP: English for Business Purposes

SPSS:Statistical Package of Socoal Science

POS: Parts of Speech

JJ: Adjective (in POS tagging method)

RB:Adverb

CC: Conjunction

DT:Determiner

NN: Noun

NU: Number

IN: Preposition

PRP: Pronoun

VBZ: Verb

TO: To

WP: wh- question

VBD: verb-past tense

VB: verb, base form

VBP: verb, 3rd participle

RBR: Adverb, comparative

NNS: Noun, plural

NNP:Proper noun, singular

SP: spelling

SENT: Sentence structure includes Grammar Mistakes, long disconected Sentences.

PNT: Punctuation

WF: Word frequency

DSS:Document Student Sentence

Chapter One

Introduction

1.1 Introductory Notes

English is an international language since most of the scientific and technical works (spoken or written) are done in English. Moreover, it is also considered as the first foreign language used in many developing countries like Iraq. Like other professions, English plays a very important role in medical profession as medical students need to use English for various purposes. They need English to read textbooks, understand the lectures given in English, communicate with their teachers, write their exams, projects and the reports of the patients in English. This indicates the necessity of English for Iraqi medical students. The present study is an attempt to investigate the difficulties faced by medical students at Diyala University when using morphosyntactic elements in order to highlight the most problematic ones. Significant numbers of medical students have reported little experience of speaking, reading and writing in English. Students in the majority of medical schools in Iraq are left alone to face this new challenge. Inability to cope with these changes leads to a high drop-out rate from courses. Our medical colleges therefore need to implement strategies to solve this problem. Developing valid and reliable assessment methods and enhancing the educational environment are probably initial steps.

Abilities to communicate in English as the language of instruction can form a barrier to medical education . Few studies have investigated clinical experiences of students from non-English speaking backgrounds and the strategies necessary to support their learning. At Diyala university, unsatisfactory spoken language fluency associated with poor performance in medical communication skills are observed and reported to the researcher, a fact ensured by the statistical results of medical students' final exams of different levels at college study. English is considered one of the top difficulties facing our students during their early years of study.

This study investigates the relationship between language background, English language proficiency, and medical communication skills in a cohort of different years of undergraduate medical students studying at colleges of Human Medicine and Veterinary Medicine at Diyala University. Students enter the

medical colleges of medicine in Iraq directly from high school at an average age of 18 years. The school system relies mainly on teacher-based activities, examinations based on recalling of memorized information and norm-referenced tests to evaluate students. As a result, most of the students acquire passive learning habits.

The secondary school system in Iraq uses Arabic language as the primary language for education; English is taught as a foreign language, starting in 1st grade of primary school recently, but grade 5 since 2012. However, the medical school curriculum is taught in English throughout study years. Regardless of their language proficiency level, students should study their text books in English . Therefore, when they join university, students face increased academic demands and quickly realize that they need to develop appropriate English learning skills.

1.2 Statement of the Study

There are morphosyntactic differences between medical students' written corpora and medical syllabus textbooks which lead to a misunderstanding of medical textbooks and a high ratio of failure among different levels of medical college students specifically at earlier levels of college study at Diyala University.

1.3. Rational of the Study

Results of this study are hoped to be beneficial for :

1. EFL college instructors' for further understanding of the impact of morphsyntactic features on English textbooks.
2. EFL college students' to get a better understanding of applying morphsyntatic features in their written corpora.
3. Educators and administrators and pre and in-service instructors can gain a deeper insight of morphosyntactic features in English medical textbooks.
4. Curriculum designers and planners responsible for reviewing the available textbooks can develop new syllabi focusing on morphsyntactic features and apply new strategies , techniques and procedures to meet certain criteria of learning English as a foreign language .

1.4 Aims of the Study

The study aims at:

1. Assessing Iraq EFL medical students' recognition and production of the main morphosyntactic elements by exposing them to an achievement test about the most widely used morphosyntactic elements.
2. Investigating and analyzing the most problematic morphosyntactic elements for Iraqi EFL medical college students at both recognition and production level.

1.5 The Research Questions

The study tries to answer the following questions:

Q1. To What extent do Iraqi EFL medical students face difficulties in using morphosyntactic elements in general?

Q2. To What extent do Iraqi EFL medical students face more difficulties at recognizing or producing morphosyntactic elements?

Q3. Are all the morphosyntactic elements of the same level of difficulty for Iraqi EFL medical students?

Q4.What are the main reasons behind the weakness and difficulties faced by medical students in using morphosyntactic elements?

Q5. What are the similarities/differences between human medical students' performance and that of veterinary students in using morphosyntactic elements?

Q6. Are there any developments in medical students' performance in using morphosyntactic elements in general? Are there any differences between the two groups of students in terms of this development?

1.6 The Hypotheses

It is hypothesized that:

1. Iraqi EFL medical students face serious difficulties in the area of morphosyntactic elements in general.
2. Iraqi EFL medical students face serious difficulties in recognizing morphosyntactic elements.
3. Iraqi EFL medical students face serious difficulties in producing morphosyntactic elements.
4. Iraqi EFL human medical students perform better than veterinary students in the area of morphosyntactic elements in general.
5. Iraqi EFL human medical students perform better than veterinary students in recognizing morphosyntactic elements
6. Iraqi EFL human medical students perform better than veterinary students in producing morphosyntactic elements.
7. In spite of the serious difficulties faced by the students, the EFL program at both colleges contribute, to a certain extent, to the development of students' performance in the area of morphosyntactic elements.

1.7 The Methodology

A sample of two hundred undergraduate students at different stages of colleges of human and veterinary medicine at Diyala university during the academic year 2017-2018 were exposed to an achievement test which was constructed by the researcher and approved by a committee of experts in English language and linguistics. The test consists of two parts: the first part measures the students' ability to recognize morphosyntactic elements. It consists of 25 multiple-choice items. The second part of the test measures the students' ability to produce morphosyntactic elements. Here, the students are required to write a composition on a certain selected medical topic. The students' written corpora were gathered and analyzed using a pos tagging method to highlight the frequency and misuses of

morphosyntactic elements, and whether or not they can produce coherent writing.

A pilot administration of the test was also carried out to evaluate the suitability of the test items, and the time needed to answer them. Some adjustments were made based on the experts' recommendations. Most of the students needed around 30 minutes to complete each part of the test. Spss method was used to investigate the number of errors students committed in their recognition and production tests.In addition Brown &Bailey (1984) scale was used to correct the (200)students' written compositions.

1.8 The Procedures

To fulfill the aims of the study, the following procedures are adopted.

1. Presenting a theoretical framework of English morphosyntactic elements including their definitions, classifications, uses, etc.
2. Selecting the study sample.
3. Constructing an achievement test to measure the students' performance in recognizing and producing morphsyntactic elements.
4. Analyzing the collected data by using appropriate statistical methods.
5. Comparing the errors committed by both groups of medical sttudents and highlighting the most problematic morphosyntctic elements for each group.
6. Tracing the developments students may achieve throughout college levels of study.
7. Analyzing and discussing the obtained results and their pedagogical implications.
8. Drawing conclusions, recommendations and suggesting topics for future studies.

1.9. Limitation of the Study

The present study is limited to:

1. EFL Iraqi College students of Human and Veterinary Medicine at University of Diyala during the academic year 2017-2018.
2. The students' performance in the area of morphosyntactic elements at recognition and production level.

1.10 Dissertation Organization

This research will be divided into five chapters.

Chapter I is an introduction, which relates to the background of the study, its problem, objectives, limitation, benefits, and its organization.

Chapter II presents the theoretical framework that consists of the notion of morphosyntax, morphosyntactic features, scopes of Morphology and Syntax, types and uses of morphosyntactic elements, Corpus–based Approches, POS tagging method and previous studies.

Chapter III is devoted to research methodology. It describes the type of research, subjects of research, object of research, data and data sources, method of collecting data, techniques of analyzing data.

Chapter IV presents the findings and the discussion of the most problematic uses of morphosyntactic elements by both groups of medical students at recognition and production level.

Finally, Chapter V presents the main conclusions drawn in the light of the study findings, and the topics suggested for future studies.

Chapter Two

Theoretical framework and Literature Review

2.1 Introductory Note

This chapter presents a theoretical framework of English morphosyntax including the main morphological and syntactic categories. The first section presents definitions and some detailed structures of English morphosyntax starting with English morphosyntactic structure then morphological and Syntactic structure. The chapter also focuses on some other basic concepts the study deals with such as *English for specific purposes* (ESP) and more specifically *English for Medical purposes* (EMP). *Definition of ESP and its types, similarities and differences among ESP, English for general purposes (EGP), English for Academic Purposes (EAP) and characteristics of both ESP and EMP* are then given. In addition, an *overview on EMP teaching* then *teaching medical education in Iraq* are reviewed. Review of *some primary research studies on EMP* are done under previous studies on EMP. Then the third section discusses what is meant by *corpora* detailing *its types, charateristics,* then explaining *the importance of corpora* in diagnosing learners' weakness in learning English in general and medical education in specific. The fourth section sheds light on the study's approach of analysis which is *corpus based approach* by defining the approach , its techniqies and procedures then comparing it with other two analysis approches. The section ends with reviewing some previous studies and comparing them with the current study.

2.2 On English Morphosyntax?

Morphosyntax is the combination of two branches of linguistics: morphology and syntax and the word 'morphosyntactic' is its adjective. Morphosyntax is derived from morphology, which is the study of word formation, and syntax which is the study of how words are combined into larger units such as phrases and sentences. Julien (2007:210) points out that traditionally the relation between morphology and syntax is the following: while morphology builds up word forms—typically by combining roots with other roots and with affixes, and also by applying other operations to them, syntax takes fully inflected words as input and combines them into phrases and sentences. The division of labour between morphology and syntax is thus perfect: morphology only operates below the word level whereas syntax only operates above the word level.

Moreover, these two components of grammar are ordered in strict sequence, such that the syntax takes over after the morphology has done its work.
According to Crystal (1980:234) 'morphosyntax' is a term in linguistics used to refer to grammatical categories or properties for whose definition criteria of both morphology and syntax apply, as in describing the characteristics of words. Crystal (ibid) illustrates that the distinctions under the heading of number in nouns constitute a morphosyntactic category since number contrasts affect syntax which in turn require morphological definition (e.g. adding –s for plural). An example of how both morphology and syntax are interrelated is pluralization whose grammatical category of number, which is a morphosyntactic unit, requires both a morphological change and syntactic agreement between noun/subject and verb in order to produce a grammatically correct sentence.

Anderson (2005) identifies the major areas where syntax and morphology interface as follows:

i. Agreement properties: Aspects of the exact form of a word are determined by reference to the properties of some other neighboring word in the same structure. For example, in sentence (1) below the plural form of verb to be (are) is determined by the fact that the word birds which functions as subject is plural, a case known as subject-verb agreement.

1. Listen ! The bird**s are** singing on the tree. (subject-verb agreement)

ii. Inherent properties: The inherent properties of a word can also assign agreement properties to neighboring words in concordial agreement. An example is gender agreement between a noun and its pronoun as in:

2. The **mother** fed **her** baby and the **father** bought **his** baby a toy. (the inherent property of the word "mother" which is feminine requires the feminine pronoun "her"; and the masculine inherent property of the word"father" requires the masculine pronoun "his".

iii. Configurational properties: A good example of these properties is the syntactic case of nouns which determines the form of the pronouns referring to these nouns as is the case in relative clauses. In the example (3.a) below, "who" is used to refer anaphorically to " the man" which is in the subjective case functioning as the subject of the verb "built", while in (3.b), the pronoun "whom" is used to refer to "the man" which is in the objective case functioning as the object of the verb visited:

3.a I visited the man **who** built the wall (subjective case)

3.b I visited the man **whom** the wall fell on (objective case)

In 3.a, the verb 'built' requires a doer (subjective case) which in turn needs the relative pronoun "who". In 3b, the phrasal verb "fell on" requires a receiver or an object thus the relative pronoun "who" is used with this objective case.

iv. Phrasal properties: Ascribed to larger, phrasal domains but realized on particular words within these domains. Some of these are responsible for determining the way these domains behave syntactically.For example:

> 4. **Appearing with high heals, long straight hair and attractive make up**, the **young lady** attracted all the audience's attention. **She** was the owner of Stacy's Beauty Salon. (the first non finite clause is composed of feminin inherent properties which preanticipated female referent to be followed, i.e "she").

Anderson (ibid) further asserts that all the above properties appear to have something in common: they fall under the notion of inflectional morphology. Inflectional morphology consists of exactly those aspects of word structure that are syntactically relevant, in the sense of being determined by or are accessible to syntactic rules. Inflectional morphology involves concepts that are more relevant to how the word relates to other words in a construction than to the lexical item itself. The autonomous words in an inflected language are natural syntactic classes. Each syntactic class is associated with a set of grammatical categories, and the values of those grammatical categories constitute the paradigm. Embick and Halle (2005:37) state that the inflectional categories associated with a given class are those that are relevant to that class; good examples are tense, aspect, and mood, which are relevant to verbs, as opposed to number, gender and case, which are relevant to nouns. Inflectional morphemes and the grammatical categories they express are productive: if a new lexical item enters a given syntactic class, it will inherit all the associated inflectional morphemes.

Crystal (1980) provide a detailed description of the English morphosyntactic structure. In his work, he discusses the relationship between English word formations studied in morphology, and the syntactic structure. In arranging the elements of syntactic structure, Crystal, (ibid) asserts that the morphological aspect often plays an important role in linking words in a well-connected syntactic structure. Crystal (2000) expounds by saying that word inflection actually enters the formal syntactic structural description unnoticed. This rather extensive treatment of English morphosyntax identifies a number of areas where morphological forms determine the arrangement of syntactic structure. At the word level, this influence is realized in the formation of plural and tense morphemes. The word 'cooks', for example, consists of the free morpheme 'cook' and the inflectional bound morpheme'–s'. The word 'cooks'

occurs in an English sentence whose subject is singular noun or uncountable noun and the tense is simple present. In most cases, therefore, it is the morpheme which determines the syntactic structure, depending on the word class of the morpheme in question. At sentence level the subject must agree with the verb, for example:

(5) i. a) The boy is eating
*b) The boy are eating
ii. a) The boys are eating
*b) The boys is eating
iii. a) The student walks to school
*b) The student walk to school
iv. a) The students walk to school
*b) The students walks to school
v. a) That man has gone
*b) That man have gone

In the above examples, the underlined nouns influence the choice of the verb; the subject (noun/pronoun) must agree with the verb. Singular subjects require singular verbs as in examples; i(a), iii(a) and v(a). Plural subjects on the other hand require plural verbs as in sentences ii(a) and iv(a). Ignoring the morphological elements in syntax results in ungrammatical structures as in part (b) of each pair. Crystal (1980) notes that this relationship is also manifested at phrase and word level. At Phrase level, determiners must agree with the nouns in number. Look at the following examples:

(6) (i) this student, that student, a student
(ii) these students, students, several students, many students, a lot of students, a few students
iii) *this students *that students *these student *those student.

In example (٦i) the determiners *this* and *that* need singular noun. The morpheme {-s} is needed in the noun when it comes after the determiners 'these, those, several, many, a lot of, and a few' like in example (٦ii). The phrases in (٦iii) are not grammatically correct because they do not agree with the nouns. These examples show how morphological rules are interrelated with the syntactic structure of words and sentences.

Accordingly and since the link is very tight between morphology and syntax, this section tries to discuss the relationship between English word formations which are studied in morphology and the syntactic structure which is the domain of syntax. Morphosyntax covers morphosyntactic elements of a sentence or what is widely known as part-of-speech (verb, noun, adjective, preposition, etc) along with its morphosyntactic features (case, number, person,

aspect, mood, etc.) in addition to sentence pattern, derivational and inflectional morphems which will be discussed later in the chapter.

2.2.1. Morphosyntactic Structure

The relation between the English morphological structure and the English syntactic structure is called English morphosyntactic structure. Kibort (2007) points out that variations in forms resulted from inflected words are correlated with meanings or functions which are labelled 'featues'. However, not all features that are identified by inflectional morphology are morphosyntactic. She defines a morphosyntactic feature as the feature which is relevant to syntax. In order to be relevant to syntax, the feature should be involved either in syntactic agreement or government. Since gender, number and person are involved in agreement, therefore they are typical morphsyntactic features, whereas tense which encodes regular semantic distinction, is not required by syntax through the mechanisms of agreement or government. Therefore, many familiar instances of the feature 'tense' are morphosemantic, but not morphosyntactic.

To illustrate more, the English noun class system involves singular and plural patterns as well as agreement marking triggered by these noun classes. The agreement markers (concords) are manifested on syntactic constituents like adjectives, numerals, verbs and others. The concords play an important role in separating one class from another. Any feature (number, gender, person, case or tense) which marks either agreement or government is a morphosyntactic feature. The first feature which registers a lot of morphosyntactic variation is the number feature, which is manifested through agreement.

Table 1 : Morphosyntactic features (Adapted from Kibort, 2007)

	Participates in Agreement	Participates in Government
Gender	√	
Number	√	
Person	√	
Case	√	√

The table above indicates that gender, number, person and case elements are all features of the morphosyntactic structure realized through either agreement or

government, though *case* is involved in both, which will be discussed later under grammatical categories.

2.3 Morphology

Morphology as a term is traditionally derived from the Greek word "morphos" meaning "form". Unlike Syntax, Morphology doesn't analyze sentences in terms of the words they contain, but rather it analyzes words in terms of their constitutents which are called morphemes. It deals with examining the internal design and structure of words as well as the patterns and principles underlying their composition. In doing so, morphology stands between grammar (i.e. the rule-based, productive component of a language) and the lexicon (i.e. the distinctive, rote-learned component). It therefore looks at both sides of linguistic signs, i.e. at the form and the meaning, combining the two perspectives in order to analyze and describe both the component parts of words and the principles underlying the composition of words. Morphology skills require an understanding and use of the appropriate structure of a word, such as word roots, prefixes and affixes(morphemes). Strong knowledge of grammatical morphemes, such as the use of *–ing* for a present progressive verb, /s/ to indicate a plural form and correct use of verb tense, is necessary in order to have well developed morphology skills then in turn well developed syntactic structures as they are affecting each other. Hence, each individual word is studied individually to understand how a suffix or prefix or the use of a word in a different context can change the meaning of the word.

Accordingly, Morphology does not analyse words in terms of syllables, like phonology, but in terms of morphemes, i.e. components of words that carry meanings. For example, while the words *mother* and *teacher* both consist of two syllables, *mother* represents only one morpheme (meaning "female parent"), whereas *teacher* consists of two: the verb *teach* ("instruct" and the nominalizing suffix-er ("someone who does something"). The most widely known definition of the notion "morpheme" states that it is the "smallest meaning-bearing unit" in a given language. (Lim Kiat Boey,1975:37), As the example of *mother* has shown, morphemes not only can coincide with simple words, or more precisely, simple lexemes, i.e. abstract representations of words uniting forms and meanings, but they can also constitute parts of complex lexemes, which are in turn defined as lexemes consisting of more than one morpheme. Unlike *mother*, then, *teacher* is an example of a complex lexeme.

2.3.1 The Scope of Morphology and word Formation

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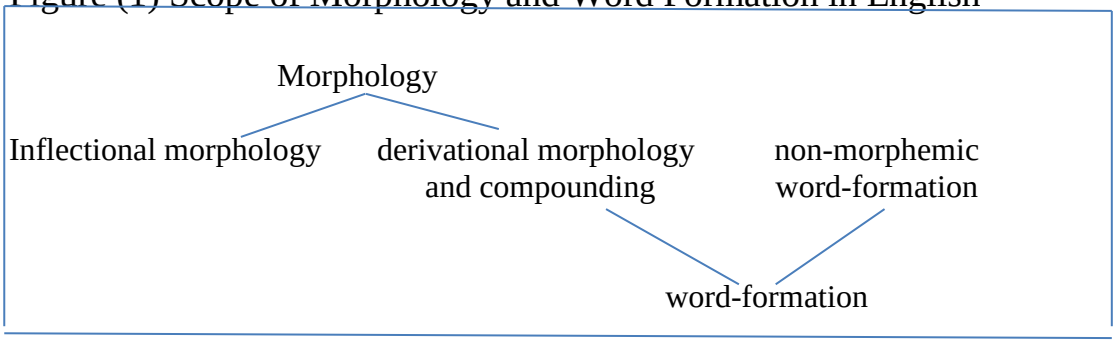
The process of forming words is the main concern of morphology. So morphological structure consists of the elements that form words. The most common word formation in languages including English is affixation which is the process of word formation by adding the affixes (or bound morphemes) in bases or roots (free morphemes).

While word-formation deals with the patterns and rules guiding the formation of new words, morphology is rather concerned with just word-forms of existing words. From this perspective, the word *unemployment*, for instance, would be first segmented into the base *employ* and the derivational morphemes **un-** and **-ment**, and it would be stated that the affixes **un-** and **-ment** are added to the base *employ*, thus manifesting the word-formation types of prefixation and suffixation respectively. In addition to derivational morphology (defined next section), word-formation encompasses the study of compounding (e.g. *employment agency*) and also those word-formation types that do not use morphemes as their basic building-blocks, i.e. non-morphemic types such as *blending* (e.g. infotainment : information and entertainment) and *clipping* (e.g. flu : influenza).

However, Schmid argues (2015:3) that the situation is not quite as simple and clear between the scope of morphology and word-formation as :firstly, the word-formation type of compounding does not really fall within the scope of derivational morphology, but is placed in the same branch as prefixation and suffixation because it shares with these the property that it uses morphemes as basic building blocks. Secondly, conversion, i.e. the transfer of a word from one word class to another without the addition of a morpheme, and back-formation, as in the verb to "sightsee" derived from the longer noun "sightseeing", could be seen as relying on morphemes, too, but this is much less straightforward than is the case in the other types of morphemic word-formation patterns. The scope of morphology and word-formation is clearly shown in Figure (1) below. (adapted from Schmid (2011:15).

Figure (1) Scope of Morphology and Word Formation in English



2.3.2 Classification of English Morphemes

As has been mentioned earlier, morpheme is defined as the smallest meaningful unit of a language. Morphemes can be classified in various ways. One common classification separates those morphemes that mark the grammatical forms of words (-s, -ed, -ing and others) from those that form new lexemes conveying new meanings, e.g. un- and -ment. The former morphemes are *inflectional morphemes* and form a key part of grammar, the latter are *derivational morphemes* and play a role in word-formation as noticed in the previous section. The study of morphology is traditionally divided into two major areas. The first is known as *inflectional morphology* and deals with the markers of grammatical categories: **CASE, NUMBER, TENSE** and **ASPECT** discussed later in the chapter. These inflectional morphemes are attached to lexical stems and create word-forms (rather than new words). For example, the verb "employ" can occur in the base-form "employ" when no inflectional morpheme is added, in the form "enjoy**s**" when the morpheme marking agreement with a third person singular subject is attached, in the form "enjoy**ed**" when marked by the past tense or the part participle morpheme, and in the ing-form "enjoy**ing**", used, among other things, for encoding the progressive aspect.

In terms of affixations, morphemes are classified to *free vs. bound morphemes.* Both inflectional and derivational morphemes must be attached to other morphemes; they cannot occur by themselves, i.e in isolation, thus known as *bound morphemes. Free morphemes*, on the other hand, are autonomous, i.e can occur on their own and are thus also words at the same time. For example in 'walk-ed', the attached part of the word , i.e. '-ed' is called *bound morpheme*. The base, i.e. 'walk' is called *free morpheme,* while the expression to which a bound morpheme is attached is called the *stem,* e.g. in *believable* 'believe' is the stem, and in *unbelievable* 'believable' is the stem. Affixes in turn are subdivided into four classes: *prefixes***,** *suffixes infixes and circumfixes*. Prefix includes any extension added to the beginning of a word (or a stem) such as the '–un' in : 'unhappy'. Suffixes are those extensions added to the end of the stem such as '–able' in 'readable'. Circumfixes are affixes that "surround" the word, attached to the beginning and end of the word. Although there is no infix in English language, yet it has few examples of circumfix type of affix. Two of the most well known circumfixes in English are:

En- -en as in **en**light**en**

Em- -en as in **em**bold**en**

In addition, Yule (2010,p.69) further classifies *affixes bound morphemes* into *derivational* and *inflectional morphemes*. *Derivational morphemes* are used to create new words or to "make words of a different grammatical class from the stem". For example, the addition of the derivational morpheme **-ize** changes the

adjective **normal** to the verb **normalize**. Similarly, we can derive the adjectives **helpful** and **helpless** by adding the derivational morphemes **-ful** and **-less** to the noun **help**. *Inflectional morphemes* in turn are used to show some aspects of the grammatical function of a word. We use *inflectional morphemes* to indicate if a word is singular or plural, whether it is past tense or not, and whether it is a comparative or possessive form. Compared to other languages, there is relatively little inflection in English. Today there are only eight inflectional morphemes in English: 3rd person singular (waits), past tense (waited), progressive (waiting), past participle (eaten), plural (cars), possessive (Peter's), comparative (faster), superlative (fastest) as discussed in detail below.

Another way of classifying morphemes relies on the kinds of meanings they encode. **Grammatical morphemes** serve the purpose of signalling grammatical categories and encoding relational meanings, while **lexical morphemes** carry richer conceptual, more autonomous meanings. Therefore, grammatical morphemes mark grammatical categories and relations while lexical morphemes carry conceptual meanings. It is noticed that this distinction overlaps partly, but not fully, with the one between inflectional and derivational morphemes. In fact, inflectional morphemes form the subclass of bound grammatical morphemes, whereas derivational morphemes are bound lexical morphemes. Table 2 gives a survey of a widespread way of classifying morphemes in terms of a cross-tabulation of the dimension of distribution/freedom of occurrence (free vs. bound) and meaning (lexical vs. grammatical).

Table (2) A cross-classification of types of morphemes

	lexical morphemes	grammatical morphemes
free morphemes	= content words (e.g. paper, slim, run) •semanticallyand distributionallymore autonomous • can be inflected • rich conceptual content.	= function words (e.g. to, the, of) •semanticallyand distributionallyless autonomous • cannot be inflected •markgrammatical relations.
bound morphemes	= derivational morphemes (e.g. re-, -ize, -able) • create new lexemes • closer to the stem • more restricted productivity • more open class.	= inflectional morphemes (e.g. -s, -ed, -est) • mark word-forms • more distant from the stem • highly productive • closed class.

The table above also indicates that English *free morphemes* are classified into *Content vs. function* morphemes. *Content morphemes* are the lexical words that carry the meaning of the sentence such as: N, V, ADJ, ADV. They are also called

the *open class category*. *Function morphemes* are the words that link the lexical or content morphemes with each other in a sentence then in a text such as: prepositions, conjunctions and auxiliaries. They are also called the *closed class category*. They contribute to the encoding of grammatical categories such as Tense and Aspect (I have be**en** runn**ing**), Negation (She does **not** eat shrimp.), Voice (He was scratched by the dog) or sentence Mood (Does she eat garlic?). Both content and function morphemes are also called *parts of speech* which will be discussed later in the chapter.

2.3.2.1 Distinctive Features of Inflectional & Derivational Morphemes

The main distinctive features of derivational and inflectional morphemes in English are summarized by Quirk etal, (1985, pp. ١٥١٨-1525), Oz, H (2014, pp 92-95) as follows:

1. Derivational morphemes can change the category of a word and consequently its syntactic function in a sentence. For example:

   free **(ADJ)** , freedom **(N)** (derivation)
   kill **(V)** , killer **(N)** (derivation)
   category **(N)** , categorize **(V)** (derivation)
   talk **(V)** , talked **(V)** (inflection)

2. Derivational morphemes are less productive than inflectional morphemes (e.g. *–hood* occurs with half a dozen words in English while *–ed* is attached to almost every verb).

3. Derivational morphemes tend to have more concrete meanings than inflectional morphemes.

4. Derivational morphemes occur closer to the stem than inflectional morphemes (e.g. expect-**ation**-s).

2.3.2.2 Inflectional Morphemes in Syntactic Structure

2.3.2.2.1. Plural Morpheme

In English, the plural form of a noun is formed by adding the plural marker to the noun. The common plural marker or the plural morpheme is the suffix –s, although in reality this morpheme can be realized by the phonetic representations [s], [z], or [iz]. These phonetic representations or allomorphs are conditioned by

the phones of the base to which the plural morpheme is added. Some countable nouns are not added with the suffix **–s** to make them plural but the number of these types are not as many as those added with the suffix **–s**. Therefore, this plural morpheme is usually called the morpheme **–s** because this suffix frequently occurs in the plural noun formation. The followings are some examples of the words containing the plural morpheme or the morpheme {-s} which is pronounced /s/, /z/, or /iz/

Singular	**{-s}**	**Plural**	**Phonetic representation**
baby	-s	babies	[beibiz]
bag	-s	bags	[bægz]
book	-s	books	[buks]
box	-s	boxes	[boksiz]
cat	-s	cats	[kæts]
dog	-s	dogs	[dogz]

As mentioned above, the plural morpheme {-s} is not always realized by the suffix –s. The followings are some examples:

Singular	**{-s}**	**Plural**
man	-s	men
woman	-s	women
child	-s	children
ox	-s	oxen
tooth	-s	teeth
foot	-s	feet
sheep	-s	sheep
deer	-s	deer

These morphological forms will determine the arrangement of syntactic structure. At sentence level, the subject must agree with the verb as the examples below clarify:

(7) The book **is** on the table.
(8) The book**s** **are** on the table.

(9) The student **is** in the class.
(10) The students **are** in the class.

(11) The **man** **is** in my room.
(12) The **men** **are** in my room.

(13) The **student** walk**s** to school.
(14) The student**s** **walk** to school.
(15) The **woman** **goes** to the market.
(16) The **women** **go** to the market.

The examples above show that in present tense, the form of verb **to be** which is suitable with the plural morphemes added to the noun is **are** as in sentences (8), (10), and (12). In sentence (14) and (16), the plural morpheme {-s} needs the verb form without inflectional morpheme. To show present simple tense, the Inflectional morpheme {-s} is needed in the sentence whose subject is singular or uncountable noun as in sentences (13), (15) above.

At Phrase level, some determiners must agree with the plural morpheme. Look at the following examples.

(17) **this** student
that student
a student

(18) **these** student**s**
those student**s**
several student**s**
many student**s**
a lot of student**s**
a few student**s**

(19) ***this** students
***that** students
***these** student
***those** student

In example (17) the determiners *this* and *that* need singular noun. The plural morpheme{-s} is needed in the noun when it comes after the determiners *these, those, several, many, a lot of,* and *a few* like in example (18). The phrases in (19) are not grammatically correct.

2.3.2.2.2 Present Tense Morpheme (-s)

Inflectional morpheme plays an important role in English present tense. In English, inflectional morpheme is needed as present tense marker with particular subject. The singular noun, the third singular personal pronoun: *he , she, it* and uncountable noun as subject need the verbs with present tense morpheme. The form of present tense morpheme in this case is the suffix –*s*. Look at the examples below:

(20) My mother sweeps the floor.
My father works in a bank.
My teacher comes on time.
She/he speaks English fluently.

(21) My teachers never come late.
My friends watch TV every night.
The girls study in a university.

(22) *My mother sweep the floor.
*My father work in a bank.
*My teacher come on time.
*She/he speak English fluently.

(23) *My teachers never comes late.
*My friends watches TV every night.
*The girls studies in a university.

All the verbs in sentences (20) namely sweeps, works, comes and speaks contain inflectional morpheme **–s** are added in the final position (suffix) because the subjects are singular noun or the third person singular. Inflectional morpheme **–s** is not needed for the plural noun subjects. This is shown in examples (21). The sentences in example (22) and (23) are not grammatically correct because of the omission of inflectional morpheme **–s** and the misplacement of the inflectional morpheme **–s**.

2.3.2.2.3 Past Tense Morpheme (-ed)

In English, the most popular past tense morpheme is indicated by the suffix ***–ed*** added to regular verbs that is why this past tense morpheme is often called morpheme ***–ed*.** In reality, this past tense morpheme has three phonetically conditioned variants or allomorphs [t], [d], and [id]. It means that the morpheme {-ed} can be pronounced [t], [d] or [id] depending on the final sound of the base to which this morpheme is attached. Below are some examples of the regular verbs which contain the suffix –ed.

Verb	**{-ed}**	**Inflection Result**	**Phone**
Cook	-ed	cooked	[t]
Stop	-ed	stopped	[t]
Wash	-ed	washed	[d]
Watch	-ed	watched	[d]

Wait	-ed	waited	[id]
Want	-ed	wanted	[id]
Divide	-ed	divided	[id]

The past tense morpheme(–ed) also occurs irregularly which means it is not represented by the suffix **– ed**. This morpheme occurs with particular verbs called irregular verbs. These variants of past tense morpheme are said to be lexically conditioned. Below are some examples of irregular verbs which contain the past tense morpheme are as follows:

Verb	**{-ed}**	**Inflection Result**
am, is	-ed	was
are	-ed	were
break	-ed	broke
bring	-ed	brought
buy	-ed	bought
catch	-ed	caught
do	-ed	did
go	-ed	went
put	-ed	put
teach	-ed	taught

In English, the past tense morpheme is used to show the past event or condition. Therefore the adverbs of time showing past time such as *yesterday, last week, two years ago,* and *in 1999* are related to the past tense morpheme. Look at the examples :

(24) My mother **cooked yesterday**.
(25) She **came** here two days **ago.**
(26) She **worked** in Jakarta **last year**.

2.3.2.2.4 Progressive Morpheme

Progressive morpheme is indicated by the suffix ***–ing*** added to the verbs. This progressive morpheme is used in the progressive tense sentences. The progressive tense gives the idea that an action is in progress during particular time. The tense says that an action which began before, is in progress during, and continues after another time or action (Azar,1993: 3).

The progressive tense is also called the continuous tense. The progressive morpheme can be used in present and past tense. This morpheme is placed after *be*. It is also used as participle adjective for example; the *boring* lesson. Azar,ibid.

(27) He is **painting the house** right now.
(28) He *was* **painting the house** when we arrived.
(29) He **will be painting** when we arrive.

2.3.2.2.5 Past Participle Morpheme

Past participle morpheme is used to show the perfect event and the passive sentence. Past participle morpheme can be in the form of suffix –ed added to the verbs or it can be in irregular forms of verbs. This morpheme is usually called the morpheme {-en} to differentiate it from the past tense morpheme whose symbol is {-ed}. The verbs containing past participle morphemes are usually called verb three (V 3). This is because in the list, this verb is placed in column three (3). The use of the English verbs containing past participle in morphosyntactic structure are described as follows:

2.3.2.2.5.1 Past Participle Morphemes in Perfect Tense Sentence

Past participle morphemes are used in perfect tense sentences. Past participle morpheme {–en}) is added to the verb after the auxiliary verb *has, have*, or *had*. Look at the examples below:

(30) She *has cooked*.
(31) I *have lived* here for three years.
(32) They *had gone* when we arrived.
(33) Sally *has given* me money.
(34) John *has been* here for one hour.

2.3.2.2.5.2 Past participle Morphemes in Passive Sentences

Past participle morpheme is also used in passive sentences with the formula (be + p.p).
(35) I **was invited** to the meeting.
(36) She **is waited** by his grandmother.
(37) He **was stopped** by the police.
(38) This homework **must be** *done* here.
(39) This floor **is swept** everyday.

2.3.2.2.6 Comparative and Superlative Morpheme

The comparative bound suffix morpheme ***-er*** and the superlative suffix morpheme***-est*** are added to the one-syllable adjective base form. The free affix

morpheme *more and most* are added to the more than one-syllable adjective. For example, rich, richer (Comparative). and richest (Superlatives); more beautiful (Comparative), most beautiful (Superlative).

2.3.2.2.7 Possessive Morpheme:

It is represented by the possessive –'**s** which is a bound suffix morpheme that connects the possesser and the possessive, as in : The man'**s** car, the teacher'**s** book, and Pronoun with determiner, singular plural, as in:
1st *: mine ours my our*
2nd: *yours yours your your*
3rd : Masc *his theirs his their*
Fem : *hers her*
Neut: *(its) its*

Table 3: Inflectional morphemes in present-day English

word-class	morpheme	functions/meanings	grammatical category
noun	{plural}	marking of plural	NUMBER
	{genitive}	marking of genitive, possession, part-of, etc.	CASE
verb	{3rd person}	3 rd person singular present, marking agreement with subject	PERSON, AGREEMENT
	{ing}	Present participle, marking of progressive	Aspect
	{ed1}	Simple past	TENSE
	{ed2}	past participle, used for present perfect and passive voice	TENSE
adjective	{er}	comparative	
	{est}	superlative	GRADATION

2.3.2.3 Derivational Morpheme in Syntactic Structure

The most common derivational morphemes are the following:

2.3.2.3.1 The Morphemes –*ness*, -ity, - ation

The bound suffix morphemes that change free morpheme (verbs or adjectives) to nouns are: -ity, -ness, -ation, for example:
Happy-happyness, necessary- necessity, generalize- generalization.

2.3.2.3.2 The Morphemes –en, ize

The bound suffix morphemes –en and -ize change free morpheme (Nouns or adjectives) to verbs**, f**or example:

Category – categorize
Red – reden

2.3.2.3.3 The Morpheme –ish

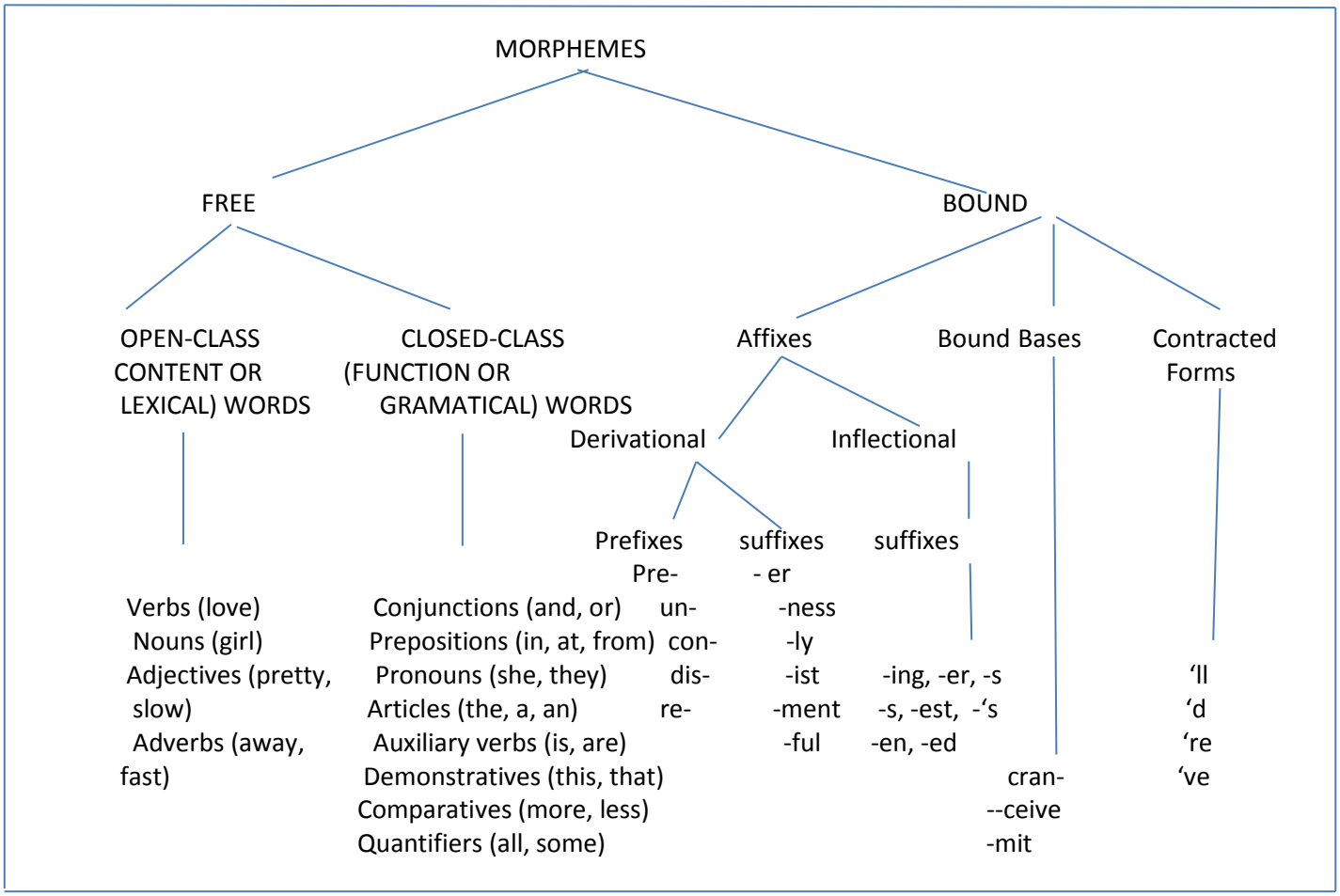
The bound suffix morpheme **-ish** changes free morpheme (verbs or nouns) to adjectives, for example: Radiate – radish
Child – childish

2.3.2.3.4 The morphemes --ly, -wise

The bound suffix morpheme **--ly, -wise** change free morpheme (Nouns or adjective) to adverbs, for example:

Kind- kindly, anger- angerly, like- likewise.

Figure (2) Classification of English Morphemes (Oz,2014:p.90)

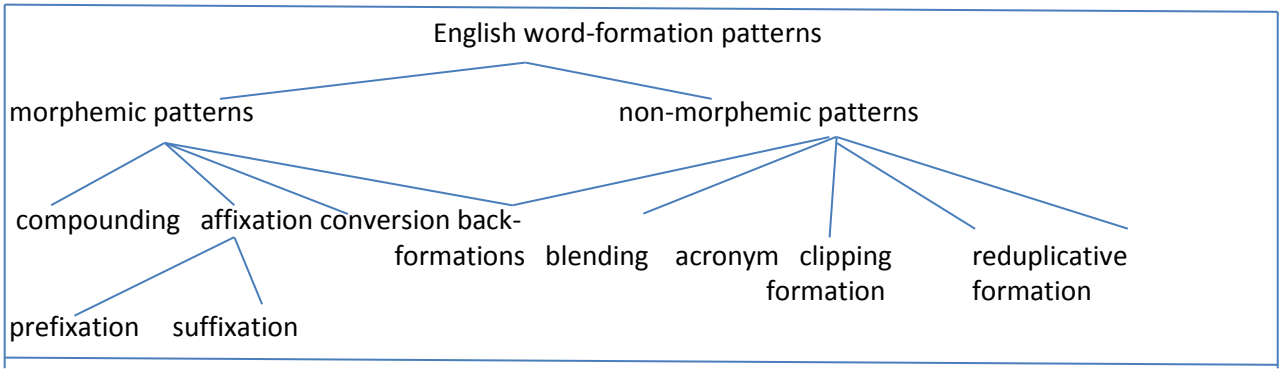


2.3.3 English word-formation patterns

The second major branch of morphology is *word-formation*, whose scope includes the direct terminological counterpart to inflectional morphology, *derivational morphology*, but it also goes beyond that as it is shown in figure (3) below and discussed in detail below.

Figure (3) renders the most common way of classifying word-formation patterns in English (cf. Plag 2003, Lieber 2005, Schmid 2011).

Figure 3 : Survey of basic word-formation patterns in English



2.3.3.1 Compounding

Compounding is the process of joining at least two free lexical morphemes or simple lexemes to form a complex lexeme. Compounds can be distinguished from syntactic phrases with the help of a number of criteria: in compounds, the main stress is typically, but not always, on the first constituents (blackbird vs. black 'bird); the first constituent cannot be inflected (*wall**s**paper); the head cannot be replaced by "one" in coordination (cf. *let's buy a newspaper and a wall **one**); and compounds are typically lexicalized, which means that the meaning of the compound tends to differ and go beyond the meanings of its parts. For example, a *holiday* is not a *holy day*, as its components suggest, but typically extends over several days and mainly marked by the fact that 'people do not work'. In terms of morphological form, if compounds consist of nothing else than two lexemes (e.g. wallpaper, mousemat, daydream), they are commonly called root compounds and described in terms of the word-classes of their constituents Compounds containing bound morphemes in addition to free ones, e.g. *meeting point*, *theatre-goer* or *good-looking*, are known as synthetic compounds.

Some compound words introduced recently into English are *Facebook*, *YouTube*, *power nap*, and *carjack*. The *White House*, *school bus*, and *decision making* are also compounds but written as two words. These examples of English compounds are mostly nouns, but it is also possible to produce compound adjectives (*icy-cold*, *bittersweet*) and compound words consisting of noun (spoon) plus verb (feed) as in Start to *spoonfeed* your baby at around six months.

2.3.3.2 Prefixation

Prefixation is the word-formation pattern which attaches a bound lexical morpheme at the front of a base. It typically includes at least one free lexical morpheme, i.e. lexeme. In most cases, prefixation does not change the word-class of the base but has an effect on its meaning. Prefixation thus has mainly semantic, rather than grammatical, effects on a base. As for the morphological form and structure, three partterns could be distinguished: nominal, adjectival and verbal prefixation patterns.Table(4)(extracted from Quirk etal,1985:1540–1546) provides a survey of frequent prefixes, which is organized in terms of semantic groups. It provides information on the word-classes of the bases with which they occur and contains information on their major meanings or semantic relations.
Most prefixes in present-day English are not of Germanic origin but come from Greek, Latin and French. Exceptions are the forms *fore-* as well as *under-*, *over-* and *out-*. We may also have noticed that the prefix *in* has a number of variants depending on the first sounds of the base to which it is attached (e.g. *indirect*, *illegal*, *impossible*, *irresponsible*). These assimilations often took place in Latin or French before the words were borrowed into English. From a synchronic descriptive point of view, the variants can be considered allomorphs of bound lexical morphemes.

Table (4) Frequent types of prefixes (extracted from Quirk et al. 1985: 1540–1546)

Semantic type	prefix	meaning	nominal examples	adjectival examples	verbal examples
negative	a-	'lacking in'	-	amoral, asexual	-
	dis-	'the converse of'	Disorder discontent	disloyal	disobey
	in-	'not', 'the converse of'	-		-
	non-	'not'	Non-smoker		-
	un-	'the converse of'	-		-
Reversative and	de-	'reversing the action'	attached to deverbal	-	defrost, de-escalate

privative			nouns, e.g. de-nationalization		
		'remove from			
	dis-	'reversing the action'	-	-	Delouse, degasify
	un-	'reversing the action'	-	-	Disconnect, disinfect
pejorative	mal-	'Depriving of'	-	-	Unzip, unpack,unwrap
	mis-	'wrongly', 'astray'	-	misleading	mishear
	pseudo-	'false', 'imitation'	Pseudo-intellectual	Pseudo-scientific	-
Degree or size	co-	'joint'	Co-pilot	-	Co-exist
	hyper-	'extreme'	-	hypersensitive	-
	mini-	'little'	Mini-skirt	-	-
	out-	'surpassing'	outnumber	-	outgrow
	over-	'Excessive'	-	overconfident	overreact
	sub	below	-	subnormal	-
	super	'more than' 'very special'	Superman	supernatural	-
	under	'too little'	-	underprivileged	underplay
Orientation and attitude	anti-	'against'	Anti-war	Anti-social	-
	contra-	'opposite'	Contradistinction	contrafactual	contraindicate
	counter-	'against'	Counter-espionage	Counter-clockwise	counteract
	pro-	'For', 'on the side of'	-	Pro-American	-
locative	inter	Between, among	Inter-war	international	-intermarry
	sub-	'under'	Subsection	subnormal	subdivide
	super-	'above'	superstructure	-	superimpose
	trans-	'across'	-	transatlantic	transplant
time and order	ex-	'former'	Ex-husband	-	-
	fore-	'before'	foreknowledge	-	foretell
	post-	former	Post-war	Post-Freudian	postpone
	pre-	'before'	Pre-war	Pre-marital	Pre-heat
	re-	'Again', 'back'	re-analysis	-	rebuild
number	bi-, di-	'two'	Biplane, dioxide	Bilateral, divalent	-
	poly-, multi-,	'many'	Polytechnic, Multiform	Multi-racial	-
	semi-, demi-	'half'	Semivowel, Demidod	Semi-conscious	-
	tri-	'three'	Tricycle	tripartite	-
	uni- mono-	'One'	Unisex, monoplane	Unilateral, monosyllabic	-

2.3.3.3 Suffixation

In suffixation, a bound lexical morpheme is attached at the end of a base which consists of at least one free lexical morpheme. However, the effects of suffixation on the base are basically different from the effects of prefixation. Although there are a number of suffixes that keep the word-class of the base in order without any change, including the nominal suffixes -ship (lordship), -let (droplet) and -ing (tubing) and the adjectival suffix -ish (childish), these constitute a comparatively small portion of the full set of derivational suffixes, whose main function arguably is to bring about a change in word-class. A survey of English suffixes is therefore also more reasonably arranged in terms of their target word-classes, i.e. the word-classes of the products of the derivation process, and the word-class of the base see Table 5 The most precise and economical way of describing specific suffixation patterns follows the format "de-base target word-class formation". For example, *signify* would be described as the product of a de-nominal verb formation, *amendment* as a de-verbal nominalization, *manageable* as a de-verbal adjective formation.

Table (5) Frequent types of suffixes (extracted from Quirk et al. 1985: 1546–1558)

noun-forming suffixes adjective-forming suffixes	de-nominal	Abstract	-age: mileage, footage -ery: drudgery, slavery -ful: spoonful, glassful -hood: brotherhood, widowhood -ing: carpeting, farming -ism: idealism, impressionism -ship: friendship, membership
		Concrete	-er: Londoner, villager -ess: actress, lioness -ette: kitchenette -let: booklet, piglet -ster: trickster, gangster
	de-verbal	Abstract	-age: drainage, leverage -al: refusal, dismissal -ation: exploitation, exploration -ment: amazement, embodiment
		Concrete	-ant: contestant, informant -ing: building, opening -ee: employee, payee -er, -or: driver, writer, computer, actor
	de-adjectival	Abstract	-ity: sanity, mobility -ness: happiness, kindness
noun/adjective forming suffixes	de-nominal or– de adjectival	reference to persons and membership qualities	-ese: Japanese, Chinese -(i)an: Darwinian, Elizabethan, Russian -ist: violinist, stylist -ite: socialite, Raffaelite

adjective-forming suffixes	de-nominal or – de-adjectival	Native	-ed: wooded, simple-minded -ful: useful, delightful -ish: foolish, snobbish -less: careless, restless -like: childlike, monkeylike -ly: brotherly, friendly -y: sandy, wealthy
		Foreign	-(i)al: dialectal, professorial -esque: romanesque, Kafkaesque -ic: atomic, heroic -ous: desirous, ambitious
adverb-forming suffixes	de-verbal		-able: washable, debatable -ive: attractive, explosive.
	de-adjectival		-ly: extremely, calmly
verb-forming suffixes	de-nominal		-wards: northwards -wise: clockwise, crosswise
verb-forming suffixes	de-nominal		-ate: orchestrate, hyphenate -ify: codify, beautify -ize: hospitalize, symbolize
	de-adjectival		-en: broaden, harden -ify: simplify, amplify -ize: legalize, publicize

As the list in Table (5) also suggests, suffixes are of course restricted regarding the types of bases with which they can combine. To be more specific, similar to prefixes, suffixes are subject to productivity restrictions (Bauer 2001). These mainly concern the word-class properties of bases. For instance, while the suffix **-er** can be added to nouns to form concrete nouns denoting a typical quality of persons or, less frequently, objects (e.g. Londoner, villager) and to verbs in order to refer to the agents of actions (driver, teacher) or instruments (computer, dish-washer), de-adjectival formations (*consistenter, *patienter) are unacceptable. Knowledge about such restrictions can be very useful in the analysis of word-formation products, because it allows learners of English specially Medical students to predict, for example, that the nominalization *cleaner* must be derived from the verb *to clean* rather than the *adjective clean*. Most suffixes have further productivity restrictions concerning more specific grammatical or semantic properties. The noun-forming suffix **-ee**, for instance, typically combines with bases expressing the patient rather than agent role in a paraphrase: *employee* denotes 'someone who is employed', *interviewee* 'someone who is interviewed'. The adjective-forming suffix **–able** tends to require transitive rather than intransitive verbs as bases.

2.3.3.4 Conversion and zero-derivation

When a word of one grammatical category becomes a word of another grammatical form without any changes to pronunciation or spelling, this process of word formation is generally known as conversion. In English, numerous nouns

like: *hammer*, *bottle*, *father*, *email*, *chair*, *vacation*, *butter*, and *host* for instance, have been turned into verbs, also recently *facebook* and *google* with no formal change. For example:

(40) I will **email** you the document as soon as I finish revising it;
(41) Tom **chaired** the meeting yesterday;
(42) Ali and Zaynab are **vacationing** in London this summer,
(43) I am **facebooking** at the time being,
(44)Try to **google** the topic of your assignment.

This common process of word formation is also labeled as "category change" or "functional shift" and sometimes referred to as 'zero derivation' or 'null derivation' because it is assumed that the formal class alteration between words leads to the insertion of an invisible morpheme. However, it is a very productive word formation process like clipping and the like. In English conversion is particularly a productive process, with new uses occurring commonly. It seems fair to state that the most productive form of conversion in English is noun to verb conversion, as in the above examples. However, it can also include verbs being converted to nouns (e.g., *guess*, *must* and *spy* as the sources of *a guess*, *a must* and *a spy*) and phrasal verbs becoming nouns (e.g., *to print out* and *take over* as the sources of a *printout* and *takeover*). As Yule (2010, p. 57) exemplifies, verbs like: *see through*, *stand up* also become adjectives, as in *see-through* material or a *stand-up* comedian. Similarly, adjectives, as in a *dirty floor*, an *empty room*, some *crazy ideas* and those *nasty people*, can become the verbs *to dirty* and *to empty*, or the nouns a *crazy* and *the nasty*. Consequently, it can sometimes be hard to figure out which word category is the source of conversion, as in the example of *host*, but overall, conversion is a common creative way of word formation and it has the potential to facilitate learners' vocabulary acquisition. The grouping of words of this type can be seen in Table (6) ,which gives a survey of the dominant types of conversion (Quirk et al. 1985: 1560–1563).

Table (6) Frequent patterns of conversion

de-verbal nouns	
"state", "state of mind"	desire, dismay, doubt, love, smell, taste, want "event/activity" attempt, fall, hit, laugh, release, search, swim "
object of V"	answer ("that which answers"), bet, catch, find „
subject of V"	bore („s.o./s.th. who/that bores"), cheat, coach „
instrument of V"	cover („s.th. with which to cover things"), paper
manner of V-ing"	walk („manner of walking"), throw „
place of V"	divide, retreat, rise, turn
de-nominal verbs	
to put in/on N"	bottle, corner, catalogue, floor, garage
"to give/provide with N"	butter (bread), coat, commission, grease, oil
to deprive of N"	core, peel, skin
to … with N	brake, elbow, fiddle, hand, finger, glue

to be/act as N with respect to	chaperone, father, nurse, parrot, pilot
to make/change … into N	cash, cripple, group
to send/go by N	mail, ship, telegraph; bicycle, boat, canoe
de-adjectival verbs	
to make (more) Adj‟ (trans. V)	calm, dirty, dry, humble, lower
to become Adj‟(intrans. V)	dry empty, narrow, weary (of), yellow

2.3.3.5 Back-formation

Like suffixation and conversion, back-formation is a word-class-changing process. However, this process differs from them as not been marked by the addition of morphological material or by keeping the surface form unchanged, but by the elision of material. It can be defined as the process whereby the deletion of a morpheme or morpheme-like element results in a switch of a lexeme to a new word-class. The verb *babysit*, which is derived from the noun *babysitter* by means of back-formation, and the verb *to sightsee* derived from *sightseeing* have already been mentioned above. Other frequently quoted examples include *to burgle* ; *burglar*, *to edit*; *editor*, *to laze* ; *lazy* and *to televize* , *television*. As these examples indicate, back-formation joins conversion as a predominantly verb-forming process. Actually, back-formation is more difficult to identify than additive word formation processes. Deficient inflectional examples can be an indicator, as is indicated by the rather unusual forms *I babysat last week* or *we sightsaw in London.* Paraphrases can also assist to clarify: while *‘to sit by the baby’* is a rather poor gloss of *to babysit*, a paraphrase that includes the noun *babysitter*, e.g. *‘to act as a babysitter’* is quite reasonable. If we keep in mind that genuine verbal compounds do not exist in English, this will also help us to realize that verbs like *bottle-feed*, *house-hunt* or *chain-smoke* might be the results of a back-formation process.

2.3.4 Non-morphemic word-formation types

In addition to the fact that they do not obey morpheme boundaries, the prominent feature of non-morphemic word-formation processes is that they are less regular and therefore less predictable. This means that given a recent verb like *to desktop-edit*, one can easily imagine that someone may eventually find it convenient to coin the adjective *desktop-editable*. However, knowledge of the words *floor* and *wardrobe* will not have put us in a position to foretell that someone has actually found it funny to coin the blend *floordrobe* to refer to an untidy room where lots of clothes are scattered all over the floor. Four main types

of non-morphemic word-formation process are commonly identified: *blending*, *clipping, acronym-formation* and *reduplication* which will be discussed below.

2.3.4.1 Blending

It is the process in which two or more words can be merged into each other. In the most typical cases, overlapping segments of words are exploited, as for example in the classic *smog* ; *smoke* and *fog* or the more recent *wintertainment* ; *winter* and *entertainment*, and the meanings of the blended lexemes are also blends of the meanings of the source lexemes. In *sexploitation*, both source words are retained in their full forms. The example *floordrobe* mentioned earlier illustrates the type of blend in which there is no or only a very superficial kind of overlap. A further example is the well-known noun *brunch* ; *breakfast and lunch*, which differs from *floordrobe*, however, in that floor finds its way into the blend without being subject to a change.

2.3.4.2 Clipping

This process of word formation happens when a word of more than one syllable such as *photograph* is reduced to a shorter form *photo*. The process of clipping is responsible for a number of entirely common everyday words, whose sources are hardly known today. For example, *car* is a front clipping of *motor car* and *bus* a front clipping of *omnibus*; *pub* is a back clipping of *public house* and *zoo* a back clipping of *zoological garden*. *Flu* has emerged from *influenza* by way of a combination of front and back clipping. Similarly, everyday fax is the clipped form for *facsimile***.** Common examples of English clippings are *bike* for bicycle, *gas* for gasoline, *phone* for telephone, *van* for caravan, *prof* for professor, *fan* for fanatic, *ad* for advertisement, *telly* for television and *gym* for gymnasium. As Yule (2010: 56) states, particularly educational environments encourage the process of clipping because so many of them are reduced as in such examples *ad*, *chem*, *vocab*, *exam*, *gym*, *lab*, *math*, *phys-ed*, *polysci*, *prof* and *typo*. Orthographically, there are also some clipped abbreviations such as Dr. (*doctor*), Mr. (*mister*) and GB (*gigabyte*) whose spellings have been shortened but whose pronunciations are not essentially different. In English expressions such as the baker's (for the baker's shop), a daily (for a *daily newspaper*) and *white-collar* (for white-collar-worker) there is also a kind of clipping called *ellipsis* in which a part of the structure or phrase is omitted "for reasons of economy, emphasis, or style." (Demirezen, 2002: 215)

2.3.4.3 Acronym-formation

Acronyms, also called initialisms, is the process of producing new words from the initial letters of a group of other words. For example, DVD is an acronym for ***D**igital **V**ideo **D**isk*, ATM is another acronym for ***A**utomatic **T**eller **M**achine* and VCR is likewise an acronym for ***V**ideo **C**assette **R**ecorder* where the pronunciation consists of saying each separate letter (D-V-D, A-T-M and V-C-R). Other common examples of acronyms in English include NATO /ˈneɪ.təʊ/ from ***N**orth **A**tlantic **T**reaty **O**rganization*, NASA /ˈnæsə/ from ***N**ational **A**eronautics and **S**pace **A**dministration*, UNESCO /juːˈnes.kəʊ/ from *United Nations Educational, Scientific, and Cultural Organization* and UNICEF /ˈjuː.nɪ.sef/ from *United Nations International Children's Emergency Fund*. These acronyms are typically pronounced as new single words and written in capital letters. Nevertheless, in everyday English, many acronyms have lost their capital letters and become everyday terms, including *scuba* (self-contained underwater breathing apparatus), *zip* (zone improvement plan), *laser* (light amplification by stimulated emission of radiation), and *radar* (radio detecting and ranging). Although these words are originally produced as acronyms, people rapidly forget their origins and they regularly become new independent words in languages. Finally, it seems that there are tens of thousands of acronyms in the English-speaking world today, which precisely shows the creative and changeable aspects of human language.

2.3.4.4 Reduplication

Reduplication is a quite minor type of word-formation pattern illustrated by lexemes such as *hush-hush*, *hip-hop* and *walkie-talkie*. As the examples indicate, the pattern subsumes cases where an element is repeated in identical form (hush-hush), cases where we have a vowel change (hip-hop) and those where the two components rhyme (walkie-talkie).

2.3.4.5 Eponyms

An eponym refers to the word formation process in which a new word is formed from a proper name. In other words, an eponym denotes the name of an object or activity which is also the name of the person who first created the object or did the activity. Some common examples of eponyms as illustrated by Oz (2014:103) include:

- sandwich (from the eighteenth-century fourth Earl of Sandwich, who first insisted on putting his meat between two slices of bread while gambling),
- jeans (from the Italian city of Genoa where the type of cloth was first made),
- robot (after the mechanical creatures in the Czech writer Karel Capek's play R.U.R., the initials standing for "Rossum's Universal Robots."),

- gargantuan (named for Gargantua, the creature with a huge appetite created by Rabelais),
- jumbo (after an elephant brought to the United States by P. T. Barnum). Some eponyms include technical terms that are based on the names of those who first discovered or invented things, such as volt (from the Italian, Alessandro Volta), watt (from the Scottish inventor, James Watt), fahrenheit (from the German, Gabriel Fahrenheit), boycott (from the name of Charles C. Boycott), and even behçet or behçet's disese (named in 1937 after the Turkish dermatologist Hulusi Behçet, who first described the triple-symptom complex of recurrent oral aphthous ulcers, genital ulcers, and uveitis).

2.3.5 Implifications for teaching Morphological Awareness

Nowadays, Learners of EFL face enormous challenges as they must not only learn to communicate but also understand and study content presented in English. Authors like Graves (2006), Kieffer (2009) and Kieffer and Lesaux (2012a/2012b) suggest that one of the ways in which they could achieve this is to enable learners acquire morphological awareness and help learners recognize and manipulate new words. Reasonably, language learners who recognize how English words are created, by combining prefixes, suffixes, and roots, tend to have more words and comprehend texts better (Kieffer and DiFelice Box, 2013).

Morphological awareness is defined as "children's conscious awareness of the morphemic structure of words and their ability to reflect on and manipulate that structure" Carlisle (1995:194). In other words, it means learners' knowledge of both derivations and inflections in language at the same time is the basic steps towards acquiring new vocabularies. Derivational morphology comprises our knowledge of prefixes (e.g., -un in ***un****do* or -dis in ***dis****connect*), suffixes (e.g., -ation in *specializ**ation*** or *form**ation***), and compounding (e.g., *homework* and *highlight* are both compound words). On the other hand, inflectional morphology deals primarily with indicating grammatical changes in words (e.g., -s in boys or -ed in wanted are both grammatical inflections). This awareness of both inflectional and derivational morphology occurs when the learner understands the relationships among words and word forms and decomposes complex words into the smallest meaningful units (Kieffer and Lesaux, 2012a:25). In other words, derivational morphological awareness is of particular interest for language teaching and it plays a crucial role in understanding the language development of learners. This can be manipulated when learners can understand and use derived word forms, understand connections between different morphological forms of a word, and create new derivations of known words.

Developing an awareness of English morphology will enable language teachers to help their learners understand the internal structure of words, what they consist of and how they are formed by combining prefixes, suffixes, and roots. Since medical terminology wholly depend on Latin prefixes and suffixes, understanding the meaning of all kinds of affixes will help medical students, subject of the study, predict the mening of the new medical terms and memorize their orthography easily. Moreover, recent research suggests that learners with an awareness of word-formation processes tend to have larger vocabulary and better reading comprehension (Kieffer and Lesaux, 2008; 2012a/2012b), and also producing better writing (Templeton, 2012). Consequently, morphology can be a valuable instructional tool for language learners to develop and use vocabulary creatively.

Therefore, vocabulary-rich lesson contents should be accompanied by teaching morphological awareness in language teaching. Language teachers can introduce their learners to strategies such as recognizing morphemes in relatively common words. In this way, learners can apply their knowledge to words that are not familiar to them or to words that are familiar, but presented in a different morphological form. Activities aimed at prompting morphological awareness can be adjusted to suit each age group. For young language learners, for example, morphology instruction can start with simple words and progress slowly to more complex words. For adolescents and adult learners, such instruction can start at morphologically more complex words. Group and pair work may work well to help learners get deeper insights into English word formation processes. In line with the above principles, a specific technique of promoting morphological awareness among language learners is to use an affix card deck. Also referred to as "multisensory-guided discovery" (Carreker, 2005), this approach requires the teacher to read a series of derivative affixes that have a common feature (e.g., *careful, graceful, helpful, joyful, and cheerful*). The learners 'discover' the similar sounds and then visually discover the sound-symbol correspondence. The similar sounds and letters are then identified as a prefix or suffix, and the student verbalizes these discoveries to anchor the learning. As a last step, the teacher writes the affix on a card which is added to the deck and it is regularly reviewed daily and weekly. This technique could be very beneficial especially when used with young learners and early adolescents.

2.3.5.1 Principles of Teaching Morphological Awareness in Classroom

Building on previous research in this area, some scholars like: Kieffer & Lesaux (2007/2009/2012a) propose four main instructional principles that can be used in the language classrooms:

1. Teaching morphology explicitly and as a separate component of vocabulary teaching.

2. Teaching students "as a cognitive strategy" with explicit steps. In order to break a word down into morphemes, learners must complete the following four steps:

a. Recognizing that they do not know the word or do not have a deep understanding of the meaning of the word.

b. Analyzing the word for recognizable morphemes in the roots, prefixes, and suffixes.

c. Thinking of a possible meaning based upon the parts of the word.

d. Checking the meaning of the word against the context.

3. Teaching learners to understand the use of prefixes, suffixes, and roots, and how words are transformed.

4. Teaching learners the concept of cognates – words with similar spelling and meanings in English and the native language – to improve their reading comprehension.

Given the importance of the aforementioned instructional principles, recent research into morphological awareness suggests that there is a significant rate of achievement among students who have been exposed to strategies for not only understanding the meanings of words but also recognizing different morphological forms of the same word in reading texts, as opposed to students who were not exposed to such strategies (Kieffer, 2009; Kieffer & Lesaux, 2009; Kieffer & Lesaux, 2012a).

In conclusion, there appears to be little doubt that teaching morphological awareness has a highly beneficial effect on the language development of learners. The implications for teaching and learning are significant, since the research conducted into this area points that students who understand how words are formed by combining prefixes, suffixes, and roots have larger lexicon and better reading comprehension than those without such knowledge and skills.

2.4 Syntax

Syntax as a term comes from Greek, meaning 'to arrange together.' It is known as the rules of grammar which are used for ordering and connecting words to form phrases or sentences (Longman Dictionary of Contemporary English, 1987: 1072). Crystal defines syntax as the study of the inter-relationships between elements of sentence structure, and of the rules governing the arrangement of sentences in sequences.(1980:146). Hence and since syntax refers to the rules of word order and word combinations in order to form phrases and sentences, it is therefore concerned with studying the different parts of speech to understand the role that words may be contributing to the sentence. Words can take the forms of nouns, verbs, adjectives and other parts of speech. In addition to that, syntax is

also concerned in studying sentence patterns and variety for their effects, types of sentences and their syntax modes include simple sentences, compound sentences, complex sentences, and compound-complex sentences. Syntax is, therefore; the concept that enables people to know how to start a question with a question word ("What is that?"), or that adjectives generally come before the nouns they describe ("green chair"), subjects often come before verbs in non-question sentences (affirmatives) ("She jogged"), prepositional phrases start with prepositions ("to the store"), helping verbs come before main verbs ("*can* go" or "*will* do"), and so on. A language learner should be fully aware of correct syntax examples which include word choice, matching number and tense, and placing words and phrases in the right order. As a result, solid syntactic skills require an understanding and use of correct word order and organization in phrases and sentences and also the ability to use increasingly complex sentences as language develops.

Based on the definition above and the domain of syntax , it is good to shed some light on the syntactic structure which contains the words that are arranged to form phrases or sentences. The main syntactic structure is sentence and phrases, which are parts of sentences. Therefore, the sections below discuss word classes or parts of speech, grammatical/functional categories (subject, object), categorical/phrasal (noun phrase, verb phrase... etc.) type of relations in addition to sentence types and patterns based on Eastwood.(1999:2-6),Quirk etal, (1985: pp.96,135,247 and Stageberg (1971:pp.151-175).

2.4.1 lexical Categories or Parts of Speech

The traditional term for parts of speech is lexical categories. Following an approach that goes back to Latin, grammars of English also give a traditional list of word classes under the name of parts of speech: verb, noun, adjective, adverb, preposition, conjunction, pronoun, article or determiners, and interjection. In language studies and analyzing learners' written corpora, we often need to talk about parts of speech so that we can "make general and economical statements about the way the words of the language behave (Crystal, 1996: 206). Not only we need to know the meaning or synonyms of a word and its pronunciation when we say we know a word, but we should also recognize its grammatical category such as noun or verb as well as its spelling or orthography. When we loop up a word, any typical English dictionary should give at least lexical entry information that contains spelling, standard pronunciation, definitions to represent one or more meanings of the word, and parts of speech. Knowing the grammatical category or class a word belongs to help the language user identifies specifically the meaning of the word. The part of speech indicates how the word functions in meaning as

well as grammatically within the sentence. They are commonly divided into open classes (nouns, verbs, adjectives, and adverbs) and closed-classes (pronouns, prepositions, conjunctions, articles, determiners, and interjections). The idea is that open-classes can be altered and added to as language develops and closed classes are pretty much set in stone. For example, new nouns are created every day, but conjunctions never change.

Definitions of parts of speech may show variations among authors, but they are often similar, for example, "A noun is a word that is used for naming a person, thing or concept." The term 'part of speech' is widely used in grammar. Sometimes it is also referred to as 'word class' or 'lexical category'. The literature on parts of speech is rather extensive. Schachter (2007) was an important refernce, Trask (1999), Anward (2000,2001) and Schachter & Shopen (2007) are helpful. Learners and students of English will gain a basic understanding of sentence structure and the English language by familiarizing themselves with these essential components. Below is a brief account of lexical and functional categories with their morphosyntactic features as cited from Çelik (2007: pp. 92-93) and Crystal (1996: pp. 206-2013).

2.4.1.1 Nouns

In English grammar, a *noun* is a part of speech (or word class) that names or identifies a person, place, thing, quality, idea, or activity. Most nouns have both a singular and plural form, can be preceded by an article and/or one or more adjectives, and can serve as the head of a noun phrase.

A noun or noun phrase can function as a subject, direct object, indirect object, complement, appositive, or object of a preposition. In addition, nouns sometimes modify other nouns to form compound nouns. To understand how to recognize and use nouns, it's helpful to learn about the different types of nouns in English.

This lexical category or word class includes: proper nouns, common nouns, count nouns, mass nouns, concrete and abstract. For example: *Bill, tree, comment, milk, music, etc. Below is a brief account of these types of noun in English grammar.*

a. Common Noun

A common noun names any person, place, thing, activity, or idea. It's a noun that is *not* the name of any particular person, place, thing, or idea. A common noun is one or all of the members of a class, which can be preceded by a definite article, such as *the* or *this*, or an indefinite article, such as *a* or *an*. Examples of common nouns make up the vast majority of nouns in English. For example: chair, book, door, wallet, board, car, dog, pen, ...etc.

b. Proper Noun

A proper noun names specific or unique individuals, events, or places, and may include real or fictional characters and settings. Unlike common nouns, most proper nouns, like *Fred*, *New York*, *Mars*, and *Coca-Cola*, begin with a capital letter and are not preceded by an article. They may also be referred to as proper names for their function of naming specific things. For example : Ahmed, Susan, London, Atlantic ocean, Tigris, Nile, Alp mountains, ...etc.

Proper nouns are not typically preceded by articles or other determiners, but there are numerous exceptions such as the *Bronx* or the *Fourth of July*. Most proper nouns are singular, but again, there are exceptions as in the *United States* and the *Joneses*.

c. Concrete and Abstract Nouns

A concrete noun names a material or tangible object or phenomenon : something recognizable through the senses, such as *chicken*, *egg*, flag, desk, cat. ...etc. An abstract noun, by contrast, is a noun or noun phrase that names an idea,event,quality concept *courage*, *freedom*, *progress*, *love*, *patience*, *excellence*, and *friendship*. An abstract noun names something that can't be physically touched. Abstract nouns are "typically non observable and nonmeasurable."

d. Collective Noun

A collective noun (such as team, committee, jury, squad, orchestra, crowd, audience, and family) refers to a group of individuals. It is also known as a group noun. In American English, collective nouns usually take singular verb forms and can be replaced by both singular and plural pronouns, depending on their meaning. For example:

(45) The **Jury** finds him guilty. (**jury** as a whole committee).

(46) The **team** play vaiably. (**every member** plays in different level from the other).

e. Count and Mass Nouns

A count noun refers to an object or idea that can form a plural or occur in a noun phrase with an indefinite article or with numerals. Most common nouns in English are countable: they have both singular and plural forms. Many nouns have both countable and noncountable uses, such as the countable dozen eggs and the noncountable egg, an idea; several ideas.

A mass noun — *advice*, *bread*, *knowledge*, *luck*, and *work* — names things that, when used in English, cannot usually be counted. A mass noun (also known as a noncount noun) is generally used only in the singular. Many abstract nouns are uncountable, but not all uncountable nouns are abstract.

f. Other Types of Nouns

There are two other types of nouns. Some style guides might separate them into their own categories, but they are really special types of nouns that fall within the categories described previously.

i. **Denominal nouns:** A denominal noun is formed from another noun, usually byaddinga suffix,suchas *villager* (from *village*), *NewYorker* (from *NewYork*), *booklet* (from *book*), *limeade* (from *lime)*, guitarist (from *guitar*), *spoonful* (from *spoon*),and librarian (from *library*).

Denominal nouns are context-sensitive; they depend on the context for their meaning. For example, while a *librarian* usually *works* in a library, a *seminarian* usually *studies* in a seminary.

ii. **Verbal nouns:** A verbal noun is derived from a verb (usually by adding the suffix *-ing*) and exhibits the ordinary properties of a noun. It is a noun that has no verb-like properties despite being derived from a verb. It may therefore end with the suffixes: ing, -tion, -al or no suffix. For example:(to build: building; to arrive, arrival; to repeat: repeteation; to attack: attack).See the examples below:

(47). His **firing** of Thomas was a mistake.

In (47), the word *firing* derives from the word *fire* but functions as a subject verbal noun.

Being normal nouns, verbal nouns can be modified by adjectives, be pluralized (if the sense allows), and be followed by prepositional phrases (e.g., …*of men*, …*by me*).

(48). A brilliant **studying** at college, won him the scholarship.

In example (48), the verbal noun *studying* is preceded by the determiner (a), an adjective as a modifier (brilliant), and followed by a prepositional phrase (at college).

A verbal noun is different from a gerund. A gerund is a noun that, having derived from a verb, retains a few verb-like properties and only ends with the suffix (ing). For example, a gerund can be modified by an adverb and take a direct object.

Here is an example showing the difference between a verbal noun and a gerund.

Verbal noun: (49). This bad **planning** of a project is not acceptable
(This is a verbal noun. It is acting just like a noun. Just like any noun could have, it has a determiner (This) and an adjective (bad), and it is followed by a prepositional phrase (of a project.)

Gerund: (50) Badly **planning** a project is not acceptable.
(This is a gerund. It is functioning as a noun, but it has two notable verb-like properties. Just like any verb could have, it has an adverb (badly) and a direct object (a project).

2.4.1.2 Pronouns

As clarified by Quirk etal 1985(pp.335-392). They are of seven types:
1. Personal pronouns
2. Possessive pronouns
3. Reflexive pronouns
4. Relative pronouns
5. Interrogative pronouns
6. Demonstrative pronouns
7. Indefinite pronouns

1.Personal pronouns
They are distinguished in terms of being singular, plural, subject or object and as shown below:
1st *I me we us*
2nd *you you you you*
3rd Masc. *he him they them*
3rd Fem. *she her*
Neut. *it*
The grammatical features of pronoun include:: number, gender, case
Function: indicate coreference with noun (phrase)
Usually, the coreferential N(P) precedes the pronoun (anaphoric relationship); but initial ADV-clauses may include a pronoun that anticipates a subsequent N(P) (cataphoric relationship):
(51) When **she** saw that Bill wasn't there, **Sue** left immediately.
In some constructions ***it*** is non-referential (expletive).
(52) **It** is raining.

(53) **It** is obvious that this doesn't make much sense.
Generic reference is commonly expressed by *we, you,* and *they.* In formal style, *one* is often used as a generic pronoun.
(54) **We** live in an age of moral dilemmas.
(55) **You** can always tell if someone is lying.
(56) **They**'ll soon find a cure for cancer.
(57) **One** has to do check up periodically.

2. Possessive pronouns
They include the following singular and plural pronouns that can function as determiner:
1st person *mine ours my our*
2nd person *yours your*
3rd person Masc *his theirs his their*
Fem *hers her*
Neut *(its) its*

3. Reflexive pronouns
They are either singular or plural,1st, 2nd or 3rd person, masculine or feminine or neutral as shown below:
1st *myself ourselves*
2nd *yourself yourselves*
3rd Masc *himself themselves*
Fem *herself*
Neut *itself*
(58) Ahmed saw **himself** in the mirror.
(59) Magi saw **herself** in the mirror.

4. Relative pronouns
They connect two sentences or a sentence and a clause.
They gave the book to the man ***who*** stood there.
human *who whom whose* (60) *This is the man **whose** car hits the wall.*
nonhuman *which,* (61) *They discussed the crisis **which** appeared recently.*
nonhuman *that,* (62) *He passed the exam **that** he was afraid of.*
neutral *'zero'*

5. **Interrogative pronouns** and interrogative adverbs
The pronouns which are used for asking questions are called Interrogative Pronouns.For example: Who is that ? What is the matter ? Which is yours? Whose is that trunk ? Whom do you like most ?

The difference between an interrogative adverb and an interrogative pronoun involves their usage in a sentence. An interrogative adverb functions as an adverb

only while an interrogative pronoun can function in many ways (Subject, objects, subject complement, object complement and object of preposition).

(63) **When** did you fix my laptop? [" When" is an adverb of time- interrogative adverb]

(64) Since **when** have you been here? ["When" is an object of the preposition "since"- interrogative pronoun.]

(65) **Who** [subject] prepares tea? [Interrogative pronoun]

(66) By **whom** [object of preposition] is tea prepared? [Interrogative pronoun]

6. Demonstrative pronouns and demonstrative determiners

Demonstratives can act as pronouns or as determiners. A pronoun is a word that is used instead of a noun or noun phrase. **A determiner** is a word that comes before a noun and is used to show which thing is being referred to, i.e modify it.
This, that, here, there, these, those.
(67) Here are five pictures. Now compare **this** one to **that** *one*.(demonstrative pronoun)
(68) **This *teacher*** is my favourite, Mr Jones.(demonstrative determiner).
(69) **These** are my books.
(70) **Those** far houses are nice.

7. Indefinite pronouns and determiners

1. Universal Pronoun Determiner
Positive everyone every/each, Everybody, everything, all, both.
Negative no one none/no, nobody, nothing, none.

2. Partitive Pronoun Determiner
They are either assertive such as.: someone some, somebody, something, some or Nonassertive such as : anyone, any/either, anybody, anything,anywhere, none.

(71) We are looking for **anyone** who can open the lock of the door.

Assertive indefinites occur in positive declarative sentences. Nonassertive indefinites occur in interrogatives, negative, and conditional sentences. Indefinite adverbs include: *everywhere, nowhere, anywhere, somewhere*.

(72) I looked **everywhere** *but couldn't find my purse.*

2.4.1.3 Determiners

Determiners are usually the first element in a noun phrase. However, there are a few words, premodifiers, that may precede a determiner, e.g. *all, both, half, twice, double.* Determiners include: articles, demonstratives, possessives, wh determiners, negative determiners and quantifiers.
Definite article: *the* ,Indefinite article: *a,an* and 'zero',
Demonstratives: *this, that*
Possessives: *my, your, his, her, our, their*
WH determiner: *which, whose, whichever, whatever, whoever*
Negative determiner: *no*
Quantifier: *each, either, neither, some, any, enough*

i. Definite article (the)

The definite article indicates that the speaker thinks that the hearer is able to identify the referent based on contextual, situational, or general knowledge.
(73) Do you see ***the*** bird sitting on the lower branch?
(74) Fred brought a radio and a video-recorder, but he returned ***the*** radio.
(75) We came to an old house. When we got out of ***the*** car, someone closed ***the*** door.
(76) ***the*** Pope, ***the*** sun.

ii. Indefinite article (a. An)

The indefinite article is used when the referent is not uniquely identifiable. Very often, the indefinite article occurs when a referent is first mentioned in discourse.
(77) I am just about to move into ***a*** new apartment.
Indefinite plural nouns and mass nouns (in singular) are expressed by 'zero'.
(78) There are **apples** on the table.
(79) There is **milk** on the table.

iii. Generic reference

The, a, and 'zero' can indicate generic reference; 'zero' is by far the most frequent determiner of generic nouns.
(80) **The** car
(81 **A** car became an increasing necessity of life in the 20th century.
(82) Cars

2.4.1.4 Verbs:

Verbs are the action words in a sentence that describe what the subject is doing. Along with nouns, verbs are the main part of a sentence or phrase, telling us about what is taking place. In fact, without a verb, full thoughts can't be properly conveyed, and even the simplest sentences, such as *Mary* ***sings***. In fact, a verb can

be a sentence by itself, with the subject, such as, ***Sing***! and ***Drive***! As explained in Quirk etal, (1985: 96-147) Verbs comprise the following types:

2.4.1.4.1 Types of Verbs

In addition to the main categories of *physical verbs**,** mental verbs,* and *state of being verbs**,*** there are several other types of verbs. In fact, there are more than ten different types of verbs that are grouped together by function.

1. **Physical verbs** are action verbs. They describe specific physical actions. If you can create a motion with your body or use a tool to complete an action, the word you use to describe it is most likely a physical verb. For example,

(83) Joe **sat** in his chair.

(84) the dog **breathes** quickly after she **chases** her ball,

(85) *should we **vote** in the election?*

Even when the action isn't very active, if the action is done by the body or a tool, consider it a physical verb.Physical Verb Examples are: play, sing, write,read,shout,jump,..etc. The physical verb examples in the following sentences are in bold for easy identification.

(86).Let's **run** to the corner and back.

(87). I **hear** the train coming.

(88). **Call** me when you're finished with class.

2. Mental Verbs

Mental verbs have meanings that are related to concepts such as discovering, understanding, thinking, or planning. In general, a mental verb refers to a cognitive state. Mental Verb Examples

(89). I **know** the answer.

(90). She **recognized** me from across the room.

(91). Do you **believe** everything people tell you?

3. States of Being Verbs

Also known as linking verbs, state of being verbs describe conditions or situations that exist. State of being verbs are inactive since no action is being performed.

These verbs, forms of to **be**, such as *am, is, are,* are usually complemented by adjectives. States of Being Verb Examples:

(92). I **am** a student.

(93). We **are** circus performers.

(94). Please **is** quiet.

4. Action verbs express specific actions and are used to show action or discuss someone doing something. It's important to remember that the action does not have to be physical. Action verb examples:run,dance,slide, jump,do, go, ...etc

5. Transitive Verbs

Transitive verbs are action verbs that always express doable activities that relate or affect someone or something else. These other things are generally direct objects, nouns or pronouns that are affected by the verb, though some verbs can also take an indirect object, such as show, take, and make. In a sentence with a transitive verb, someone or something receives the action of the verb.Transitive verb examples: Love, respect, tolerate, believe, maintain, etc.

(95) Susan **ate** the cookies.

The transitive verb is *ate, Susan* is the subject, because it is Susan who is doing the eating, and *the cookies* are the direct object, because it is the cookies that are being eaten. Other examples:

(96). He **kicked** John.

(97). John **punches** him.

(98). They **sold** the tickets.

6. Ditransitive Verbs: Verbs that are followed with two objects : direct and indirect objects. Examples of verbs used with both direct and indirect objects:

(99). They **sell** him the tickets.

In this sentence, *the tickets* are the direct object while *him* is the indirect object.

(100). Mary **baked** her mother a pie.

In this sentence, *a pie* is the direct object while *her mother* is the indirect object.

7. Intransitive Verbs

Intransitive verbs are action verbs that always express doable activities. They are different from transitive verbs because there is no direct object following an intransitive verb.For example: walk, laugh, cough, play, run, arrive, etc

(101) We **walk t**o school.

8. Auxiliary Verbs

Auxiliary verbs are also known as helping verbs and are used together with a main verb to show the verb's tense or to form a question or negative. Common examples of auxiliary verbs include *have, might, will*. These auxiliary verbs give some context to the main verb, for example, letting the reader know when the action took place. Auxiliary verb examples:(*Would, should,do,can,did,could,may*).

The auxiliary verb examples in the following sentences are in bold for easy identification.

(102) I **will** go home after football practice.

The auxiliary verb *will* is telling us that the action of the main verb *go* is going to take place in the future – *after football practice* has ended. If the auxiliary verb *will* was removed, we get the sentence:

(103) I **go** home after football practice.

In this case, there is no definite time frame for the action. The sentence suggests that going home after football practice is just something the subject *I* generally does.

Also, auxiliary verbs are used to help form negative statements, with the use of words like *not* and *never*. These will usually split the auxiliary and main verbs:

(104). I **may never** dance with you again.

(105). We **did not** consider Bryan's feelings.

(106). Jenny **has not** spoken her final words.

9. Stative Verbs

Stative verbs can be recognized because they express a state rather than an action. They typically relate to thoughts, emotions, relationships, senses, states of being, and measurements**.** The best way to think about stative verbs is that they are verbs that describe things that are not actions. The stative verbs are all expressing a state: A state of doubting, a state of believing, a state of wanting. These states of being are often temporary.

(107) The doctor **disagrees** with your analysis.

Disagree is a stative verb here, as it describes the doctor's state of being – disagreement.

(108) John **doubts** the doctor's opinion.

(109) I **believe** the doctor is right.

(110) She **wanted** another opinion.

10. Modal Verbs

Modal verbs are auxiliary verbs that are used to express abilities, possibilities, permissions, and obligations.They are of two kinds:
1. Central modals: Those models that consist of one word and are more widely used than semi models.*can, could, may, might, shall, should, will, would, must*
2. Semi modals: Those models that consist of more than one word (more occure with to infinitive) and are less used in comparison with central modals.
a. *used to, ought to, dare to, need to, have to*
b. *be able to, be supposed to*
c. *had better, would rather*
The modal verb examples in the following sentence is in bold for easy identification.

(111) He **can** shoot a three-point shot easily.

The auxiliary verb *can* is expressing an ability, suggesting that shooting a three-point shot is a skill the subject possesses.

It is noted that in the case of *should* and *must* in the examples below, the modal verbs are expressing obligations, whereas *would* and *may* are expressing possibilities.

(112) I **should** go home.

(113) You **must** not delay.

(114) Sally **would** not recommend the sushi.

(115) David **may** be late.

11. Phrasal Verbs

Phrasal verbs aren't single words; instead, they are combinations of words that are used together to take on a different meaning to that of the original verb. There are many examples of phrasal verbs, some of which have colloquial meanings, such as *make up, hand in, bring up, point out, look forward to*. Each time the verb takes the extra word(s) it takes on a new meaning. For example, *make* without the *up* expresses that something is being created, whereas with *up*, the suggestion is that there are some lies or a fantastical element to the story and *make out* can mean either to grasp or see something difficult, or to kiss passionately. Phrasal

verb examples: *Run out, Go all out, Make out, Hand out, Bring out, Face up, Think through,...* etc

(116) Mary **looked forward to** her high school reunion.

The verb *looked* has taken on (*forward to)* to become a phrasal verb meaning *to be excited about or eagerly await something*.

(117) He **brought up** the same points again and again.(repeated)

(118) Ali **handed in** the wallet to the police.(submitted)

(119) I **make up** stories all the time.(compose stories= fabricate events)

(120) She **pointed out** Tom's mistake. (highlighted)

12. Irregular Verbs

Irregular verbs are those that don't take on the regular spelling patterns of past simple and past participle verbs. Unfortunately, there are hundreds of irregular verbs in the English language. Some of the most common irregular verbs include: say, make, go, take, come, know and see. Irregular verb examples: Eat, Think , Bring, Hold, Bear, Buy, Lay, Catch, Drive, Paid, Feel, Redo ...etc

(121) I **take** my time when I *go* to the shops (present tense)

(122) I **took** my time when I *went* to the shops (past tense)

The grammatical features of the verb include: (i) tense (ii) aspect and (iii) mood

(i) **Tense**
Present tense: work**s**
Past tense: work**ed**
Present perfect: has work**ed**
Past perfect: **had** work**ed**
Future **will** work
Future perfect **will have** work**ed**

Individual tense forms can serve multiple functions. The particular interpretation of a specific tense form is determined by the context and the meaning of the verb.
In terms of action, two basic verb types must be distinguished: (i) static or stative verbs (e.g. have) and (ii) dynamic or action verbs (e.g. go).

(ii) **Aspect**

Aspect indicates the way a situation is viewed or conceptualized: extended, completed, ongoing, etc. In some languages like Russian,for example, every verb is marked as being either perfective (i.e. having clear boundaries) or imperfective

(i.e. having fuzzy boundaries). English does not have a systematic aspect system like Russian, but the perfect and the progressive have aspectual meanings.

(123) They **are playing** football. (meaning: the action started but hasn't finished yet)
(124) I **have written** the report.(meaning: it is ready now for submission or reading)

(iii) **Mood**

The category of mood indicates how the speaker judges the validity of the utterance. **Indicative** indicates certainty, and **subjunctive** indicates uncertainty. English has lost most of its subjunctive forms. The *present subjunctive* is expressed by the base form, i.e. the present tense form without the 3rd person singular –s. Thus, the subjunctive is formally indistinguishable from the indicative present except for 3rd person singular. In addition, *be* is used for all persons as the present subjunctive. The present subjunctive occurs in complement clauses of verbs indicating demand, recommendation, proposal, or intention (e.g. *insists, prefer, propose, recommend)*.

(125) I **insist** that we reconsider the Council's decision.
(126) The employees **demand** that he resign.
(127) I **suggest** that you be President.

The *past subjunctive* survives only in *were*, which occurs with all persons in the subjunctive. In all other forms, the past subjunctive has the same form as the simple past tense. The past subjunctive occurs in counterfactual conditionals (see example 128) and in optative sentences (example 129).

(128) If she **were** leaving, you would have heard about it.
(129) I wish I **were** you.

2.4.1.5 Adjectives

Two forms of adjective are distinguished in English: attributive and predicative. The attributive form is when the adjective occurs before the noun and the predicative form is when the adjective comes after copular verb as explained below. Quirk etal, (1985: pp416-432).
(130) A blue ball .....attributive
(131) The ball is blue..... predicative
There are a few adjectives that serve only one of the two functions. For instance, ***utter*** is only used attributively, and ***afraid*** is only used predicatively.
(132) **utter** darkness
(133) I am **afraid**

i. Attributive use

Though attributive adjectives usually precede the noun (e.g. *a blue ball*), there are some adjectives that follow the noun.

(134) the City of London **proper**
(135) attorney **general**
(136) the soldiers **present**

Indefinite pronouns ending in *–body, –one, –thing,* or *–where* can be modified only by postnominal adjectives.

(137) I want to try on **something larger**.
(138) We're not going **anywhere very exciting**.

Adjectives ending in *able* and *–ible* can be postnominal when the noun is modified by another adjective in the superlative. The resulting structure includes a discontinuous AP.

(139) *The best* use **possible**
(140) *The greatest* insult **imaginable**
(141) *The only* actor **suitable**

ii. Predicative use

Predicative adjectives occur in copular clauses.

(142) The house is ***big*.**
(143) I find him ***careless*.**
(144) She wiped the table ***clean***

Predicative adjectives can take ***complements.***

(145) I am ***glad*** that you are here.
(146) I am ***afraid*** that we will lose.

2.4.1.6 Adverbs

Quirk etal, 1985,(pp.478-512) explain adverb form and function in details but summerize that adverb are of three main kinds:

1. simple adverbs: *very, just, only, well, back, down, near, out, here, there*
2. compound adverbs: *somehow, somewhere, therefore, yesterday, afterwards*
3. derivational adverbs: ADJ-*ly*

Syntactically, adverbs function as modifiers of: clauses (147), verbs (148), adjectives (149).

(147) ***Fortunately***, we didn't miss the train.
(148) Peter walked ***slowly*** back to the car.
(149) That was ***extremely*** useful.

2.4.1.7 Prepositions

A preposition is a word placed before a noun or pronoun to form a phrase modifying another word in the sentence. Therefore a preposition is always part of a prepositional phrase. The prepositional phrase almost always functions as an adjective or as an adverb. Quirk etal (1985: pp.665-672) identify two kinds of prepositions in English:

i. Simple prepositions: They consist of one word such as: *in, at, of, on, to, by, over, since, after, until, before, for, under, into, through, during, behind, above, below, with, concerning, along, between, from, underneath, about, despite*.

ii.Compound prepositions:

They consist of more than one word such as: in spite of, on account of, in addition, as well as ..etc. In terms of the meaning they express, prepositions are classified as follows:
Space: *in, on, at, above, under, through*
Time: *since, in, during, for, at, from … to*
Cause: *because of, on account of, for*
Instrument: *by, with*
Accompaniment: *with, without*
Concession: *despite, in spite of*
Exception: *except for, excluding, apart from*
Addition: *in addition, besides, as well as*

2.4.1.8 Conjunctions

They are also called linkers or coordinators. However, Quirk etal (1985:927) classify them in terms of the kinds of sentences, clauses or phrases they connect :
coordinators: They are words that connect two or more independent sentences or clauses such as: *and, or, but, for, both … and, either … or, neither … nor*
conjuncts: They are not part of the basic structure of a clause or sentence. They show how what is said in the sentence containing the conjunct connects with what is said in another sentence or sentences such as : yet, so, nor, however, therefore;
subordinators: They are words that connect independent clause or sentence with dependent clause or sentence such as: *for, so that, if, because*. Conjunctions can also be classified according to the number of words they comprise to simple and complex conjunctions.:
Simple conjunctions: *when, since, before, after, until, while, as, if, although, unless, but, and, for, whereas, once, because*
Complex conjunctions: *so that, in case that, as long as, as soon as, even if, except that, both … and, either … or, neither … nor. (Quirk etal, 1985,pp930-970)*

2.4.1.9 Interjection

An interjection is a word used to express emotion. It is often followed by an exclamation point. For example: Oh!... Wow!... Oops!

(150) The young girl brought me a very long letter from the teacher, and then she quickly disappeared. **Oh my God!**

2.4.2 Grammatical Categories

The term "grammatical category" refers to specific properties of a word that can cause that word and/or a related word to change in form for grammatical reasons (ensuring agreement between words). Grammatical categories can be classified to nominal categories (number, case, gender, degree, definitness) and verbal categories (tense, aspect, mood and voice). Below is a detailed description of these categories and their morphosyntactic effects on some parts of speech to which they are related:

2.4.2.1 Gender

Historically, two types of gender have been identified in language: natural gender and grammatical gender. Natural gender is a semantic system. Those nouns that stand for male animate beings are masculine, those that refer to female animate beings are feminine, and those that refer to inanimate entities are neuter (Corbett,1999:57). The natural gender system is based on biological sex. For example, in English (a language with natural gender), words like ‘boy,’ ‘father,’ ‘dog,’ and ‘rooster’ are masculine. They necessarily refer to animate, male beings, and can be replaced by the pronoun ‘he.’ In the same way, words like ‘girl,’ ‘mother,’ ‘bitch,’ and ‘hen’ are feminine. They necessarily refer to animate, female beings and can be replaced by the pronoun ‘she.’ Conversely, words like ‘stapler,’ ‘book,’ ‘happiness,’ and ‘peace,’ since they represent inanimate objects or concepts, are neuter in English. The pronoun ‘it’ can be used to refer to them (Ibid.)

In contrast to natural gender, grammatical gender is characterized by a formal system, where each noun belongs, obligatorily, to a certain grammatical class. Moreover, this system requires that there be gender agreement between a noun, the adjectives and articles that modify it, and any pronoun used to refer to it. A word’s grammatical gender is logically independent from the meaning of the word. So there may or may not be a correspondence between a given word’s natural and its grammatical gender.

Gender is no longer an inflectional category in Modern English. The only traces of the Old English gender system are found in the system of pronoun antecedent agreement, although this is now based on natural gender, gender

identity, or perceived sexual characteristics, of the pronoun's referent. Another manifestation of natural gender that continues to function in English is the use of certain nouns to refer specifically to persons or animals of a particular sex: widow/widower, actor/actress, etc.

Hellinger (2001:272) describes grammatical gender in English as a covert grammatical category. He notes that gender as a property inherent in nouns (rather than in their referents) is not entirely absent from modern English: different pronouns may be appropriate for the same referent depending on what noun has been used. The third-person singular personal pronouns are chosen according to the natural gender of their antecedent or referent. A general rule can be summerized as follows:

1– **He** (and its related forms **him**, **himself**, **his**) is used when the referent is male, or something to which male characteristics are attributed;
2– **She** (and **her**, **herself**, **hers**) is used when the referent is female, or something to which female characteristics are attributed. This is common especially with vessels such as ships and airplanes, and sometimes with countries. An example is in "God Bless **America:** Stand beside **her**, and guide **her** through the night with a light from above."
3– **It** (and **itself**, **its**) is used when the referent is something inanimate or intangible, a non-animal life-form such as a plant, or, less often, a child when the sex is unspecified or deemed unimportant.

Pronoun agreement is often with the natural gender of the referent (the person or thing denoted) rather than simply the antecedent (a noun or noun phrase which the pronoun replaces). For example, one might say either *the doctor and his patients* or *the doctor and her patients*, depending on one's knowledge or assumptions about the sex of the doctor in question, as the phrase *the doctor* (the antecedent) does not itself have any specific natural gender. Also, pronouns are sometimes used without any explicit antecedent (Ibid.). The choice of pronoun may also be affected by the particular noun used in the antecedent. When the antecedent is a collective noun, such as **family** or **team**, and the pronoun refers to the members of the group denoted rather than the group as a single entity, a plural pronoun may be chosen, compare the examples:

(151) **The family** and **its** origins.
(152) **The family** and **their** breakfast-time.

Because there is no gender-neutral pronoun, problems arise when the referent is a person of unknown or unspecified sex. Traditionally the male forms **he** has been used in such situations, but in contemporary English (partly because of the movement towards gender-neutral language) this is often avoided. Possible alternatives include:
4– Use of **he** or **she**, **he/she, s/he**, etc.

5– Alternation or random mixture of use of **she** and **he.**
6– Use of singular **they** (common especially in informal language).
7– Use of **it** (normally only considered when the antecedent is a word like child, baby, infant) (Ibid.).

Quirk etal (1985,pp.314-317) point out that in English, unlike many other related languages, nouns, determiners, and adjectives have no inflectionally-marked gender distinctions. Some 3rd person pronouns and wh-pronouns do, however, express natural gender distinctions:

It, which, etc (Nonpersonal contrast with the following:
Who, whom, etc (personal)
He, himself, etc (Masculine, chiefly personal)
She, herself, etc (feminine, chiefly personal)

They add (ibid) that Gender in English nouns may be described as 'notional' or 'covert' in contrast to the 'grammatical 'or 'overt' gender of nouns in some other languages. Quirk etal (1985, ibid) summerize gender feature in English grammar as follows:

Gender distinctions are relevant where personal pronouns and possessive determiners have to be used. These distinctions are only noticeable in singular nouns.

a/b) personal male/female nouns

(153). **He** found **his** book.
(154). **He** had been looking for **it.**
(155). **Lindaw** found **her** book.
(156). **She** had been looking for **it.**

c) Personal dual or neuter Gender

There are also special cases, such as the association of neuter gender with babies and small animals, or feminine gender with a vehicle.

(157). I just saw a **mouse**. **It** was running across the room.
(158). The **spider** was spinning **its** web.
(159). The **beetle** crawled into **its** hole.
(160). The **baby** threw down **its** rattle.
(161). I've got a new **boat**; **she**'s a real beauty.

Nouns denoting male persons and animals are masculine in that they are used with the pronouns and possessive determiners: *he, him, his*. Nouns denoting female persons and animals are feminine in that they are used with the pronouns and possessive determiners *she, her, hers*.

(162). **Barry** saw Linda. **He** called out to **her** that **he** had found **her** book.
(163). **Magi** saw Paul. **She** told **him** that **she** had found **his** book.
(164). ***Madeleine*** *saw* ***Kamelia She*** *said 'Hello' to* ***her***.

The pronouns and possessive determiners used to refer to common or neuter nouns are: " it, its." Nouns denoting inanimate objects and abstract notions are also neuter.

(165).***Truth*** *will emerge.* ***It*** *always does.*

d) Common Gender

Some nouns denoting people have the same form for masculine and feminine. Nouns used for a group, e.g. government or team, have common or neuter gender, even when we know that the group is made up exclusively of male or female members.

With some nouns of common gender it might be possible to specify the gender if we had sufficient information. But if we do not have this knowledge, the choice of pronoun or possessive determiner becomes a problem.

- *driver…he/she*
- *the cook…he/she*
- *doctor…he/she*

As a way around this problem, in informal and spoken English, **their** is often used after a singular noun or an indefinite pronoun. Some people consider this grammatically unacceptable, but it is widely used to avoid repetitions of his or her or him or her.

(166). ***Each*** *student must apply to* ***his*** *or* ***her*** *tutor for an extension.*
(167). ***Everyone*** *must apply to* ***their*** *tutor for an extension.*
(168). ***Someone*** *has left* ***their*** *coat in my room.*

The specialized terms used to name male, female and neutered animals show a number of gender differences.

e) Collective nouns:

They are nouns that refer to a group of people. They differ from other nouns in taking as pronoun coreferents either singular *it* and relative *which* or plural *they* and relative *who* without change of number in the noun (the army: *it/which-they/who*; *they-which*). Consequently, *they* may be in the plural or singuar depending on the speaker's collectind meaning of the refernts or spooradic or indiviual meaning of the refernt.

(169). The football team has expressed **its** happines for winning the match. (All the team in one action)

(170). The football team have expressed **their** happiness for winning the match. (every member of the team in different actions).

f) Other spradic Uses of gender:

Gender differences are also shown in the nouns that indicate relationships for example: parents..mother..father ; child..daughter..son

- Many nouns denoting an occupation have no explicit gender for exaple: (doctor, engineer, teacher, lawyer, officer,mechanic ...etc)

- Some occupations and professions have a special feminine form for the noun.

(171). Call your bank **manager** today.
(172.) Sue is **manageress** of a hairdressing salon.
(173). **Actors** from all over the world attended the ceremony.
(174). *Here in the studio to talk about **her** new book is **actress** Mary Farrell.*

(175).Many people prefer to avoid these forms, regarding the distinction as unnecessary.
(176). **J.K. Rowling** is a highly successful **author.**
(177). **Judi Dench** is one of our finest **actors.**
(178).**Michelle Stewart** has been promoted to Branch **Manager.**

The forms *authoress* and *poetess* are now considered patronising and are rarely used. Some speakers prefer to use a different form of the word or an entirely different word in order to avoid a gender-marked noun, for example: the chairman, the chairperson, the chair.

Sometimes the gender of a common noun can be made clear by adding a descriptive term such as woman or male/female.

(179). *Would you prefer to see a **woman doctor**?*
(180).***Male staff** should attend first.*

When discussing a country from an emotional, economic, or political viewpoint , feminine gender is sometimes used.

(181). Poland has made steady progress restructuring her economy.

2.4.2.2 Number

Number is a grammatical category. There are two number categories in English: sigular and plural. These two categories relate to nouns, pronouns, determiners, and verbs. In other words, a noun, a pronoun, a determiner or verb can be described as singular or plural.

Grammatical number is a morphological category characterized by the expression of quantity through inflection or agreement. As an example, consider the English sentences below:

(182)**.That apple** on the table **is** fresh.

(183).**Those two apples** on the table **are** fresh.

The number of apples is marked on the noun—"apple" singular number (one item) vs. "apples" plural number (more than one item)—on the demonstrative, "that/those", and on the verb, "is/are". In the second sentence, all this information is redundant, since quantity is already indicated by the numeral "two".

Number is an agreement category. For instance, Noun modifiers (such as adjectives) and verbs may also have different forms for each number class and be inflected to match the number of the nouns to which they refer. Every noun is either singular or plural (a few forms, such as "fish", can be either, according to context), and at least some modifiers of nouns—namely the demonstratives, the personal pronouns, the articles, and verbs—are inflected to agree with the number of the nouns to which they refer: "this car" and "these cars" are correct, while "*this cars" or "*these car" are ungrammatical and, therefore, incorrect. However, adjectives are not inflected, and some verb forms do not distinguish between singular and plural ("She/They went", "She/They can go", "She/They had gone", "She/They will go"). Only count nouns can be freely used in the singular and in the plural. Mass nouns, like "milk", "silverware", and "wisdom", are normally used in only the singular form. Number is also marked with verbs. English verbs distinguish singular from plural number in the third person present tense ("He goes" versus "They go"). English treats zero with the plural number. (Akhmanova,1966: 86).

Accordingly, Number is a morphosyntactic feature as it participates in agreement regardless of whether or not it is expressed on the controller or not. If number is not found affecting other elements of the clause, it can only be regarded

as a morphosemantic feature in the language. Nominal number is inherent to nouns, and it is contextual to all other elements in the clause which express number due to agreement. On some nouns, number is lexically supplied - this is the case with nouns which have one lexically determined number value that they impose on the agreeing elements like the English words: **health**, **trousers** and **news**. Number in English morphosyntax is manifested through subject-verb agreement which is obligatory in all contexts.

2.4.2.3 Person

In English grammar, the category of person identifies the relationship between a subject and its verb, showing whether the subject is speaking about itself (first person—*I* or *we*); being spoken to (second person—*you*); or being spoken about (third person—*he*, *she*, *it,* or *they*). Also called a *grammatical person*.

Personal pronouns are so-called because they are the pronouns to which the grammatical system of person applies. Reflexive pronouns, intensive pronouns, and possessive determiners also show distinctions in person. The category of person exists in a language if it is possible to make a distinction between at least two of the basic participants in a speech act. This could be: the addressor or the addressee. It can be posited as a morphosyntactic feature because it participates in agreement; it reflects aspects of grammaticalization of the category of person in the context. For example:

(1) the boy — he
(2) the girl — she
This is achieved, for example, by allowing self-reference or reference to the addressee. Such reference can be made with the conventional use of any type of noun, or by using some special words that lexicalise the meanings of 'speaker (1)' and 'addressee (2)'. However, the morphosyntactic feature of person can be posited for the language only if this feature participates in agreement (or government) in the language. Person as a morphosyntactic feature is typically a feature of agreement. When it is found on controllers of agreement, it is an inherent feature, and when it is found on targets of agreement, it is a contextual feature. The controllers of agreement in person are linguistic elements that express syntactic arguments - these are typically nouns or pronouns.

English’s grammar can be said to be noun-centric in the sense that most words in a sentence agree with a noun. Agreement is by number and person and is indicated by suffixe –s attached to the word stems. Thus, it is the morpheme which determines the syntactic structure, depending on the word class of the morpheme in question. The subject agreement marker is obligatory in almost all contexts in English. For example,

(184). A **man** window **cleaner** has fallen though **he** was careful.
(185). A **girl** window **cleaner** has fallen though she was careful.
(186). **Window cleaners** have fallen though **they** were careful.

In sentence (31) , the subject ***cleaner*** is singular, and must therefore use the singular subject marker (a), indefinite article. Since it is masculin, the subject is referred to by the masculine pronoun 'he'. The Sentence (32) as opposed to (31) has a feminine subject **girl *cleaner***, it therefore has referred to by the feminine pronoun 'she'. The Sentence (33) has a plural subject ***cleaners***, it therefore has to take zero article as it is plural and has generic reference. Thus agreement occurs with the subject in gender, person and number.

2.4.2.4 Case

Case is the grammatical function of a noun or pronoun. It is an inflection or use of a noun or pronoun to show its relation to other words in the sentence. There used to be four main cases in English grammar: nominative, genitive, accusative and dative. However, and after the accessive changes occurred to the grammatical structure of English language, dative case which was related to indirect object is no longer exist in modern English. There are only three cases in modern English, they are subjective (nominative) (he), objective (accusative) (him) and possessive (genetive) (his).The pronoun cases are only three:-

1. The nominative case refers to the case used for a noun or pronoun when it is the subject of a verb. For example,

(187). **We** cooked our dinner.

2. The genitive case refers to the case used for a noun, pronoun, or adjective to show ownership or a noun. For example:

(188). We cooked **our** dinner.

3. The accusative case refers to the case used for a noun or pronoun that is a direct object. For example:

(189). We cooked our **dinner.**

Table (7) Three cases of English personal pronouns.

Subjective/Nominative	Objective/Accusative	Possessive/Genitive
Referring to the subject in a sentence	Referring to the object in a sentence	The apostrophe form of the word ("Lynne's).
I	Me	Mine
You	You	Yours
He	Him	His
She	Her	Hers
It	It	Its
We	Us	Ours
They	Them	Theirs
Who	Whom	Whose

In table (7) above these pronouns, **who** and its compounds, are the only words that are inflected in all three cases (subjective, objective, possessive). In nouns the first two cases (subjective and objective) are indistinguishable, and are called the common case.

Case is not very pronounced in English, but it rather appears as a state. State is similar to case but applies to verbs and other word classes as well as nouns, pronouns and adjectives. Quirk etal (1985: 318f) point out that there are two states in English: (i) common case, and (ii) genitive case. The genitive *–s* is a clitic. For example:

(190). The queen's favorite game = The queen of England's favorite game.

In English grammar, common case is the ordinary base form of a noun—such as a cat, moon, house. Nouns in English have only one case inflection: the possessive (or genitive). The case of nouns other than the possessive is regarded as the common case. The base state is used as an object of a negative verb, He doesn't play *pinkponk*, object of a preposition She plays with **her little sister**, or as a noun predicative; He is *a* real *help* to his mother. The most familiar example of government feature over a unit is the assignment of case to a noun phrase. When a noun and its adjectival modifier are in the same case, For example, in railway station, *railway* is used as a modifier to describe what kind of station it is. it is because the case value is imposed on both simultaneously. Case is therefore a morphosyntactic feature realized through government.

2.4.3. Functional Categories

In the identification of the clause patterns, the following symbols are used: V= Verb C=Complement S=Subject, Od= Direct Object Oi=Indirect Object Co= Object Complement Cs=Subject complement Cop=Copula.

Funtional relations indicate the syntactic functions of phrasal categories in a sentence. They function as (Subject, Object and Adverbial as discussed below as discussed by Greenbaum, S. and Nelson, G., (2009: 24-31)

2.4.3.1 Subject

a. It usually functions as the actor or agent
b. It usually precedes the verb
c. It agrees with the verb in person
d. It usually controls the omitted actor/agent of adverbial participles and coordinate clauses
e. subject pronouns occur in nominative case

2.4.3.2 Direct object

a. It usually functions as the patient or undergoer
b. It usually follows the verb
c. It often controls the omitted actor/agent of infinitives
d. Object pronouns occur in accusative case

2.4.3.3 Indirect object

a. It functions as the recipient or benefactor
b. It only occurs in ditransitive clauses

2.4.3.4 Adverbials

a. they indicate time, place, cause, manner etc.
b. several adverbials can occur in one clause
c. they are typically expressed by adverbs, PPs, and ADV clauses

Two subtypes of adverbials are distinguished in English grammar:

(1) Optional adverbials (i.e. *adjuncts*) and (2) Obligatory adverbials (i.e. *complements*).

Subject complement: The NP (or ADJ) after the copula e.g. Nada is out.

Attributes: Attributes are modifiers of a noun. They can be part of the subject, direct or indirect object, or an adverbial.

2.4.4 Phrasal Categories:

A phrase is a group of words that have a function in a sentence, but do not have a subject and verb. If it had a subject and a verb, it would be a clause. Phrases can function in the sentence like nouns, adverbs, or adjectives. Phrasal categories are syntactic categories that refer to the function of a phrase. A phrase is built upon a noun, an adjective, a preposition and functions as the head of that phrase. Examples include *noun* phrases, *verb* phrases, *prepositional* phrase,etc. Syntactic category can include both lexcical categories and phrasal categories. According to some definitions, lexical category only deals with parts of speech: nouns, verbs, adjective, prepositions, etc., while phrase categories refer to parts of speech phrases, i.e noun phrases (NP), verb phrses (VP), adjective phrases (AdjP), adverbial phrases(AdvP), prepositional phrses(PrepP). The following brief descriptions is extracted from Biber etal (1999:97-105).

2.4.4.1 Noun phrase

A noun phrase has four positions: the head, the specifier, premodifiers and postmodifiers. The head is either a noun or a pronoun. The specifier is a determiner (or genitive noun). While most NPs require a specifier, there are NPs in which the specifier is absent. Some linguists assume that such NPs include a zero determiner.
A noun phrase is either a single noun or pronoun or a group of words containing a noun or a pronoun that function together as a noun or pronoun, and occur in the position of the subject or object of a verb.

Noun phrases normally consist of a head noun, which is optionally modified. Possible modifiers include:

• determiners: articles (the, a), demonstratives (this, that), numerals (two, five, etc.), possessives (my, their, etc.), and quantifiers (some, many, etc.).

• adjectives (the red ball); or

• complements, in the form of a prepositional phrase (such as: the student of physics);

• modifiers; pre-modifiers if before the noun and usually either as nouns (**the university** student) or adjectives (the **beautiful** lady), or post-modifiers if after the

noun. A postmodifier may be either a prepositional phrase (the man **with long hair**) or a relative clause (the house **where I live**).

2.4.4.2 Verb phrases:

A verb phrase is a syntactic unit composed of at least one verb and the dependents of that verb. A verb phrase may be constructed from a single verb; often, however, the verb phrase will consist of various combinations of the main verb and any auxiliary verbs, plus optional complements, and adjuncts. For example:

(191). He **was walking** to work today.

There are two types of verb phrase:

1. Finite Verb Phrase

If a sentence has just one verb phrase, it is a finite verb phrase. The head verb is finite and either comes in present or past form. For instance:

(192). I go to college in the morning.

2. Nonfinite Verb Phrase

They don't have a tense. While the sentence around them may be past, present, or future tense, the **non-finite verbs** themselves are neutral. There are three types of **non-finite verbs**: gerunds (baking), participles(present participle: baking, past participle: baked) , and infinitives(to bake).

Non-finite verbs function as nouns, adjectives, or adverbs or combine with a finite verb for verb tense.See the table below:

(193). John likes **playing** tennis. (gerund/ noun)

(194). He wants **to play** tennis. (Infinitive/ noun)

(195). He wants a game **to play**. (Infinitive/ adjective)

(196). He begged **to play**. (Infinitive/ adverb)

(197). Leon was the **playing** reseve. (Participle(present)/ adjective)

(198). We watched Lee **playing** rugby. (Participle(present)/ adjective)

(199). He is **playing** badly. (verb tense)(Participle/ present continuous)

(200). He has **played** two games. (Participle (past)/verb tense)

A verb phrase can also be a phrase that functions as an adverb or adjective that has a verb and its complements, objects, or modifiers. Some examples are:

(201). **Running on the wet floor**, she slipped and broke her arm.

(202). **To bake a cake**, you need flour and sugar.

2.4.4.3 Prepositional phrase

Prepositional phrases have a preposition as the central element of the phrase. In contrast to other types of phrases, this cannot be described as a head, since the preposition cannot stand on its own. Prepositional phrases can function as (1) adjuncts, (2) complements, (3) attributes.

(203). He is playing **in the garden**.
(204). He talked **about his new car**.
(205). The guy **from Chicago** wasn't there.

PP adverbials serve a wide variety of semantic functions as exampled below:
(206). Space: They walked **down the hill**.
(207).Time: We took a walk **after lunch**.
(208). Cause: We left because **of the weather**.
(209). Instrument: I have difficulty eating **with chopsticks**.
(210). Concession: We stayed **despite the rain**.
(211). Exception: We left on Friday **except for Peter**, he stayed longer.
(212). Addition: **In addition to** your argument, I would claim that …

2.4.4.4 Adverb Phrases:

While Adjective phrases modify a noun or a pronoun, **adverbial phrases** modify an adjective, a verb, or an adverb. An adverbial phrase ("AdvP") is a multi-word expression operating adverbially: its syntactic function is to modify other expressions,including verbs, adjectives, adverbs, adverbials,and sentences. Adverbial phrases can be divided into two types: complement adverbs and modifier adverbs. For example, in the sentence :

(213). She sang **very well**,

the expression *very well* is an adverbial phrase, as it modifies the verb to sing. It is good to note that there is a difference between Adverb and Adverbial.

Adverbs modify verbs, adjectives, and other adverbs while, adverbials act like adverbs to modify a verb or a clause. Adverbials can consist of a single word or an entire phrase. Pullum and Huddleston (2005:124).

2.4.4.5 Adjective Phrases

An adjective phrase, or an adjectival phrase, is more than a group of words with an adjective as a head. It's actually a group of words that describe a noun or pronoun in a sentence, thus functioning as an adjective. An adjective phrase can be formed out of an intensifier and an adjective. It is used in the langauage to provide more detailed description on a noun or pronoun. An example is:
(214).The **dazzlingly beautiful** woman walked down the street.

Sometimes, one adjective isn't descriptive enough. In this case, a string of adjectives can work together as an adjective phrase to describe a noun, such as:
She had the most **silky, smooth, and radiant** hair I've ever seen.
In the sentence, "Monica is a **sweet** girl," there is one adjective, namely, *sweet.* However, in the sentence, "Monica is a **sweet, intelligent, beautiful** girl," we see an adjectival phrase that paints a much more in-depth picture of Monica.

Adjective phrases don't simply modify nouns. They can also modify pronouns. Let's look at two examples:

(215). He is **from Boston**.
Some adjective phrases modify nouns or noun phrases , for example:

(216). The **very small** kitten jumped at the big dog.

Other adjective phrases modify the predicate of the sentence, for example:
(217). We **were saddened** by the news of his demise.

Adjective phrases can also modify objects and will follow the word they are modifying, for example:

(218). They were proud of their team **winning the championship**.

Quirk etal ibid:402-437) point out that two types of adjective phrases are distinguished in English: (1) APs consisting of an ADJ and a modifying adverb (ex.219), (2) APs consisting of a predicative ADJ and a complement clause (ex. 220-222).

(219) a **very good answer**, that is perfectly reasonable.
(220) I am **glad that you are here.**
(221) It is **important to be precise.**
(222) She is not **capable of looking after herself.**

2.4.5 Syntactic Structure

In English grammar, sentence structure is the arrangement of words, phrases, and clauses in a sentence. The grammatical function or meaning of a sentence is dependent on this structural organization, which is also called syntax or syntactic structure. For a sentence to be complete, it should consist of a subject and predicate that combine to form an independent clause. The subject of a sentence names "who" or "what" the sentence is about and refers to the person or thing doing or performing an action. The simple subject of a sentence is always a noun or pronoun used without single-word modifiers, phrases, and subordinate clauses; the complete subject includes the simple subject and any modifying words or word groups. A predicate is the part of a sentence that contains the verb and its modifiers and that makes a comment or assertion about the subject.

Sentences can be classified by their *structure* (the relationship between the number and types of clauses contained within the sentence), their *purpose* (the objective of the sentence), and their *pattern* (the flow from subject to verb to objects or complements). Most sentences follow a subject-predicate order and open with the subject of an independent clause. Other patterns are formed with different types of predicates or inverted word order. Sentences can also be categorized by the writer's purpose in communicating, e.g., whether s/he is asking a question or making a statement, giving a command or showing an emotional response.Therefore we will look below at the main parts which help us understand sentence structure which are sentence types and patterns.

2.4.5.1 Common Sentence Structure / Sentence Patterns

Sentence structure may ultimately be composed of many parts, but the foundation of each sentence is the subject and the predicate. The subject is a word or a group

of words that functions as a noun; the predicate is at least a verb and possibly includes objects and modifiers of the verb. The most common word order in English sentences is Subject-Verb-Object (SVO). When reading a sentence, we generally expect the first noun to be the *subject* and the second noun to be the *object.* However, students need to know the basic sentence patterns to be more aware of the structure of sentences.

Common sentence patterns range from a basic subject-verb pattern to a variety of patterns with different types of predicates or inverted word order, as follows:

• Subject + [Verb]: a simple subject is followed by a verb

(223). The show ended.

In this example, *show* is the simple subject and *ended* is the verb; together they form an independent clause that can stand alone as a complete sentence. The sentence can be expanded in various ways by adding words, clauses, and/or phrases, but the position of the subject and verb will remain consistent: e.g.,

As **the actor left** the stage and the light disappeared into darkness, the superb performance ended with tremendous applause and a standing ovation from the audience.

• Subject + [Verb + Direct Object]: the direct object completes the meaning of the verb. For example:

(224).The professor presented the lecture.

In this example, *professor* is the simple subject, *presented* is the verb, and *the lecture* is the direct object telling what the *professor presented*. Note that a sentence can also have a compound subject: two or more simple subjects joined with a coordinating conjunction:

(225). **Both the manager and the HR staff** made the orientation to the newly hired staff.

In this example, *the manager and the HR staff* together compound subjects, "made" is the verb, and orientation is the direct object.

• Subject + [Verb + Subject Complement]: a linking verb is followed by a subject complement, a noun or pronoun that refers to and names or describes the subject

(226). The player looked anxious.

In this example, *the player* is the simple subject, *looked* is the linking verb, and *anxious* is the subject complement, describing the subject.

• Subject + [Verb + Indirect Object + Direct Object]: the verb is followed by an indirect object, referring to the person or thing doing or performing the action, and by a direct object. For example:

(227). The office manager ordered the newly hired employees fully paid vacation leave

In this example, *the office manager* is the simple subject, *ordered* is the verb, *the newly hired employees* is the indirect object, and "fully paid vacation leave" is the direct object.

• Subject + [Verb + Direct Object + Object Complement]: the object complement refers to and renames or describes the direct object. For example:

(228).We elected Ahmed a chaiman.

In this example, *we* is the simple subject, *elected* is the verb, *Ahmed* is the direct object, and *chairman* is the object complement.

• [Implied Subject] + Verb "[You]. For example:

(229). Answer me!"

2.4.4.5.2 Sentence Types

Depending on the number and types of clauses they contain, sentences can be classified to *simple, compound, complex, or compound-complex.* Clauses can be connected to form sentences by coordination, using a coordinating conjunction to connect two independent clauses, and by subordination, using a subordinating conjunction to connect one or more dependent clauses to an independent clause. Sentences can be clasiified acoording to their function or purposes to: declarative, imperative, interrogative, or exclamatory. Below is the detail account of sentence types:

i. Sentences are classified according to the number of clauses they contain to:

a. Simple Sentences :

A simple sentence contains a subject and a verb. - It expresses a single complete thought that can stand on its own.

(230). **The dog barked** on the thief. (There is a subject and a verb that expresses a complete thought.)

A simple sentence does not necessarily have to be short. It can have adjectives or more than one subject or two verbs. For example:
Don and Ron **ate** too much and **felt** sick. (Although there are two subjects and two verbs, it is still a simple sentence because both verbs share the same subjects and express one complete thought).

b. Compound Sentences :

A compound sentence has two independent clauses. An independent clause is a part of a sentence that can stand alone because it contains a subject and a verb and expresses a complete thought. Basically, a compound contains two simple sentences. - These independent clauses are joined by a conjunction (for, and, nor, but, or, yet, so). For example:

The man had stolen the shope, **so** he ran once he saw the police. (Both clauses before and after the conjunction *so* are complete sentences. *The man had stolen the shop*" can stand alone and so can *he ran once he saw the police*. Therefore, this is a compound sentence.

(231). They spoke to him in Arabic, **but** he responded in English. (This is also a compound sentence that uses a conjunction to separate two individual clauses.

C. Complex Sentences:

A complex sentence is an independent clause joined by one or more dependent clauses. A dependent clause either lacks a subject or a verb or has both a subject and a verb that does not express a complete thought. - A complex sentence always has a subordinator (as, because, since, after, although, when) or relative pronouns (who, that, which). Examples:

(232). After eating lunch at The Cheese cake Factory, Tim went to the gym to exercise.

The independent clause is *Tim went to the gym to exercise.* The subordinating clause before it is dependent on the main, independent clause. If one were to say *after eating lunch at The Cheesecake Factory*, it would be an incomplete thought.

D. Compound-Complex Sentences :

Compound - complex sentences contain at least one dependent clause and more than one independent clause. The clauses are connected by both conjunctions (i.e., but, so, and, etc.) and subordinators (i.e., who, because, although, etc.). For example:
(233). **After the two soccer players lost their game,** they joined their other teammates for lunch, **and** they went to the movies. If we remove the dependent clause *after the two soccer players lost their game*, we have a compound sentence. The dependent clause makes this sentence compound-complex.

(234). Jane forgot her friend's birthday, so she sent him a card when she remembered.

E.Subordination and Coordination

Both coordination and subordination involve the linking of clauses, but while coordination involves two clauses of the same type, subordination involves a subordinate clause and a matrix (i.e. main) clause. Subordinate clauses function as:
(1) subject or object, (2) adverbial/adjunct, or (3) attribute in the matrix clause.
(235) Peter saw **that Mary was talking to Bill.**
(236) We've been waiting for you **since the bus left Chicago**.
(237) Can I get the one that **Peter gave you**.

Subordinate clauses can be finite or nonfinite (coordinate clauses are usually finite). Nonfinite subordinate clauses can be (1) infinitival constructions, (2) *–ing* participles, (3) *–ed* participles. In addition, there are so-called verbless clauses (4).

(238) Peter wants me **to leave** right now.
(239) **Leaving** her room, he tripped over the mat.
(240) **Disgusted by** the show, they left soon after they got there.
(241) **Whether right or wrong**, he always comes off worst in argument.

ii. Sentences classified according to their Purpose or Function

Sentences are also classified according to their purpose or how they are used within a text. There are four types of sentences: declarative, imperative, interrogative, or exclamatory. Some grammar books add comparative and resultative sentences:

• *A declarative sentence* makes a statement or provides information:

(242).The results of the exam were posted on the department's website.

• *An imperative sentence* gives a command or issues a request:

(243). Do not answer me in that tone of voice.

• *An interrogative sentence* asks a question:

(244). When do you expect to graduate?

• *An exclamatory sentence* expresses surprise or a similar emotional response:

(245). I just can't believe it!"

Comparative sentences: compare two animate or inanimate objects.
Resultative sentences: Show or state the result of the action or the state of the subject.

Each sentence type is associated with a particular function:
1. declarative sentences convey information
2. interrogatives request information
3. imperatives instruct the hearer to do something
4. exclamatives express the speaker's emotional stance.

a. Declaratives:

They are the kinds of sentence that express or convey information or negate information:
The visitor will arrive at 3pm.
The students didn't attend the lesson.

b. Interrogatives

The interrogative asks a question. In the interrogative form the auxiliary verb precedes the subject which is then followed by the main verb (i.e., Are you coming ....?). The interrogative form ends with a question mark (?).

They are of two kinds: a. yes-no questions and b. wh-questions.

a. yes-no questions

(246) Has the boat left?
(247) Do you like bananas?
(248) The boat left?
(249) You like bananas?
The formation of yes-no questions involves SUBJ-AUX inversion.
Tag questions:
(250) Joan didn't recognize you, did she?

(251) Peter is swimming in the pond, isn't he?

b. wh-questions

(252) Who is coming to the party? SUBJ
(253) What did you bring? OBJ
(254) What was she talking about? OBL
(255) Whose dog is that? GEN-N
(256) Which bike is yours? DET-N
(257) Where do you live? ADV
(258) When did you arrive? ADV
(259) How are you? ADV
Like yes-no questions, wh-questions involve SUBJ-AUX inversion (except for SUBJ-questions).

c. Imperatives

They state the speaker's orders to the listener to do something.They therefore start with an aux or main verb:
(260) Jump!
(261) Be reasonable!
(262) Consider yourself lucky!
Features of the imperative:
1. usually no overt subject (but: *You be quiet!*)
2. no tense and aspect distinctions
3. no modals
Imperatives introduced by *let* plus first person plural *us* constitute a special sentence type of imperative sentence called *adhortative*:
(263) Let's go!
(264) Let's you and him fight!

d. Exclamatives

They convey the speaker's astonishment from an action or state of being.
Wh-exclamatives introduced by *what* or *how and end with exclamation mark.*
(265) What a wonderful time we've had!
(266) How quickly you eat!
Verb-first exclamatives
(267) Hasen't she grown!
(268) Boy, do you look annoyed!

e. Comparative Sentences

(269) Jane is **as** healthy **as** her sister.
(270) Jane is healthi**er than** her sister.
Standard of comparison: 'health'
Basis of comparison (often implicit): 'her sister'
The basis of comparison is often shortened or omitted (i.e. elliptical)
(271) James enjoys the theatre **more than Susan enjoys the theatre**.
(272) James enjoys the theatre **more than Susan enjoys it.**
(273) James enjoys the theatre **more than Susan does.**
(274) James enjoys the theatre **more than Susan.**
(275) James enjoys the theatre **more.**

f. Resultative construction

(276) She wiped the table **clean**.
(277) He made me **happy**.
(278) Peter talked us **dizzy.**

2.5 English for Specific Purposes (ESP)

In the world of learning/teaching English as a second or foreign language, English is either learnt or taught for general purposes,i.e. to communicate ideas, knowledge, culture in what is called everyday English or for specific professional or academic reasons. Belcher distinguishes between teaching English generically – "language for no purpose" and teaching it for specific purposes, though she stesses that languages are always taught with some kind of purpose in mind (2009: 1). English for general purposes (EGP) or General English (GE) is essentially the English language learnt in schools where learners are taught grammar, vocabulary, sound systems and symbols that form the language. On the other hand, English language instructed to adults in different professions or to teritiory students in different disciplines is associated with the specific discourse that learners need in order to achieve their own tasks effectively. As a result, many courses have emerged to develop the learners' specific English language skills related to their major of study or professions; such courses teach what we know as English for specific purposes abbreviated as ESP.

Hence, it is assumed that ESP courses are preceded by a good basic knowledge of EGP which is already supposed to be acquired in previous education. This makes many scholars and accademicians argue that ESP courses are most likely to be linked to adults rather than young students due to the appropriateness of such courses with the learners' field of interest.(Faraj,2015, Ibrahim, 2010)

Accordingly, ESP is defined as "an approach to language learning in which all decisions as to contents and methods are based on the learners' reasons for learning".(Hutchinson and Waters,1987:19). Therefore the learner is regarded the main ring in the chain of teaching process. Thus his/her reasons of learning, objectives and needs should be carefully considered. Hutchinson and Waters (ibid) note that ESP courses are designed in answer to the question,'why do learners need to learn English?' Thus, it is seen as an approach which gives importance to the learners' needs attempting to provide them with the language they need for their academic and occupational requirements. Orr (2001, p.207) states that ESP is "English language instruction designed to meet the specific learning needs of a specific learner or group of learners within a specific time frame for which instruction in general English will not suffice".

Belcher (2009,p.1) divide ESP into two main branches: English for Occupational Purposes (EOP) and English for Academic Purposes (EAP). Hutchinson and Waters (1987), in their ELT tree, also divide ESP according to whether the learners need English for academic reasons or for occupational reasons. However, they point out that the distinction between EAP and EOP is not a definite distinction as people can work and study simultaneously. They go on to divide ESP according to the learners' specialized area: EST (English for Science and Technology, EBE (English for Business and Economics) and ESS (English for Social Sciences).

Similarly, Dudley-Evans and St. Johns (1998) classify ESP as EAP, EOP, EST and EBP (English for Business Purposes). In their tree diagram, given below, they show the categories and subcategories of ESP. It is important to note that English for Medical Purposes is categorized both as EAP and EOP. Medical students' need to read textbooks and articles and write essays can be classified as EAP (English for Academic purposes) needs. On the other hand, practicing doctors' requirements of reading articles, preparing papers, presenting at conferences, and, if working in an English speaking country, interacting with patients, in English can be classified as EOP (English for Occupational purposes) needs.

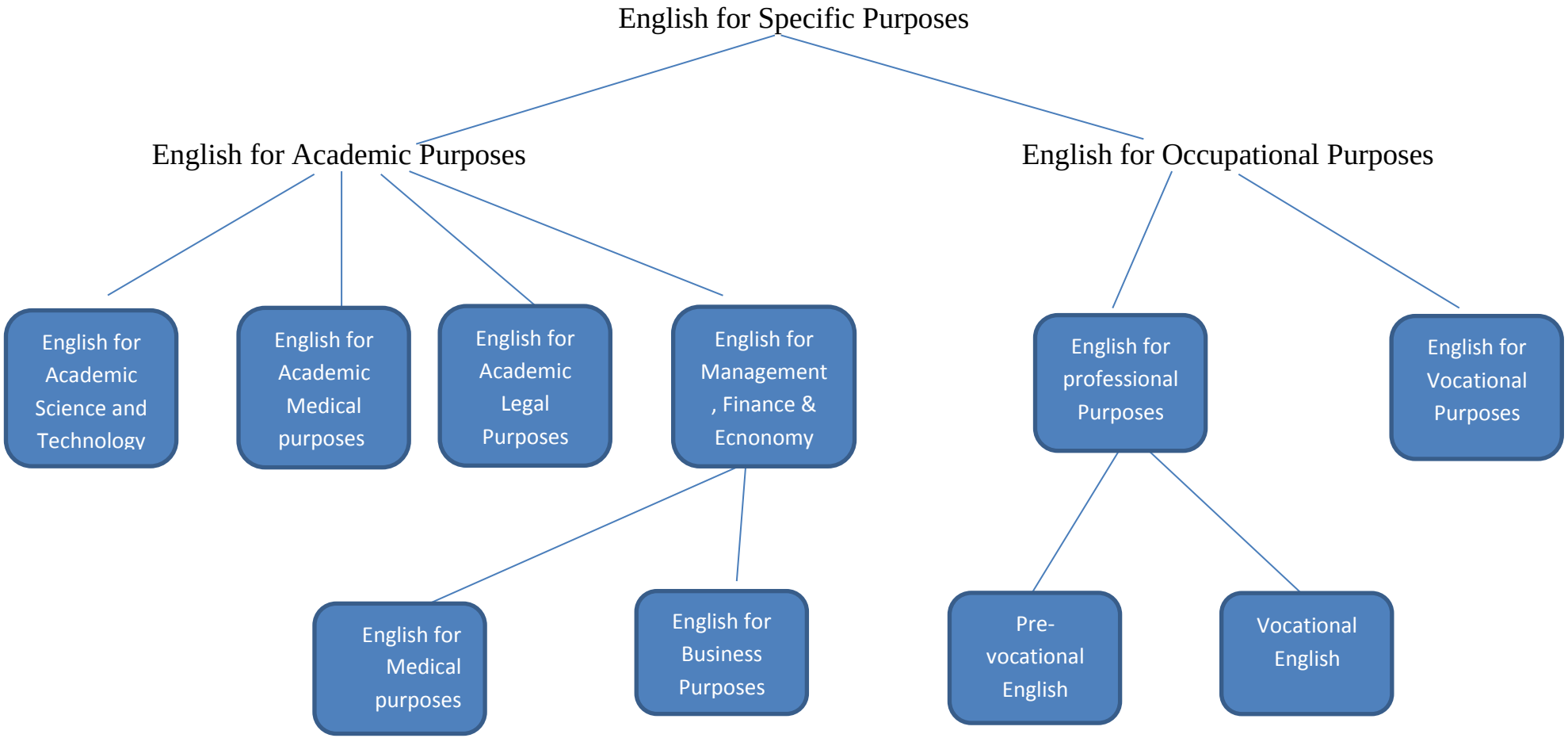


Figure (4) ESP Sub-gategories as classified by Dudley-Evans & St. John, 1997 (p.7)

2.6 English for Medical Purposes (EMP):

The need for English as a professional language in medicine has led to the emergence of Medical English or English for medical purposes (EMP), which refers to the teaching of English required by L2 speakers who may be learning to become members of the profession or who may already be qualified medical professionals (Shi, 2009: 206). Thus, English for medical purposes has emerged as a subsection of ESP, more specifically of EOP, (English for Occupational Purposes). During the last decades, EMP has existed as a prominent area of study all over the world. It is worthy to note that English for Medical Purposes is tagged under both EAP (English fot Academic Purposes) and EOP (English for Occupational Purposes). Dudley-Evans & St.Johns, (1998) classify Medical students' need to read textbooks and articles and write essays as EAP needs. On the other hand, practicing doctors' requirements of reading articles, preparing papers, presenting at conferences, and, if working in an English speaking country, interacting with patients, in English are classified as EOP needs. The term 'EMP', English for medical purpose as stated by Maher (1986) refers to the teaching of English for doctors, nurses and other personnel in the medical professions. He further adds that EMP course is designed to meet the specific English Language's needs of medical learners, and thus deals with the themes and topics related to the medical field. It therefore focuses on certain skills that are required by the medical learners, such as writing medical paper, delivering a speech for a medical meeting, discussing or arguing in medical conferences.(ibid)

Accordingly, it is necessary to know some charesteristics of this special jargon and the restricted language of health care personel. It is thus obviously clear that L2 learners need to acquire and/or develop key competences in English that are mainly connected with "not only the register of medical terminology, but also the preferred choices of lexis and syntax, typical discourse structures (case histories, operation notes, research articles, etc.), and any other features which are distinctive conventions of the language used in medical contexts" (Maclean & Maher, 1994: 2431).

2.6.1 Linguistic Features of EMP

2.6.1.1 Lexical Features of EMP

Medical and indeed all scientific texts in England were written in Latin till modern times. This practice began to change in the 16th century and the use of English in this functional context required new vocabulary to express scientific meanings. This led to borrowing a huge number of classical and in particular Latin words, so that according to some estimates 80% of English current vocabulary comes from Latin (Milroy, 1984: 36). This process resulted in the income not only of words (e.g. laceration) but also of affixes (e.g. -ate and -ion) and in a tradition of using classical driven words and word components that is still characteristic of medical English.

It is obviously clear to the readers of English originality that English was rooted as a Germanic language, but was then highly inflenced by Latin.(Lanza,2005). Analysis of medical texts shows that they have a good amount of multilingual vocabulary, i.e. words found in several languages with similar phonetic, grammatical and semantic forms. (Laar, 1998). Faulseit(1975) (cited in Laar, 1998) observes that the most typical characteristics of medical English is that most of its multilingual vocabulary consists of terms of Latin or Greek origin. Laar (ibid) obsrves that the general vocabulary of English contain words that entered English from French or directly borrowed from Latin whereas the words of multilingual vocabulary are often derivatives from Latin stems. Some of these words also adopted suffixes as well as a few stems from Greek origin.

Erten (2003)(as cited in Tasci (2007:78)) remarks that some words in general English are used in medical English but with different terminology. She gaves examples like *delivery* (for birth), *hemorrhage* (for bleed), *uterus* (for womb), *vertigo* (for diziness) and *syncope* (for fainting). She further clarifies that some special abbreviations need to be learnt such as *ABS* (Acute Brain Syndrome) and *IV* (intravenous), *DOA* (dead on arrival), *DKA* (diabetic Retoacidosis). But she attracted medical learner's attention to the use of some abbreviations that represent more than one meaning, for example *CT* is used for: *cellular therapy*, *cerebral tumour*, *clotting time*, *connective tissue* and some others. The meaning of such terms and what they represent can be inferred from their contexts.

Medical terminology is highly prolific when it comes to synonyms: medical English displays several names for anatomical, physiological, and technical terms as well as names of diseases that differ according to "whether they derive from anatomical, pathogenic, toponymic, historical, or simply descriptive considerations" (Van Hoof, 1998: 56). Take, for instance, *epidemic infantile paralysis*, also called *acute atrophic paralysis*: its historical name is the *eponym Heine-Medin disease* whereas anatomically it is known as *acute anterior poliomyelitis*, and clinically as *infantile spinal paralysis*. Just like synonyms, eponyms proliferate in medical English and may be a cause of confusion for L2

learners as sometimes there may be two, three or more denominations to express the same concept: e.g. *Basedow's disease*, *Flajani's disease*, *Graves' disease*, and *Parry's disease* can all be used to refer to *exophthalmic goitre* (Montalt & Davies, 2007: 244). Even more astonishing may be a related set of terms where a condition typical of a person or group of people caused by some occupations or forms of recreation retains that name regardless of the context: e.g. *cinema eye*, *housemaid's knee*, and *surfer's rib*.

2.6.1.2 Morphological Features of EMP

Talking about the formation of the terms, Yang (2005) points out that there are two characteristics for medical terms:
1. Most medical words of more than one syllable consist of roots and affixes. The affixes can be subclassified into prefix and suffix. Every multiple syllable medical term has one root determining its meaning and one or more prefixes and/or suffixes alter the part of speech or the meaning of the root,
2. Medical words actually belong to an open class system consisting of a large number of low-frequency words and newly created words.

This coincides with Erten (2003)(as cited in Taşçı, (2007)) who points out that the meaning of medical terms can be predictable not only from the context, but from their particles, which are the roots, prefixes and suffixes. She gives examples of the frequently encountered origin in Greek roots as follows:

Cardi: heart cephal : head
Hepat: liver Neph: Kidney
Examples of originally Latin roots are:
Cerv: related to the neck Cerebro: related to the brain

Moreover, Boztas (1988)(as cited in Taşçı, (2007) classifies the commonly used prefixes as prefixes related to time and place; related to size, type, direction, colour, quantity and number. As for suffixes related to medical register, he classifies them as suffixes denoting state, condition or medical actions associated with small size. He further classifies a special set of suffixes that are called word terminals as terminals that change words to nouns:
e.g. –ance, -any, state and condition
resistance (act of resisting)
terminals that change word roots to adjectives and verbs:
e.g. – tice pertaining to
diagnotic – pertaining to diagnosis

- Terminals that change singular to plural
- Sing pl e.g.

- -a -ae burs**a** – burs**ae**
- -en -ina lum**en** – lum**ina**

As for the morphological characteristics of medical register, we can find that there is a tendency to turn nouns into verbs; for example: adrenalecticizo (from adrenalectomy), hospitalize (from hospital), thoracotomize (from thoractomy) and so on. Other examples of morphological particularities are coinage and syllabic contraction such as 'urinalysis' which is used instead of urinoanalysis, or 'contraception' instead of contraconception (Johnson, 1980 cited in Maher,1986b).

Regarding self-mention and citation, the use of the plural first-person pronoun is recurrent in this genre as it is a reminder of the collaborative nature of medical research itself. However, medical researchers tend to use few citations and downplay their personal role in the research by resorting to the use of verbs which emphasise research activity rather than their own interpretations of it (e.g. *analyse, observe* and *show*) or to other linguistic means such as the passive voice or dummy *it* subjects (Hyland, 2013:96-110)

2.6.1.3 Stylistic Features of EMP

In addition to the peculiarities in word formation, written medical English has also different stylistic features. The written style of medical discourse is generally characterized with the frequent use of the passive voice, cumbersome diction, excessive use of initial long sequences of nouns used as adjectives, stereotyped sentence structures and hackneyed beginnings (Ingelfinger (1976) cited in Maher, 1986b: 119)

Moreover, Van Hoof (1998: 53-54) also reports that the most visible marks of Medical English can be noted in:

(a) the irregular plurals of Latin and Greek words, e.g. arthritis/arthritides; or bacillus/bacilli;

(b) a high degree of hybridisation in suffixation whereby Greek suffixes are associated with Latin roots (e.g. cellulitis or fibroma) or Latin suffixes are combined with Greek stems (e.g. thyroidism or aortic);

(c) the use of common medical abbreviations normally left in Latin, especially the ones referring to administration of medicines: e.g. b.d. (bis die for twice a day); and s.l. (sub linguam for under the tongue).

Cabrita etal (2014:339) observe that there are a number of distinctive features typical of medical English which are recurrent in various types of text belonging to different written medical genres, such as research articles, abstracts, case reports, and review articles. Some of the most immediately noticeable ones concern medical terminology that is first and foremost a nomenclature of labelling and description (Mclean & Maher, 1994: 2431). The core of scientific medical

terminology in international use today is made up of a large corpus of technical or specialised terms derived from Greek and Latin, vastly increased by the use of prefixes, suffixes and compounds. Greco-Latin morphemes provide the basic building blocks of medical terminology and enable us to infer the meaning of innumerable medical terms, whether they are in English or in most European languages, by going back to their etymology - e.g. *haematuria* means *blood* (*haem*-) *in urine* (*-uria*), *laparotomy*, *incision* (*-tomy*) *in the abdomen* (*laparo*-).

Latin and Greek etymological forms continue to be used for new terms in the biological sciences and even in clinical medicine, e.g. *status anginosus* (i.e. *prolonged angina pectoris refractory to treatment*) (Maclean & Maher, 1994: 2431). Standard English is, however, used to name some new findings and conditions, for instance, syndromes such as *acquired immunodeficiency syndrome*. Hence, an awareness of both the Greco-Latin foundations of medical terminology and other sources from which medical terms are currently drawn proves to be quite useful for L2 medical undergraduates. Nevertheless, the Greek and Latin basis of medical terminology and the direction it is currently taking are but one aspect of the language of medicine, which also displays a particular liking for synonyms, eponyms and abbreviations, which we will now focus on.

Among other units of specialised knowledge of special interest for L2 learners are abbreviations and acronyms. Such is the case of reference to symptoms (e.g. *D&V*, for *diarrhoea and vomiting*), signs (e.g. *JVP* for *jugular venous pressure*), investigations (e.g. *FNAB* for *fine needle aspiration biopsy*), and diagnoses (e.g. *CHF* for *congestive heart failure*), among others. Still on the subject of terminology, but also related to formal and informal styles, reference should be made to two important features of medical English: the existence of a double-layered medical vocabulary, and the tendency of English to use terms from everyday speech in a medical sense. The former may be termed the *doublet phenomenon* and has to do with the fact that most scientific words and expressions of a Greco-Latin origin have popular counterparts, that is, learned and non-learned terms co-exist to name common diseases and anatomical parts: e.g. *otitis* vs. *glue ear*, *pertussis* vs. *whooping cough*, and *rubella* vs. *German measles*; *thorax* vs. *chest*, *trachea* vs. *windpipe*, and *patella* vs. *kneecap*, etc. This doublet phenomenon is also encountered in adjective vs. noun roots, e.g. *heart failure* vs. *cardiac failure*, or *kidney function* vs. *renal function.*. Both learned and non-learned terms are used in formal written communication. The latter refers to the tendency of medical English to take words from everyday speech whose basic meaning is extended to uses in scientific jargon (Van Hoof, 1998: 61-62). Such is the case of the term '*course'.* The most obvious definition of this word in a language dictionary is a series of lessons; in a medical context, however, *course* may describe a series of drugs to be taken (e.g. *the patient was put on a course of antibiotics*) or the developmental stage of a disease (e.g. *the postoperative course was uneventful*).

Another feature of medical English is related to standardised collocations: prepositional (e.g. *presented with* and *on examination*) as well as verbal collocations (e.g. *to pass a tube* and *to withdraw a catheter*) are, for instance, commonly utilised in case reports (Maclean & Maher, 1994: 2432-2433). Various other linguistic features have been identified by genre-based research in connection with the macro-level rhetorical functions of different types of medical texts, among which are to be found in research articles. The medical research article has become increasingly standardised and rule bound: within each section of the now classical IMRAD (Introduction, Methods, Results, and Discussion) rhetorical structure there may be several Swalesian moves or text segments, each with a distinct communicative function and a characteristic lexicogrammatical realisation (Ferguson, 2013: 249). Nwogu's (1997: 129) stresses that the contents of medical research article tend to be realised by: (a) the use of the passive to indicate source of data (e.g. Samples of fossa… were obtained post mortem); (b) the use of the present or past tense to indicate sample size (e.g. The study population includes all children …); and (c) explicit lexemes (e.g. (i) The study population …; (ii) Criteria for inclusion ..).

2.6.2 Teaching Medical English

EMP courses, like other ESP types, should be designed and taught according to the learners' needs. Maher (1986a) stresses that EMP should be tailor-made to the learner's purposes and needs. Therefore EMP course designers should know who these medical learners and what their purposes are. Revision of previous literature on EMP education and best methods of teaching suggested by researchers showed that a good syllabus is the one which enhance the communicative effectiveness of an English language course. In order to designe such specific courses for medical learners, pedagogical suggestions of previous studies with the current one need to be taken into consideration. Some previous studies attempted to develop courses using instructional and methodologies such as content-based learning and problem-based learning. Besides, the use of technological equipment has been added to EMP courses to give touch of real life communication to the medical classroom. In addition to that and in order to explore different ways of teaching medical terminology, which is the most challenging aspect of teaching EMP courses, various project have been done. Structural and traditional methods such as teaching term formation of medical terminology as a vocabulay teaching strategy and grammar translation were suggested in the literature. (Tasci, 2007:24)

2.6.2.1 Content- based Approach

Medical students practice English Language skills while they are studying one subject area. In such classes, learners use language to do real tasks in authentic context. Bailey (2000, ch.10) for example, describes a course based on the concept of health to boot the student's learning in an ESL context. Bailey assigns the students during the course writing essays using one of the magazines and then reading books on health-related topics, academic texts and autobiographics. Finally, students performed drama after watching movies about medical issues. In such courses students were found to achieve great progress in learning English as they found the course with its instruction method very authentic and useful. According to Bailey their communicative skills improved with the interaction best through discussing controversial medical and health issues. Bailey inferred that the learners experienced the pleasure of learning in group while focusing on real and involved health issues.

2.6.2.2 Problem- based Approach

Many researchers in the literature of teaching medical English adopted this approach in their studies as it is an approach mainly applied in medical education. (Huey,2001; Norman and Schmidt,2000; Gonnely and Seneque, 1999). This approach was firstly introduced by a faculty member of a medical school in response to the failure of the traditional medical education which couldn't prepare students well for prefessional life. It was believed to promote lifelong in the professional practice.

In this approach, students discuss a medical problem(symptoms) to come up with reasonable solutions (diagnosis) to that problem(sickness) suggesting their solutions (medicine) and discussing whether they are appropriate (accurable) to the situations (cases) they discussed. Finally, students evaluate this learning process and their participation to the group of discussion.(Maudsley, 1999 as cited in Wood and Head, 2004 and Maxwell etal, 2001). Huey (2001) describes the aims of PBL (Problem Based Leaning) as acquiring better understanding, scientific integration of students clinical knowledge and improving clinical thinking and more effective prolonged skills.

In general, most researchers in medical education look at PBL as a useful technique for teaching English for academic purposes for medical students, as it is a context-based, cooperative and student-centered approach.(Wood and Head, 2004; Kimball, 1998). Wood and Head (2004) encourage the possible applications of PBL in the EAP classes of medical schools using web-based course as they obtained positive feedback both from the students and the instructors. Such courses encourage students to study medical topics using English communicatively.

Besides proposing PBL tasks as a useful technique for the evaluation of medical settings, Kimbell (1998) also encourages teaching it through the web. He concludes that the syllabus designed with problem-solving tasks using internet web pages not only provided students with authentic sources, but also reflected the medical students' needs as EFL learners since the concepts are about new findings and the treatments are in English and the medical resources the students need to use are all written in English. These studies show that by using web and problem-based and learner-centered activities, medical students were able to experience authentic and practical discourse which couldn't have been reflected so efficiently in other approaches or printed materials.

Video tapes were also used in EMP curricula as some researchers tried to bring real life communication into the classroom medium using video cameras (Belchar, 2004), Shi etal (2001) stress that using videotaped data not only useful for the design of an EMP course, but also useful as teaching materials by involving the students in the process of designing curriculum thus enhancing the students' motivation.

The researchers used cameras to assess the difficulties learners face when making diagnostic hypotheses with doctors and to identify the discourse of diagnostic linguistic skills students needed. So they can achieve various cognitive objectives.

2.6.2.3 Structural Approach

As for teaching medical terminology, some projects and research studies have been conducted during the past two decades. It is concluded that using structural analysis by identifying word parts like prefixes and suffixes enables students to determine the wors' meaning. Moreover, the integration of the four learning skills: reading, writing, listening and speaking in the context of a story enables learners to understand medical terminology while enjoying the story. Laar (1998) states that term-forming elements like prefixes and suffixes in medical texts need to be presented systematically. He assumed that words of Latin origin could be sucessfully taught and learnt through integrated teaching in the English and Latin courses designed for medical faculties. Laar (ibid) adds that terms of multilingual usage, i.e share similar phonetic , grammatical and semantic forms in several languages could be included in English courses to improve text comprehension. Laar (ibid) presented in his study lists of these multilingual terms with their definitions in English with practice exercises. He finally concludes that since English is enriched with Latin borrowings, the Latin and Greek medical terms are best taught and learnt in the medical English courses proposed by the medical faculty.

2.6.2.4 Grammar- Translation Method

Another approach to EMP teaching is the grammar-translation method which is probably still used in some language courses throughout the world.(Maher,1986b).In Iraq, the grammar-translation method has been commonly practiced an EFL teaching method in high school and ESP registers untill recently. However it has recently been replaced by communicative approach in syllabus but the instructors are still practising grammar-translation method even in medical colleges.

2.6.2.5 Concluding Remarks on Teaching EMP

To sum up with EMP teaching methods, most previous studies recommend using methods and techniques that meet medical students' communicative academic and professional language needs. The literature also proposed using technologies which provide real world data. It is worth noting that all the attempts to improve EMP courses using technologies and instructional methodologies like content-based, problem-based and grammar translation method stress that English for medical purposes teaching is a demanding job for the instructors. Accordingly the instructors should first analyze the students' own needs in their context then choose the most suitable method.

Medical undergraduate students' immediate needs are expected to be related to: (a) understanding textbooks and journal articles written in English as a means of acquiring or updating knowledge in their medical studies; (b) grasping the semi-technical vocabulary; (c) developing listening and oral skills connected with understanding spoken medical English and giving oral presentations. The EMP course taught at some medical schools is planned at the outset according to these short-term target needs but it also caters to medium-term foreseeable needs given that medical students may eventually have to write papers for publication, give papers in English, or understand lectures at international meetings.

Accordingly, learner-centred activities and problem-solving tasks are devised with the dual pedagogical goal of directing learners to the rhetorical conventions of written and spoken medical English and consolidating general language skills through authentic texts and tasks directly related to their needs. Activities carried out during the course are suggested to include:

a- reading a research article, a case report or a popular medical article, taking notes, summarising and reporting back to the group;

b- listening to a recorded lecture or watching a TV medical documentary, taking notes and reporting back to the group;

c- preparing and presenting short talks based on a case or medical topic previously researched; answering audience questions;

d- preparing a poster by adapting information from an article; talking to a poster;
e- writing the abstract of a research article.
The above-mentioned activities are ultimately aimed at helping students to acquire medical literacy skills that will enable them to become functionally competent in their areas of expertise.

2.7 Medical Education in Iraq

The system of medical education in Iraq like other majors of education is based on the British curriculum and uses English as the language of instructions. Iraqi medical students don't have to begin with a pre-medical year in which they study a course preparing them for medical syallabi. They study 6 years of basic medical subjects which comprise: anatomy, physiology, biochemistry, pathology, pharmacology and microbiology. After that 3rd year medical students start the clinical training stage which includes subjests such as medicin, ophthalmology, padediatrics, surgery and gynaacology, besides forensic and community medicine.

Only in 1st and 2nd year of study, medical students are offered English language courses beside their academic medical subjects. The curricula of English language courses in these two years are mainly based on Grammar-translation method which seems insufficient to either enhance the academic language skills for medical students or enabling them to communicate effectively in English. At the starting levels, the students study some basic grammatical features such as: tense, voice, negation and interrogation. Later they study some terminologies through reading passages related to their medical subjects. The English language classes are scheduled once a week for just two hours. After graduation, the student is expected to have adequate English enabling him/her to continue his/her professional career successfully.

However, there is no evaluation as to whether medical students are really satisfied with the English course they have undertaken, rather they show a very poor English language professincy and inability to communicate functionally and effectively in English. As a result, they face several difficulties in their medical study due to the inadequate functional English communicative skills. Hence, medical students start to feel frustrated and lose the interest and ambition to continue their medical education. In fact their successful or failed achievement in English is often a determining factor.

Since English language is the only medium of instruction and teaching medical syllabi in Iraqi medical schools, ESP courses for medical students should be based on target needs of students representing communicative use of language rather than linguistic categories. However, linguistic categories that widely ocuur in medical syllabi need to be identified, highlighted then sorted out in order to be focused on at ESP medical courses to help students overcome any problem or difficulties they may encounter in learning them.

2.8 Corpora in Linguistics

2.8.1 What is Corpora?

Corpora as a term refers to samples of real world texts whether spoken or written. It is the plural form of corpus. (On line Wikipedia). Crystal (1991:86) defines a corpus as a "collection of linguistic data, either written texts or a transcription of recorded speech, which can be used as a starting point of linguistic description or as a means of verifying hypothesis about a language." Giouli and Piperidis (2002:9) observe corpora as lingustic resources which have been widely used in disciplines such as computational linguistics, lexicography, language engineering, etc. for deriving both qualitative and quantitative evidence about language. It was originally derived and compiled manually, but now corpora are automatically derived from the source texts. McEnery etal (2006:4) define corpora as "a collection of sampled texts written or spoken in machine-readable form which is possibly annotated with various forms of linguistic information." They differentiate between corpora and a random collection of texts or an archive stating that the latter is assembled with no purpose set in advance as it is the case with corpora. Giouli and Piperidis (2002) also distiguish between corpora and other related notions such as text archive,text library and text collection. They point out that all differ from a corpus in that they comprise texts which are of interest by themselves and not structured. Specifically an electronic text archive is a repository of readable electronic text not linked in any coordinated way.

Of all what has been mentioned beforehand, there is an increasing agreement that a corpus is a collection of machine-readable, authentic texts (including transcription of spoken data) which are samples of a particular language or language variety. Biber etal (1998) point out that reliable language analysis is more feasible with corpora collected in the field, in their natural contexts and with minimal experimental interference.

2.8.2 Types of Corpora

There are different kinds of corpora and the degree of their specialization also varies according to their representation. For example, general corpora, referred to in the literature as 'reference corpora',consist of general texts that do not belong to a single text type, subject field or register. The aim of collecting such general corpora is describing the structure and use of real language with its varieties as used by its native speakers and their distinctive features from other languages and varieties. The other kind is specialized corpora which deal with particular academic or professional genre. Cubillo, (2010:26) defines specialized corpora as smaller collections of more specialized texts of language produced by a specific group of people which may have a strong direct or indirect impact on language teaching practice. Accordingly, the aim of collecting such corpora is

investigating learners' use of second or foreign language and identifying their problematic area for learning and teaching improvement, such as Cambridge learner Corpus. It was not until the late 1980s and early 1990s that academics and publishers started collecting corpora of non-native English, which have come to be referred to as learner corpora. It is worthnoting that most applied linguistic studies that deal with corpora, and this study is one of them, limit themselves with learner corpora since they comprise text collections produced by learners of a given language and are of vital significance in drawing conclusions about learners performance with respect to that language and for guiding teaching and learning methodologies. This study adopts written medical compositions written by 200 Iraqi medical undergraduate students.

Corpora also vary in their size according to the number of words they comprise. In addition, some specialised corpora may include more specialised sub-corpora. For example, the Hong Kong Corpus of spoken English has four sub-corpora: conversation, business discourse, academic discourse and public discourse.(Warven,(2004) as cited in O'Keeffe & McCarth, 2010:68).

Generally, Giouli and Piperidis (2002: 6) classify corpora to different categories and subcategories as illustrated in the following table:

Table(8) categories and subcategories of corpora as classified by Giouli and Piperidis (2002: 6)

Corpus Classification	
By:	
Modality Speech	Speech Text Multimodal (transcribed text, audio, visual)
Text Type	spoken (transcribed) corpora (e.g. London-Lund corpus) written corpora (e.g. Lancaster Oslo/Bergen corpus(LOB)) mixed corpora (British National Corpus (BNC) or Bank of English)
Medium	newswire, books, periodicals, etc.
Language Coverage	Reference corpora Sublanguage or special Corpora
Genre/register	corpora of literary texts corpora of technical documents corpora of non-fiction (e.g. news texts) mixed corpora covering all genres

Language Variables	monolingual multilingual (Translation and parallel corpora) comparable corpora (either monolingual or multilingual)
Production Community	native speakers learner corpora
Markup	Plain (or raw) corpora Annotated corpora
Open-endedness	closed, unalterable corpora (e.g. LOB, Brown) monitor corpora (Bank of English)
National varieties	British corpora (e.g. Lancaster Oslo/Bergen corpus) vs. American corpora (e.g. Brown corpus) vs. an international corpus of English
Historical variation	diachronic corpora (Helsinki corpus) synchronic corpora (Brown, LOB, BNC) corpora which cover only one stage of language history (corpus of Old or Middle English, Shakespeare corpora) *Dialectal variation* corpus of dialect samples (e.g. Scots) vs. Mixed
Dialectal variation	corpus of dialect samples (e.g. Scots) vs. mixed corpora (The BNC spoken component includes samples of speakers from all over Britain)
Age	corpora of adult English corpora of child English (English components of CHILDES)
Availability	commercial vs. non-commercial research corpora, online corpora vs. corpora on ftp servers vs. corpora available on floppy disks or CDROMs

2.8.3 Corpora's Role in ESP, EFL and Data-driven Learning

Learner Corpora are frequently used in ESP field as teachers are more concerned with the production of their students in the contexts of specialization. Since general corpora have proven to be effective for the study of the structure and use of language, specialized corpora are more required when exploring language in specific academic and professional settings. (Conner & Upton (2004a as cited in Campoy etal, 2010). Meanwhile Flowerdew(2004) proposes adopting specialized smaller corpora in ESP studies as they are more advantageous than general corpora from a methodological perspective due to the more contexual information (i.e. the communicative situation) they tend to provide in comparison

with larger corpora. She adds that when complete texts are included, feasible implementation of top-down analysis of the textual and generic features present in the text is made.

According to Campoy etal (2010: 26) using learners' corpora applications pedagogically should go in line with the needs of learners. Teachers should consider which groups of learners may profit most or weak and have problems from which type of materials. Related to this issue are questions centring around the learners' willingness and ability to deal with computer corpora, online search interfaces and concordance exercises prepared by their teachers. Data driven learning (DDL) may work well with the computer-savvy student who is ready to explore larger amounts of language data, but it may not be the best solution for the techno-phobic student who prefers a teacher-centred, controlled type of instruction. The needs of learners will probably not only vary considerably by learner type, but also by learner level, course type and learner objectives. Depending on whether we are dealing with intermediate or more advanced learners, for instance, our focus in designing corpus-derived materials may shift to more specialized vocabulary and its preferred patterns of usage. Similarly, participants in a business English class or international students of mechanical engineering will probably profi most from working with materials that are tailored to their specific needs and discourse in their field of study. This means that in making decisions on what to teach and how to teach it, it is important to consider the learner's language background and what discourse community she/he eventually wants to be a member of and be able to communicate with.

In addition, Bernardini (2002:165) describes corpora as "rich sources of autonomous learning activities of a serendipitous kind. Therefore corpora have a great impact on developing and enhancing language teaching and learning as well as improving teaching materials and syllabus design, which is one of the aim of the study.

Campoy etal (2010) report different types of direct and indirect applications of learner's corpora analysis results in language learning and teaching, depending on whom or what is affected by the use of corpus methods and tools. They classify pedagogical learners corpus applications into two parts: *Indirect applications* which are represented by the assistance provided for researchers and materials writers and *Direct applications* which hand on for learners and teachers (data driven learning). They further subdivide indirect application to include: *Effects on the teaching syllabus*, *reference works* and *teaching materials*, while direct applications comprise: *teacher-corpus interaction* and *learner-corpus interaction*.

Romer (2011) also explains that corpora have good impact on improving language learning and teaching. They have great potential to improve pedagogical practice as they can be used in a number of ways, indirectly to inform teaching materials and reference works and directly as language learning tools and repositories for the design of data-intensive teaching activities.

Romer (2011:206) points out that when referring to applications of corpora in L2 teaching, this includes both the use of corpus *tools*, that is, the actual text collections and software packages for corpus access, and corpus *methods*, that is, the analytic techniques that are used when we work with corpus data. In classifying pedagogical corpus applications that is, the use of corpus tools and methods in a language teaching and language learning context. This means that, indirectly, corpora can help with decisions about *what* to teach and *when* to teach it. Indirect corpus applications thus have an effect on the teaching syllabus and the design of teaching materials. Moreover, Romer (2011:206) holds that direct applications mainly affect how something is taught and learned. They actively involve the learner and teacher in the process of working with corpora and concordances. The following figure simplifies the direct and indirect applications of learners' corpora in second and foreign language learning and teaching as extracted from Campoy etal (2010: 19)

Figure (5) the direct and indirect applications of learners' corpora in second and foreign language learning and teaching

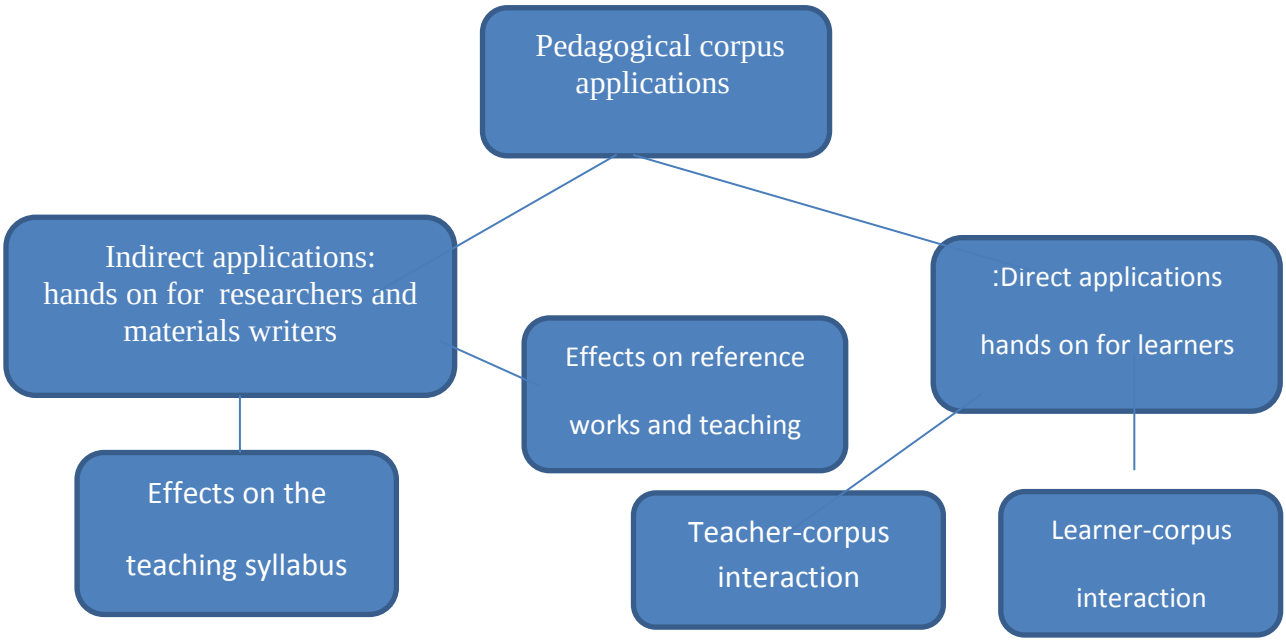


Fig. 6. The use of corpora in second language learning and teaching.

As a result, while the direct approach characterizes corpus use by teachers and learners; and introduces corpora and concordances to the classroom, the indirect approach is researcher-focused. It centres on corpus evidence and the impact it can have on syllabus design or teaching materials. (Romer,2006:125)

Accordingly, the results of analyzing medical students' corpora will improve learning/teaching morphosyntactic elements specifically of the area where difficulty is detected in the learners' corpus. Thus, and as Hymes (1992) stresses, corpus data can inform the selection and sequencing of materials and provide practical support by enhancing the morphosyntax aspects that proved to be more problematic for the learners and therefore include them in teaching examples and exercises. By this, corpora have proven to be an invaluable resource in designing language teaching syllabli that emphasize communicative competence and give prominence to those items that occur frequently in the language and those most likely encountered by learners in real life communicative situation. However, frequency of occurrence is not the only criterion that should influence decisions about the inclusion of items in the teaching syllabus; there are other relevant criteria such as range, avialability, coverage and learnability (Kennedy,1992:340).

Romer (2011) further adds that learners will find it easier to develop both receptive and productive skills when faced with the most common items of a language as their language-teaching input give high priority to infrequent words and structures that the learners rarely encounter in real-life situation. Barlow (1996:32) agrees and stresses that learners' corpora can greatly affect course design, the content of teaching materials and the existing pedagogical descriptions if evaluated according to learners' corpus analysis results. Sinclair (2004c:271) reports that in the light of 'new evidence', learners' corpus analysis reveals that new decisions about the selection of language course materials should be made and revision of the syllabus items could be done even in the progression of the course to ensure better achievement of the learners. Kennedy (1992:327) aslo supports researchers' attempts to use corpora as language teaching enhancing tool such as Michael West who organized a conference in 1934 to discuss the part played by corpus-based word lists in the teaching of English as a foreign language. West then and in 1953 published General Service List of English Words (GSL) which had great influence on curriculum design. West's work suggests a syllabus that is based on words rather than grammatical structures. It is also based on frequently ooccurring words rather than on rare ones.

Thus analysis of learners' corpus assists in informing the teaching syllabus and stresses the importance of frequency of occurrence of language items in actual language use and comparing the distributions and patterns found in learners corpora of speech /writing with the presentations of the same items in teaching materials (course books, grammars, and usage of handbooks). They also call for corpus-inspired adjustments in the language-teaching syllabus, specifically in terms of selection and progression and for revised pedagogical descriptions which present a more adequate picture of the language as it is actually used.

Moreover, analyzing learner corpora can be useful to teachers in focusing their efforts on the task of selection of language content. An important issue for ESP teachers is giving priority to teaching those words and expressions that their

leaeners will need later on to be able to handle texts in their subject area. Coheads's (2000)‘s academic words list (AWL) is one of the examples which shows how corpora can impact general EAP (English for academic purposess) teaching. Cohead's AWL, which is based on a corpus of academic writing, contains the vocabulary items that are most relevant and useful to EAP learners.

Meunier (2002:125) points out that studies on learners' corpora, which are systematic comuterized collections of the language produced by language learners, are also supportive and enhance improvement of syllabus design. They actually provide insights on "the needs of specific learners and help to assess teachers' perspective about whether a particular linguistic aspect is difficult or not." Thus in short, learners corpora have been extensively used for modeling learner behavior deviating from the norm and establishing teaching methodologies.

2.8.4 Corpora ‘s Requirements:

Giouli and Piperidis (2002:1) state that a text collection is not considered to be a corpus unless it meets certain minimal criteria. However, there is no consensus among researchers regarding corpus design and building. Certain key-issues that are widely accepted should be taken into consideration as *minimum requirements* for a text collection to be considered a corpus:

1-Format/Storage: A corpus should be in machine readable (electronic) form. Currently, computer corpora may store many millions of running words that can further be analyzed by means of applying linguistic annotations to the raw text. Therefore, a corpus should preferably be in plain text, that is ASCII characters, with any mark-up clearly identified and separable from the text. Nowadays it is likely that many texts will be in SGML format, the latest trend being XML, the universal format for structured documents and data on the Web. The study's corpora are electronically data entered to be readable by computer and to facilitate the analysis process.

2-Structure: Textual data comprising a corpus should be structured in order for the users to be able to draw useful conclusions about the language.This is followed by the researcher and result in drawing useful conclusion.

3-Size: A corpus size should be sufficient for the purpose it has been constructed for. Yet, there is no general agreement as to what the size of a corpus should ideally be. In Practice the size of a corpus tends to reflect the ease or difficulty of acquiring the material. In turn, this factor may be loosely related to the availability of the material to the public and therefore to its relative importance as influential language, as against material which is difficult to get, perhaps because it is of small circulation. The size of the study's corpora is expected to be sufficient and lead to fruitaful results as of the most ocurring morphosyntactic elements in the

medical texts of the investigated 200 medical students' written essays to highlight the most problematic morphosyntactic elements along with the highly frequently ocurring ones.

4-Representativeness. A corpus should be representative of the language variety and/or sublanguage it is intended for. This holds true especially for large corpora aimed to be used as reference of the language they are intended for (McEnery et al.,1996); (McEnery et al., 2002); (Sinclair, 1987); (Zampolli,1990). To this extent, sampling procedures should be adopted prior to building a corpus. In this sense the corpus of the study represents EMP since the topic selected by the researcher is pure medical topic to be elaborated on and discussed with not more than 250 words by the subjects.

5-Balance. A corpus should be balanced. The latter applies to general purpose corpus building and implies that a range of different text types should be included proportionally, so that the corpus reflects, in some more-or-less principled way, their levels of use within the language community. The random selection of 200 students' written essays:100 medical essays from each of the two colleges of medicine; human medicine and veterinary medicine at Diyala university is hoped to guarantee this.The 100 students' medical written essays of each college are selected randomly to equally cover the number of the sample from the whole stages of the two colleges study.

2.8.5 Annotation and Analysis of Corpora

In order for corpora to be of optimal benifit, they should be annotated and analysed to infer and come up with results that can be used to improve learning/teaching process and syllabus design. Sinclair (2004:7) stresses that corpus evidence is essentially indirect, which means that it cannot be taken as raw material unless it goes through a process of interpretation. Leech (1993:275) defines corpus annotation as 'the practice of adding interpretative (especially linguistic) information to an existing corpus of spoken and/or written language by some kind of coding attached to, or interspersed with, the electronic representation of the language material itself'. Annotation is hence needed in order to move beyond the surface level of text. Therefore corpus interpretation or annotation is an essential step in the investigation process of learners use of a language. It is a common practice for many corpus projects to add annotations, that is, special markup relevant to data that facilitate access to and use of the resource.

2.8.5.1 Types of Corpora Annotations

Giouli and Piperidis (2002) point out that there are two types of annotations applied to a corpus data: *corpus encoding*, and *linguistic annotations* which enrich the raw text with information resulting from linguistic analyses of the data. Corpus encoding is referred to as structural annotation. It includes both external and internal data present in the texts of the resource. External data refers to the information of corpus documentation, e.g. bibliographic information (author, publisher, edition, etc.) as long as information related to the distribution of the electronic corpus (institution, address, etc.). Internal data concerns itself with the mark-up of the structural elements in the raw text material. Giouli and Piperidis (ibid) discuss two kinds of structural annotations: *gross structural mark-up* and *sub-paragraph mark-up*. The former comprises elements such as chapters, sections, paragraphs, etc. At the paragraph level, titles, lists tables, etc. are meaningful structural units. Sub-paragraph structure rather includes elements such as sentences, abbreviations, dates, quotations, references, etc. A header and a body elements are also highlighted and encoded for every text in the corpus. While the header comprises the documentation information, the body contains the raw text material and the mark–up for structural information.

Linguistic annotation, Giouli and Piperidis (ibid) add, is represented by the additional information added manually by linguists, automatically by relevant Natural Language Processing tools or semi-automatically by manually correcting the output of these tools. These reflect the linguistic structure of a given corpus at various levels of linguistic analysis and may be added upon either textual data, or recorded linguistic signals. Giouli and Piperidis (2002) note that linguistic analysis could be performed at various levels such as: part-of-speech tagging, syntactic analysis, functional relations marking, Named Entity identification, co-reference annotation, and so on.

McEenry etal (2003:33) look at corpora annotation from another perspective as they argue that corpus annotation can be achieved at different levels with various forms. For example, it can be undertaken at phonological level within syllable boundaries (phonetic/phonemic annotation) or prosodic features (prosodic annotation), at the morphological level in terms of prefixes, suffixes and stems thus called morphological annotation. At the lexical level, corpora can be annotated for parts of speech (POS tagging). Lemmas (lemmatization), and semantic fields (semantic annotation). At the syntactic level, corpora can be annotated with syntactic analysis (parsing, treebanking or bracketing). At the discoursal level, corpora can be annotated to clarify anaphoric relations (coreference annotation), pragmatic information like speech acts (pragmatic annotation) or stylistic features such as speech and thought presentation (stylistic annotation). Among all these types, the most commonly used type of annotation and highly spread one is *morphosyntactic annotation or POS tagging* which has been applied successfully to many languages. Syntactic parsing is also developing

rapidly while some types of annotation (e.g. discoursal and pragmatic annotations) are relatively developd slowly.

Flowerdew (1998: 549) suggests that annotating texts for generic move structures ‘would have wide pedagogical applications'. Thus by publication of this work for generic benefit, it is hoped to affect pedagodically on medical teaching syllabi in Iraq and similar context worldwide. The morphosyntactic annotation will be explained thouroghly henceforth as it is adopted as the tool of analysis in this study while the other types of annotation will be discussed briefly.

2.8.5.1.1 Linguistic Annotation

Linguistic annotation or linguistic metadata, or simply markup includes the following operations: adding more additional information manually (by linguists), automatically or semi-automatically which is done either by relevant natural language processing tools or manually connecting the output of these tools. All these operations reflect the linguistic structure of a given corpus at various levels of linguistic analysis and could be added either to textual data (written one) or recorded linguistic signals (spoken corpus).

Linguistic analysis could work on various levels: morphosyntactic analysis or part-of-speech tagging (POS), syntactic analysis, functional relations marking, Named Entity identification, co-reference annotation, and so on. The focus in this study is on morphosyntactic analysis which will be discussed below.

..). The aim of

2.8.5.1.2 Morphosyntactic Annotation (Part of Speech Tagging).

Morphosyntactic annotation, also known as part-of-speech tagging or word-class syntactic tagging (Van Halten, 1999) is a process in which each word appearing in a text is assigned an unambiguous morphosyntactic tag or description. This process is, in general, composed of two parts: the program first assigns, on the basis of a morphological lexicon, all the possible tags that a word form can be associated with, and then chooses the most likely tag on the basis of the context in which the word form appears in the text. For instance, the word 'hotel‘ has three possible tags: 1. nominative singular 2. accusative singular 3 masculine past participle (verbal). In the sentence 'He went to a hotel‘, the token hotel should be tagged as a noun in accusative case.

Therefore, the main function of morphosyntactic annotation is to assign a code or tag to each lexical unit in the text indicating its part-of-speech (verb, noun, adjective, preposition, etc) in addition to its morphosyntactic features (case, number, person, aspect, mood, etc.). In other words, the aim of the morphosyntactic analyer is to perform the analysis of the contigous words in the sentences to recognize regular structure such as compound tenses of verbs, and the comparative and superlative forms of adjectives. The analyzer aimes to retrieve from every analysed word the lemma (base) it is dreived from, its syntactic

category (e.g. verb, noun, adjective, conjunction...etc) and its morphologic category (e.g. singular, masculine, indicative..etc).jikjpouo8ituio

The next step in annotating corpora is lemmatization which is closely related to POS-tagging. It involves assigning lemma, i.e., the base form of an inflected word, to every word token in a corpus.

Part-of-speech tagging is a useful means of annotation as it increases the specificity of data retrieval from corpora and forms an essential base for further forms of analysis (such as syntactic parsing and semantic field annotation). It has been one of the first types of annotation to be applied on corpora usually with the aid of Natural Language Processing tools, named part of- speech taggers, which carry out the task with a high degree of accuracy.

Many approaches have been emerged to automatic part of speech tagging. Some are simple rule-based tagging but others are statistically sophisticated techniques. In order to assign tags to unknown or ambigious words, typical rule based approaches adopting contextual information are used. Moreover, morphological information can be of a great assistance in the disambiguation process. Biber etal (1993) stress that using morphosyntactic annotation applied to corpora is very important in developing tools for automatic POS-tagging. After part–of-speech tagging, syntactic annotation is considered the most commonly used form of corpus annotation. It aims at recognizing and labelling syntactic constituents and clauses within sentences. When corpora are syntactically annotated or parsed, they are often known as treebanks – a term that refers to the tree diagrams or phrase markers used in parsing. Automatic parsing doesn't always have high successful rate,therefore parser output is often either post-edited by human analyst or hand-made; syntactic annotation may sometimes be done with the assistance of parsing software. However, using manual annotation has disadvantage of inconsistency especially where more than one person is involved along with the possible occurrence of disambiguities. (Giouli and Piperidis, 2002) Morphosyntactic tagging was first developed for English language, where the set of morphosyntactic tags is relatively small. English is an inflectionally poor language, so problems arise mainly in connection with ambiguities at the word class (part-of-speech) level, e.g. in determining whether ―left‖ should be tagged as an adjective (my left hand), a noun (on your left), or a verb (he left early). Taggers and (manually) tagged corpora were later developed also for morphologically richer languages, such as Czech (Hajič and Hladka, 1998) and Slovene (Erjavec *et al*., 2000). Such languages typically distinguish more than a thousand morphosyntactic tags, and the largest problem, at least at first sight, is caused by having to disambiguate between the large numbers of syncretic inflectional forms within word classes.

Recognizing and labeling surface phenomena in the text is a necessary prerequisite for most Natural Language Processing tasks. Therefore, tokenization, that is, basic text handling, is the first level of text analysis. This includes identifying text structure at subparagraph level, that is, word boundaries, sentence

boundaries, dates, abbreviations, etc. Identifying word and sentence boundaries in most cases involves resolving ambiguity in punctuation use since structurally recognizable tokens may contain ambiguous punctuation; this may be the case for numbers, alphanumeric references, dates, acronyms and abbreviations. Having spaces between words in English language facilitate locating the word boundaries thus no need for words seperation preprocessing task.

2.8.5.1.3 Functional Annotation

Nicholls (2003:573-574) identifies five types of annotation recognised in terms of the function or aims of analysis, i.e whether reducing the word to its base(lemmatization), identifying the coreference between nouns and their pronouns, the use of speech acts in domain specific context (Pragmatic), investigating stylistic features in cetrain literary texts (Stylistic Annotation), or investigating learners error for learning and teaching pedagogy (Error Tagging).

2.8.5.1.3.1 Lemmatization

It is a type of annotation that reduces the inflectional variants of words to their base form which appears in dictionary entries. For example, the lemma of 'has', 'have' and 'had' is 'have'.

2.8.5.1.3.2 Coreference Annotation

It is a type of discourse-level annotation which has been applied to a number of corpora. Its major concern is coreference identification, e.g. the identification of coreferential relationships between pronouns and nouns phrases. It helps track how elements of a text are connected and interwoven cohesively typically through the use of pronouns, repetitions, substitution, ellipsis and so on.

2.8.5.1.3.3 Pragmatic Annotation

It is another type of annotation at the discourse level. Its focus is on speech/dialogue acts in domain-specific dialogue such as doctor-patient discourse and telephone conversations.

2.8.5.1.3.4 Stylistic Annotation

While pragmatic annotation is concerned with speech acts in dialogues, stylistic annotation is particulary associated with stylistic features in literary texts.

2.8.5.1.3.5 Error Tagging

It is a special type of annotation specifically related with learner corpora and exploited in language pedagogy. It involves assigning codes indicating the types of errors occurring in a learner corpus. Corpora annotated for learner errors can

help to reveal the relative frequency of error types produced by learners of different L1 (first language) backgrounds and proficiency levels. They are also useful when exploring features of non-native language behaviour (e.g. overuse or underuse of certain linguistic features). Error-tagging schemes vary to some extent from one corpus to another in terms of the number and types of common error types such as omission, addition and misformation. The Cambridge-scheme, for example, includes six general errors: wrong word form used (F), something missing (M), word/phrase that needs replacing (R), unnecessary word/phrse(U) and word wrongly derived (D)(Nicholls,ibid).

2.9 Corpus-Based Approach

Corpus-based approach as defined by Biber etal (1998:4) studies the use of language characteristics by considering the relevant 'association pattern'. This notion represents quantitative relations measuring the extent to which features and variants are associated with contextual factors focusing also on functional (qualitative) interpretation which is an essential step in any corpus-based analysis.

Biber etal (ibid) add that if a representative corpus is well exploited, it may provide many additional kinds of information about language use. A corpus-based approache, Biber etal further, state allows researchers to identify and analyse complex 'association patterns': the systematic ways in which linguistic and non linguistic features interact together to perform their function in the context. Thus the researcher needs to focus on: the use of a linguistic feature either a lexical item or grammatical construction and on the characteristics of texts or varieties. Traditionally, linguistic analyses have focused on a particular linguistic feature, either a word order or grammatical construction. However, the use of such features can be further investigated by considering their systematic associations with other features. There are two main kinds of associations: the linguistic association of a feature includes: lexical associations with particular words bn and grammatical constructions. The non-linguistic association comprises: distribution across registers, across dialects and across time periods.

Biber etal, (1998:6) classify linguistic associations into two major categories: *lexical associations* investigating how the linguistic feature is systematically associated with particular words; and *grammatical associations* investigating how the linguistic feature is systematically associated with grammatical features in the immediate context. An example on lexical association given by Biber etal (ibid) is the analysis of words like: big, large and great; that is, the words that tend to co-occur with each target word. For example, big commonly co-occurs with 'toe',

while 'large' commonly co-occur with number. These three words are nearly synonymous in isolation, yet the analysis shows that they tend to be used with very different kinds of words. Such analysis looks at lexical-lexical association patterns. An example on the lexical-grammatical associations discussed by Biber etal (ibid) is comparing the nearly synonymous adjectives small and little, showing how they have very different grammatical associations with attributive versus predicative positions (e.g the small boy vs the boy is small)

When corpus-based approach also investigates non-linguistic associations, it sheds light on three major factors: the distribution of a textual item or grammatical construction across varieties defined by situation (registers); varieties defined by social group (dialects),; or periods of time. An investigation of the different distribution of nominalizations across academic prose and conversation is an example of the association between a grammatical feature (nominalzations) and non-linguistic feature (register). Hence, linguistic and non-linguistic association patterns are not independent. They rather interact with each other and it is the corpus-based approach which investigates them both. When lexical-lexical associations for big, large and great are considered for example by CBA (Corpus Based Appoach), their distributions across different registers are also investigated. It is also possible for corpus-based analysis to describe the characteristics of texts or varieties in terms of association patterns. Thus CBA students attempt to characterize registers, dialects, styles, or individual literary works in terms of their linguistic assocation patterns. This also led CBA to also investigate the ways in which groups of linguistic features commonly co-occure in texts. For example, nouns, prepositions, attributive adjectives tend to co-occure in certain registers, corpus based analysis tries to investigate such occurrence and finds interpretation to them.

As stated above, a crucial part of the corpus-based approach is going beyond the quantitative patterns to propose functional interpretations explaining why the patterns exist. As a result, a large amount of effort in corpus-based studies is devoted to explaining and exemplifying quantitative patterns.

Moreover, adopting electronic corpora gains corpus-based approach a previlidge which other paper-based and structure analysis approaches lack. CBA thus acquired an obvious advantage of using a computer for language study represented by the speed of processing data and the ease with which it can manipulate data (e.g. searching, selecting, sorting and formatting). Using computer made CBA rapid in processing and manipulating corpora at minimal

cost and time. In addition, using computers that process machine-readable data add accuracy and consistency. In addition, as computer can avoid human bias in an analysis, it can make the results more reliable. Machine-readability allows further automatic processing to be performed on the corpus so that corpus texts can be enriched with various metadata and linguistic analysis. Svartvik (1992:9) stresses that it is the use of computerized corpora together with computer programs which facilitate linguistic analysis that distinguishes modern machine-readable corpora from early 'drawer-cum-slip' corpora.

2.9.1 Characteristics of Corpus Based Approach.

A corpus-based approach has the following characteristics:
Firstly, it is based on the analysis of a comparatively large and carefully selected collection of naturally occurring texts that are stored in machine-readable form (i.e., a corpus). Secondly, because it analyzes actual patterns of language use in the corpus, it is empirical and therefore objective. Thirdly, the corpus-based approach takes advantage of computational tools and methods for manipulating the corpus, arranging the data in ways that make it possible to spot items and patterns that would be difficult to identify in other types of resources. An additional advantage of computers is that they provide consistent and reliable analyses (i.e., they do not change their minds or get distracted). Finally, the corpus-based approach combines both quantitative and qualitative techniques; a computer is capable of churning out counts of linguistic features.

Most corpus analysis tools contain at least the following two main features: *word frequency lists* and *concordancers*. A word frequency list allows users to discover how many different words are in the corpus and how often each appears. These two figures are referred to as *types* and *tokens*. Take for example the sentence “I really like translation because I think that translation is really, really interesting.” This sentence contains a total of thirteen words; therefore, we could say that it contains thirteen tokens. However, some of the words appear more than once in the sentence (i.e., ‘I’, ‘really’, ‘translation’); therefore, the sentence contains only nine different words, and these are known as types. In a word frequency list, the types are presented in a list and the number of tokens (i.e., the number of times that word occurs) is shown beside the type. Word frequency lists can also be used in a number of ways. They can be sorted in alphabetical order or in the order of ascending or descending frequency. Words belonging to the same lemma (i.e., words which have the same stem and belong to the same major word class, differing only by spelling or inflection) can be counted together or separately, as can words beginning with upper or lower case letters. Stop lists, which are lists of words to be ignored, can also be used. This could be done, for example, in order to eliminate common function words such as prepositions or conjunctions. Frequency information can be useful for helping translators decide

which term to use when faced with a number of potential synonyms or translation equivalents. For instance, this type of data can help them to determine whether a given term is commonly used by experts in the field, or whether it is simply one author's specific preference.

A concordancer, on the other hand, retrieves all the occurrences of a particular search pattern in its immediate contexts and displays these in an easy-to-read format. The most commonly used format is known as a KWIC (key word in context) display which shows one occurrence of the search pattern per line with the search pattern itself highlighted in the centre of the screen-. The extent of the context on either side of the search pattern is variable. Moreover, these contexts can be sorted in a variety of ways, such as the order of appearance in the corpus, or alphabetically according to the words preceding or following the search pattern. Concordancers have also become quite flexible, allowing functions such as case-sensitive vs non-case sensitive searches, wildcard searches (e.g. 'play*' to retrieve 'play', 'played', 'player', 'players', 'playing', 'plays', etc.), and searches where another term must appear within a user-specified distance of the search term (e.g. contexts where 'play' appears within five words of 'DVD').

2.9.2.The Corpus-based Approach Vs other Approaches

Compared to other traditional studies of language use, corpus-based approach doesn't rely on intuition, anecdotal evidence, or small samples; it rather adopts empirical analysis of large databases of authentic texts. However, Biber etal (1998:9) consider CBA a complementary approach to more traditional approaches rather than being unique and newly emerged approach.

McEnery etal (2006:6) compare corpus–based approach to intuition-based approach. They argue that corpus linguistics is a system of methods and principles of how to apply corpora in language studies and teaching/learning. They report that in principle when researchers use intuition-based approach, they invent purer examples instantly for analysis. This is because intuition is readily available and invented examples are free from language-external influences existing in naturally occurring language. Nevertheless, intuition should be applied with caution as it is possible to be influenced by one's dialect or sociolect, i.e what appears unacceptable to one speaker may be perfectly felcitous to another. Add to that when a person states an example to support or disprove an argument, he/she monitors his/her language production conciously. Hence, even if one's intuition is correct, his/her statement may not represent typical language use. In contrast, the corpus-based approach depends on authentic or real texts to analyze. However, authenticity itself may cause dispute among researchers and analysts. Moreover, results based on applying intuition-based approach are difficult to be verified since they are based on introspection which is not observable. On the contrary, results obtained by applying corpus-based approach are rather observable and manageable. McEckenry etal (2006) add that the corpus-based approach can

reveal differences that intuition alone cannot perceive and it can come up with relaiable quantitative data.

Generally speaking, unlike intuition-based approach, corpus-based approach can offer linguists improved reliability because it doesn't only reject intuition, but also stress the importance of its empirical data. Therefore, McEckenry etal (2006): 14) point out that the key to using corpus data is to find the balance between the use of corpus data and the use of one's intuition. McEnery etal (2006) stress that the corpus-based approach and the intuition-based approach are not mutually exclusive. They are complementary if the researcher addresses a broad range of questions.

2.9.3 Previous Studies

The literature on medical education is extensive. There has been an increasing number of studies on EMP within the field of ESP. However, most of these studies have addressed the English needs of medical students worldwide, language problems of international medical doctors who work in American hospitals (Cameron & Williams, 1997), the relationship between non-native English-speaking physicians' pronunciation and a nurses' perception of their medical competency (Horani, 1995) and the teacher's role in an EMP course (Chang, 2007). Moreover, some ESP researchers have targeted the field of EMP and non-English native medical doctors' problems in publishing papers. Only a few have considered ESP in the field of medicine and focused on non-native medical students' problems related to English communicative competence and fewer, if none, have investigated the most problematic linguistic forms for medical EFL learners by doing morphosyntactic analysis of their written corpora comparing the most occurring medical linguistic forms with their actual use and the language difficulties medical students may face. Below is a brief account of some related studies.

2.9.3.1 Chia etal 's (1999) English for College Students in Taiwan: A Study of Perceptions of English Needs in a Medical Context.

In their paper, Chia etal (1999) carried out a need analysis study on (349) college students and (20) faculty members at Chung Shan Medical School in Taiwan. Two questionnaires were developed for the survey. The questionnaires were translated into Chinese, piloted, and modified according to feedback from ten respondents: six medical students and four faculty members from Chung Shan Medical College. The questionnaire given to the medical students consisted of five sections of 23 questions, the topics of which were as follows: the importance of English in college and professional careers, perceived language skill needs and problems, the activities needed in a freshman language course, and suggestions for

development of course content and materials as well as demographic information. The faculty questionnaire consisted of four sections of 16 questions, which were parallel to those in the version given to the students but no demographic information was gathered. The data were computer-analyzed using an SPSS program. Students' responses were divided into two groups: juniors and seniors based on the courses in which each group studied. In the questionnaire, percentages were determined for all questions except 8 and 13 for which *means* were computed. Chi-square, t-tests, and ANOVA analyses were conducted in order to determine the perceptions of English language needs of medical college students and their faculty and to compare the perceptions held by the various groups; (the lowerclass men (LC), the upperclass men (UC), and the faculty (F)). Students and faculty were in agreement that *reading* is the most important skill needed for students' medical studies, followed by *listening*, *writing*, and *speaking*. It is noteworthy that freshmen did think that their listening skills needed to be improved and said that writing was the skill least needed. As for listening, all medical students felt that improving the ability to understand daily conversations was most important for incoming freshmen. Since the study is based on analyzing medical students' needs, it graded the students' needs according to the questionnaire's results as follows: an understanding of textbooks and journal articles written in English, an understanding of lectures in which medical terms are given in English, and an ability to write reports and research papers. The study's results showed that both students and faculty agreed on the problems students have with English in their medical studies, namely, limited vocabulary, slow reading, speed and poor listening comprehension were rated highest. Poor grammar was rated the lowest. As to the design of English curricula, most of the students preferred that General English be taken in the freshman year, followed by elective EMP courses in the ensuing years. Results also showed that English was perceived as important for students' academic studies and their future work. Students wanted a basic English language course at the freshmen level, naming listening as the most important skill to improve. Students and faculty desired more than one year of English language study. The study recommended that the present pattern of English courses—general English in the freshman year followed by three years of specific elective English—to be the most desirable.

2.9.3.2 Taşçı's (2007) An analysis of medical students' English language needs

This doctoral Dissertation aimed at finding out the academic and professional English language needs of Turkish medical students in an EFL context from the perspectives of (14) administrators, (173) currently enrolled students, and (58) academicians, to contribute to the development of English for medical purposes curriculum. Data were collected via questionnaires which were designed to compare the perceptions of the currently enrolled students and the academicians at

the medical faculty of a Turkish-medium university. An interview was held with the Dean of the Medical Faculty to better obtain information about perceptions of the administration staff towards the English language needs of the medical students and their expectations from the English classes. The questionnaire data were analyzed quantitatively, and the interview data were analyzed qualitatively . The main results of the study revealed that medical students studying in Turkish-medium contexts primarily need to improve their English reading skills in order to do research for their problem-based learning classes. In addition to English reading skills, medical students regard speaking skills and an interactive way of learning English in groups as very important. This finding indicates a changing trend in the students' perceptions of their foreign language needs in comparison with the previous needs analyses of English language needs in medical contexts. The overall findings of this study revealed that there is a need to increase the class hours, provide technological equipment, and appoint trained instructors for the efficient teaching of medical English.

2.9.3.3 Hossin etal's (2010) Is English as a Medium of Instruction a Problem for Undergraduate Medical Students ?

This paper aimed to identify the nature of the problems faced by the undergraduate students in different aspects of English used in Anatomy. The study was conducted on (191) third year medical students who had just passed the Anatomy portion of their undergraduate course from two renowned government medical colleges and one private medical college of Bangladesh. Anatomy was selected as the topic of the study test as it is the beginner and basic subject and offers a great thrust to new comer Bengali-based students with a great volume of English as well as Latin anatomical terminology. Hence, this study aimed at addressing some of the problematic areas faced by undergraduate medical students of Bangladesh regarding 'English used in Anatomy'. Two sets of questions were prepared as the instrument of the test. In constructing questions on the issue 'proficiency of English used in Anatomy'. The questions included in the two sets were close-ended and Multiple Choice Question (MCQ) type responses (multiple true-false type, one best response type etc.), Short Answer Question (SAQ) type responses (filling in the blanks, writing in one or two words, translating short or long sentences, changing the voice, rephrasing a sentence, rewriting a sentence with correct words for spelling, tense etc). Questions were asked in Bengali keeping all the technical terms in English, so that inability to understand the language due to a lower English proficiency would not affect the students' understanding of the questions and thereby obscure the real picture of their performance in the test. An arbitrary grading scale was used to categorize the level of difficulties the students had with 'English used in Anatomy' (as evidenced through their performance): Grade 0 (No difficulty) = 80.01% and above correct responses Grade I difficulty = 60.01% - 80% correct responses, Grade II difficulty

= 40.01% - 60% correct responses, Grade III difficulty = 20.01% - 40% correct responses, Grade IV difficulty = up to 20% correct responses. Comments were also collected from the students regarding their problems with English used in Anatomy. An average of only about (48.2%) responses on 'English used in Anatomy' was correct. Performance of the students showed that the undergraduate medical students of Bangladesh were facing varying but noticeable amounts of difficulty with most of the areas of 'English used in Anatomy'. Reading comprehension was a very important concern of this study because difficulty in understanding the textbooks by reading makes the students more dependent on the so-called 'guidebooks' or 'notebooks'. When the students were asked regarding this, most of them identified this understanding difficulty as the cause of more popularity of Anatomy textbooks written by Bangladeshi and Indian writers.

For testing the area of reading, Students' performance was relatively better in the item of 'understanding direct statements' in comparison to the other two items, 'understanding main ideas' and 'drawing inferences'. In most of the items of vocabulary and spelling, medical students' performance was weak. The students only performed better (about 70%) in the items of understanding the meaning of prefix and suffix of the area vocabulary. The response in using verb was not satisfactory. Use of verbs in anatomical texts is very extensive and proper understanding of use of verbs is essential for proper understanding of anatomical texts. The study shows that about 75% of students have difficulty in 'English used in Anatomy' and only 25% do not. This actually jeopardizes their understanding of textbook and facing difficulties in written and oral examinations. However, when the students were asked about their own perception of their English language proficiency, some replied that they were quite good or very good in English, others were undecided about their proficiency and few of them thought they were quite bad or very bad in English. So, the results of the students' performance in the study do not tally with their comments. They concluded that organized, regular ways of dealing with these problems should be devised taking into account the specific aspects showing weakness and that they should be based on principles of terminology and English rather than individual terms of words.

2.9.3.4 Boniadi etal's (2013) Problems of English for Specific Purpose Course for Medical Students in Iran

Boniadi etal (2013) focused in their paper on an ESP course offered at Tabriz Faculty of Medical Science in Iran. The need analysis conducted in this study only obtained feedback from (200) students and (5) lecturers who are academically involved with these ESP students at medical faculties. Both quantitative and qualitative approaches were considered to produce a more accurate interpretation of the data. The qualitative approach was carried out via ESP class observation and semi-structured interviewes with the ESP lecturers involved in teaching this

ESP course. Initially, classroom observation was conducted during an ESP lesson according to Hutchinson and Waters' checklist. Secondly, the semi-structured interviews were conducted in the instructor's office. Respondents were asked to comment on the content of the course, the materials used, teachers' classroom practices and general problems they encountered. With this instrument, teachers' insights about the program were obtained. As for the quantitative phase of this study, a questionnaire was designed to collect data. The questionnaire used in this study was constructed by the researcher according to other related studies in electronic and non-electronic recourses. The items were ranked on a Likert Scale ranging from 1 (least important) to 4 (most important). The data from the questionnaires were analyzed by using the SPSS programme, version 16. Mainly descriptive statistics were used. The mean, percent, frequency and Standard Deviation of questions were obtained. The semi-structured interviews were conducted by instructors and their answers were tape-recorded. All responses were transcribed and then translated into English. They concluded that with regard to the examination of English language problems that students were currently facing in their academic studies, boring classes, low English proficiency, and overcrowded classes were rated as the main problems. The majority of instructors believed that the size of classes, uninterested and unmotivated students, inactivity and low proficiency of students are the main problems in the ESP course. To sum up, all feedback of the opinions obtained from the two groups of subjects towards their perception of ESP courses agreed that the current English courses provided for the medical students are not relevant to the academic needs of the students. More English courses which are academically specific to their field are urgently needed. In addition, all the macro skills (reading, writing, speaking and listening) and especially communication skills should be included in ESP course.

2.9.3.5 Al Sout's (2013) An Investigation of English Language Needs of the First Year Pre-Medical Students at Sebha University, Libya.

Al Sout (2013) in a paper investigated the English language needs of (50) premedical students at the University of Sabha in Libya to analyze their needs so that a good program can be designed for these students to fulfill their English language needs. The study aimed to compare medical students' needs as perceived by the students and the teachers, their effects on language learning and teaching process and check if their needs suit the existing English syllabus and program. The data collected through questionnaire were arranged , classified and analyzed by using content analysis technique. The data show that (94%) of the students believe that they need English language, where 38% strongly show the need of studying English for medical profession. This shows the English language needs of the pre-medical students and their recognized importance of studying English. The data also reveal that (34%) of the participants replied saying that they always

need English while practicing their medical profession. 30% of students replied saying that they needed English most of the time whereas 30% of the students replied saying that they needed English sometimes while practicing profession. This implies that almost (94%) of the participants recognize the need of English while practicing medical profession. Only (6%) of the participants had negative replies. Thus the needs of the pre-medical students in English vary. The following results were obtained from the data analysis and discussion.

1. Most of the pre-medical students of the University of Sebha believe that they need English in the profession for various purposes.
2. Though the students have been studying English for more than five years, they face many difficulties while communicating in English.
3. The Pre-medical students have various English language needs such as getting training and practice in speaking skills, vocabulary, writing, listening, reading, focus on grammar, more time and explanation, proper evaluation and assessment, some lessons in pronunciation, encouragement and motivation from the teachers and a learner-centered approach.
4. There is no prescribed syllabus for teaching English to the premedical students of the University of Sebha.
5. ESP teachers at the University of Sebha also face many hurdles while teaching English to the premedical students and wish that the administration take the issue of teaching ESP to pre-medical students seriously for effective teaching and learning.

The study concluded that teaching English for specific purposes is an important and developing field in ELT. ESP looks at learners' needs while teaching English for specific purposes to make them competent in performing the English language functions in that field.

2.9.3.6 Hijjo's (2013) A Morphosyntactic Analysis on Malaysian Secondary School Students' Essay Writing in English Class.

In this paper, Hijjo (2013) investigates the morphosyntactic issues and grammatical errors in English essays written by Malaysian secondary school students in English course. He analyzes ten students' essays (50 pages) in the light of Chomsky's (1995) Minimalist Program using X-Bar theory to represent the tree diagram. The research paper aims to focus on the morphosyntactic issues that lead to the grammatical errors which take place in the English writing of Malaysian secondary school students. The findings suggest that the Malaysian students are not fully aware how to use the plural mark 's' as well the '3rd singular' in present tense. Moreover, they cannot build a simple sentence due to the different word-order and sentence structure between Malay language and English in term of morphology and syntax .

2.9.3.7 Mammeri 's (2015) A Morphosyntactic Study of EFL Students' Written Compositions: A Corpus Based Analysis.

In his paper, Mammeri attempts to explore the written compositions of EFL students at the level of morphosyntax. The purpose of the study is to identify, classify, and supply a plausible interpretation for the different morphosyntactic errors made by the learners. For this reason, a corpus of (120) English written compositions was collected from second year students enrolled at English Department at Bejaia University, Algeria. The data were collected from answering sheets of a test in stylistics . The method adopted in this study is a descriptive and qualitative one. After analyzing the corpus at the sentence boundary, the findings revealed the following morphosyntactic errors: (1) word order, (2) subject-verb agreement, (3) verb structure, (4) noun/adjective/adverb structure, (5) word/morpheme addition, (6) word/morpheme omission, (7) short forms/abbreviations, and (8) conversational informal words. It concludes with some pedagogical implications to overcome the aforementioned problem and for a better writing performance. Most of the aforesaid errors are ascribed either to incomplete application of rules, overgeneralization of rules, false concepts hypothesized, or to interlanguage interference, mainly, with French. In a word, all the above mentioned errors indicate that the second year EFL Students do not master English morphosyntax.

2.9.3.8 Kayaoğlu, and Akbaş's (2016) An investigation into medical students' English language needs.

In their paper, Kayaoglu and Akbas (2016) investigated the academic English language needs of the first year medical students attending an advanced English course at the Faculty of Medicine at Karadeniz Technical University. The data were collected via a structured questionnaire with (47) items. It covers five different parts focusing on: medical students' purposes of learning English, significance of learning English, their preference of learning environment, language learning needs of major language skills (reading, writing, speaking, listening), their preference of assessment type. The questionnaire was administered to (169) students at the Faculty of Medicine at Karadeniz Technical University. Descriptive statistics was employed in order to analyze the data.

The quantitative data analysis show that students' priory purposes in learning English are to be able to interact with others and achieve a score in the related language exams. English learning seems to be more important for the students as prospective medical doctors. Another result is that face-to-face traditional language classroom is relatively more desirable for the participants. However, as compared to product or process evaluation type, self-assessment seems to be more

preferable for them. As for the major language skills, *speaking* is the most important skill to improve ,followed by *listening*, *reading* and *writing* respectively. The most important speaking sub-skills are speaking to a public on medical issues, discussing on medical issues in conferences, speaking for conversational English. In addition, listening to medical audio & video sources, medical conversations and oral presentations are considered to be the most significant listening sub-skills among all. Reading medical books, articles and manuals are regarded as the most important reading sub-skills while writing articles, projects and taking notes as the most important writing sub-skills.

The results of the study show that students' priority purposes in learning English are to be able to interact with others and achieve a score in the related language exams. Another result is that face-to-face traditional language classroom is relatively more desirable for the participants. In line with these results, they seem to be against assessment in English courses. However, as compared to product or process evaluation type, self-assessment seems to be more preferable for them. As for the major language skills, speaking is the most important skill to improve and it is followed by listening, reading and writing respectively. In addition to this, listening to medical audio & video sources, medical conversations and oral presentations are considered to be the most significant listening sub-skills among all. Reading medical books, articles and manuals are regarded as the most important reading sub-skills while writing articles, projects and taking notes as the most important writing sub-skills.

2.9.3.9 Krišković & Coslovich (2016) Developing Language and Communication Skills in a Medical English.

In their paper, Krišković & Coslovich (2016) conducted a study on medical students at the Faculty of Medicine, University of Rijeka, Croatia. The participants were (552) medical students enrolled in all years of the study in the academic year 2014/2015, including (188) (34.1%) males and 364 (65.9%) females. They comprised (101) first year students, (116) second year students, (101) third year students, (82) fourth year students, (78) fifth year students and (74) sixth year students. The aim of this study was to explore the perceptions of medical students about their ESP course. A questionnaire survey comprising (18) statements was conducted about the Medical English course. The students were asked to express their agreement or disagreement with the offered statements using a Likert 5-grade scale: strongly agree, agree, not sure, disagree, strongly disagree. Finally, the students were asked to give comments about the course and to provide suggestions for possible modifications .

A questionnaire was designed to evaluate a medical English course through five categories: (1) the importance of medical English for students' professional development, (2) oral presentations, (3) course requirements, (4) teaching methods, and (5) organization of the course. The results showed there was a very positive attitude towards the usefulness of English for the students' future profession. The responses concerning oral presentations showed differences among students depending on the year of study. The findings demonstrated differences in the students' perception of course requirements. The students were indecisive in their evaluation of the teaching methods. The organization of the course was highly ranked. All statistical analyses were done with software package Statistics 12 (Stat.Soft, Inc., TulsaOK). The study concluded that there was a very positive attitude toward the English language and its usefulness for the professional courses. However, it seems that many students were not sure of their opinion about certain aspects of the Medical English course. On the other hand, it was evident that some other participants would prefer a different approach to learning Medical English, but without the final exam at the end of the course. Their evaluation of the Medical English course demonstrated that only about one third found it to be useful to them. Based on this evaluation, some modifications in the teaching process in the following academic year were suggested to make it more beneficial and diverse .

2.9.3.10 Hamza's (2018) English Language Problems that face by Medical Students in EFL context.

The aim of this paper was to address the difficulties faced by the medical Saudi students at Prince Sattam Bin Abdu Al Aziz University in learning ESL. Data were collected via questionnaires designed to find out the perceptions of the currently (170) enrolled students and (50) academicians at the medical faculty of a Saudi medium university. The questionnaire data were analyzed quantitatively, and the interview data were analyzed qualitatively using SPSSII method. An interview was held with the Academician of the Medical Faculty to obtain better information about their perceptions towards the English language problems of the medical students.
The questionnaires were administered to the students enrolled in the first and through sixth classes at the faculty. Data were analyzed using the Statistical Package for Social Science (SPSSII). Multiple choice and ranking questions-different statistical technique were used. First, means and standard deviations for the likert scale items were calculated and analyzed.

The study concluded that all participants agreed on considering writing reports and research paper as the most challenging skill. In regard to speaking sub-skills,

there was not any significant difference between participants in ranking both class discussion and conversation with lecturers as the most difficult. The students do not find asking and answering questions difficult because they are rarely given chance to ask or even being asked during the lectures. For reading sub-skills, all participants felt that unknown vocabulary is the most challenging sub-skill that students face in their reading medical texts. Finally, it was found that wording in two statements for listening sub-skills confuse participants in determining the level of difficulty. Each of "understand lectures" and "follow lecturers" was ranked as the most difficult. Most students, and some teachers felt that "follow class discussion" is less difficult and that this could be attributed to the fact that the students are not encouraged for discussion with each other or even with their lecturers in the class. The overall findings of this study reveal that there is a need to increase the class hours, provide technological equipment, and use Grammar Translation method for teaching medical terminology and PBL (problem Base Learning Strategy) for teaching medical methods.

2.9.3.11 Yang et al's (2019), Challenges and adaptations in implementing an English-medium medical program: A case study in China.

In their paper,Yang et al (2019) investigated the challenges and adaptation strategies of teachers and students in an EMI (English as the medium of instruction) medical education program in China. The research sample comprised three groups: (188) students receiving EMI instruction from 2007 to 2016 , (24) EMI teachers from a range of medical disciplines, and (3) faculty administrators who have been directly involved in the development and implementation of the EMI program. Data were collected on EMI and non-EMI students' test performances and students' and teachers' perceptions of the program. Test scores and survey results were analyzed using SPSS. Focus group transcripts and open-ended comments from surveys were examined using thematic coding. The results of the study showed that there were no significant differences in admission and graduation test scores for EMI and non-EMI students which means there is no improvement or any development in the students' production of English language as the medium of instruction. Four challenges with the EMI program were identified: (1) insufficient/inappropriate teaching materials, (2) unsatisfactory teaching, (3) inadequate class interactions, and (4) failure to teach medical humanities. To address these challenges, teachers and students used adaptive strategies, such as the use of alternative textbooks, selflearning skills and Chinese language.

2.9.3.12 Comparison of the Previous Studies with the Current Study

Surveying the above selected previous studies on EFL medical learners show some variety in their concerns. Some of these studies are concerned with analyzing medical students' needs when using English professionally. Examples are the studies of Chia etal (1999) , Taşçı (2007), Hossin etal's (2010), Al Sout (2013), Boniadi etal (2013) , Kayaoglu and Akbas (2016). Other studies like that of Krišković & Coslovich (2016) aim to explore medical students' perceptions of their ESP course. On the other hand, some other studies aim at identifying the nature of the problems faced by the medical students. Examples of these studies are those of Hamza (2018), and Yang et al (2019). Only two studies namely: Hijjo (2013) and Mammeri (2015) investigated the morphosyntactic issues and grammatical errors in English written essays of EFL learners in English course but not in medical context. Hijjo (2013) investigated the morphosyntactic issues and grammatical errors in ten English written essays with by Malaysian secondary school students in English course. Mammeri's study, on the other hand, attempted to explore the use of morphosyntactic elements in the written compositions of EFL college students at one of the Algerian colleges. These two studies seem closer in aims to the current study which aims to asses Iraqi EFL medical students' recognition and production of the main morphosyntactic elements and find out the most problematic morphosyntactic elements for them at both recognition and production level.

As for the data and procedures of analysis adopted in the studies, all need analyses together with Hijjo (2013) and Mammeri's (2015) morphosyntactic studies followed observation, interview and questionnaire for qualitative analysis and SPSS statistical system for quantitative analysis. However, the current study follows quantitative analysis represented by multiple choice achievement test for recognition level whose results were analyzed using SPSS version 16, and composition test for production level where students' written performance was scored using Brown & Bailey (1984)'s analytical scale, and POS method for identifying and classifying students' errors in composition.

All the need analysis studies being reviewed concluded that EMP course need to be designed and taught at medical colleges stressing on the importance of developing the four skills of language learning: reading,

listening, speaking and writing. They all agreed that all the macro skills (reading, writing, speaking and listening) and especially communication skills should be included in EMP course. Some of the studies like those of Chia etal's (1999) Taşçı (2007), Hossin etal's (2010), Al Sout's (2013) stressed that medical students need to improve their English reading skills in order to do research for their problem-based learning classes. However, Kayaoğlu, and Akbaş's (2016) study came out with the conclusion that *speaking* is the most important skill to improve followed by *listening, reading* and *writing* respectively. Hamza's (2018) study concluded that writing reports and research paper is the most challenging skill. However, most of the need analysis studies agreed that needs have not been fully met because of the limited classroom hours, lack of technological access, and inadequately trained EMP instructors. They also found out that vocabulary and grammar structures in medical texts are problematic for medical students who regard translation as an important skill. The most notable change in the perceptions of English needs is that medical students perceive speaking in groups as a very important way of learning. These indications of the students' needs are in line with the aims of communicative language teaching which should be addressed by medical faculties in English curriculum design. Hijjo (2013) and Mammeri (2015) who conducted morphosyntactic analysis on written the texts of EFL high school and college learners concluded that some morphosyntactic elements are more problematic than others,and thus need some more emphasis while teaching. Hijjo (2013), for example concluded that Malaysian students are not fully aware of how to use the plural -s as well the '3rd singular' in present tense. Mammari (2015) concluded that EFL second year college students majoring at English Language have more morphosyntactic difficulties in the following areas due to the high percentage of their errors committed: (1) word order, (2) subject-verb agreement, (3) verb structure, (4) noun/adjective/adverb structure, (5) word/morpheme addition, (6) word/morpheme omission, (7) short forms/abbreviations, and (8) conversational informal words. This actually goes in line with the results of the current study which concluded that each group of medical students has its own problematic areas of morphosyntactic elements at both recognition and production levels which vary in the percentage of difficulty from one morphosyntactic element to another. However, both groups of human and veterinary students didn't show any development in their correct uses of morphosyntactic elements at production level as will be discussed in detail later in chapter four.

Chapter Three

3.1 Introductory Note

This chapter is intended to describe the methodology and procedures followed in the study including selection of the sample, construction and administration of the test, and the employed statistical tools.

3.2 Population of the Study

A population is the group to which a researcher would like the results of the study to be generalized.(Gay, 1996:128). The population of this study consists of two groups: the first is Iraqi EFL human medical students distributed over six stages at College of Medicine, University of Diyala, and the second is Iraqi EFL veterinary students distributed over five grades at College of Veterinary, University of Diyala, for the academic year 2017-2018 .

3.3 Selection of the Sample

Gay (ibid) defines sampling as the process of selecting a number of individuals for any study in such a way that the individuals represent the larger group from which they were selected. The purpose behind using sampling is to gain information about a population. Logically, an analysis of either the whole population or a representative sample of that population should come to the same conclusion.

The selected sample of this study consists of two groups each consisting of 100 students. The 1st group is that of Iraqi EFL human medical students at College of Medicine, University of Diyala. They were selected using the formula: total number of the students per stage divided on the total number of the college students divided on 100 to get the sample of students for each stage. The students

are therefore distributed as follows: 27 students at the 1st stage, 20 students at the 2nd stage, 17 students at the 3rd, 14 students at the 4th, 12 students at the 5th and 10 students at the 6th stage. The 2nd group is that of Iraqi EFL veterinary students at College of Veterinary, University of Diyala who were distributed as follows: 31 students at the 1st stage, 27 students at the 2nd stage, 15 students at the 3rd, 16 students at the 4th, 11 students at the 5th stage for the academic year 2017-2018. See Table (9) below:

Table (9) Numbers of the sample students distributed according to theircollege stages.

Students				
College / Stage	**College of Human Medicine**	**Number of sample Students**	**College of Veterinary**	**Number of sample Students**
1st stage	114	27	66	31
2nd Stage	84	20	61	27
3rd Stage	73	17	31	15
4th Stage	58	14	31	16
5th Stage	54	12	20	11
6th Stage	45	10	non	non
Total	428	100	209	100

The group of human medicine students represents (67%) while the group of veterinary students represents (33%) of the whole sample which consists of 200 male and female students. These percentages are based on a criteria suggested by Combe etal (2007:252). The sample students are distributed as follows :

1- The total number of males and females at the College of Human Medicine is (428). Since the number of male students is (179), the percentage of males is (42%) while the number of female students is (249) thus their percentage is (58%) of the total number of college students.

2- The total number of males and females at the College of Veterinary Medicine is (209). The percentage of males is (49%) , while, that of females is (51%). See Table (10) below:

Table (10) Numbers of Students distributed according to their Colleges, and Gender.

Students						
Gender / College	Males	%	Females	%	Total	Total %
College of Human Medicine	179	42	249	58	428	67
College of Veterinary Medicine	103	49	106	51	209	33
Total	282	44	355	55	637	100

3.4 Construction of the Test

To collect the data necessary for achieving the aims of the study and verifying its hypotheses, an achievement test was constructed. The test consists of two parts: recognition and production. It is worth to mention that the items of the two parts have been deduced and adapted from (Snyder, 1971; Giroux, & Penna, 1979; Lynch, 1989; Gilbert & Hoepper,1996; Myles & Adreon,2001; Cialdini, 2003; Myles, Trautman, & Schlevan ,2004;and Biggs & Tang , 2009).

3.4.1 Description of The Recognition Part

This part of the test is intended to measure the students' ability to recognize the correct uses of the morphosyntactic elements under study. It consists of (25) multiple choice items. The reason behind employing multiple choice items is their objective practical nature, and their suitability for testing large numbers of students. Below are the morphosyntactic elements and their subtypes measured at the recognition part of the test.(See Appendix (3) a sample of achievement test)

1.Pronouns including: demonstrative, partative and reflexive pronouns.
2.Nominals including: gerund and infinitive.
3.Tense and aspects including: present simple, past simple, perfect tenses: present and past, continuous tenses.
4.Word morphology.
5. Passive voice.
6.Adjectives.
7.Adverbs.
8.Complementation.
9.Negation.
10. Word order and discourse organization.

3.4.2 Description of The Production Part

This part of the test is intended to measure the students' ability to produce the correct form of the targeted morphosyntactic elements. The selected technique is essay writing. Many scholars ,such as Coombe etal. ,(2007:35) point out that essay questions offer students the greatest opportunity to construct their own responses. Essay questions are the most useful format for assessing higher-order cognitive process such as analyzing, evaluating, summarizing, and synthesizing. Also, an open-ended essay test is appropriate for use with students at college level.

At this part of the test, the students were asked to write a composition or an essay of not less than 300 words on a general medical topic by using their own words. The topic was "*The Role & Importance of Anatomy in the medical career*." All (200) essays were typed using Microsoft Word 2003 so that they would be computer readable.

3.5 Scoring Scheme

As for the recognition part, spss statistical method was used for scoring every multiple choice item out of 3 marks: 3 for a correct item, and 0 for a wrong one. Since the recognition part consists of 25 items, so the first of the test was scored out of 75. Accordingly, the theoretical mean of this part is (37.5).

On the other hand, and for their credibility and accuracy, two methods were used to analyze the two hundred medical students' written compositions: the first was Brown & Bailey (1984) scale and the other was pos tagging method. Brown & Bailey (1984) was adopted and outlined as a scoring scheme for scoring the production part: essay writing. (See Appendix. (5) & (6)) . This scale measures students' written performance in terms of five categories or language areas as shown below:

1.Organization: Introduction, body and content.

2. Logical development of idea: content.

3.Grammar.

4.Punctuation, spelling, and mechanics.

5.Style and quality of expression.

Being designed for subjective tests, each category is marked separately in terms of five levels as shown below (Brown,2000:243) :

20- 25 (Excellent to Good)

19-15 (Good to Adequate)

14-11 (Adequate to Fair)

10 - 6 (Unacceptable)

5-1 (Not – College Level Work)

Each of the five categories is marked out of 5, so the total mark is out of 25. Hence, the theoretical mean of this part is 12.5 .The whole test is scored out of 100, (75 for recognition test and 25 for production test).

3.6 Instruments

Sketch Engine software application was utilized to analyze the students' errors in the essays. It is one of the different applications of POS tagging employing rule-based algorithms. It allows learners' corpora to be annotated for the type of error and provides a special interface to search for the error itself, the error correction, the error type or for a combination of the three options. It also allows teachers to mark their students' written material electronically. It is a program for marking and annotating text documents using a Windows computer. After typing

the participant's texts in electronic form, they are uploaded into the program and marked using a system of buttons and annotations. Error statistics are also automatically compiled and included at the end of the texts.(www.sketchengine.co.uk)

3.7 Why to Use POS Tagging Method in Analyzing Students' written Corpora?

A POS tag (or part-of-speech tag) is a special label assigned to each written word in a text corpus to indicate the parts of speech and other grammatical categories such as tense, number (plural/singular), case, etc. POS tags are used in corpus researches and in text analysis tools and algorithms (Halliday, 1992: p. 61-77). It is the process of classifying each word in a text with its grammatical category or part-of-speech, i.e. noun, verb, preposition, adjective, adverb, etc (Mair, C., et al.: 2002:245-264). It provides full information regarding the inflectional features of the words constituting a sentence. It adds semantic information about words which helps to resolve ambiguity in the meaning of words. POS tagging determines the grammatical functions of the words, differentiating words from each other, and determining their syntactic position the in the sentence. Each word is flanked by a tag. For example, 'Although' is analyzed as a type of adverb; 'Because' is a conjunction; 'Beautiful' is an a adjective; 'On' is a preposition (Brants, T., W. Skut, and B. Krenn, 1997.).

Once performed by hands, POS tagging is now performed in the context of computational linguistics. The main task of computational linguistics is to construct programs in order to process words and texts in natural language. Sketch Engine is one of the programs developed to analyze written texts to its pos components and tag the learners' errors according to already identified inputs of the correct structure of grammatical meaningful sentences.

The tool used in tagging is called a POS tagger. It is defined as a part of software which assigns parts of speech to every word of a language that it reads. It is called Part-Of-Speech Tagger (POS Tagger) which is a piece of software that reads text in some languages and assigns parts of speech to each word and other tokens such as noun, verb, adjective, etc. Generally, computational applications use more fine-grained POS tags like 'noun-plural' which works with a high level of accuracy reaching up to 98%. The mistakes are typically limited to misspelt

words and sometimes the same word has different parts of speech (Straková, J., M. Straka, and J. Hajič,2014). For POS abbreviations or tag set used in analyzing medical students' written texts see Abbreviation list.

In the present study, the process of POS tagging was applied on two hundred Iraqi medical students' written corpora following the steps below:

- Identifying the number of words for each sentence.
- Identifying parts of speech for each sentence by assigning tag for each word in a sentence.
- Classifying parts of speech in a table.
- Counting the number of nouns, pronouns, adjectives, prepositions, adverbs in each sentence .
- Identifying the grammatical, punctual and spelling mistakes.
- Counting the number of errors in each pos category then calculating errors percentages in each pos.

To conclude, students' errors for each category are calculated and their percentage of errors are obtained out of the total occurrence of words in the written corpora of each group of medical students. The parts of speech with higher percentage of errors are proved to be more difficult for medical students than those with less percentage of errors. The morphosyntactic elements identified by the study , but not used by the students in their writings are regarded as the most difficult ones for being avoided by students due to their lack of their correct uses in writing. (See Appendix (7) as sample of Student POS tagged Written composition)

3.8 Face Validity of the Test

A particular kind of validity that concerns most of test designers or researchers is face validity which means that the test should look, on the face of it, as if it is valid. Murcia (2001:6) defines face validity as the tool that refers to whether the test seems to measure what it is supposed to measure . Validity refers to the degree to which a survey instrument actually measures the concept it is supposed to measure (Slavin,1992:97-104). In other words, a measurement

instrument is considered valid if it measures what its user claims it measures. A test is valid, Harmer and Kiewitt (2007:308) asserts, if it produces similar results to some other measure, also in the way that the test is marked .

Similarly, Gay etal (1992:140) defines face validity as the degree to which a test appears to measure what its purposes to measure. Along the lines of Gay , Light, Singer, and Willet (1990:152) state that the way to measure face validity is by experts who are to examine the test and agree that it measures what it is supposed to measure. The measure should look right and readable..

The face validity of the test used in this study was certified by exposing the test to a jury of experts specialized in methodology and linguistics at different colleges of the University of Diyala.

The jury members are:-

1. Prof. Ayad Hammed, Ph.D in linguistics & translation.
2. Prof. Amthal Mohammed Abbas ,Ph.D. in linguistics & translation.
3. Prof. Sami Abdul Aziz , Ph.D .in Metheds of Teaching & syllabus design.
4. Assist. Prof. Ghazwan Adnan, Ph.D .in Metheds of Teaching & syllabus design.
5. Assist. Prof Ya'rub, M.A. in linguistics.
6. Assist. Prof Nizar Hussein Weli, M.A. in ELT methodology.
7. Assist. Prof Muna Haseeb, M.A. in linguistics

In the light of the jury members' views and recommendations, the following modifications were undertaken:

1. Minimizing the kind of pronouns to three most problematic pronouns for Iraqi EFL students: demonstrative, partative and reflexive.
2. Not to use two tested morphosyntactic elements in one sentence, i.e not to include two blanks in one item of the test.

3. The items of the achievement test were reduced to 25 after deleting the most language major related grammatical items such as *participle* from the kinds of nominals and keeping gerund and infinitive.
4. Four of the jurors recommend simplifying the language of the test.
5. Some grammatical, spelling, and printing mistakes were avoided in the final form of the test.

The percentage of agreement among the jury members about the appropriateness of the two tests instruments for the aims of the present study was 94.12%.

3.9 Pilot Administration of the Test

The pilot study is a small study conducted in advance of a planned project specifically to test the aspects of a research design and to allow necessary adjustments before final commitment to the design. http://www.aqr.org.uk. According to Waite (2002:2) "...investigation designed to test the feasibility of methods and procedures for later use on a large scale or to search for possible effects and associations that may be worth following up in a subsequent larger study". To sum up, it is a trial study carried out before a research design is put in its final form to assist in defining the research question or to test the feasibility, reliability and validity of the proposed study design.

The pilot sample of this study consists of 30 EFL Iraqi medical students at the two Colleges of Human medicine and Veterinary. The pilot administration of the test started on March 12th till 14th during the 2nd term of the academic year 2017-2018. The average length of time needed for responding to the test was 30 minutes for each part of the test. The pilot administration of the test showed no serious ambiguity concerning the instructions of the instrument .

3.10 Reliability of the Test

Gay (2001:144) (as cited in Cooper and Schindler, 2001) defines reliability as means of dependability, or trustworthiness. In Kaplan and Goldsen's (1965:83-84) words: " the importance of reliability rests on the assurance it provides that data are obtained independent of measuring event, instrument or person.

Moreover, Slavin (1992:81) states that the term “reliability” refers to the degree to which a survey instrument consistently measures whatever it is intended to measure. Mueller (1986:113) adds that when a measurement instrument is consistent and accurate, the instrument is supposed to have a high degree of reliability. Thus reliable data are defined as data that remain constant throughout variations in the measuring process.

According to Cooper and Schindler (2001:215), “reliability is a necessary contributor to validity but is not a sufficient condition for validity.” Internal-consistency reliability refers to “the extent to which all the items or questions assess the same skills, characteristics, or quality” (Fink, 1995 :48). It is basically meant to “examine the consistency of people’s responses to different items on the same instrument at the same time” (Light, Singer, & Willett, 1990 :166).

In sum, reliability concerns the consistency of a measure. That is, the tendency to obtain the same results if the measure was to be repeated by using the same subjects under the same conditions.

3.10.1 Reliability of the Recognition Part

Test-retest reliability method was applied to compute the reliability of the recognition part. Test-retest reliability indicates that the same respondents respond to the test twice , the researcher would get almost the same answer each time . This notion is the basis of the test- retest reliability by asking the same students to answer the same questions at two different times. If the correlation between the first and second set of answers is greater than 0.70, one can assume that the test-retest is reliable (Schuman and Presser (1996: 46). In fact, test-retest reliability

coefficient of the first and second administration of the test was 0.84 which is considered high (ibid.).

3.10.2 Reliability of the Essay Written Test

The method that used to find the reliability of the production part of the test was the mark/remark method. Heaton (1975:155) believes that this method indicates the extent to which the same marks or scores are obtained if the same test sheets are marked or corrected by two or more different examiners or by the same examiner on different occasions.

Hence, in order to compute the reliability coefficient, the researcher rescored the testees' papers after a period of time (22 days). i.e. the pilot sample papers, which were 30 ones, were scored twice by the researcher herself. Pearson coefficient correlation formula was applied and the reliability coefficient was found to be (0.80) which is considered an acceptable coefficient (Hedges, 1991:22).

3.11 Final Administration of the Test

After ensuring its validity and reliability, the test was finally administered on April 4th, 2018. The researcher explained the test instructions for the students. The allocated time for the test was 60 minutes: 30 minutes for the recognition part , and the other 30 minutes for the production part. After answering the items of the test, the answer sheets were collected by the researcher and then scored and tabulated in order to find out the final results.

3.12 Statistical Methods

The following steps were followed to get the final statistical results:

1. Scoring students' answers at recognition part out of 25 marks. Then for statistic easiness, each student's mark was multipled by 3 to get 75 scores

Scoring students' answers at production part out of 25 based on Brown method. Accordingly, the whole test with its two parts recognition and production was scored out of 100.

2. Calculating medical students' errors in multiple choice items by using percentage formula: the total number of students' errors for each morphosyntactic element at each stage divided on the total number of students multiplied by 100. The percentages of errors of each group of medical students are compared to measure students' performance in general , then of their performance at recognition and production parts.
3. Using T-test method for correlated groups to measure medical students' performance at both groups. Students' total errors in each multiple choice item were calculated and transferred to percentages then compared with theoretical mean, computed T-value, tabulated value and degree of freedom to measure the students' performance at each group in general, then at recognition and production levels.
4. T-test for uncorrelated samples is used to compre human medical students's performance with veterinary students' performance in general then in the recognition/multiple choice test and production/ writing composition test.
5. Using Arithmatic mean method to compare students' performance in each group at production test, and trace the development in their performance throughout their grades of college study.
6. Using Arithmatic mean percentages to draw diagrams to show the development of students' performance at each stage.
7. POS Tagging method was used to classify words comprising students' written compositions according to their parts of speech categories. Then students' errors of each category were calculated and their percentages were compared to highlight the most problematic pos and the avoided morphosyntactic elements.

Chapter Four

Analysis of Data and Discussion of Results

4.1 Introductory Note

This chapter provides a detailed description of the results obtained from the statistical analysis of the students' performance in the test constructed by the researcher. The tables, and figures show the general performance of both human and veterinary medicine students and their performance at recognition and production levels. A comparison of the two groups of students is also presented to show the variation in their performance at both levels of the test.

4.2 Analysis of Students' General Performance.

Before going into the details of the students' overall performance, it can be useful first to consider Table (11) below:

Table (11)The mean scores & T-values of subjects' overall performance

Group	No	Mean score	Standard deviation	Theoretical mean	Computed T value	Tabulated T value	Degree of freedom
Human & Veterinary Medicine	200	41.34	10.19	50	12.03	1.96	198

As the table shows, the mean score of the subject is (41.34) while the theoretical mean is (50). The computed T- value is (12.03) while the tabulated T value is (1.96) at degree of freedom 198. And since the mean score is lower than the theoretical one, and the computed T value is higher than the tabulated one, this indicates that the general performance of the subject is significantly weak. This verifies the first adopted hypothesis which states that " Iraqi EFL medical students face serious difficulties in the area of morphosyntactic elements in general."

To have an idea about the developmental performance of the students at both colleges, it can be useful to consider Figure (6) Figure (7). As the figures show, the percentages of errors reduce whenever we move from a lower to a higher stage at both colleges. This means that though the performance of the students is

generally weak, there is a sort of development in their proficiency due to their exposure to the English teaching program at the two colleges.

Figure (6) Percentages of Students' Errors according to their Stages at College of Human Medicine

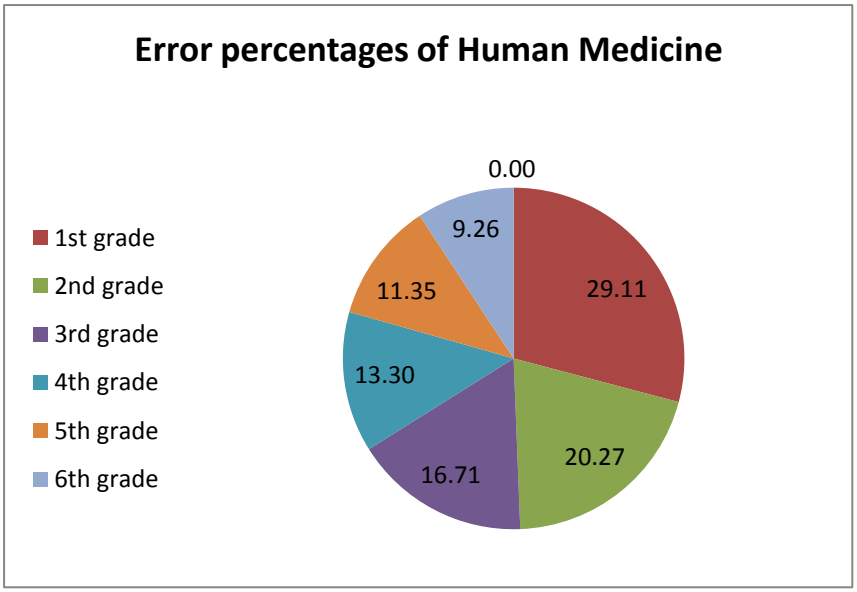
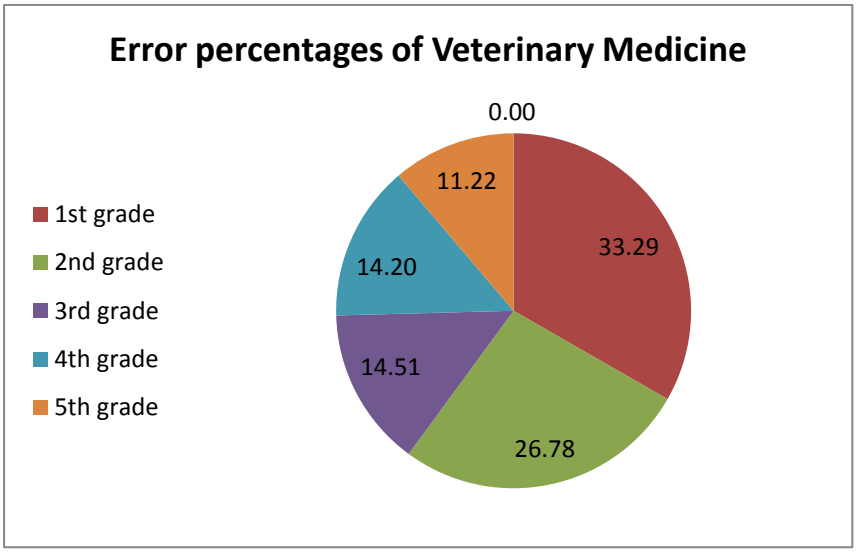


Figure (7) Percentages of Students' Errors according to their Stages at College of Veterinary Medicine.



Based on the results shown in Figures (6) and (7j), it can be concluded that in spite of the observed significant difficulties, there is a kind of development in the performance of medical students at both colleges due to their exposure to EFL teaching program at their colleges. This verifies the seventh adopted hypothesis which states that " In spite of the serious difficulties faced by the students, the EFL program at both colleges contribute to a certain extent to the development of students' performance in the area of morphosyntactic elements."

4.3 Analysis of the Students' Overall Performance at Recognition Level.

Table (12) below shows the overall performance of the subjects at the first part of the test which measures the subjects' recognition of morphosyntactic elements.

Table (12) **The mean scores & T-values of subjects' performance at recognition level.**

Group	No	Mean score	Standard deviation	Theoretical mean	Computed T value	T table	Tabulated T value	Degree of freedom
Human & Veterinary Medicine	200	29.51	9.82	37.5	11.58	1.98	1.98	198

As the table shows, the mean score of the subjects is (29.51) while the theoretical mean score is (37.5). The computed T-value is (11.58) while the tabulated T-value is (1.98) at the degree of freedom (198). Comparing the computed mean score with the theoretical one and the computed T value with the tabulated one, shows that the subjects face statistically significant difficulties at recognition level. This again verifies the second adopted hypothesis which states that "Iraqi EFL medical students face serious difficulties in recognizing morphosyntactic elements."

4.4 Students' Overall Performance at Production Level

Table (13) The mean scores & T-values of subjects' performance at production level.

Group	No	Mean score	Standard deviation	Theoretical mean	Computed T value	T table	Tabulated T value	Degree of freedom
Human & Veterinary Medicine	200	11.85	2.26	12.5	4.06	1.96	1.96	198

As the Table (13) shows, the mean score of the subject is (11.85) while the theoretical mean score is (12.5). The computed T-value is (4.06) while the tabled T-value is (1.96) at the degree of freedom (198). Comparing the computed mean score with the theoretical one and the computed T value with the tabulated one shows that the subjects face statistically significant difficulties at production level. This verifies the third adopted hypothesis which states that "Iraqi EFL medical students face serious difficulties in producing morphosyntactic elements."

4.5 Analysis of Students' Overall Performance according to Morphosyntactic areas.

4.5.1 Analysis of Students' Performance in the Area of Pronouns.

Table(14) Frequencies & Percentages of Students' Errors in the Area of Pronouns.

group	No	**Pronouns**											
		Demonstratives.				**partative**				**Reflexive**			
		Corr answer	%	Wrong	%	corr	%	wrong	%	Corr	%	Wrong	%
Human	100	51	51	**49**	49	50	50	50	**50**	57	57	**43**	43
Vet	100	28	28	**72**	72	30	30	70	**70**	43	43	**66**	66
total	200	79	39.5	**121**	60.5	80	40	120	**60**	100	50	**109**	54.5

As Table (14) shows, the students' performance in the use of reflexive is the best since the percentage of errors (54.5 %) is less than that of the other types of pronouns. Medical students have less problems in using partative pronouns as the percentage of errors is (60%) then comes the demonstratives which have the highest percentage of errors, i.e (60.5%). However, the percentage of errors committed by human medical students is less than that of veterinary students as the table above shows. But, there is a variation in the percentages of errors in using pronouns between the two groups of mdical students. Human medical students have the least difficullties in using reflexive pronouns as they committed (43%) percentage of errors, more difficulties they have in using demonstratives as they committed (49%) of their total errors in using them and the most difficulty they have is in using partative pronouns since they committed (50%) percentage of errors when using them. On the other hand, Veterinary students have the most problems in using demonstratives as their percentage of errors is (72%) then in using partative pronouns (70%), then in reflexive pronouns (66%). This is due to the better qualification of human medical students in general since higher

averages are accepted at Human Medicine College than Veterinary College. The variations in difficulties between human and veterinary medical students in using personal pronouns may be due to the fact that the students are more familiar and more exposed to the use of some kind of pronouns in everyday use of English than others.

4.5.2 Analysis of Students' Performance in the Area of Nominal (infinitive & gerund).

Table (15) Frequencies & Percentages of Students' Errors in the Area of Nominals.

Group	Number	**Nominals**							
		Infinitive				**Gerund**			
		Corr	%	wrong	%	corr	%	wrong	%
Human	100	35	٣٥	**65**	65	22	٢٢	**78**	78
Vet	100	26	٢٦	**74**	74	23	٢٣	**77**	77
Total	200	61	30.5	**139**	69.5	45	22.5	**155**	77.5

Table (15) clearly shows that the students' performance in the use of infinitive is the best since the percentage of this kind of errors (69.5) is less than that of gerund (77.5 %). The percentage of human medical students' errors in general is less than that of veterinary students. Nevertheless, Human medical students have more difficulties in using gerund as their percentage of errors is (78%) while it is (65%) in using infinitive. Veterinary students also face more serious problems in the use of gerund (77 %) than infinitive (74%). The lower performance of the medical students in gerund than in infintive can be due to the fact that medical students are less familiar and less exposed to the use of nominals in general and gerund in specific in everyday use of English.

4.5.3 Analysis of Students' Performance in the Area of Tense and Aspect

Table (16) Frequencies & Percentages of Students' Errors in the Area of Present & Past Simple

Group	**Number of Students**	**Present simple**				**Past simple**			
		correct	**%**	**wrong**	**%**	**correct**	**%**	**wrong**	**%**
Human	**100**	٥٢	**52**	٤٨	**48**	**46**	**46**	٥٤	٥٤
Veterinary	**100**	٤٥	**45**	٥٥	**55**	٤٦	**46**	**54**	**54**
Total	**200**	**97**	**48.5**	**103**	**51.5**	**92**	**46**	**108**	**54**

As Table (16) above shows, medical students face more problems in the use of past tense than in present simple. The percentage of their error in the use of past simple is (54 %) while that of the present simple is (51.5%). Nevertheless, human medical students face less difficulties in using present simple tense (48%) than veterinary students (55%). However, both are equal in having the same difficulties in using past tense as their percentage of errors is (54 %).

Table (17) Frequencies & Percentages of Students' Errors in the Area of Present & Past Perfect

Group	Number of Students	Present perfect				Past perfect			
		Correct	%	Wrong	%	Correct	%	Wrong	%
Human	100	31	31	69	69	25	25	75	75
Veterinary	100	29	29	71	71	24	24	76	76
Total	200	60	30	140	70	49	24.5	151	75.5

Concerning the use of perfect tense, medical students face more problems in using past perfect (75.5%) than in using present perfect (70%). However, veterinary medical students have more problems in the use of the present perfect (71 %) than human medical students (69%) .They face more difficulties even in the use of the past perfect (76%) than the human medical students (75%). The error percentages in the use of the present and past perfect coincide with error analyses' studies previously conducted on Arab EFL learners which shows that these two tenses are among the most problematic grammatical categories due to the unexistence of perfect tenses in Arabic .

Table (18) Frequencies & Percentages of Students' Errors in the Area of Past Future & Using Could have p.p

Group	Number of Students	Could have pp				Future in the past			
		Correct	%	wrong	%	correct	%	wrong	%
Human	100	24	24	76	76	34	34	66	66
Veterinary	100	20	20	80	80	30	30	70	70
Total	200	44	22	156	78	64	32	136	68

Table (18) above shows that the medical students' performance in the use of *could have P.P* is weaker than in the use of *future in the past tense* as the error percentages are (78%) , (68 %) respectively. As expected, human medicine students face less problems in using *could have p.p* tense (76%) than veterinary medical students (80%). They also face less difficulties in using *future in the past* (66%) than veterinary students (70%).This could be due to the less exposure of medical students to such tenses in using English than the other least used tenses.

Table (19) Frequencies & Percentages of Students' Errors in the Area of Perfect & Continuous Future

Group	Number of Students	Future Perfect				Future Continuous			
		correct	%	wrong	%	correct	%	wrong	%
Human	100	23	23	77	77	33	33	67	67
Veterinary	100	26	26	74	74	29	29	71	71
Total	200	49	24.5	151	75.5	62	31	138	69

As of the use of future perfect, it is more problematic for medical students (75.5%) than future continuous (69%). Human medical students face more problems in the use of future perfect (77%) than veterinary students (74%), but human medicine face less problems in the use of future continuous (67%) than veterinary medical students (71%).

4.5.4 Analysis of students' performance in the area of passive voice

Table (٢٠) Frequencies & Percentages of Students' Errors in the Area of Passive Voice

Group	Number of Students	Correct Answers	%	Wrong Answers	%
Human	100	38	38	62	62
Veterinary	100	26	26	74	74
Total	200	64	32	136	68

As Table (٢٠) above shows medical students in both groups face problems in using passive voice since their total error percentage is (68%). The human medical students have less problems (62%) in using passive voice than Veterinary

students (74%). This could be attributed to the human medical students' better background in using scientific register of English in which passive voice is highly used than veterinary students though both group of students are supposed to be exposed to scientific register.

4.5.5 Analysis of students'performance in the area of Modality

(could, needn't, might, mustn't)

Table (٢١) Frequencies & Percentages of Students' Errors in the Area of Modality

group No	Modals															
	Could				Need'nt				Might				Mustn't			
	Corr	%	Wrong	%	corr	%	wrong	%	Corr	%	Wrong	%	Corr	%	Wrong	%
Human 100	47	47	53	53	63	63	37	37	67	67	33	33	62	62	38	38
Vet 100	52	52	48	48	48	48	52	52	51	51	49	49	58	58	42	42
total 200	99	48.5	101	50.5	111	55.5	89	44.5	118	59	82	41	120	60	80	40

Table (2١) indicates clearly that medical students face less problems in using modals: **could, need'nt, might, musn't** than other morphosyntactic elements 50.5%, 44.5%, 41% and 40% respectively. They specifically have less problems in the use of **mustn't** (40%) then in **might** (41%) ,**needn't** (44.5%) and the greatest problem is in using **could** (50.5%). However, human medicine students have less problems in using **might** (33%), then in using **needn't** (37%) then **musn't** (38%), while with veterinary students the percentages are (52%), (48%) and (42%) respectively. However, human medicine students face more problems in the use of **could** (53%) than veterinary students (48%).

4.5.6 Analysis of students' performance in the area of morphology.

Table(2٢) Frequencies & Percentages of Students' Errors in the Area of Morphology

Group	Number of Students	Correct Answers	%	Wrong Answers	%
Human	100	32	32	68	68
Veterinary	100	30	30	70	70
Total	200	62	31	138	46

As for the students' errors in using morphological elements, Table (٢٤) above shows that the error percentage for both groups is (46%); and that veterinary medical students face more problems (70%) than human medical students (68%). Since medical register is mainly based on morphological terminologies, it is highly recommended to pay more attention to teaching morphology from the first level upward at the medical college study.

4.5.7 Analysis of students' performance in the area of Superlative Adjective & Adverb

Table (٢٣) Frequencies & Percentages of Students' Errors in the Area of Superlative Adjective & Adverb

Group	Number Of Students	Superlative Adjective				Adverb			
		Correct Answers	%	Wrong Answers	%	Correct Answers	%	Wrong Answers	%
Human	100	64	64	36	36	71	71	29	29
Veterinary	100	52	52	48	48	55	55	45	45
Total	200	116	58	84	42	126	63	74	22.5

In using superlative adjective and adverb, medical students' error percentages show the least problematic uses, (42%) and (22.5%) in comparison with other morphosyntactic elements. In spite of that, veterinary medical students face more problems in using superlative adjective (48%) and adverb (45%) than human medical students in using both superlative adjective (36%) and adverb (29%) .In addition, medical students of both groups have better performance in using adverb than in using superlative adjective. This could be justified as using adverb are easier for Arab learners in general than using adjective which totally differs in its order of occurence since it comes before the noun it modifies while in Arabic it comes after the noun it modifies which causes some problem to Arab learners of English.

4.5.8 Analysis of Students' Performance in the Area of Negation & Relativization

In general, Negation and Relativization are among the most problematic uses of morphosyntactic elements for medical students. The error percentages are (57.5%) for negation and (71%) for relativization for both groups of students. Relatization seems to be more problematic for medical students. However, there's a variation at the level of difficulties in the uses of both of these categories of morphosyntactic elements by medical students. While human medical students face more problems in using negation (61%) than veterinary medical students (54%), they have a little bit problems in using relativization (70%) than veterinary students (72%). See Table (24) Below.

Table (٢٤) Frequencies & Percentages of Students' Errors in the Area of Negation & Relativization

Group	Number of Students	Negation				Relativization			
		Correct Answers	%	Wrong Answers	%	Correct Answers	%	Wrong Answers	%
Human	100	39	39	61	61	30	30	70	70
Veterinary	100	46	46	54	54	28	28	72	72
Total	200	85	42.5	115	57.5	58	29	142	71

4.5.9 Analysis of students' performance in the area of Complementation, Discourse Organization & word order)

Table (٢٥) Frequencies & Percentages of Students' Errors in the Area of Complementation & Discourse Organization (word order)

Group	Number of Students	Complementation				Discourse Organization			
		Correct Answers	%	Wrong Answers	%	Correct Answers	%	Wrong Answers	%
Human	100	43	43	57	57	25	25	75	75
Veterinary	100	35	35	65	65	16	16	84	84
Total	200	78	39	122	61	61	30.5	159	79.5

Table (2٥) above shows that medical students' performance in the use of Complementation and word organization are weak as the error percentages are (61%) and (79.5%) respectively. As expected, human medicine students face less problems in the area of complementation (57 %) and word organization (75%) than veterinary medical students (65%) and (84%) respectively.

4.6 A Comparison between the Performance of Human Medicine and Veterinary Students.

4.6.1 Analysis of the Students' Overall Performance

Table (2٦) Mean Scores & T Values of Students' Overall Performance in the Tests.

Group	Number of Students	Mean Score	Theoretical Mean	SD	Computed T Value	Tabulated T Value
Hum	100	45.01	50	9.096	4.632	1.96
Veterinary	100	38.86	50	9.671		

As Table (2٦) shows, the performance of human medicine students is better than that of veterinary students. This becomes clear by comparing the mean score and SD of human medicine students which are (45.01) & (9.096) respectively with those of veterinary students' which are (38.86) & (9.671). Since the computed T value (4.632) is higher than the tabulated one (1.96), therefore there is a statistically significant difference between the two groups of medical students in favor of human medical students . Accordingly, the obtained results verify the fourth adopted hypothesis which states that "Iraqi EFL human medical students perform better than veterinary students in the area of morphosyntactic elements in general." The higher performance of medicine students can be due to the higher IQ of the students since the college of medicine in Iraq receives students who get the highest score at preparatory school.

4.6.2 A Comparison between the Performance of Human Medicine and Veterinary Students at Recognition level.

Table (2٧) Mean Scores & T values of Students' Performance at Recognition Level

Group	Number of Students	Mean Score	Theoretical Mean	SD	Computed T value	Tabulated Value
Hum	100	32.25	37.5	8.979	3.331	1.96
Vet	100	27.92	37.5	9.399		

As Table (2٧) shows, the performance of medicine students is higher than that of veterinary students in terms of recognition test. This is clear by comparing the mean score of medicine students and SD which are (32.25) & (8.979) respectively with that of veterinary students which are (27.92) & (9.399). Since the computed T value (3.331) is more than the tabulated one (1.96), therefore there is a statistically significant difference between the two groups in favor of medical students. Thus the fifth adopted hypothesis which states that "Iraqi EFL human medical students perform better than veterinary students in recognizing morphosyntactic elements" is veified. The higher performance of medicine students can be due to the higher IQ of the students and their better English backgrounds since the College of Medicine in Iraq receives students who get the highest scores at preparatory school.

4.6.3 A comparison between the performance of Human Medicine and Veterinary Students at Production level.

Table (2٨) Mean Scores & T Values of Students' Performance at Production Level

Group	Number of Students	Mean Score	Theoretical Mean	SD	Computed T Value	Tabulated T Value
Hum	100	12.76	12.5	2.310	4.733	1.96
Vet	100	10.94	12.5	3.074		

As Table (2٨) shows, the performance of human medical students is higher than that of veterinary students. Comparing the mean score of human medical students and SD which are (12.76) & (2.310) respectively with those of veterinary students which are (10.94) & (3.074), shows that human medicine students' performance is better than that of veterinary students. Since the computed value (4.733) is more than the tabulated value (1.96), therefore there is a statistically significant difference between the two groups in favor of human medical students. Accordingly, the sixth adopted hypothesis which states that "Iraqi EFL human medical students perform better than veterinary students in producing morphosyntactic elements" is verified. The higher performance of human medicine students can be due to the higher IQ of the students since the college of Human medicine in Iraq receives students who get the highest score at preparatory school.

4.6.4 A Comparison between the Performance of Human & Veterinary Students in the Area of Morphosyntactic Elements

The statistical analysis of the results shows a difference at the level of difficulties facing human medicine and veterinary students in the area of morphosyntactic elements. The level of difficulty differs even within the same group from one morphosyntactic element to another. Table (29) below shows the percentages of human and veterinary students' errors in the area of morphosyntactic elements as arranged from the highest to the lowest.

Table (2٩) Frequency and Percentages of Human and Veterinary Errors in the Area of Morphosyntactic Elements.

seq	% Human Med errors	Morphosyntactic Elements / Human med errors	Morphosyntactic Elements /vet errors	% Vet errors
1	78%	gerund	Discourse org & word order	84 %
2	76.36 %	future perfect	could have p.p	79.23 %
3	75.56 %	could have p.p	gerund	76.61 %

4	**75 %**	**Past perfect**	**Past perfect**	**76 %**
5	**75 %**	**Discourse org &word order**	**passive voice**	**74 %**
6	**70.14 %**	**reletivization**	**infinitive**	**73.41 %**
7	**69 %**	**present Perfect**	**future perfect**	**73.3 %**
8	**68 %**	**word morphology**	**demonstrative**	**72 %**
9	**67 %**	**future continuous**	**present Perfect**	**71.17 %**
10	**66 %**	**future in the past**	**Relativization**	**70.72 %**
11	**65 %**	**infinitive**	**word morphology**	**70 %**
12	**62 %**	**passive voice**	**Partative pronouns**	**70 %**
13	**61 %**	**Negation**	**future in the past**	**69.43 %**
14	**56.3 %**	**Complementation**	**future continuous**	**69.41 %**
15	**54 %**	**Past Simple**	**reflexive**	**64.92 %**
16	**53 %**	**could**	**Complementation**	**63.8 %**
17	**50 %**	**Partative pronouns**	**present simple**	**55 %**
18	**49 %**	**demonstrative**	**Negation**	**54 %**
19	**48 %**	**present simple**	**Past Simple**	**54 %**
20	**43 %**	**reflexive**	**needn't**	**52 %**
21	**38 %**	**musn't**	**might**	**49 %**
22	**37 %**	**needn't**	**superlative adj**	**48 %**
23	**36 %**	**superlative adjective**	**could**	**48 %**
24	**33 %**	**might**	**Adverb**	**45 %**
25	**29 %**	**Adverb**	**musn't**	**42 %**

4.6.5 A Comparison in the Development of Using Morphosyntactic Elements in Human Medical students and Veterinary Students.

Before discussing in details the development of using morphosyntactic elements in the medical students' performance of both human medical students and veterinary students, it is somehow useful to sort the morphosyntactic elements according to their percentage of errors as the less developed elements and the more developed ones. These percentages are obtained by following the increase or decrease in the percentage of students'errors from the 1st stage of college study to the last stage. See tables (٣٠ a & b) and (3١ a & b) below:

Table (٣٠a) The Less developed morphosyntactic elements by human medical students

Human medicine	%1st stage	%6th grade	%of development
complementation	51.85	51.66	0.19
future in the past	70.37	70	0.37
future continuous	70.37	70	0.37
could have +pp	77.78	76.4	1.38
gerund	81.48	80	1.48
past perfect	81.48	80	1.48
relativization	66.67	65	1.67
partative pronouns	51.85	50	1.85
future perfect	77.78	75	2.78

Table (٣٠b)The Less developed morphosyntactic elements by Veterinary medical students

Vet medicine	% 1st stage	% 5th grade	% of development
infinitive	74.19	74.17	0.02
complementation	64.52	64.5	0.02
reflexive pronoun	67.74	67.7	0.04
musn't	54.84	54.55	0.29
future perfect	74.19	73.6	0.59
gerund	80.65	80	0.65
relativization	77.42	76.66	0.76
future in the past	70.97	70	0.97
present perfect	70.97	69.9	1.07
future continuous	70.97	69.88	1.09
could have p.p	80.65	79	1.65
word order & Discourse organization	83.87	81.82	2.05

Table (3١a) The More developed morphosyntactic elements by Human medical students

Human medicine	% 1st stage	%6th grade	% of development
past simple	70.37	40	30.37
could	62.96	40	22.96
present simple	59.26	40	19.26
word Morphology	77.78	60	17.78
passive voice	66.67	50	16.67
Negation	66.67	50	16.67
Demonstrative pronoun	55.56	40	15.56

needn't	44.44	30	14.44
Adverb	33.33	20	13.33
Word order and discourse organization	81.48	70	11.48
Superlative adjective	40.74	30	10.74
musn't	40.74	30	10.74
present perfect	70.37	60	10.37
might	37.04	30	7.04
infinitive	66.67	60	6.67
reflexive	44.44	40	4.44

Table (31b) The More developed morphosyntactic elements by Veterinary medical students

Vet Medicine	**% 1st stage**	**% 5th grade**	**% of development**
Adverb	58.06	36.36	21.7
Negation	64.52	45.45	19.07
could	61.29	45.45	15.84
present simple	61.29	45.45	15.84
Demonstrative pronoun	77.42	63.64	13.78
needn't	64.52	54.55	9.97
might	54.84	45.45	9.39
Partative pronoun	70.97	63.64	7.33
past simple	61.29	54.55	6.74
passive voice	77.42	72.73	4.69
past perfect	77.42	72.73	4.69
Word Morphology	77.42	72.73	4.69
superlative adjective	54.84	54.55	0.29

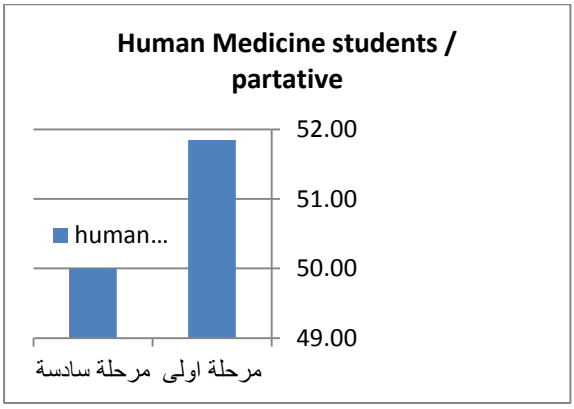
4.6.5.1 A Comparison in the Development of Using Pronouns

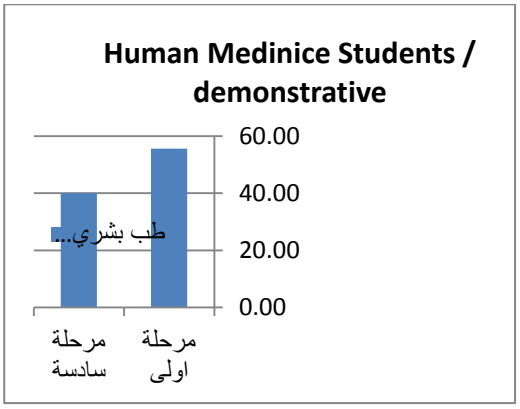
As stated earlier, human medical students have less difficulties in using pronouns than veterinary students. Moreover, when tracing the percentage of human medical students' errors committed at the 1st grade with the one committed at the last 6th grade, it shows that there is some kind of development in their performance. The percentage of errors of using demonstratives in the 1st grade of human medical students decreases from (55.56%) to (40.00%) in the final grade, (51.85%) to (50%) in using partative pronoun and from (44.44%) to (40%) in using reflexive pronoun. This shows that inspite of the high rates of errors , there are still some kinds of developments in the human medical students' learning

which still needs to be emphasized and supported by revising and enhancing the current syllabus of teaching English to medical students.

On the other hand, veterinary students show less improvement in using pronouns: demonstratives' percentage of errors in the 1st grade (77.42%) reduced to only (63.64%) in the 5th last grade. The error percentages of veterinary students in using partative pronouns were reduced from (70.97) in the 1st grade to (63.64%) in the 5th last grade and the error percentages in using reflexives were very little reduced from (67.74%) in the 1st grade to (67.70%) in the 5th last grade which hence shown to be rather a fossilized error. See Figures (8) & (9) below:

Figure (8) Percentage of improvement of Human medical students' Performance in the use of pronouns





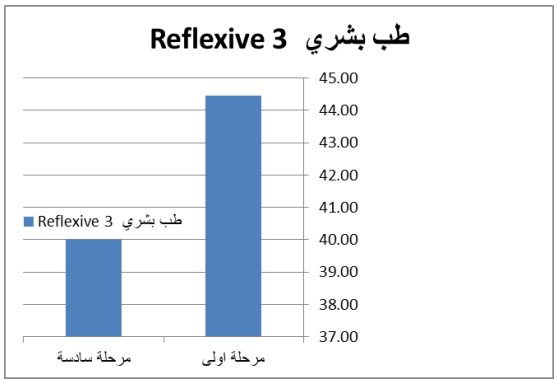
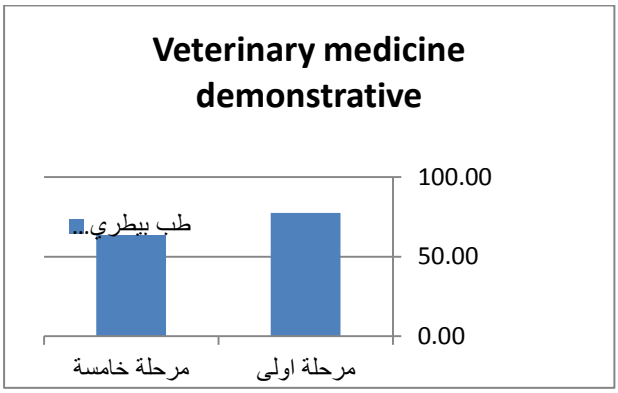
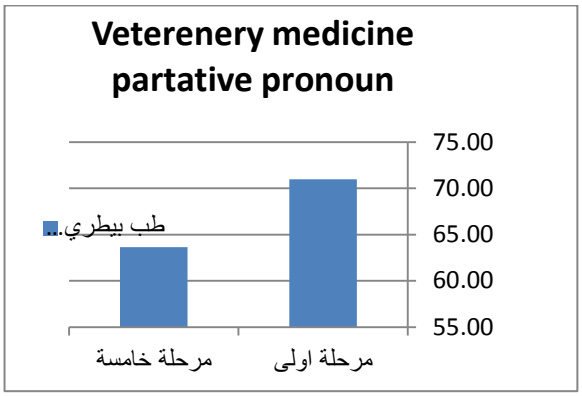
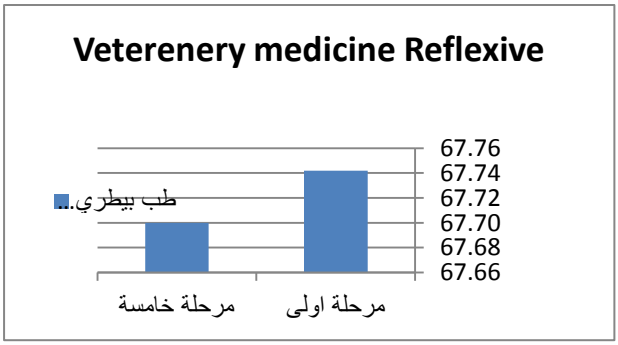


Figure (9) Percentage of improvement of Veterinary students' Performance in the use of pronouns







4.6.5.2 A Comparison in the Development of using Nominals: Infinitive & Gerund

As the discussed previously, Human medical students have less problems in using nominal than veterinary students. However, human medical students are shown to have more difficulties in using gerund (78%) than infinitive (65%), than veterinary students (76.61%) and even than all other morphosyntactic elements. Therefore, nominals are the most problematic morphosyntactic element for human medical students. Meanwhile, veterinary students face more difficulties in using infinitive (73.41%) than human medicine students. Comparing the percentage of errors between the first and last grades of medical students' shows that human medical students have more development in using infinitive than gerund. This is clearly indicated in the reduction of human medical students' errors percentage in the use of infinitive from (66.67%) in the 1st grade to (60%) in the last 6th grade while from (81.48%) in the 1st grade to only (80%) in the last 6th grade in the use of gerund. However, veterinary students' percentage of errors shows less improvement in using infinitive (1st grade (74.19%) reduced to only (74.17%) in

the last 5th grade) than gerund (1st grade (80.65%) reduced to (80%) in the last 5th grade). See Figures (10) & (11) below:

Figure (10) Percentage of improvement of Human & Veterinary medical students' Performance in the area of Infinitive

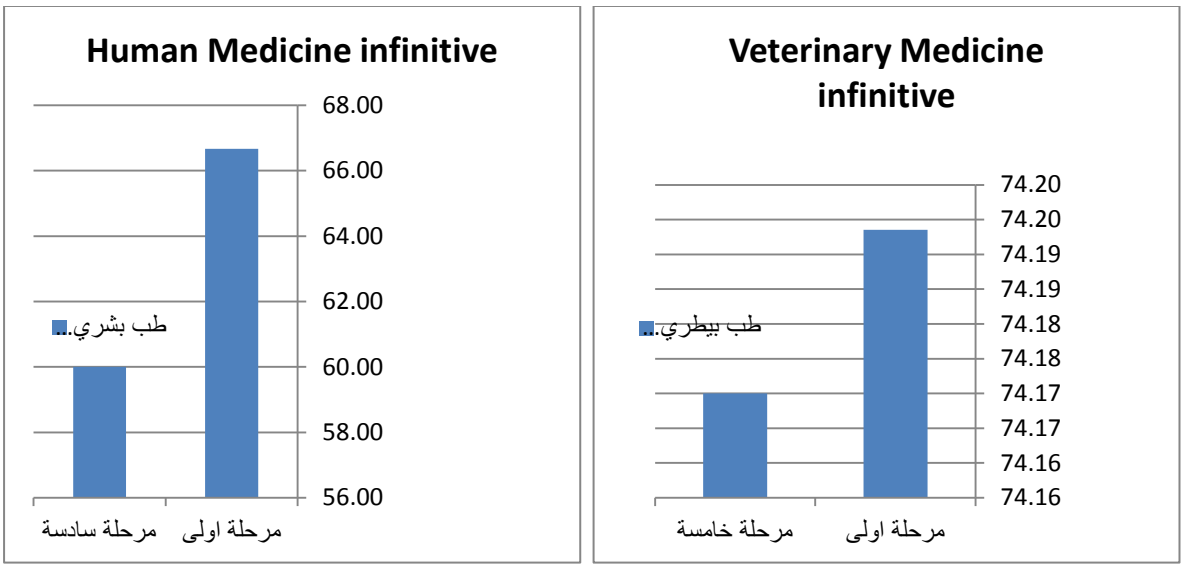
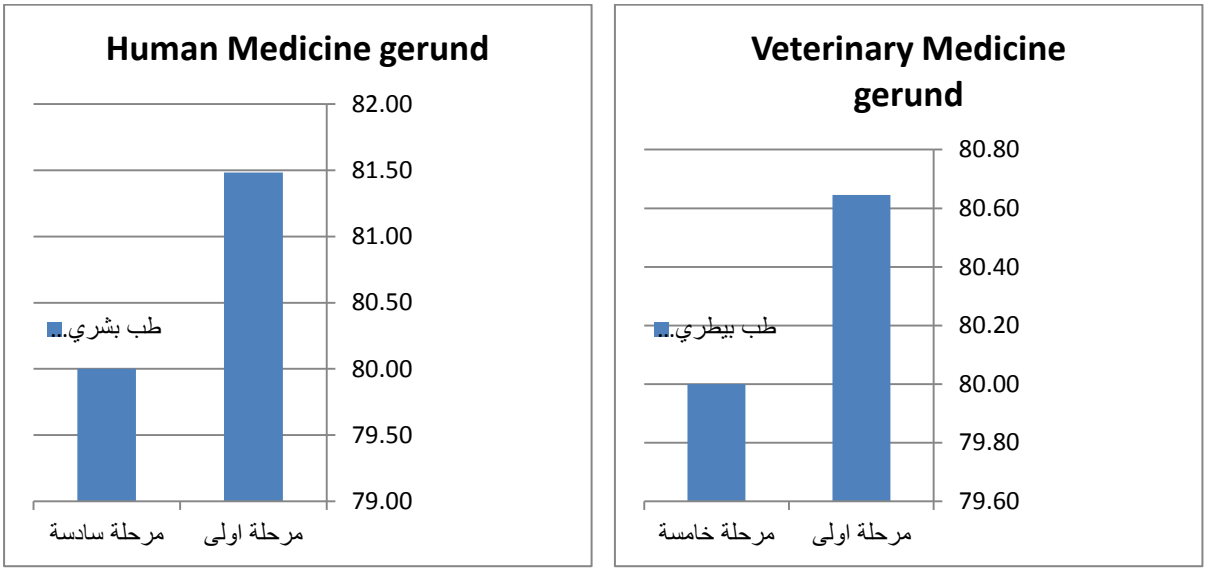


Figure (11) Percentage of improvement of Human & Veterinary medical students' Performance in the area of Gerund



4.6.5.3 A Comparison in the Development of Using Tense and Aspect: present Simple & Past Simple.

Though, human medical students' total percentage of errors in using present simple tense is (48%) which obviously highlights their weak performance, it is better than their performance in using past simple tense (54%). However, human medical performance shows improvement throughout their college study levels as 1st grade students' error percentage in using present simple decreased from (59.26%) to (40%) in 6th last grade. Clearer improvement appears in using past simple tense by human medical students whose performance developed to have less error percentage in 6th grade (40%) than in 1st grade (70.37%).

Meanwhile, veterinary medicine students have a bit more problems in using present simple as their total errors percentage is (55%) which is more than past simple total percentage of errors (54%). Moreover, veterinary medical students' performance in using present simple tense improved more than using past simple tense. Veterinary students' error percentage at first grade in using present simple tense was reduced from (61.29) to (45.45%) in the 5th last grade while in using past simple, their percentage of errors was reduced from (61.29%) to (54.55%) in the last fifth grade. See Figures (12) & (13) below:

Figure (12) Percentage of improvement of Human & Veterinary medical students' Performance in the area of present & past simple tenses

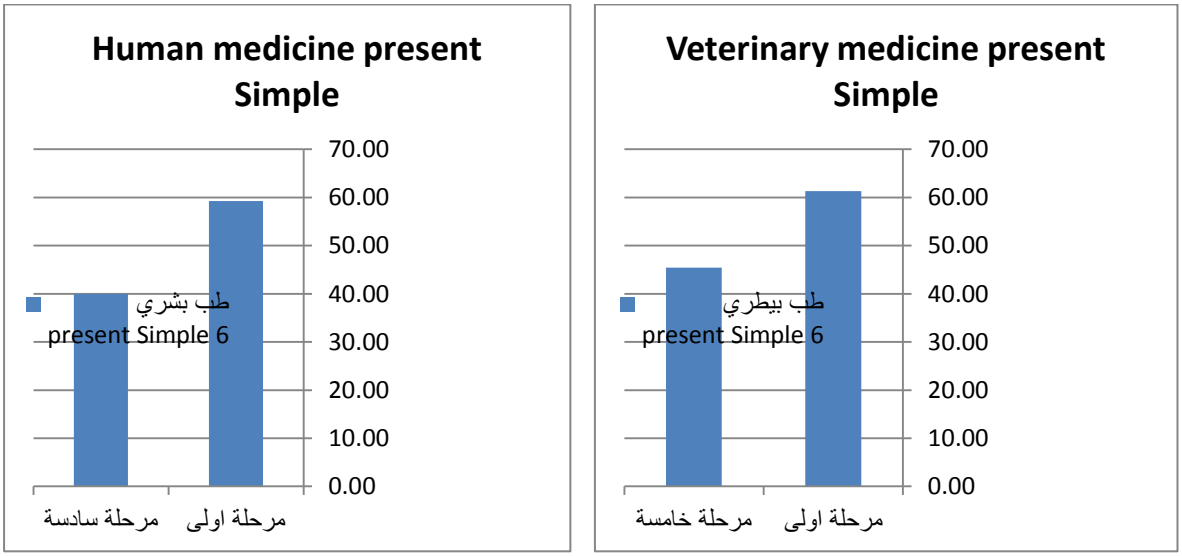
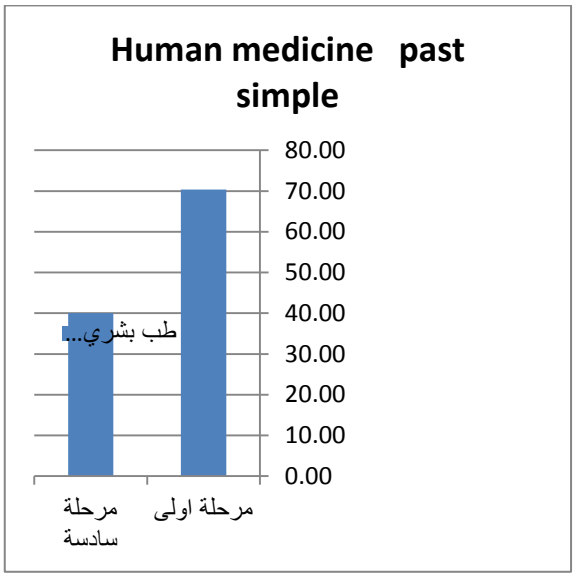
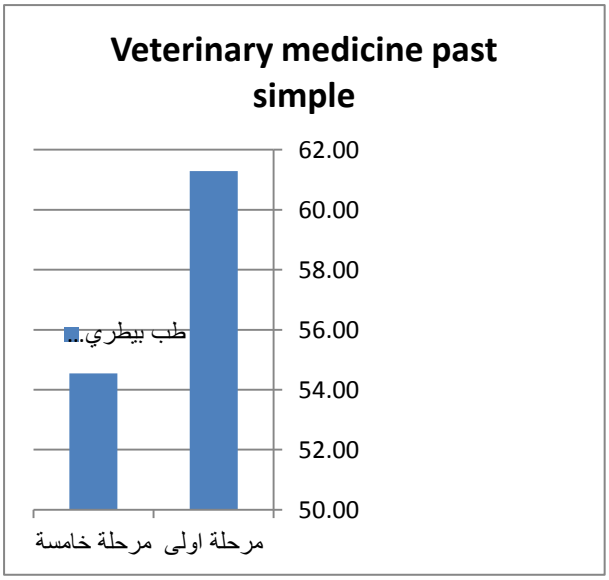


Figure (13) Percentage of improvement of Human & Veterinary medical students' Performance in the area of present & past simple tenses:



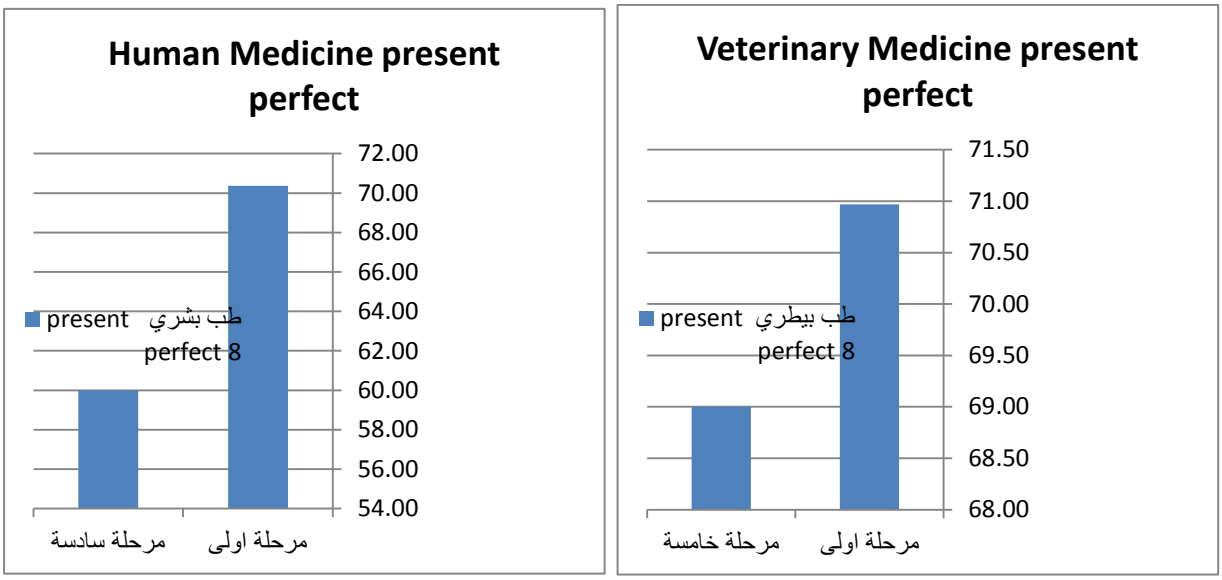


4.6.5.4 A Comparison in the Development of Using Present Perfect & Past perfect Tenses

As for perfect tense, both groups of medical students appear to have approximate error percentages. Human medical students' total percentage of errors in using present perfect is (69%) while that of veterinary students is (71.17%). However, human medical students' use of present perfect improved and more developed in comparison with veterinary students. The percentage of 1st grade human medical students' errors (70.37%) reduced to (60%) in the 6th last grade, but the percentage of errors of 1st grade veterinary students (70.97%)

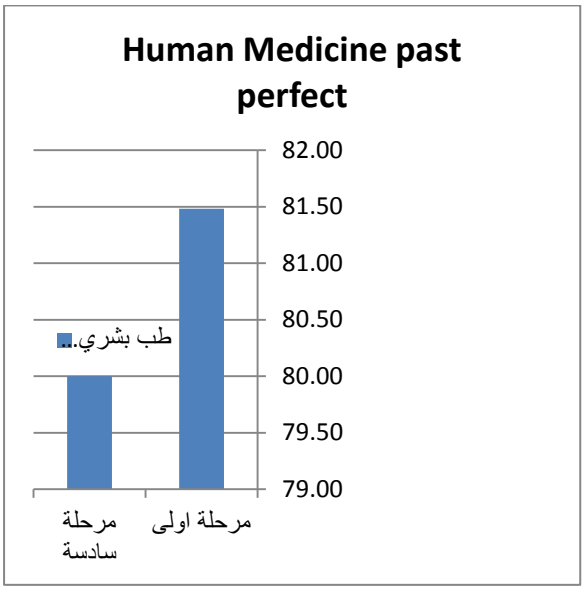
reduced to only (69.90%) in the 5th last grade which shows little improvement in their performance. See Figure (14) below:

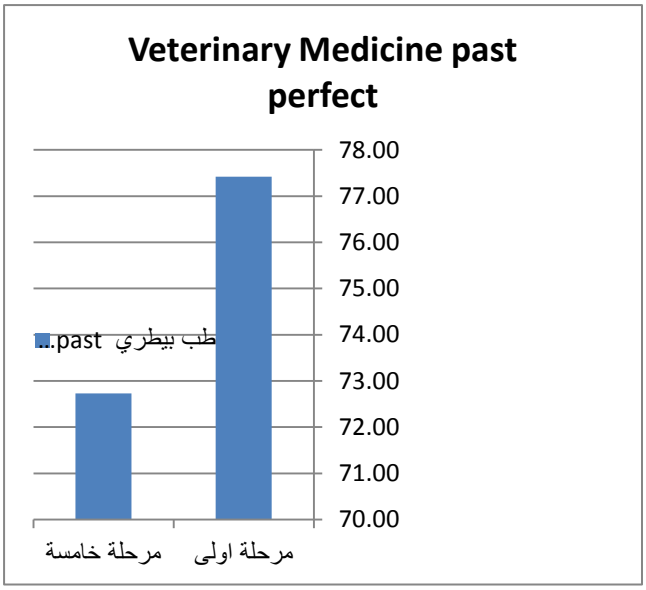
Figure (14) Percentage of improvement of Human & Veterinary medical students' Performance in the area of present perfect tense:



Regarding past perfect, human medical students appear to face less difficulties (75%) than veterinary students (76%). However, human medical students' improvement in the use of past perfect tense is less than veterinary students. The percentage of errors (81.48%) of 1st grade human medicine students reduced only to (80%) in the 6th last grade. Meanwhile, the percentage of errors of 1st grade veterinary students in the use of past perfect(77.42%) reduced to (72.73%) in the 5th last grade. See Figure (15) below:

Figure (15) Percentage of improvement of Human & Veterinary medical students' Performance/ present & past simple tenses:

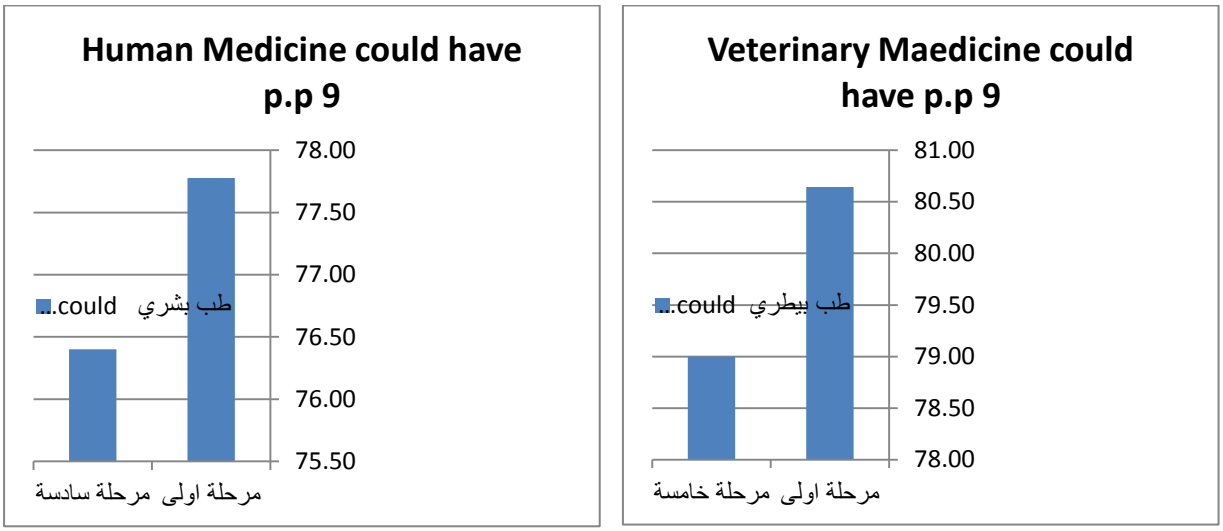




4.6.5.5 A Comparison in the development of using "*could have pp*"

It can be noticed that both groups of human and veterinary medical students not only face difficulties in the use of *could have pp*, but also commit fossilized errors since there's no clear improvement in their use of this morphosyntactic elements**.** First grade human medicine students' percentage of errors (77.78%) reduced only to (76.40%) in the 6th last grade. Meanwhile, the 1st grade veterinary students' percentage of errors in the use of *could have p.p* (80.65%) reduced to (79%) in the 5th last grade. See Figure (16) below:

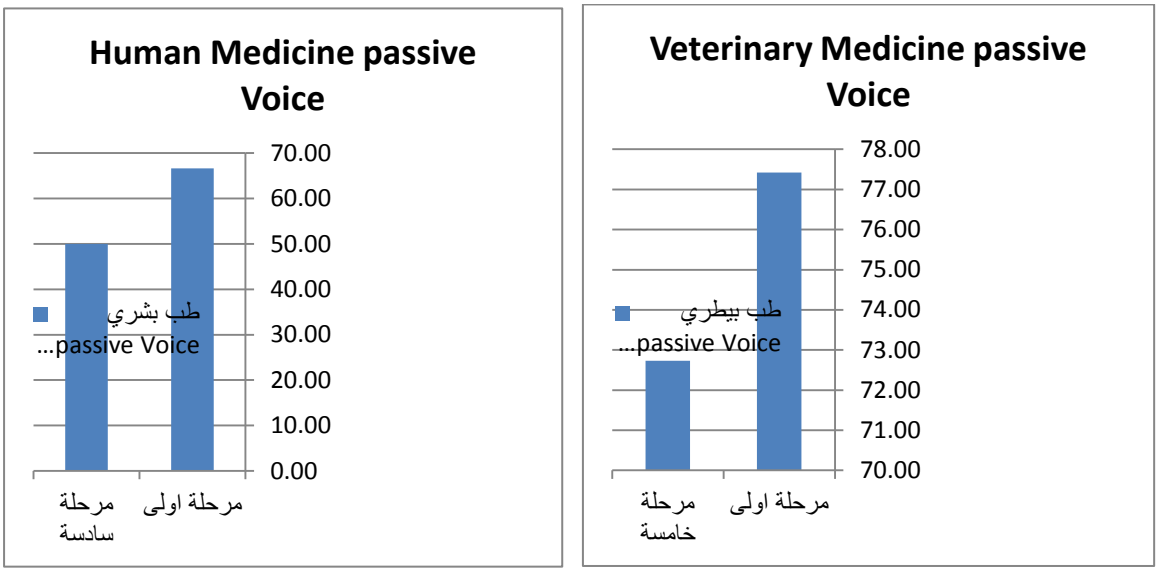
Figure (16) Percentage of improvement of Human & Veterinary medical students' Performance in Using could have pp



4.6.5.6 A Comparison in the development of using passive voice

As for medical students' use of passive voice, their percentages of errors show that they have problems in using passive voice. The total percentage of human medical students' errors in the use of passive voice is (62%) and that of veterinary students is (74%). In addition, human medical students' performance in using passive voice improved as the percentage of their errors in the 1st grade (66.67%) reduced to (50%) in the 6th last grade. The same thing is true for veterinary students whose percentage of errors reduced from (77.42%) in the 1st grade to (72.73%) in the 5th last grade of college study. See Figure (17) below:

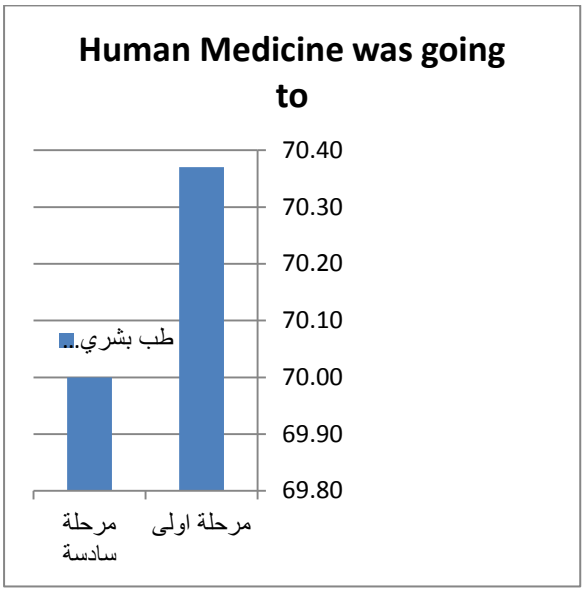
Figure (17) Percentage of improvement of Human & Veterinary medical students' Performance in the area of Passive Voice

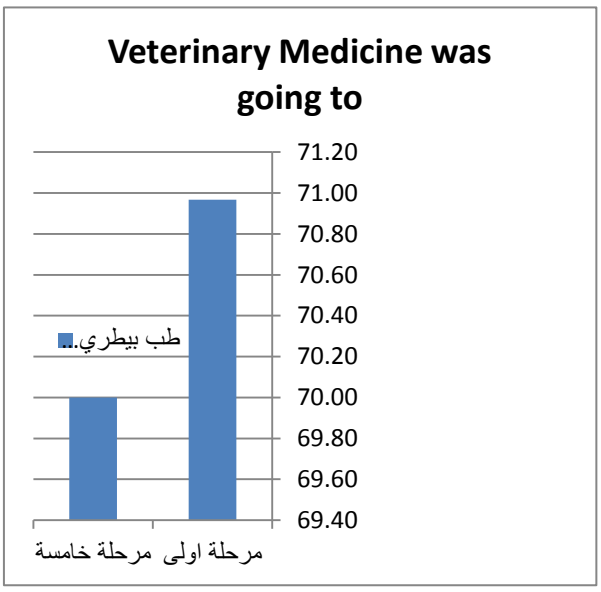


4.6.5.7 A Comparison in the development of using Future in the past (was going to)

Human medical students' total percentage of errors in using Future in the past (**was going to**) (66%) is less than that of veterinary students (70%). This shows that they face less difficulties in using this tense. Moreover, both groups show to have difficulties in using this tense throughout their college levels. Human medical students didn't develop their performance in using (**was going to)** as their percentage of errors in the 1st grade (70.37%) reduced to only (70%). The same thing is true for veterinary students whose percentage of errors in the 1st grade (70.97%) didn't develope much ,but almost kept the same percentage (70%). Therefore, medical students' errors in the use of future in the past is regarded as a fossilized error. See Figure (18) below:

Figure (18) Percentage of improvement of Human & Veterinary medical students' Performance in using was going to



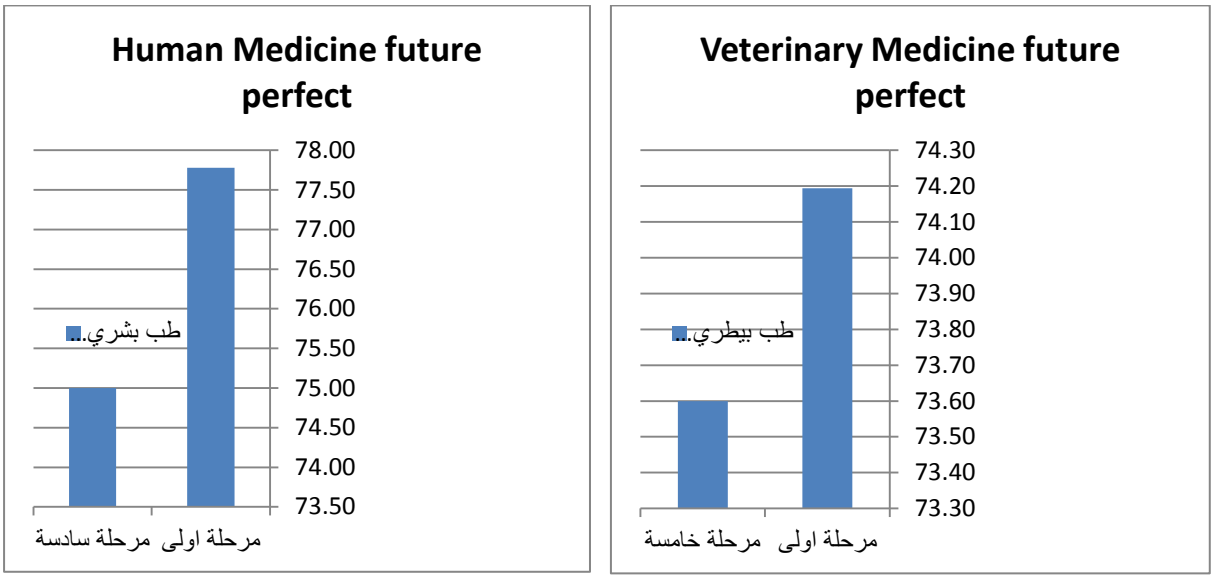


4.6.5.8 A Comparison in the development of using future perfect

Human medical students show to have more problems in using future perfect tense than veterinary medical students. This is clear by comparing both groups' total error percentages. Human medical students' total percentage of errors is (77%) while that of veterinary students is (74%). The development in human medical students' perfomance regarding the use of the future perfect is rather weak and fluctuated through their levels of college study. Their percentage of errors (77.78%) in the 1st grade increased to 80% in the 2nd grade then decreased to (70.59%) in the 3rd grade, then to (71.43%) in the 4th grade then increased to (83.33%) in the 5th grade and finally decreased to (75%) in the 6th grade. This shows that their errors are fossilized and need more emphasis in teaching than other morphosyntactic elements.

Similarly, Veterinary medical students show almost the same fluctuation in the percentage of errors throughout their college grades. Their percentage of errors in the 1st grade (74.19%) decreased to (70.37%) in the 2nd grade ,then increased to (73.33%) in the 3rd grade ,then (75%) in the 4th grade, but finally decreased to (73.60%) in the 5th last grade. Therefore, future perfect is shown to be among the most difficult morphosyntactic elements that need to be reinforced during teaching process and syllabus writing of medical colleges' English course. See Figure (19):

Figure (19) Percentage of improvement of Human & Veterinary medical students' Performance in the area of future perfect

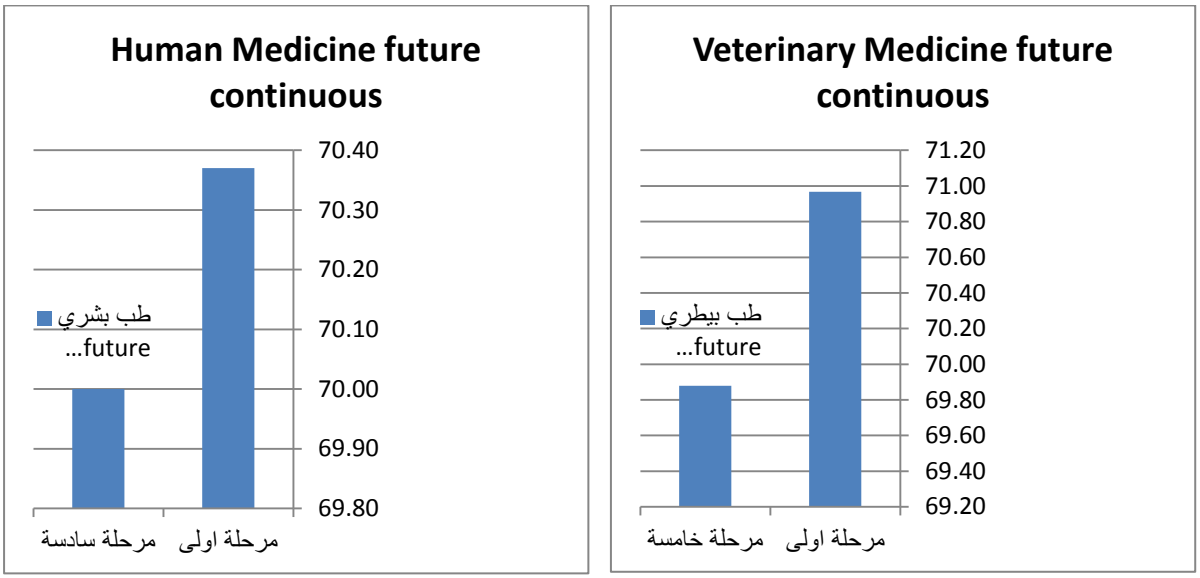


4.6.5.9 A Comparison in the development of using Future Continuous

Percentage of Medical students' errors in the use of future continuous reveals that they have difficulties in using the future continuous tense. Comparing human medical students' total percentage of errors (67%) with that of veterinary students (69.88%) reveals that human medical students have less difficulties in using future continuous than veterinary students. However, the development in human medical students' performance in using future continuous is weak as their percentage of errors (70.37%) in the 1st grade decreased to only (70%) in the 6th grade. This shows that their errors are fossilized and need more emphasis in teaching than other improved morphosyntactic elements.

Similarly, veterinary medical students show almost the same fluctuation in the percentage of errors throughout their college study levels. Their percentage of errors in the 1st grade (70.97%) decreased to (69.88%) in the 5th last grade. Therefore, future continuous is shown to be among the most difficult morphosyntactic elements that need to be reinforced during teaching process and syllabus writing at medical colleges. See Figure (20) below:

Figure (20) Percentage of improvement of Human & Veterinary medical students' Performance in the area of future Continuous



4.6.5.10 A Comparison in the development of using Modals: could, needn't, might, & musn't

Medical students show to have the least problems in using modals than other kinds of morphosyntactic elements. Nevertheless, the percentage of their errors in using the modals: could, needn't, might, & musn't vary from one modal to another. Human medical students have the least problem in using **might** (33%), then **needn't** (37%) then **musn't** (38%) then **could** (53%). Moreover, there is a development in human medical students' performance in using these modals throughout the 6th levels of college study. The percentage of errors in using **might** in the 1st grade (37.04%) reduced to (30%) in the last 6th grade. The percentage of errors in using **needn't** in the 1st grade (44.44%) reduced to (30%) in the last 6th grade. The percentage of errors in using **musn't** in the 1st grade (40.74%) reduced to (30%) in the last 6th grade; and the percentage of errors in using **could** in the 1st grade (62.96%) reduced to (40%) in the last 6th grade. Hence, human medical students' performance developed in using *could* then *needn't* then *musn't* and the least development is in using *might.*

Likewise, veterinary medical students face less difficulties in using models than other kinds of morphosyntactic elements. However, there are some kinds of variations in the percentages of errors which veterinary students commit when using the models: could, needn't, might and musn't. They actually have the

least problem in using **musn't** (42%) then **could** (48%) then **might** (49%) then **needn't** (52%). Regarding the development in veterinary medical students' performance in using these modals throughout the six levels of college study, there is less development in their uses of these modals than in human medical students. The percentage of errors in using **musn't** in the 1st grade (54.84%) reduced to only (54.55%) in the last 6th grade. The development in using **could** is better than **mustn't** as the percentage of errors in the 1st grade (61.29%) reduced to (45.45%) in the last 6th grade .Also the percentage of errors in using **might** in the 1st grade (54.84%) reduced to (45.45%) in the last 6th grade. The percentage of errors in using **needn't** in the 1st grade (64.52%) reduced to (54.55%) in the last 6th grade.Therefore, while there is almost not much development in using **mustn't**, there is some development in using **could, might and needn't** . See Figures (21),(22,(23) & (24) below:

Figure (21) Percentage of improvement of Human & Veterinary medical students' Performance in using *could*

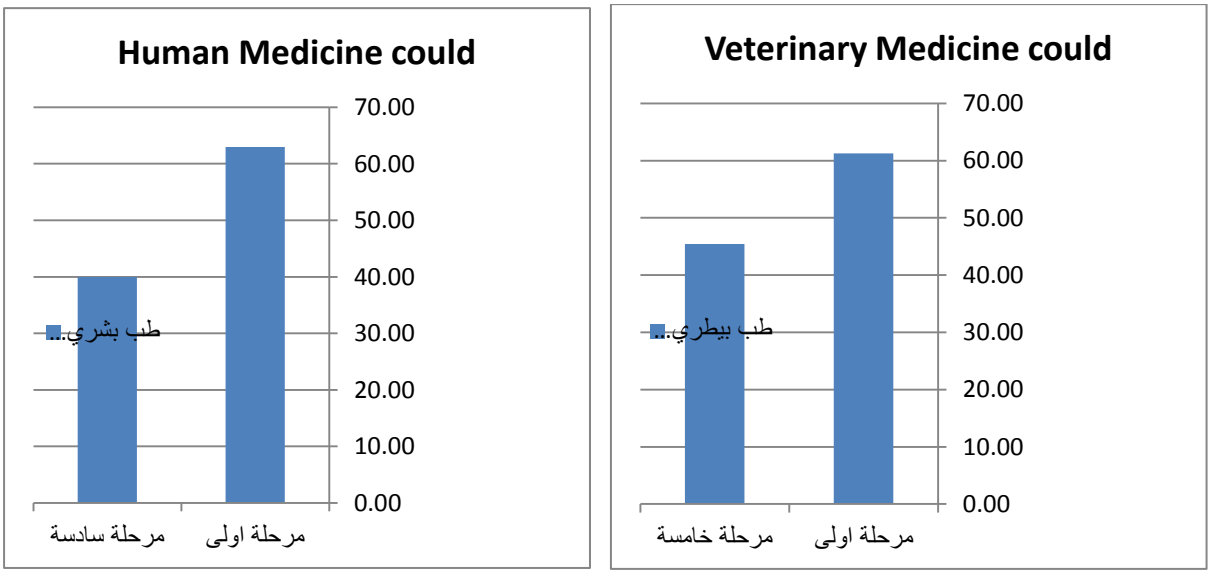
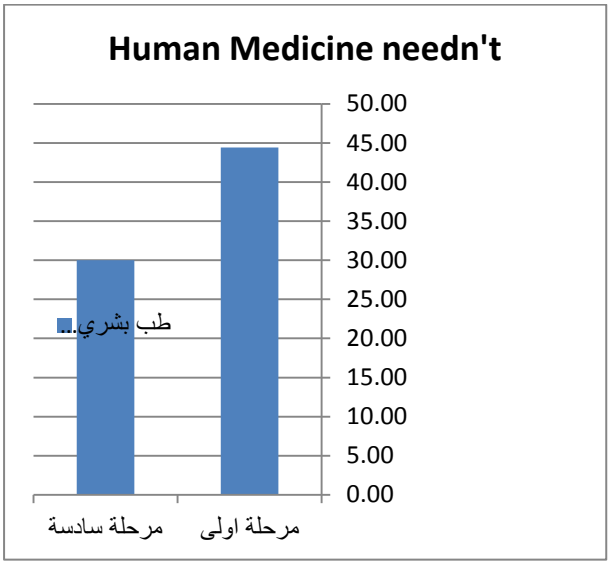


Figure (22) Percentage of improvement in Human & Veterinary medical students' Performance in using needn't



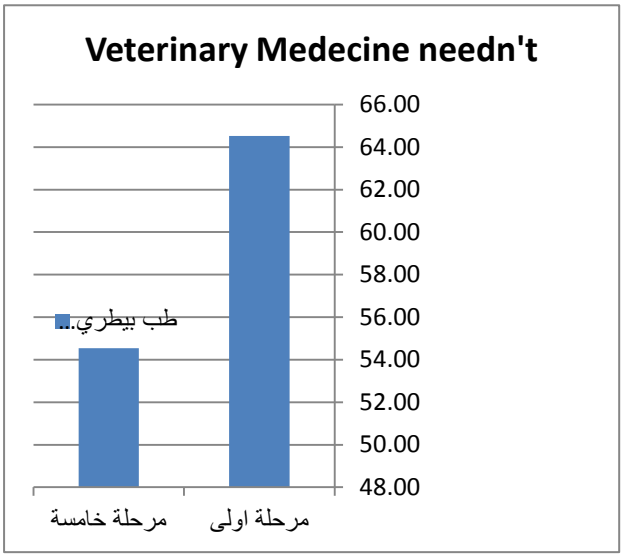
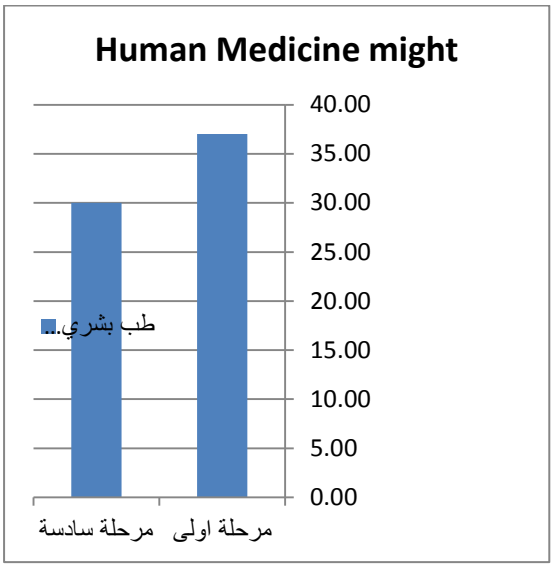


Figure (23) Percentage of improvement of Human & Veterinary medical students' Performance/modals (might)



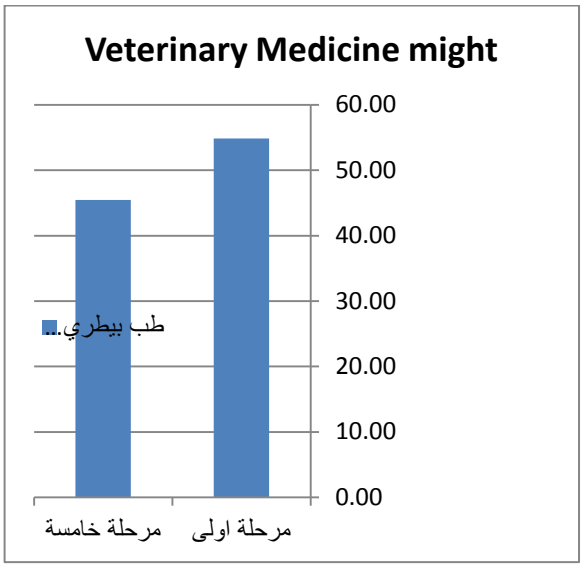
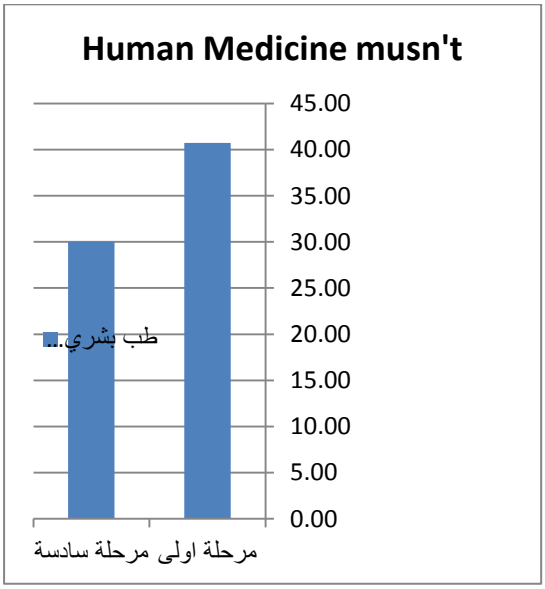
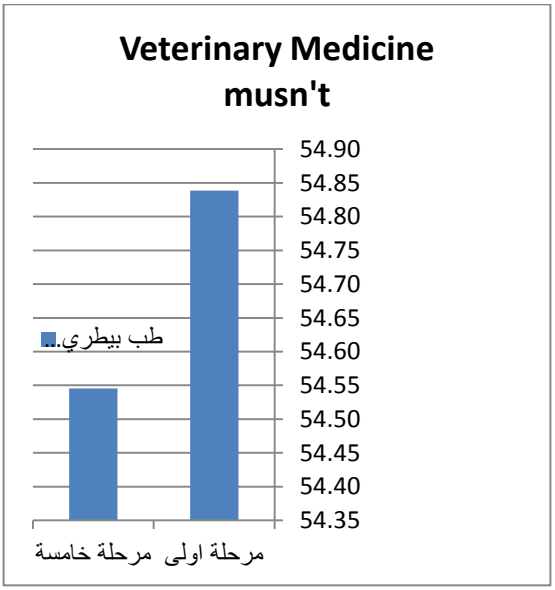


Figure (24) Percentage of improvement in Human & Veterinary medical students' Performance in using mustn't

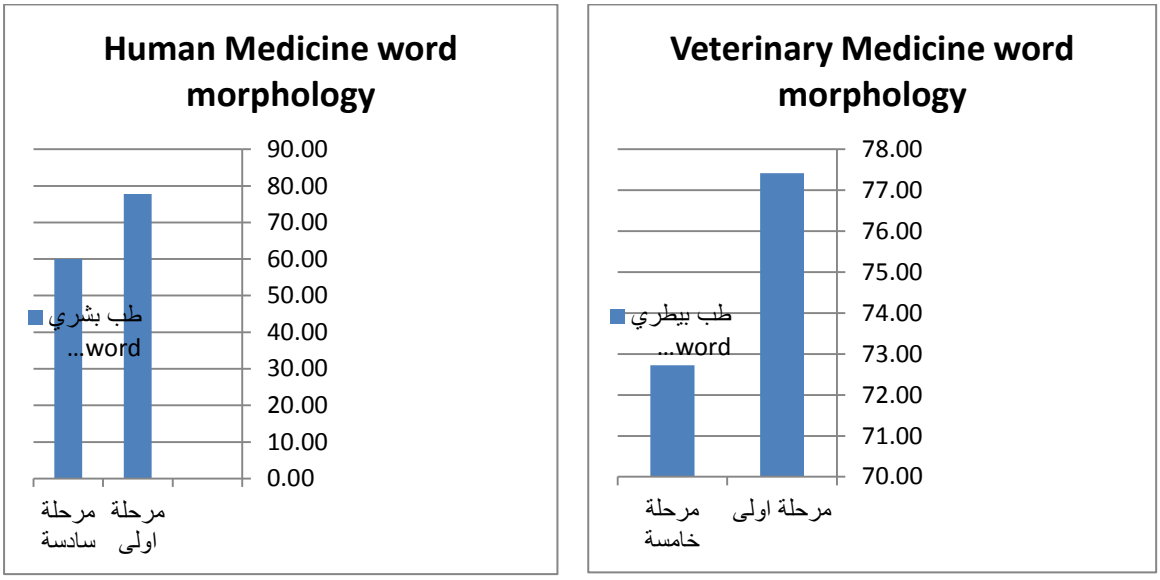




4.6.5.11 A Comparison in the development of using word Morphology

Concerning word morphology, human medical students' total percentage of errors in using word morphology (68%) is less than that of veterinary medicine students (70%). In addition, human medical students show improvement in their use of word morphology throughout the six grades of college study. Their percentage of errors in the 1st grade (77.78%) is reduced to (60%) in the 6th grade. However, veterinary medical students' development in using *word morphology* across their five grades of college study isn't as good as that of human medical students' performance since their error percentage in the 1st grade (77.42%) is reduced only to (72.73%). Therefore veterinary students need more enhancement in teaching word morphology in their syllabus than human medical students. See Figure (25) below:

Figure (25) Percentage of improvement of Human & Veterinary medical students' Performance in the area of word morphology.



4.6.5.12 A Comparison in the development of using superlative adjective & adverbs

Medical students' use of superlative adjective and adverb are shown to be less problematic than using other morphosyntactic elements which registered higher percentage of errors by both groups. The total percentage of human medical students' errors in the use of superlative adjective is (36%) and that of veterinary students is (48%). This clearly shows that human medical students face less difficulties in using superlative adjective than veterinary students. As for medical students' use of adverbs, human medical students' percentage of errors (29%) is also less than that of veterinary students (45%). In addition, human medical students' use of superlative adjective improved as their percentage of errors in the 1st grade (40.74) reduced to (30%) in the 6th last grade. The same thing is true for their use of adverbs whose percentage of errors reduced from (33.33%) in the 1st grade to (20%) in the last 6th grade.

On the contrary, veterinary students' use of superlative adjective didn't improve much. Their percentage of errors reduced only from (54.84%) in the 1st grade to only (54.55%) in the 5th last grade of college study. However, veterinary students' percentage of errors in the use of adverbs improved across college years of study from (58.06) in the 1st grade to (36.36%) in the 5th grade of college study which shows good progress in comparison with other fossilized uses of morphosyntactic elements. However, superlative adjective seems to be more problematic and needs to be reinforced while teaching English courses to medical students. See Figure (26) &(27) below:

Figure (26) Percentage of improvement of Human & Veterinary medical students' Performance/Superlative Adjective:

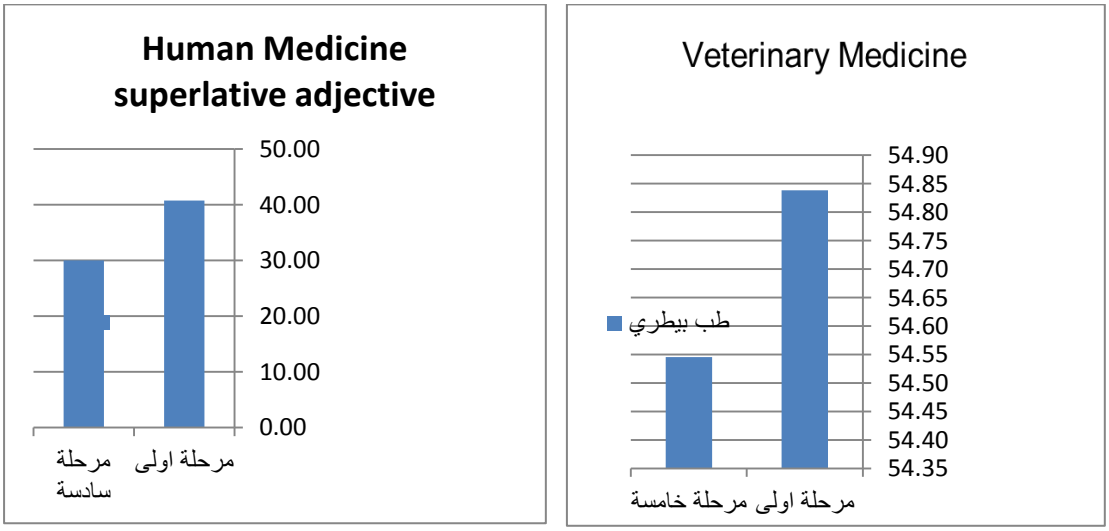
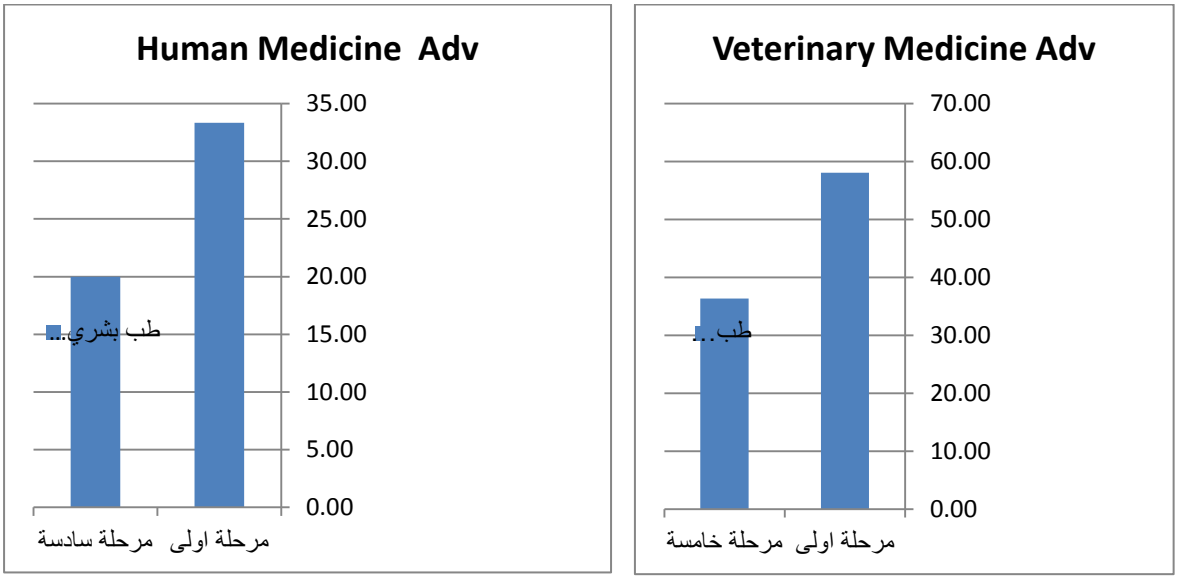


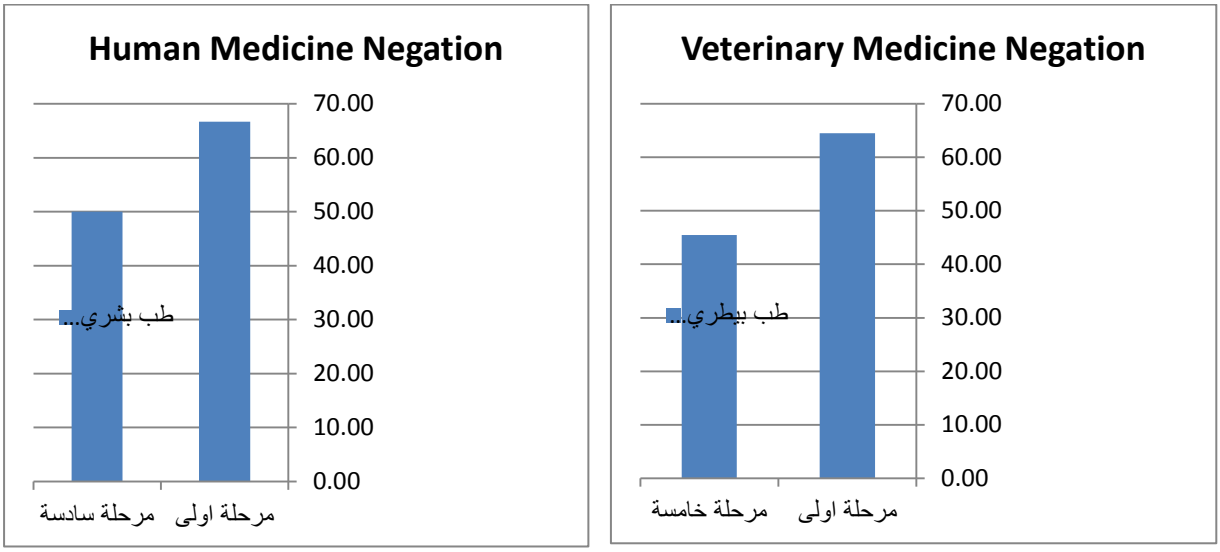
Figure (27) Percentage of improvement of Human & Veterinary medical students' Performance in the area of Adverbs



4.6.5.13 A Comparison in the development of using Negation

As for Negation, human medical students' total percentage of errors (61%) is more than that of veterinary students (54%). Nevertheless, both groups of medical students show improvement in their use of negation throughout the six and five grades of college study. Human medical students' percentage of errors in the 1st grade (66.67%) reduced to (50%) in the 6th grade. Similarly, veterinary medical students' development in using negation is clear as their percentage of errors in the 1st grade (64.52%) reduced to (45.45%). Consequently, the figures show that human medical students face more difficulties in using negation and their performance developed less than veterinary medical students. See Figure (28) below:

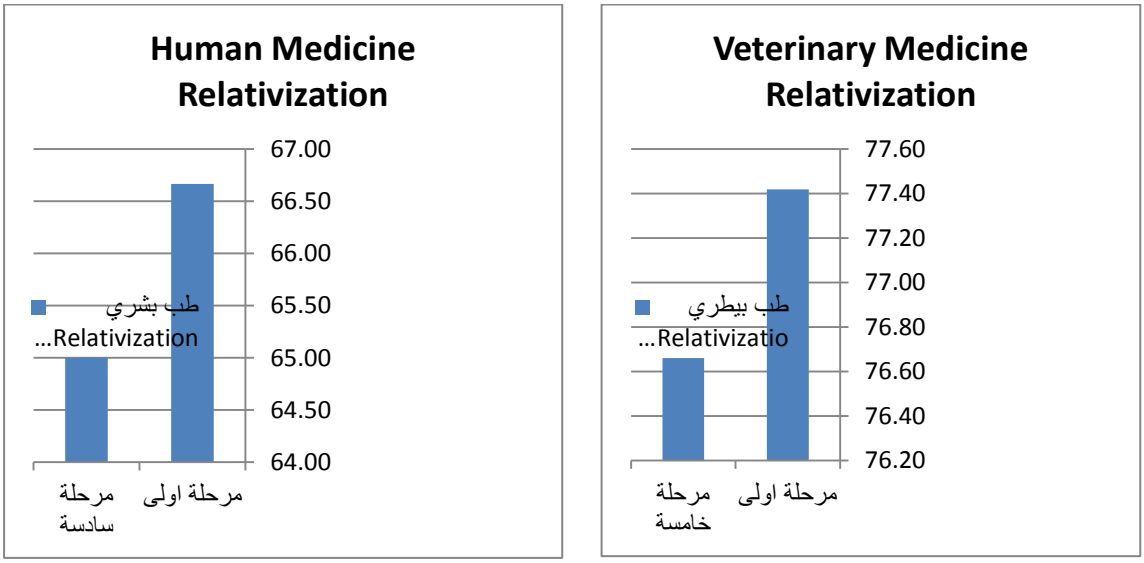
Figure (28) Percentage of improvement of Human & Veterinary medical students' Performance in the area of Negation



4.6.5.14 A Comparison in the development of using Relativization

As for medical students' use of relativization, both groups show weak performance and difficulty in using relatives to connect sentences. Moreover, human medical students face less difficulties in using relativization as their total percentage of errors (70%) is a little bit less than that of veterinary students' (72%). Both groups of medical students' show little development in their use of relatization across their levels of college study. Human medical students' percentage of errors in the 1st grade (66.67) reduced to only (65%) ,while veterinary medical students' percentage of errors (77.42%) in the 1st grade reduced to only (76.66%) in the 5th last grade. As the figures show, human medical students performance developed a little bit more than veterinary medical students. Nevertheless, such kind of morphosyntactic element seem to be fossilized thus need to be more emphasized through teaching process. See Figure (29) below:

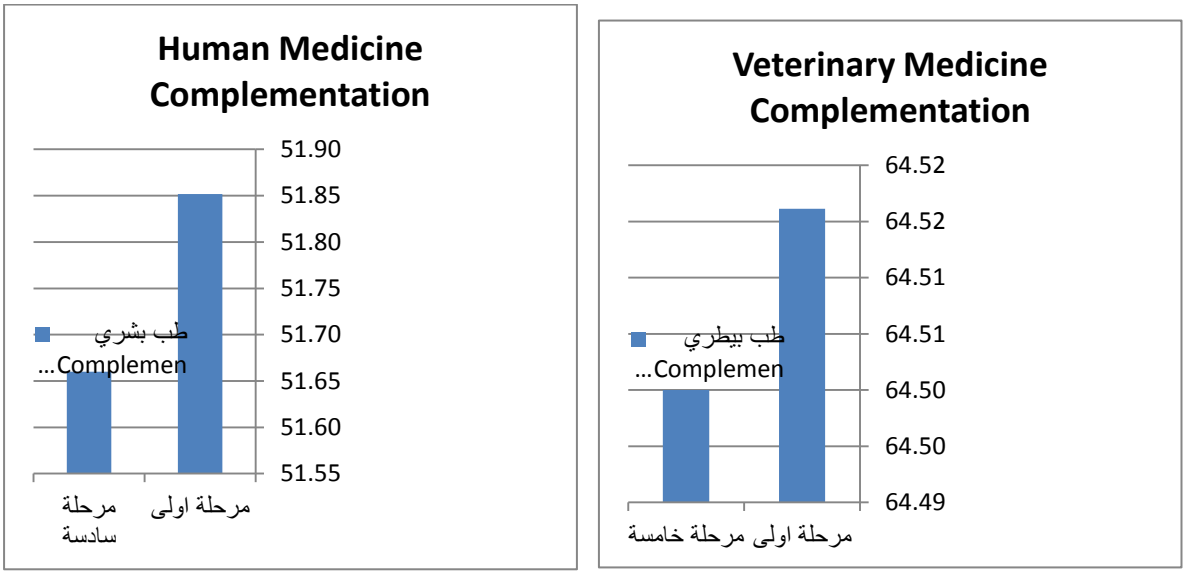
Figure (29) Percentage of improvement of Human & Veterinary medical students' Performance in using Relativization



4.6.5.15 A comparison in the development of using Complementation

One of the most difficult morphosyntactic elements for medical students is complementation. As mentioned before, human medical students' total percentage of errors in using complementation is (57%) while that of veterinary students is (65%). Therefore, it is quite obvious that veterinary students face more difficulties in using complementation than human medical students. Moreover, there is very little improvement in the use of complementation by human medical students as well as veterinary students. This is shown by comparing the percentage of errors in the 1st grade of human medical students (51.85%) with that in the 6th grade (51.66%). Likewise veterinary students' percentage of errors in the 1st grade (64.52%) reduced to only (64.50%). Therefore, and as the figures show, human medical students' performance developed a little bit more than veterinary students'. And as the development is not clearly obvious, medical students' errors in using complementation is fossilized and need to be emphasized in teaching English to medical college students and reinforced in medical English syllabus writing. See Figure (30) below:

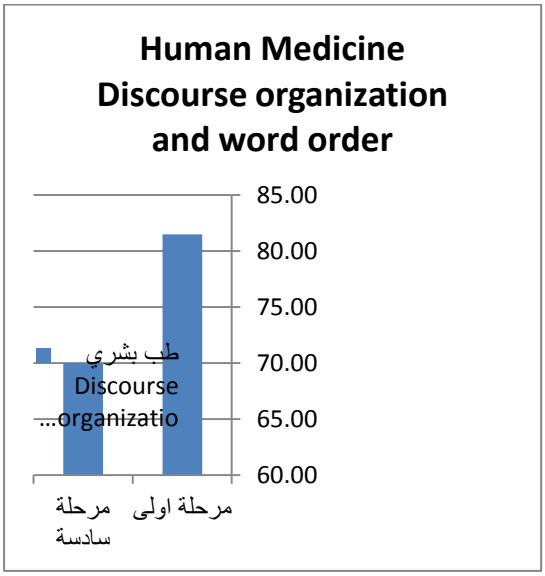
Figure (30) Percentage of improvement of Human & Veterinary medical students' Performance in the area of complementation

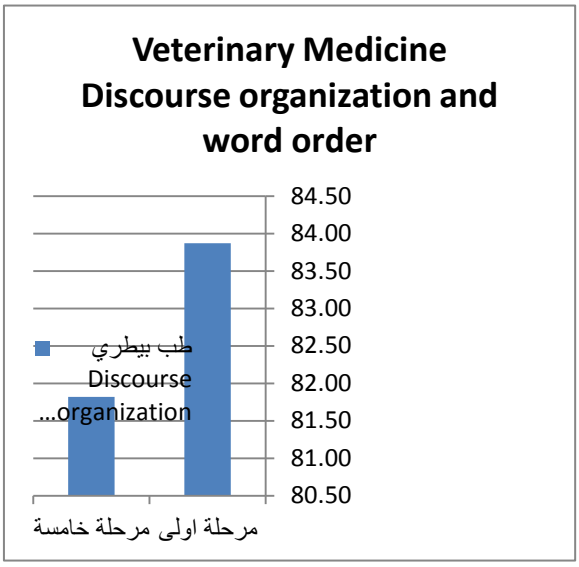


4.6.5.16 A Comparison in the development of using Discourse organization & Word Order

Medical students' percentage of errors in the use of discourse organization and word order is among the highest error percentages of their uses of morphosyntactic elements. Human medical students' total percentage of errors is (75%) which is less than that of veterinary students (84%). In addition, human medical students show better improvement in using discourse organization & Word Order throughout their levels of college study than veterinary students. Their error percentage in the 1st grade (81.48%) reduced to (70%) in the 6th final grade of college study. On the other hand, veterinary students' percentage of errors in the 1st grade (83.87%) didn't reduce much but only to (81.82%). Accordingly, using discourse organization and word order is among the most problematic element for medical students specifically for veterinary students. See Figure (31) below:

Figure (31) Percentage of improvement of Human & Veterinary medical students' Performance in the area of Word Order and Discourse Organization.





4.6.6 A Comparison in the Development of writing Composition in Human medical students and Veterinary Students' Performance.

Figures (32) & (33) show the arithmetic mean percentages of human medicine and veterinary medicine students which are obtained by dividing **the total correct answer scores of composition at each stage on the total number of the students at each stage**. For example, the total scores of 1st stage students' correct answers (366) is divided on (27) the total number of student's sample of 1st stage multiplied by 100 to get the arithmetic mean percentage (13.6%) and so on for the other stages. As it is shown, the low percentages of students' arithmetic mean indicate the difficulties faced by medical students of both groups in using morphosyntactic elements in writing. However, human medical students' total percentage of correct answers in using morphosyntactic elements in writing is (12.76 %) which is higher and thus better than the total percentage of correct answers (10.94%) of Veterinary students in using morphosyntactic elements in writing.

In addition, the percentage of the students' arithmatic means of their correct answers in writing for each stage does not show any development in both

groups of medical students. For example, human medical students' total percentage of arithmatic mean at the 1st stage is **(13.6%),** at the 2nd stage (13%), at the 3rd stage (11.9%), at the 4th /'stage (12.5%), at the 5th stage (11.8 %), and finally at the 6th stage it is **(13.3%).** As such, the decrease in the students' scores of correct composition answers reflects the difficulties they face in using morphosyntactic elements in writing, and also reflects their disimprovement in using morphosyntactic elements in writing during their college years of study. The same thing is true with Veterinary students whose total percentage of arithmatic mean at 1st stage is **(11.5%)** and (10.4%) at 2nd stage, at the 3rd stage (12.2%), at the 4th stage (10%), at the 5th stage **(10.3 %)**. Comparing the percentages of arithmatic mean of human medical students' correct answers of using morphosyntactic elements in composition with those of veterinary students' shows the students' disimproved performance in using morphosyntactic elements in writing by both groups of medical students.

Figure (32) Percentages of Students' correct answers in writing compositions (by the arithmatic mean) according to their Stages at College of Human Medicine

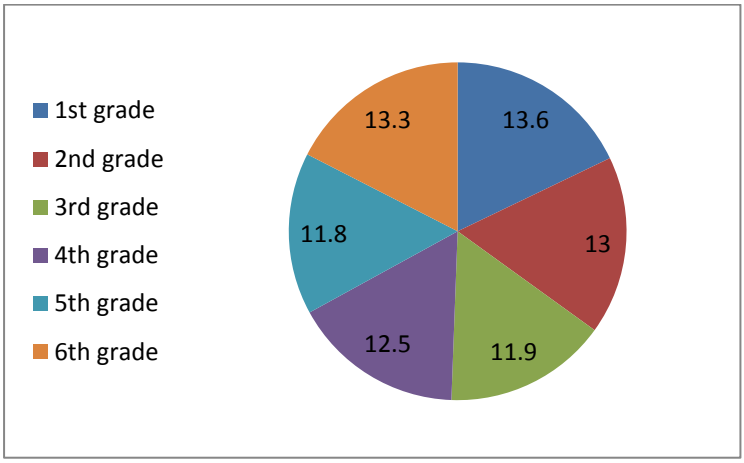
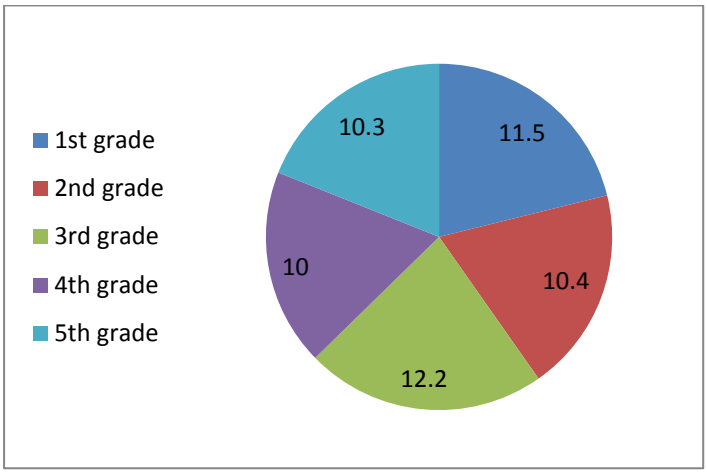


Figure (33) Percentages of Students' correct answers in writing compositions (by the arithmatic mean) according to their Stages at College of Veterinary students



Similarly, figures (32) & (33) show clearly how the arithmatic percentages of correct answers in writing decrease in human medical students' performance from (13.6%) at 1st stage to (13.3%) at sixth stage. Thus the percentage of correct answer reduced with the percentage difference (0.3%). Likewise, veterinary medical students' performance in writing disimproved as the percentage of the students'correct answers decreased from (11.5%) at 1st stage to (10.3%) at 5th stage with percentage difference (1.2%) in the veterinary students'development of performence. It is clearly observed that the decreace of human medicine students' correct performace is less than that of veterinary students' performance which is an indicator of human medical students' better performance. Moreover, there is a variation in the decrease of correct answers in both human and veterinary medicine students' performance Nevertheless the decrease of the correct answers of veterinary students' writing test is more than that of human medical students'. Accordingly, veterinary students face more difficulties in using morphosyntactic elements in writing throughout their stages of study. Therefore, they need more submission to English writing courses emphasizing the correct uses of morphosyntactic elements in writing than human medical students.

To sum up, it is clearly noticed that both groups of human and veterinary medical students have not developed their performance in using morphosyntactic elements in writing since their arithmatic means of correct scores decresed throughout their years of study and veterinary medical students' arithmatic means of correct answers of the written test decreased more than that of human medical students' which show that they face more difficulty in using morphosyntactic elements in writing than human medical students.

4.6.7 Analysis of medical Students' Written Performance in Terms of POS Tagging

Applying POS Tagging method on (200) medical students' written corpora using sketch engine software application shows that the following parts of speech are highlighted in terms of their frequency of occurrence in the medical students' writings and the percentage of errors medical students committed in each part. Again, the results show that human medical students perform better than veterinary medical students. See Appendix (7) www.sketchengine.co.uk

Table (32) shows that (116,820) words in total were used in (100) human medical students' written corpora. The words were analyzed and classified according to their parts of speech using pos tagging method. Human medical students committed (71,946) errors on different POS categories constituting (61.5%) of the total pos frequency of occurrence. Beside, human medical students' percentage of errors in *spelling* was (69%), *punctuation* (65%) and *sentence structure* (63%). The use of (*v base*) is the most problematic pos as the percentage of errors was (63%) , the use of '*wh pronouns'* in *relative clauses*. i.e relativization (61%) then using *v3rd participle* (57%), *adverb* (53%), *noun pl* (53%), number (53%), conjunction (53%), adjective (52%), noun (52%), *pronouns* (52%),*v past* (51%), *verb* (48%), *negative*(48%), *preposition*(43%), *modals* (43%), *infinitive*(30%), See table below (32):

Table (32) POS frequency and percentage of errors in Human medical students' written corpora

POS abb	JJ	RB	CC	DT	NN	NU	IN	PRP	VBZ	TO	WP
POS	adj	adv	Conj	det	nouns	number	Prepo	pron	verb	infintive	wh-pronoun
Fq of occur	3427	2765	1232	2165	3876	231	2876	1876	2543	1234	365
errors	1765	1465	654	877	1998	123	1234	976	1231	376	223
%	52%	53%	53%	41%	52%	53%	43%	52%	48%	30%	61%
POS abb	VBD	VB	VBP	mod	NNS	Ng	SP	SENT	PNT		
POS	v past	v base	v 3rd participle	modals	Noun plural	negative	spelling	sent struc	Punct	Totals	
Fq of occur	2657	1976	234	267	1432	145	29173	29173	29173	116820	
errors	1362	1243	133	115	765	69	20145	18236	18956	71946	
%	51%	63%	57%	43%	53%	48%	69%	63%	65%	61.58706	

On the other hand, veterinary medical students committed (65,517) errors on different POS categories constituting (69%) of the total pos frequency of occurrence which was (93,966), i.e. the total words used in the written corpora by 100 veterinary students. The most problematic pos for veterinary students were *punctuation* (76%), *sentence structure* (75%) , *spelling* (72%), *wh-pronoun* (74%), *base verb* (72%), *noun plural* (67%), *pronoun* (65%), *number* (64%), *conjunction* (60%), *v past* (59%), *nouns* (57%), *adv* (57%), adj(54%), 3rd participle(52%) ,modals(52%), negative (51%), verb(50%), det(48%), preposition(44%), infinitive (34%), etc. See Table (36).

The following are examples from medical students' written corpora illustrating each pos type of errors:

Sentence structure:

- I think the anatomy is very important **because it for study pathology** that enter the **body is understand by site and anatomy is model of important study to understand the part of the body**.(wrongly structured sentence)
- It provide all the important clinical information for the medical students whether it's being studied by systems or by origin. by studying anatomy a medical student or by origin, by studying anatomy, a medical student will be able to know and memorize name of muscles and their innervation, courses of never and arteries, the landmarks bone marks and other important things about our bodies. without studying anatomy a student will not be able **to** know all that for example, later on working at our medical field, if you have a pateint who had at his hand from the wrist how will you know which nerves got destroyed? (long, unstructured sentence)

Punctuation:

- The very important book or subject we study in the college of medicine is **Anatomy it** is subject talk about the contain of the human body and its tributaries overall the body. It like the map of the body **it's** very important to make the medical student know and understand what is found in the body (missing of commas and misuse of capital letters at the beginning of each sentence).

Spelling:

- Anatomy:- is the **scientis** that study the parts **in** the body and **orgins** with their functions **in** the body it **show** us the **aretiry & vine** of muscle. also we made **benfat** from the pathology that ouccers **in** our body.

Wh pronoun:

- Anatomy: is the science **who** study or deal with any part of the body. without the anatomy we open the body and don't know what you do in body **what** treatment or surgery.

Base verb:

- It **identify** over the bones, muscles, blood vessels, lymphatic and nerves.(missing 3rd singular s'). In second stage **we are study** abdomen. (the misuse of verb *to be* with main verb)

Noun plural:

- If the anatomy studying not found in medicine study the **doctor graduation** without any skills and knowledge about parts of the body **so be doctor** very failer.(missing of subject pronoun 'they' and 's' plural is missing in the noun 'doctors')

Passive Voice:

- so the collage should **be provide** the labortary of anatomy. (incorrect use of past participle of the verb 'provide'). Through the anatomy we can study our body compartments and know how our body **is building. (is being built).**

Pronoun:

- It include the clinical structure of the body that we need **it** to be good doctor. (repetion of pronoun it).
- the student is easily and important for **our** by understand to venes enter and artery exist and the blood is pump to the body. (Wrong use of possessive pronoun 'our' instead of the objective pronoun 'us').

Conjunction:

- It's help you **and to** learn about your body more preciously.

- It's a branch of biology and medicine. **as well as** we can get used with it by learning the medical terms.(misuse of the conjunction ‘as well as” which requires a phrase or clause after it).

V past:

- **Edicat puiple** faced diffeculties in studying anatomy and if they **didn't** study will be **fial** in his medical job. (incorrect use of past tense when narrating facts, present tense should be used instead)
- We **study** anatomy two year ago in first stages only which is not enough. We need to study it in all college stages.(incorrect use of past morpheme –ed in the verb “study”)

Noun:

- The **anatomy studing** is very important for medical student to learn how can work with cases show to him in the **emergent** and help the doctors in the **surgical.(incorrect use of noun forms)**
- The anatomy is very important in **medical** because it learn about the all part of the body **in**sid and outside.

Number:

- If **doctors doesn't** study anatomy they will not know what organs they are dealing and what are the organs in specific systems.(no number agreement between the subject and the verb).

Adv:

- So the doctors who have many information in anatomy are **Proffition** in their jobs.(incorrect use of Adverb “professional”).

Adjective:

- It’s **importance** in which that help us to study surgery in advanced stage. (incorrect use of the noun importance instead of the ajective “important”.)
- we should study anatomy because its very benefit.(incorrect use of the adjective “benefitial”).

3rd participle:

- Anatomy is the science of studying the body of human **include** bones and muscles.(incorrect use of include for the participle “including”)

- Anatomy **development** information very interesting.(Develping Anatomy's information)

Modals:

- It **may** be **will** diffecult firstly, but we'll learn them by then.(incorrect use of will)
- If we don't study of anatomy the student **should not** know the parts of body.(incorrect use of the model 'should' for the model "will")

Negative:

- If the anatomy studying **not found** in medicine study the doctor graduation without any skills and knowledge about parts of the body so be doctor very failer. (incorrect use of negated past verb, "didn't find" should be used instead).
- we study it to be good doctors at the future, so that we can help the others with our information, but if we **no learned** anything right now we couldn't help em by then.(incorrect use of negated past verb "didn't learn")

Verb:

- Study of the anatomy so hard and difcelet (absence of verb to be 'is')
- Anatomy **is studies** all part of human body and is very important for all doctors and medical student cause we learn the human body ad composition of the structure.(incorrect use of is with the main verb).
- So if we don't study anatomy all our jobs **is becoming** difficult and our management will be incorrect so the patieut will suffer from many complication and sometime we will end the patient life. (incorrect use of present continous).

Det:

- **The** anatomy is very important department **in the** medical because we can to understand and localize the structure of human body.(incorrect use of the definite article 'the', once with science and the other with an adjective.)

Preposition:

- for these reasons every medical student should study anatomy **on** his\her first two years **in** the college. (at college)

Infinitive:

- The doctors must have to know the body anatomy **to digonoses** and know the abnormalities of the body.(incorrect use of infinitive)
- I wish study anatomy together with the surgery **to more understand**.

Table (33) POS frequency and percentage of errors in veterinary medical students' written corpora

POS abb	JJ	RB	CC	DT	NN	NU	IN	PRP	VBZ	TO	WP
POS	adj	adv	Conj	det	nouns	number	Prepo	pronoun	verb	infintive	Wh proun
errors	1454	1232	653	908	1876	134	787	878	1139	405	197
Fq of occur	2678	2145	1089	1897	3276	211	1794	1342	2265	1198	265
%	54%	57%	60%	48%	57%	64%	44%	65%	50%	34%	74%
POS abb	VBD	VB	VBP	mod	NNS	Ng	SP	SENT	PNT		
POS	v past	v base	v 3rd participle	modals	Noun plural	negative	spelling	sentence struc	punct	Totals	
errors	1345	1345	109	167	823	62	16785	17564	17654	65517	
Fq of occur	2265	1856	211	324	1234	121	23265	23265	23265	93966	
%	59%	72%	52%	52%	67%	51%	72%	75%	76%	69.72416	

Many morphosyntactic elements weren't used in medical students' written corpora either because there was no need for using them or medical student used avoidance strategy due to their lack of their correct uses. Morphosyntactic elements that weren't used by medical students include: *gerund, perfect tenses, could have p.p and future in the past tense.*

The high percentage of errors in using parts of speech in writing and avoiding problematic morphosyntactic elements refer to the students' unfamiliarity with the correct uses of morphosyntactic elements in writing. It's also clear that human medical students need to develop their abilities in morphology as it is the source of correct formulation of most medical terms which are of Latin originality as many spelling mistakes were found in medical terms such as **diagnosise** instead of **diagnoses**. Moreover, students of human and veterinary medicine used less medical terms. Add to that, they confuse between a noun and an adjective e.g: *importance, important* and use very long sentences. Some sentences contain more than forty words. They also have problems in punctuation as they start most sentences using small letters, end most sentences without using full stop, and use capital letters in the middle of the words occurring

at the middle of the sentences. All these errors led to the weak structure of their writings and lack of cohesion.

4.6.8 A Comparison between Human and Veterinary Medical Students' Written Corpora in Terms of Morphosyntactic Errors

Both groups of human and veterinary medical students committed errors when using the morphosyntactic elements in their written corpora. However, the percentage of errors for each morphosyntactic element varies from one group to another. For example, human medical students committed a higher percentage of errors in base verb (69%) then wh-pronoun(65%) and the least percentage was in using infinitive (30%). Meanwhile, veterinary medical students committed a higher percentage of errors in using wh-pronoun (76%) then base verb (72%) and the least percentage of errors was in using infinitive (35%). The variation in error percentages could be attributed to the students' English background, unfamiliarity with the problematic morphosyntactic elements and the emphasis of teachers of English at medical colleges on the correct uses of morphosyntactic elements or weak presentation of such problematic morphosyntactic elements in English syllabi being taught at Iraqi medical colleges.

The morphosyntactic elements tagged in medical students' written corpora were arranged from the most to the least difficult ones with their error percentages as shown in Table (34) below:

Table (34) A Comparison between Human and Veterinary Medical Students' Morphosyntactic Errors in Writings .

Human Medicine	% of errors	Veterinary Medicine	% of errors
spelling	69%	Punctuation	76%
punctuation	65%	sent struct	75%
sent struct	63%	wh pro	74%
v base	63%	Spell	72%
wh- pron	61%	base v	72%
v3rd participle	57%	Number (noun pl)	67%
adv	53%	Pron	65%
Number(noun pl)	53%	Passive voice	64%
Passive voice	53%	Conjunction	60%

conjunction	53%	v past	59%
adj	52%	Nouns	57%
Negative	52%	Adv	57%
pron	52%	Adj	54%
v past	51%	3rd participle	52%
verb	48%	Modals	52%
Negative	48%	Negative	51%
prepo	43%	Verb	50%
modals	43%	Det	48%
det	41%	Prepo	44%
infintive	30%	Infinitive	34%

4.7 Discussion of Findings

Discussion of findings at this section is arranged in terms of answers to the research questions raised in the first chapter.

Q1. To what extent do Iraqi EFL medical students face difficulties in using morphosyntactic elements in general?

- The statistical analysis of the obtained results show that Iraqi medical students in general face difficulties in using morphosyntactic elements.

Q2. To what extent do Iraqi EFL medical students face more difficulties at recognizing or producing morphosyntactic elements?

- The results show that medical students face more difficulties in recognizing morphosyntactic elements than in producing them.

Q3. Are all the morphosyntactic elements of the same level of difficulty for Iraqi EFL medical students?

- It has been shown that there are differences at the level of difficulties in using one morphosyntactic element than another. For human medical students, the morphosyntactic elements can be arranged in terms of difficulty as follows*: gerund then future perfect, discourse organization & word order, relativization, present perfect, word morphology, future continuous, future in the past, infinitive, passive voice, negation, complementation, past simple, could and partative pronoun*. On the other hand, for veterinary students, the morphosyntactic elements can be arranged as follows in terms of difficulty: *discourse organization and word order*,

then could have pp, gerund, past perfect, passive voice, infinitive, future perfect, demonstrative, present perfect, word morphology, universal pronoun, future in the past, future continuous, reflexive, complementation and present simple.

Q4.What are the main reasons behind the weakness and difficulties faced by medical students in using morphosyntactic elements?

- The main reason behind the weakness and difficulties that medical students face in using morphosyntactic elements is probably their low exposure to these elements throughout their years of college study.

Q5. Are there differences/similarities between human medical students' performance and veterinary students' performance in using morphosyntactic elements?

- The obtained results show differences between human medical students' performance and veterinary students' performance in using morphosyntactic elements in favour of human medical students. Human medical students perform better than veterinary students due to their better background in English language prior to their college study and due to their high scores at preparatory schools.

Q6. Are there any developments in medical students' performance in using morphosyntactic elements in general? Are there any differences between the two groups of students in terms of development?

- Some development has been shown in medical students' performance in using morphosyntactic elements on recognition level in general. However, human medical students developed their performance more than veterinary students. Yet, both groups of medical students developed their performance in using some morphosyntactic elements more than others. For example, human medical students developed most morphosyntactic elements throughout their college years of study except using *complementation, future in the past, future continuous, could have p.p, gerund, past perfect, relativization,* partative *pronoun, future perfect* which were not developed much. Thus, they are regarded as fossilized and need more emphasis in teaching. Veterinary students developed their performance of using most

morphosyntactic elements except *infinitive, complementation, reflexive pronoun, musn't, future perfect, gerund, relativization, future in the past, present perfect, future continuous, could have p.p and word order & discourse organization* which are regarded as fossilized thus need more emphasis in teaching.

While there is a considerable development in medical students' performance in using morphosyntactic elements on recognition level, the results show that both groups of medical students didn't develop their performance in using morphosyntactic elements on production level, i.e in writing .

Chapter Five

Conclusions, Recommendations and Suggestions for Further Studies

5.1 Conclusions

In the light of the study results, the following conclusions can be drawn:

1- EFL Iraqi medical students at human medicine college and veterinary college face difficulties in using morphosyntactic elements.
2- Medical students at both colleges face difficulties in using morphosyntactic elements at both recognition and production levels.
3- Human medical students' performance is better than that of veterinary students in terms of both recognition and production levels.
4- The superiority of human medical students' performance can be due to their better scientific background at preparatory school and their higher IQ since Iraqi colleges of human medicine usually receive students with the highest scores at high school final bachalora stage .
5- In spite of the weak performance of both groups of medical students in using morphosyntactic elements, there is some develoment in their uses of morphosyntactic elements with some variations in the favor of human medical students. However, there is no development in both groups' performance in using morphosyntactic elements in writing.

6- The weak performance of medical students in using morphosyntactic elements could be attributed to the lack of using morphosntactic elements in their daily use of English which is restricted to medical register.

7- In terms of difficulty faced by human medicine students at recognition level, the most problematic morphosyntactic element is *gerund* while the least problematic one is *adverb*. The morphosyntactic elements are arranged from the most difficult element to the less difficult one as follows: **gerund, future perfect, could have p.p, Past perfect, Discourse org & word order, reletivization, present Perfect, word morphology, future continuous, future in the past, infinitive, passive voice, Negation, Complementation, Past Simple, could, partative pronoun, demonstrative, present simple, reflexive, musn't, needn't, superlative adjective, might and adverb.**

8- In terms of difficulty faced by veterinary medicine students at recognition level, the most problematic morphosyntactic element for veterinary medical students is **'discorse organization & word order'** while the least problematic one is **'musn't'**. The morphosyntactic elements are arranged from the most to the least difficult one as follows: **Discourse org & word order, could have p.p, gerund, Past perfect, passive voice, infinitive, future perfect, demonstrative, present Perfect, Relativization, word morphology, partative pronoun, future in the past, future continuous, reflexive, Complementation, present simple, Negation, Past Simple, needn't, might, superlative adj, could, Adverb and musn't.**

9- In terms of difficulty faced by human medicine students at production level, morphosyntactic elements identified as parts of speech in terms of pos tagging, can be arranged as follows: the use of a *verb as a base* is the most problematic parts of speech (63%) then the use of *'wh pronouns'* in relative clauses. i.e relativization (61%) for human medical students then using *v3rd participle* (57%), *adverb* (53%), *noun pl* (53%), *number* (53%), *conjunction*

(53%), *adjective* (52%), *noun* (52%), *pronouns* (52%),*v past* (51%), *verb* tense (48%), negative (48%), preposition (43%) modals (43%), infinitive (30%).

10- In terms of difficulty faced by veterinary medicine students at production level, morphosyntactic elements (parts of speech in terms of pos tagging method of written texts analysis) can be arranged as follows: *wh-pronoun* (74%), *base verb* (72%), *noun plural* (67%), *pronoun* (65%), *number*(64%), *conjunction* (60%), *v past* (59%), *nouns* (57%),*adverb* (57%), *adjective* (54%), *3rd participle* (52%) , *modals* (52%),*negative* (51%) ,*verb* (50%), *determiner* (48%) *preposition*(44%), *infinitive* (34%).

11- Due to their performance in using morphosyntactic elements, students at both colleges tend to avoid using the following morphosyntactic elements in writing; *gerund, perfect tenses, could have p.p, future in the past tense, passive voice.*

5.2 Pedagogical Implications

Based on the study findings, the following implications can be inferred:

1. Non-English language major college students like medical students should be given more priorities to English courses that deal with general or everyday English, then medical English comes later. In this regard, it is highly recommended to provide medical students with EMP course before enrolling with medical study just like other medical colleges worldwide.
2. In spite of their intelligence and excellency, medical students should be given more English courses preferably precollege courses and during their college study to improve their better uses of everyday English which will be highly reflected in their better performance in other medical courses since medical syllabi are all written in English.
3. Designers of English courses at medical colleges should pay more attention to morphosyntactic elements when designing English courses for medical students specifically those morphosyntactic elements which the study has

proved to be more problematic such as gerund, word order and discourse organization, could have p.p, perfect tenses and word morphology. The current English course being taught at 1st sages of Iraqi medical colleges deals only with medical terminology neglecting other basic components of general English.

4. Teachers of English courses at medical colleges should emphasize teaching morphosyntactic elements concentrating on those proved to be more problematic to medical students than others. ESP courses should be designed to include EMP in a way that improves students' general English then improving their medical English.

5.3 Recommendations

In the light of the results and conclusions of the study, the following recommendations can be put forward:

1- Incorporating more general English items into EFL courses designed for colleges of medicine beside medical English items.

2- Conducting workshops and training courses for teachers of English at medicine colleges on how to teach general EFL and EMP.

3- Effective channels of constructive communication between curriculum specialists at the Iraqi Ministry of Higher Education, the students, and the medical community are a prerequisite here to develop students' performance.

4- Curriculum designers, educators, teachers , administrators , and university faculty should put in consideration the factors which impair applying EMP courses pre or in the medical colleges courses.

5- Educators need to be more aware of the weak performance of medical students not only at speaking correct English , but writing clear and accurate medical reports that may be misunderstood for their lack of

accurate English that may lead to serious linguistic problems thus wrong dygnosis which seriously affect patients' lives.

6- Current syllabi of teaching English courses being taught at the Iraqi colleges of medicine need to be revised and replaced with EMP courses to help medical students improve their general as well as medical English to take part effectively at their lectures, workshops and future conferences.

5.4 Suggestions for Further Studies

In connection with this work, the following studies can be suggested:

1- Investigating the efficiency of employing EMP courses in teaching EFL at colleges of medicine as a pre-course and during the students' five or six years of study.

2- A content analysis of the prescribed English textbooks currently being taught to see to what extent these textbooks imply general English and how much they contribute to developing medical students correct uses of morphosyntactic elements.

3- Studying the morphosyntactic elements in the oral performance of Iraqi EFL medical university students.

4- Studying the efficiency of educational technologies in developing Iraqi EFL medical college students' performance in using morohosynactic elements.

5- Studying the morphosyntactic elements in the performance of Iraqi medical college students in the area of writing essays or medical reports.

6- Analyzing the prescribed textbooks of EFL at preparatory schools to find out what extent these textbooks contribute to developing the use of morphosyntactic elements at early stages of EFL education in Iraqi

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Appendix (1)

The letter submitted to the Jury members

Ministry of Higher Education
University of Al- Neelain
College of Graduate Studies
College of Education

Dear Sir / Madam

The researcher intends to conduct a study entitled "Analysis of the Morphosyntactic Elements in the written Corpora of the Iraqi Medical Students as ESP Learners: A Corpus Based Approach.". The aim of this study is investigate the difficulties faced by Iraqi EFL college students regarding the use of morphsyntactic elements in their written corpora. As a specialist or a foreign specialist in the field of lingusitics and teaching English a foreign language, the researcher will appreciate if you could advise her on the suitability of the items of the test as tools to achieve the above aim. Needless to say that all your comments including any suggested modification of the items will be greatly regarded and highly appreciated. Thank you in advance for your kind assistance and cooperation.

Yours

Maysaa Ridha
Ph.D. Candidate

Appendix (2)

The letter submitted to the students

Dear student

As a part of my Ph.D. research at the University of Al- Neelain, I have been conducting a study to investigate the difficulties faced by Iraqi EFL college students regarding the use of morphsyntactic elements in their written corpora. The results of the study will be made available to the curriculum designers, educators, university teachers, and college students .I will appreciate if you respond to the following questionnaire.

NOTE: Your responses will be held in strictest confidence and will remain anonymous.

(To be filled by each student at the time of test completion)

University: _____

College: _____

Department: _____

Gender : _____

Signature :_____

Date :_____

Thank you very much for your cooperation.

Appendix (3)

The Achievement Test of : Recognition Part

Q1/ Read the following statements and choose the correct option:

a) <u>Pronouns</u>

1. I really like watching old shows. _____ are presented on TV.
(demonstrative Pronoun)
(a. Those b. That c. This d. **these**).

2. I searched in every corner of the house, but I couldn't find my notes _____
(a.something, b.everyone, c. **anywhere** d. somewhere). (Partative Pronoun)

3. Though Nada insisted ,but Tom likes to read the novel.....(a.herself, b.**himself**,c. themselves d. myself) to attract her attention. (Reflexive Pronoun)

<u>b) Nominals</u>

4. ---------- such rubbish is disgraceful.(a. have Writing, **b.to write**, c.write d. steals) (Infinitive)

5. The boy denied --------- the money.(a. Steal **b.Stealing** c.Stole d. steals) (Gerund)

<u>c)Tense & Aspect</u>

6. She always ---------- a shower in the morning**.** (a.take **b.takes** c.is taking d.took) (present Simple)

7. They _____ my brother an hour ago.(a.meets , **b.met** c.have met d. meet) (Past Simple)

8. The ground is wet. It seems that it has --------
(a.rain b. rains c. raining **d. rained**). (Present Perfect)

9. They ---------if they had tried harder. (a. could win, **b. could have won**, c. could have been won d. win)

10. I ---------- the book but when I heard what the critics said I changed my mind.

(**a. was going to buy** b. Would have bought c. Was buying d. am going to buy). (Future in the past)

11. Don't call me until about 7.30. I ..... my homework until then. (a.will not have been finishing

b. won't finish **c.won't have finished** d. will not be finishing.) (Future perfect)

12. She offered me an apple, but I wasn't hungry as I ..... lunch.(**a. had just had**,

b. just had , c. was just having , d.have just had). (Past Perfect)

13. At this time tomorrow, I ---------- my speech on the meeting.

(a. Will have been delivering b. Will deliver **c. Will be delivering** d. Will have delivered) (Future Continuous)

d) Voice

14. Rome ---------- in a day. (a.Built b isn't built **c. was not built** d. build)

e) Modality (need, might, musn't, could)

15. You ---------- to take your umbrella. It is not raining.

(a.didn't need, b.needed, c. needs , **d.don't need**).

16. Take an umbrella. It-------- rain later.(a.need, b.should, c.musn't, **d.might)**

17. It is a hospital. You --------- smoke. (a.don't must, **b.musn't**, c. didn't must , d.do must)

18. I'm not sure if we ---------- visit her tomorrow. (a.could have, b.coulds, **c.could,** d.could had).

f) Word Morphology

19. Doctors' ---------- show the patient's serious infection.(**a.diagnoses**, b.diagnosis, c.diagnosing d. diagnose) .

g)Superlative Adjective.

20. It was .....gift I have ever received.

(a.most expensive **b.the most expensiv**e c.the more expensive d. expensive.)

h) Adverb

21. My mother speaks German--------. (a.perfect, **b.perfectly** c. Imperfect d. perfectibility)

I) Negation

22. There ----------in the South tomorrow. (**a. will be no rain** b. Will not rain be c. Not will be rain d. Won't rain).

J) Relativization

23. Last year we spent our holidays in Scotland, ------- is in the north of Great Britain. (a.who b. Where **c.which** d.when)

K) Complementation

24. I suggest you……. an attorney. (a. to consult **b. consult** c. to consulted

d. consulting).

L) Word Order & Discourse organization

25. When _____ ?

a. is the first performance of the school play being
b. is the first performance of the school play be
c. will the first performance of the school play be
d. **is the first performance of the school play going to be**

Appendix (4)

The Achievement Test: Production Part (Essay Writing)

Student's No. _____ Gender _____ , Grade _____ , Section_____

University of _____, College of _____,
Date_____

Essay Writing

Write an essay of about 300 words on the following topic:

"The Role and Importance of Anatomy in Medical Career."

Appendix (5)

Human medical Students' Scores in Essay Writing according to Brown & Bailey's (1984) Scale

Student number	Graded mark	Organization	Logical development of idea	Grammar	Punctuation, spelling and mechanics	Style and quality of expression
Max grade	**25**	**5**	**5**	**5**	**5**	**5**
Stage1/S1/m	15	4	3	2	3	3
Stage1/S2/m	13	3	2	2	3	3
S1/S3/m	13	3	3	2	2	3
S1/S4/m	13	2	3	2	3	3
S1/S5/m	12	2	3	2	2	3
S1/S6/m	14	3	3	2	3	3
S1/S7/m	14	4	3	2	2	3
S1/S8/m	15	3	3	3	3	3
S1/S9/m	12	2	3	2	2	3
S1/S10/m	15	4	4	2	2	3
S1/S11/m	16	4	4	2	3	3
S1/S12/m	14	4	3	2	2	3
S2/S13/m	15	4	4	2	2	3
S2/S14/m	16	4	3	2	3	4
S2/S15/m	13	3	3	2	2	3
S2/S16/m	10	2	2	2	2	2
S2/S17/m	14	4	3	2	2	3
S2/S18/m	12	2	3	2	3	2
S2/S19/m	11	2	2	2	3	2
S2/S20/m	13	3	3	2	2	3
S1/S21/m	13	3	3	2	3	2
S1/S22/m	16	4	4	2	3	3
S1/S23/m	13	3	3	2	3	2
S1/S24/m	12	3	3	2	2	2
S1/S25/m	14	3	4	2	2	3
S1/S26/m	15	3	4	2	3	3
S1/S27/m	13	3	3	2	2	3
2/1/f m	13	3	3	2	3	2
2/2/ m	10	2	2	2	2	2
2/3/ m	13	3	3	2	2	3
2/4/ m	12	2	2	3	3	2
2/5/f m	13	3	2	2	3	3
2/6/f m	14	3	3	2	3	3
2/7/f m	10	2	2	2	2	2
2/8/f m	15	3	4	2	3	3
2/9/f m	14	3	3	2	3	3
2/10/f m	15	3	4	2	3	3

2/11/f m	13	3	3	2	3	2
2/12/m	13	3	3	2	3	2
2/13/f m	14	3	3	2	3	3
2/14/f m	12	2	3	2	2	3
2/15/f m	12	3	3	2	2	2
2/16/f m	14	3	3	2	3	3
2/17/m	9	2	2	1	2	2
2/18/f m	14	3	3	3	3	2
2/19/f m	14	3	3	2	3	3
2/20/f m	15	3	4	2	3	3
Stage3/S1/f m	12	2	2	2	3	3
S3/S2/f m	14	3	3	2	3	3
S3/S3/f m	12	3	3	2	2	2
S3/S4/f m	5	1	1	1	1	1
S3/S5/f m	10	2	2	2	2	2
S3/S6/m m	13	3	3	3	2	2
S3/S7/f m	14	3	3	2	3	3
S3/S8/m m	5	1	1	1	1	1
S3/S9/f m	13	3	3	2	2	3
S3/S10/f m	15	4	4	2	2	3
S3/S11/f m	12	3	3	2	2	2
S3/S12/f m	12	3	2	2	2	3
S3/S13/m m	13	3	3	2	2	3
S3/S14/m m	14	3	3	2	3	3
S3/S15/f m	11	3	2	2	2	2
S3/S16/m m	14	3	3	2	3	3
S3/S17/f m	13	3	3	2	2	3
Stage4/S1/f m	12	3	3	2	2	2
S4/S2/f m	11	2	3	2	2	2
S4/S3/f m	15	3	3	3	3	3
S4/S4/f m	15	3	3	3	3	3
S4/S5/m m	14	3	4	2	2	3
S4/S6/m m	12	3	3	2	2	2
S4/S7/m m	15	4	4	2	2	3
S4/S8/f m	14	3	4	2	2	3
S4/S9/f m	15	4	4	2	2	3
S4/S10/f m	10	3	3	1	1	2
S4/S11/m m	14	3	3	3	3	2
S4/S12/m m	7	2	1	1	1	2
S4/S13/m m	10	2	2	2	2	2
S4/S14/f m	11	3	2	2	2	2
Stage5/S1/m m	16	3	4	3	3	3
S5/S2/m m	11	2	2	2	3	2
S5/S3/f m	10	2	2	2	3	1
S5/S4/f m	8	2	2	1	1	2
S5/S5/f m	16	4	3	3	3	3
S5/S6/f m	16	4	4	3	2	3
S5/S7/f m	14	4	3	2	2	3
S5/S8/m m	10	2	2	2	2	2

S5/S9/f m	7	1	1	2	2	1
S5/S10/f m	8	1	2	2	2	1
S5/S11/f m	9	2	2	2	2	1
S5/S12/m m	16	3	4	3	3	3
Stage6/S1/f m	15	3	3	3	3	3
S6/S2/f m	13	3	3	2	2	3
S6/S3/f m	14	3	4	2	2	3
S6/S4/m m	13	3	3	2	2	3
S6/S5/f m	12	2	3	3	2	2
S6/S6/m m	14	2	3	3	3	3
S6/S7 f m	12	2	3	2	2	3
S6/S8/m m	7	2	2	1	1	1
S6/S9/f m	13	3	3	2	2	3
S6/S10/m m	15	3	3	3	3	3

Appendix (6)

Veterinary medical Students' Scores in Essay Writing according to Brown & Bailey's (1984) Scale

Student number	Graded mark	Organization	Logical development of idea	Grammar	Punctuation, spelling and mechanics	Style and quality of expression
Max Grade	**25**	**5**	**5**	**5**	**5**	**5**
Stage1/s1/m v	11	2	3	2	2	2
S1/S2/m v	10	2	2	2	2	3
S1/S3/m v	12	3	3	2	2	2
S1/S4/f v	11	2	3	2	2	2
S1/S5/f v	5	1	1	1	1	1
S1/S6/m v	14	3	3	2	2	4
S1/S7/m v	12	3	2	2	2	3
S1/S8/m v	14	3	3	2	2	4
S1/S9/f v	13	3	3	2	2	3
S1/S10/f v	6	2	1	1	1	1
S1/S11/f v	8	2	2	1	1	2
S1/S12/f v	13	3	3	2	2	3
S1/S13/m v	14	3	3	3	2	3
S1/S14/m v	12	2	3	2	2	3
S1/S15/m v	5	1	1	1	1	1
S1/S16/m v	8	2	2	1	1	2
S1/S17/f v	12	3	3	2	2	2
S1/S18/f v	10	2	2	2	2	2
S1/S19f v	14	3	3	2	3	3
S1/S20/f v	11	3	2	2	2	2
S1/S21/m v	14	3	3	2	3	3
S1/S22/m v	15	4	3	2	3	3
S1/S23/ m v	15	3	3	3	3	3
S1/S24/f v	15	4	3	2	3	3
S1/S25/m v	15	3	4	2	3	3
S1/S26/f v	12	2	3	2	2	3
S1/S27/m v	12	3	3	2	2	2
S1/S28/f v	12	2	3	2	2	3
S1/S29/f v	9	2	2	1	2	2
S1/S30/f v	10	2	2	2	2	2
S1/S31m v	12	2	2	3	3	2
Stage2/s1/f v	11	3	1	2	3	2
S2/S2 /f v	12	3	2	2	2	3
S2/S3/f v	9	2	2	1	2	2

S2/S4/m v	12	3	2	2	2	3
S2/S5/ f v	13	3	3	2	2	3
S2/S6/f v	10	2	2	2	2	2
S2/S7/f v	16	3	3	3	3	4
S2/S8/m v	10	2	2	2	2	2
S2/S9/m v	13	2	3	2	3	3
S2/S10/f v	9	2	2	2	2	1
S2/S11/f v	13	3	3	2	2	3
S2/S12/f v	5	1	1	1	1	1
S2/S13/m v	8	2	2	1	1	2
S2/S14/m v	12	2	2	2	3	3
S2/S15/m v	13	3	3	2	2	3
S2/S16/f v	11	2	2	2	2	3
S2/S17/m v	11	2	2	2	2	3
S2/S18/ m v	10	2	2	2	2	2
S2/S19/f v	5	1	1	1	1	1
S2/S20/m v	5	1	1	1	1	1
S2/S21/m v	8	2	2	1	1	2
S2/S22/m v	5	1	1	1	1	1
S2/S23/ m v	8	2	2	1	1	2
S2/S24/m v	12	3	3	2	2	2
S2/S25/m v	13	3	3	2	2	3
S2/S26/ m v	14	4	3	2	2	3
S2/S27/f v	14	3	4	2	2	3
Stage3/S1/ m v	14	3	3	2	2	4
S3/S2/m v	15	3	3	2	3	4
S3/S3/ m v	15	4	3	2	3	3
S3/S4/f v	14	2	3	2	3	4
S3/S5/f v	5	1	1	1	1	1
S3/S6/f v	12	2	2	2	3	3
S3/S7/m v	11	2	2	2	2	3
S3/S8/f v	11	2	2	2	3	2
S3/S9/f v	12	2	2	2	3	3
S3/S10/f v	5	1	1	1	1	1
S3/S11/m v	13	3	3	2	3	2
S3/S12/m v	12	3	3	2	2	2
S3/S13/f v	16	4	3	2	3	4
S3/S14/f v	15	3	4	2	3	3
S3/S15/f v	13	2	3	2	3	3
Stage4/S1/m v	16	4	3	2	3	4
S4/S2/f v	12	2	3	3	2	2
S4/S3/m v	10	2	2	2	2	2
S4/S4/f v	12	2	3	2	3	2
S4/S5/m v	13	3	3	2	2	3
S4/S6/f v	5	1	1	1	1	1
S4/S7/m v	10	2	2	2	3	1

S4/S8/f v	7	2	1	1	1	2
S4/S9/f v	10	2	2	1	2	3
S4/S10/m v	10	2	2	2	2	2
S4/S11/f v	14	3	3	2	3	3
S4/S12/m v	7	2	2	1	1	1
S4/S13/m v	13	3	3	2	2	3
S4/S14/m v	5	1	1	1	1	1
S4/S15/f v	5	1	1	1	1	1
S4/S16/m v	11	2	2	2	2	3
Stage5/S1/m v	13	3	3	2	2	3
S5/S2/m v	6	1	1	1	1	2
S5/S3/m v	8	2	2	1	1	2
S5/S4/m v	13	3	3	2	2	3
S5/S5/m v	10	2	2	2	2	2
S5/S6/f v	14	3	3	2	3	3
S5/S7/m v	9	2	1	2	2	2
S5/S8/f v	8	2	2	2	2	1
S5/S9/m v	13	3	2	2	3	3
S5/S10/f v	11	2	3	2	2	2
S5/S11/m v	8	2	2	2	1	1

Appendix (7)

A Sample of an Essay Written by a Medical Student Analyzed Using POS Tagging

Stage 1, Student 1, Human Medicine

The anatomy:- is the study of structures associated with the body of human.
It is the identification of the living things and structures. It's a branch of biology and medicine. as well as we can get used with it by learning the medical terms. It may be will be diffecult firstly, but we'll learn them by then, we study it **to** be good doctors at the future, so that we can help the others with our information, but if we ain't learned anything right now we couldn't help em by then. and hope you like my ruritiry above there.

Part of speech tagging:

The|**DT** anatomy|**NN** :|: -|: is|**VBZ** the|**DT** study|**NN** of|**IN** structures|**NNS** associated|VBN with|**IN** the|**DT** body|**NN** of|**IN** human|**JJ**
.|. It|**PRP** is|**VBZ** the|**DT** identification|**NN** of|**IN** the|**DT** living|**JJ** things|**NNS** and|**CC** structures|**NNS** .|
. It|**PRP** 's|**VBZ** a|**DT** branch|**NN** of|**IN** biology|**NN** and|**CC** medicine|**NN**
.|. as|**RB** well|**RB** as|**IN** we|**PRP** can|MD get|**VB** used|VBN with|**IN** it|**PRP** by|**IN** learning|VBG the|**DT** medical|**JJ** terms|**NNS**
.|. It|**PRP** may|MD be|**VB** will|MD be|**VB** diffecult|**JJ** firstly|**RB** ,|, but|**CC** well|**RB** learn|**VB** them|**PRP** by|**IN** then|**RB** ,|, we|**PRP** study|**VB** it|**PRP** **to**|**TO** be|**VB** tood|**JJ** doctors|**NNS** at|**IN** the|**DT** future|**NN** ,|, so|**RB** that|**IN** we|**PRP** can|MD help|**VB** the|**DT** others|**NNS** with|**IN** our|**PRP**$ information|**NN** ,|, but|**CC** if|**IN** we|**PRP** ai|**VBP** n't|**RB** learned|VBN anything|**NN** right|**RB** now|**RB** we|**PRP** could|MD n't|**RB** help|**VB** em|**PRP** by|**IN** then|**RB** .|. and|**CC** hope|**VB** you|**PRP** like|**VBP** my|**PRP**$ ruritiry|**NN** above|**IN** there|**RB** .|.

Paragraph contents:

DSS	JJ	RB	CC	DT	NN	NU	IN	PRP	VBZ	TO	WP	VBD	VB	VBP	RBR	NNS	NNP	SP	SENT	PNT	WF
20011	1			3	3		3	1	1							1				1	13
20012	1		1	2	1		1	3	1							2			1		10
20013			1	1	3		3	5	1				1			1					7
20014			1	1	1		4	4					5			2			1		14
20015	2		2	2	3		3	2		1			2	2				4	6	4	54

Correction code :

Sent 1: PNT: Capitalized (Is).
Sent 2: SENT: (It is the identification of the living).
Sent 4: SENT (get used **to**).
Sent 5: SP: (difficult). (didn't). (them). (summary).
SENT: (It may be difficult). (at first). (We will learn). Omit (by then). (don't learn). (we will not help).
PNT: (.) after (them). (.) after (information). (.) after (them). Omit (And).