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An Evaluative Analysis of a Medical Terminology Course Taught in Saudi Arabia

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Abstract: ***Medical Sciences in all Arabs countries, where the medium of instructions is Arabic at the primary and secondary schools. The study also investigates the English language needs for both academic and professional purpose. The students' attitude towards English language is also considered in this study. The results proved that the students were torn between being instructed in a mixed language and examined in English. The weakness of English characterized all the population. The weakness of in English is the root cause of the weakness of ESP in general.***

Keywords: Latin language, General language, ESP, medical terminology. Lay terms

1. Introduction

The students of Medicine and Health Sciences at **Al-Maarefa University** and **King Saud University** form the population of the study. They have to state whether the weakness in English is the root cause of the weakness of the ESP in general or not. They have to state whether the standard of English in their secondary schools has its impact or rather negative impact on their present standard in the universities or not. The sample of the study is composed of 350 students of medicine pharmacy and Applied Medical Sciences. The data has been analyzed statistically by SPSS program.

The assumption being raised in this study is that there is still doubt as to the necessity of adopting English as a medium of teaching at the university level, and that the students in Saudi universities as well as their counterpart in all Arab countries are unable to cope with English in their study. The fact that those students have long been instructed in their mother tongue, and all of a sudden a new language was placed instead of their mother tongue.

Poor preparatory measures are also raised in this study, these measures may include, syllabus, teaching methods, and their specific needs for studying English language, as well as motivation and attitude.

2. Aims and Scope of the study

The study investigates the background of English in Saudi Arabia, and traces it back when the first school was established in the Arabian Peninsula.

The goal of the study is to explore the concept of ESP in order to gain a comprehensive picture of this branch of English. The general aim of ESP has always been to serve the specific needs of learners. The information which will be collected from the students and specialists and teachers of department of English will make the image of the profile of the situation clear, and will pave the way for the researcher to have a complete knowledge on the situation of English and ESP in the Arab universities The study investigates teaching English and medical terminology to the students of Medicine and Health Sciences; it specifies the needs of these students in order to design a language course based on their needs.

The findings and recommendations of the study demonstrate the value needs analysis in designing an ESP course for the students of Medicine and Health Sciences at the Saudi and other Arab universities.

3. Background to the problem

Arabic as a mother tongue is a medium of instructions in Saudi formal education, and English is taught as a subject or rather a neglected subject. At the same time English is the medium of teaching in Saudi Medical Colleges, and Health Sciences Colleges, such a conflict creates great obstacles. In this case, a need for developing the general English courses to cope with the ESP course as well as their medical majors. Designing a general language course becomes an urgent need for the students of Medicine and Health Sciences. Learner's need is considered a top priority when designing or evaluating an ESP course. (Nunan and Lamb 1996) "*stated that all language programs should take their form of departure from the goals and objectives that have been derive from an analysis of learner's needs."*

The researcher would evaluate the component of the ESP course and that of the general English courses, and match that to the academic needs of the students of Medicine of the two mentioned universities. The researcher would also work for the comprehensive ESP course which would meet their academic and professional needs.

4. Literature Review

Latin as the Language of Medicine

The medical English is based greatly on Latin and Greek, in fact, the both languages constitute the stock for creating any new medical term. In addition, these two languages can be described as blessing in disguise, that their incomprehensibility to the patient or the lay man keeps them in the dark of not detecting what they suffer from, or what diseases they may have. To the learned and educated patients doctors speak an incomprehensible language that

they have no desire to know. Montaigne, French philosopher and writer says" people trust more what they do not understand". English medical terminology is completely different from any other subjects, for it is a worldwide, universal terminology, not bound to any nation.

It is lucky, that Latin in medicine has its continuation in the English medical terminology, the English medical terminology with its Latin origin, is considered as an advantage, because in that way its spread is accelerated and facilitated. Medical terminology is a unique mixture of many languages, but the majority of it is drawn from Greek and Latin. Medical terminology is a combination of roots, prefixes, suffixes and combining vowels, which they all enable a student of medicine to form a meaningful comprehensible medical sentence. In the beginning the long medical sentence, with its formidable and strange sound, causes depression and discouraging for the beginner students. Here, for more clarification one can quote the French essayist of the 16th century, who made the apt remarks that," the language of medicine is an idiom foreign to the general speech and of discord sound". The statement uttered by the French philosopher, can be applied truly to the present medical terminology of the present day.

The Greek era:

The beginning of the Greek era, refers to Hippocrates's era, we all know that Hippocrates is the father of modern medicine; he formulated the theory of the diseases, that were caused naturally and not as a punishment, as people believe in that time. He is also known by his famous Oath, which is considered the main ethics of medical practice.

Medical terminology with Greek origin is estimated to be three-fourth of the whole medical terminology, that was due to the fact that Greeks were considered to be the founders of medicine, according to the Greek civilization, which dated back to the 5th century B.C. the spread of Greek in medical terminology, is also due to the fact that the language ie Greek lends itself easily when we create new medical terms, that is mainly for its flexibility of using its combining forms, or roots-words and suffixes. Also Greek endings were used to form new ideas of medical terminology, and also to describe and talk about medical instruments.

Latin continued to be the language of science up to the 18th century, in that era, all medical books and texts were composed in Latin.

Medical English

The role of general English and its effects on medical English, has been best expressed by the term lingua-franca, which shows English language as an instrument of communication in the world. Today English is considered as the language of research, this is entirely true when we look at the language of medicine. The English for medical purposes has become of international concerns. We noticed that even in countries where English was not used as the mother tongue, we find all the medical publications were often published in English. This is a part from the international conferences.

The term English for medical purposes, or as usually abbreviated as EMP, refers to the English designed especially for health care. (Maher, 1986 b) states that "an EMP course is designed to meet the specific English language needs of medical learners, and therefore, deals with the themes and topics related to medical field."

In medical English register we find some words in daily life are represented by quite different terms, such as delivery for birth, hemorrhage for bleeding, and uterus for womb, vertigo for dizziness and syncope for fainting.

Studying medical English, without opening English language text book is a disaster that has been proved by the English course they studied, which is lower in level than other courses they have studied; this will have the negative effects on medical English proficiency. Those, who have not received proper English training and proficiency, usually lack proper medical education. Therefore, raising medical English has strongly connected with raising the level of general English which prepares them to receive adequate medical English.

Romich (2002:23) stated "studying medical terminology is like learning a new language." At the first glance, the words of medical terms look strange and complicated. However, if a learner understands the main guide-line that governs the medical language, then he becomes familiar of how medical terms are constructed and understood.

Generally, medical English has a good deal of popularity, since the number of people involved in the field has dramatically increased. As a result of increasing numbers, a new language has come into being. Students and researchers need to have familiarity with the scientific language, and need to study medical English text books, but that also will not be possible unless they have some sort of command over the general English.

The medical language has always been described as difficult to understand and obscure for a lay person who has nothing to do with the medical field, except that he is a patient, who suffers from a certain disease. Modern medical practice emphasized that a patient should be informed about his health condition, in order to do that a medical practitioner has to avoid using a language that is like a puzzle for a lay patient, therefore, a need for translating medical terms into general language is a necessity. By doing so, people or patients are allowed to participate in managing their health problems.

When we form new terms in medical terminology, the new created term becomes a part of the general language, which can be used in everyday life. There is a close relationship, or to be exact a narrow gap between the language of medicine and the general language. It will be noted that, the language of science constitutes approximately three quarters of the written publications of the general language in each nation.

The general language, which will be later called the lay language, serves all its users, with their different levels, while the language of science requires a certain level of education, and it serves a specific sector. The difference

between the two languages also lies in the fact that the names and terms in the medical language only indicate their meaning, and can only be identified by those who study it. While the general language its vocabulary and words are open to many interpretations.

Knowledge of the word-formation and word-analysis facilitates and pave the way for a new learner to manage medical terminology effectively. The flexibility of the medical terminology can be seen not only in forming or coining new terms, but its ability to name new devices, diseases and symptoms.

Rules of Formation in Medical Terms

Roots of medical terms are the core in medical word, usually the roots provide the fundamental meaning of the medical word, but they do not provide a complete sense of meaning for the medical word, they only name an organ or organs such as:

Derm ---------- skin
Aden ----------gland
Onc ---------- tumor

The root becomes a medical term when a Latin suffix is attached to it, such as:
Tonsil+ ectomy , tonsillectomy, which indicates removal of the tonsils
Append+ itis

Appenditis which means inflammation of the appendix
Thyroid: gland + ectomy

Thyroidectomy which indicates removal or cutting out of the thyroid gland
Combining Vowels:
Greek source

The combining vowel is the letter /o/ which usually is attached to the word, when the letter/o/ is attached to the root then the root is no longer root, instead it is called combining form.

Examples of the function of the combining vowel/o/

1-	- O -	Cardi+	/O/	→	cardio
	↓	↓			↓
	C.V	Root	C.V		Combining form

The vowel /o/ is removed or crossed out because the suffix –itis starts with a vowel letter –i- therefore, no two vowel letters are allowed in medical terminology, and as a result the combining vowel /o/ is removed. The correct way of writing is carditis and not cardioitis. Whereas in cardiology the combining vowel /o/ is not crossed out because the suffix –logy does not start with a vowel letter

The combining vowel is usually an /o/ written between two slashes /o /. It has no apparent function, but it connects the root with the suffix.

Division of medical terms

Hemat/o/ logy

Hemat	/O/	Logy
↓	↓	↓
Root	C.V	Suffix

Hematology means study of blood, in the above example the vowel /o/ only connects the root hemat to the suffix –logy, in the next example we notice the absence of the combining vowel /o/

Medical term without combining vowel /o/

Hemat+itis

Hemat	itis
↓	↓
Root	Suffix

Hematitis is the inflammation of blood, there is no combining vowel in the mentioned medical term. When the /o/ is written immediately after the root, then the root is renamed as a combining form. It indicates the word root is ready now to be combined with any suffix to form a full medical term. The difference between the combining form and the root is that root is not followed by slash/o/.

Prefixes:

Attached to the beginning of the medical words, they modify the meaning of the medical terms; they usually indicate size, quantity, position and location. The usual pattern of prefix is to be placed before the root then followed by a suffix. This pattern is commonly used in most of the medical term terminology.

Constructed Medical Terms:

perirenal
Prefix + root + suffix

Prefix +	Root +	suffix
↓	↓	↓
Peri around	Ren/o	- al
	Kidney	Related to

The entire medical term is :perirenal, the meaning is located or (related to) around the kidney. The lay language carry completely different meaning in specific language, such as abnormal, disorder and problem, they all indicate disease
There is a third pattern that is:

Medical term with two roots

Root + root + suffix
Electrocardiogram

Root +	Root +	suffix
↓	↓	↓
Electr	Cardi	Gram
Electricity	Heart	Record

The entire meaning of the term is record of electricity of the heart, and it is usually abbreviated as ECG. It is an examination that displays the patient's heartbeat; it also measures the electrical activity in the heart. In the above medical term we noticed the repetition of the vowel /o/ which indicates two roots, hence a root when it turns into a combining form it always ends with an/o/, therefore, the vowel indicates a root and the two vowels also indicate two roots.

Another example is:

A two-root medical terms

Electroencephalogram		
Root +	Root +	suffix
↓	↓	↓
Electr	Encephala	Gram
Electricity	Brain	Record

This long medical term also has two roots indicated by the combining vowel at the end of each root. The combining form electr/o means electricity usually found in the human body, the other combining form is encephala/o which means brain and the suffix –gram indicates record or image. The entire medical term means record of electricity of the brain. It is a neurological test usually done when certain diseases are suspected such as epilepsy which is a state of loss of consciousness associated with excessive electrical activity in the brain.

Very rarely we encounter a medical term without a root, which is formed of a prefix and a suffix only, without a root, although the word root constitutes a medical term to the extent that some medical terminology scholars stated that there is no medical terms without a root. An example of a medical term without a root is:

A medical term without a root ***Anemia***

Prefix +	Suffix
↓	↓
An	Emia
Deficiency	Blood

It is clearly seen that there is no root in the above example. The entire meaning of the term anemia is deficiency of red blood cell, and medical practitioners shortened it to deficiency of blood or shortage of amount of blood.

Medical term with a root and a suffix

Appendectomy	
Root +	suffix
↓	↓
Append	Ectomy
Appendix	Removal

Is to start with the suffix –ectomy and give the equivalent English meaning which is removal or cutting out or excision, then go back to the word root "appendic" which means appendix, now the entire medical term appendectomy is removal of the appendix. In case the medical term is constituted of more than one root the same pattern is also followed such as:

		Osteoarthritis	
Root +	/O/	Root +	suffix
↓	↓	↓	↓
Oste	C.V	Arthr	Itis
Bone		Joint	Inflammation

Oste is root the /o/ is combining vowel arthr is another root, as we see the above medical term is constituted of two roots, therefore, the same pattern of getting the English equivalent meaning is followed. We start with the suffix "itis' which means inflammation then we go back to the first root "oste" which means bone, then move to the second root " arthr" which means joints, now the meaning of the medical term is inflammation of bone and joints.

As we previously mentioned there are some medical terms do not the flow the patterns, that mainly due to their nature, for they built from ancient word roots, and have to be learnt individually, such as the diseases cholera, typhus and eczema, such medical terms their meaning can only be obtained from their etymology. Luckily such medical terms are very few, and almost viewed as exception, for instance, the medical term diagnosis, can be divided and referred back to its components parts but the entire meaning of the divided medical term has no sense or complete meaning but rather sounds strange if we rely in getting the meaning on basic elements of the term, an example to illustrate that is as follow:

Medical term with prefix, roots and suffix. Diagnosis

Prefix +	Root +	Suffix
↓	↓	↓
Dia	Gno	- sis
Complete	knowledge	State of

According to the meaning explained in the above example, the prefix dia means complete, the root gnos means knowledge and the suffix –sis means state of, now according to the components of which the medical term is composed the meaning is as follow: state of complete knowledge, the definition seems a little bit confusing and not satisfactory, whereas the proper and true meaning of the term is state of complete knowledge of a disease, it would be noted the word disease is not mentioned in the medical term component but it is added to complete the meaning.

Another example is the medical term prognosis, if the term is divided and broken into its component parts it would never give proper meaning, pro means before, gnos means knowledge and the suffix –sis is state, if we follow the division we will have this meaning: the state of before the knowledge, a definition which makes no sense, whereas the true meaning is outcome of treatment or prediction of treatment after conducting laboratory medical tests.

Prognosis		
Prefix +	Root +	Suffix
↓	↓	↓
Pro	gno	- sis
Before	Knowledge	State of

Prognosis

To conclude, the referred above medical terms are to be taken and understood in their medical contexts, and never subject to any word roots or etymology of their ancient Greek or Latin origin.

Unconstructed Medical Terms:

The mentioned above examples are all called constructed medical terms in which the English equivalent meaning is based on the construction of the medical terms based of the medical terms components that constitute the basic elements of the medical terms. Medical students are sometimes encounter other medical terms in which their meanings cannot be inferred from the basic elements of the terms, such medical terms are called unconstructed medical terms.

They are the terms which are not constructed from a combination of word parts, these are words derived from other languages, words derived from names of people such as term Pasteurize which refers to the process of heating milk to a temperature that kills microorganisms. This term derived from its inventor Louis Pasteur, and some other diseases which named after the discoverers. Example of medical terms named after their discoverers are Crohn's disease, it is an inflammatory disease of the digestive system, then Parkinson's a disease which was named after James Parkinson it is a nervous disease affects the human body, characterized by slurred speech, expression less face, shaking of limbs and slow movement.

Hodgkin's disease or lymphoma, it is a cancer that usually strikes the lymph nodes or the immune system. A medical student may come across these diseases or are now considered as essential part of medical terms. Since they are merely names of the discoverers they do not subject to any patterns of medical terms.

Medical terms can be classified into one-word root, two-word roots. The formation of the medical terms for a lay-language student may seem to be uninteresting, in the beginning a student feels frustrated and at a loss, especially when he comes to know there are some names of the diseases which hide a story in their names, in such a case knowledge of the word-formation will not give the exact meaning, and here emerges the necessity of having knowledge of the history of Greek-Latin medicine and their mythology. That historical, background, will enable them to look, and understand, certain names from different point of view and prospective.

There is another important issue, which deserves to be shed light on and discussed, is that we need to be sure of the meaning of the medical terms, which we are using, and to avoid any possible ambiguity, for the ambiguity or misunderstanding of any medical terms causes a disaster.

As we stated earlier studying medical terminology is similar to learning a new language, the first step in learning the language of medicine is to know and understand the skills of how to divide the components of medical terminology into their word-parts, the skill which is known as breaking and naming each part. The medical terms, whether simple or complex can be broken down, then can be easily understood.

Up to now, we discuss a medical terminology of one root, a one-rooted medical term. But there are medical terms of two roots, or more, these two-rooted medical terms, are usually long and complicated ones. An example of the medical terms of two roots is: *electrocardiogram*. In analyzing this term, we say there are two combining forms, one is *electr/o*, which means electricity that is usually the electricity in the body, the other root is *cardi/o*, which means the heart, and the suffix –gram, that is record. In reading such a long term of two roots, we start from the right, that is the suffix *–gram*, then we jump to the left part of the medical term that is the first root *electr/o*, then we move to the middle part of the term, that is *cardi/o*. therefore, the entire meaning of the medical term, will be record of the electricity in the heart, a test or an examination that is usually done for those who suffer from heart disorders. The long term mentioned above electrocardiogram, is usually, abbreviated in the hospitals as ECG, E stands for electricity, C stands for cardi/o, and G stands for gram.

Another example of the two-rooted medical term is: *electroencephalogram*, the entire meaning of the medical term is the record of electricity in the brain, the root or combining form encephala/o means brain, which is also abbreviated as EEG. The first E stands for electricity, the second E stands for encephala/o which means the human brain, and the third G stands for gram, which also means record, it is an examination which is usually carried out for those patients, who suffer from brain tumors and disorders.

Tools of the Study

The researcher uses a questionnaire as a tool for collecting the data related to this paper. The questionnaire was distributed to 350 students of medicine, pharmacy and applied sciences.

5. Analysis of the Questionnaire

Major * The English course is relevant to the medical studies Cross tabulation

		The English course is relevant to the medical studies					Total
		Highly disagree	Disagree	Cannot decide	Agree	Highly agree	
Major	Medicine	76	54	14	8	5	157
	Pharmacy	43	38	4	2	1	88
	Applied Sciences	44	50	5	3	3	105
Total		163	142	23	13	9	350

From the above table the researcher assumes that 87.2% of the total number of the participants of the three main specialties, Medicine, Pharmacy and Applied medical sciences, confirmed that the current English language programs they study are not related to their majors. To conclude we confirm that there is an agreement among all respondents that their English language course are of a general type and are not relevant to their area of studies.

Item (2) of the questionnaire stated that the English language courses are based on medical English. For this question 132 respondents of medicine were indicated that the English courses they study are not based on medical English, in other words the courses are of general nature, 16 respondents could not decide, and only 9 respondents see that the English courses are based on medical English. The same item was answered by 88 pharmacy respondents, 81 were disagreed, and they indicated that their English courses are not based on medical English. Only 4 respondents could not decide, and only 3 respondents see that the English courses are based on medical English. Item (2) of the questionnaire is attempted by Applied Medical Sciences, 92 respondents indicated that the English courses are not based on medical English. 27 respondents could not decide, and 18 respondents see that their English courses are built on medical English.

Table 2: Illustrates item (2) the English language courses are based on medical English

		The English language courses at the college are based on medical English					Total
		Highly disagree	Disagree	Cannot decide	Agree	Highly agree	
Major	Medicine	74	58	16	6	3	157
	Pharmacy	44	37	4	3	0	88
	Applied Sciences	43	49	7	3	3	105
Total		161	144	27	12	6	350

Table (2) clearly illustrates that the English language courses taught to the students of medicine, pharmacy and applied medical sciences are not based on medical English, respondents' answers supported item 2 of the questionnaire, that the general English courses ignores the basic elements of medical language.

Table 3: Illustrates better understanding in case Arabic is used as a medium of instructions

		You understand better if you are instructed in your mother tongue that is Arabic					Total
		Highly disagree	Disagree	Cannot decide	Agree	Highly agree	
Major	Medicine	2	4	27	76	48	157
	Pharmacy	1	2	15	55	15	88
	Applied Sciences	3	3	11	67	21	105
Total		6	9	53	198	84	350

Item (10) of the questionnaire, also comes under the umbrella of the main hypothesis, the question suggests to the participants that their score in any exam will be high, only if the questions are translated. For this item the total number of the respondents is 350 of all majors, that respectively medicine, pharmacy and applied medical sciences. 303 of the entire participants indicated that their scores will be high in the exam in case the questions were translated into their mother language. This question was answered by 157 respondents of medicine; out of that number 132 respondents indicated that their scores would be rated high if the questions were translated into Arabic, whereas 18 respondents could not decide. The same question was attempted by pharmacy respondents, 81 respondents out of 88 did agree that their scores would be rated high if only the questions were translated, while only 7 respondents could not decide about the issue, and 8 respondents were disagreed. As for the applied medical sciences participants, 90 participants out of 105 respondents agreed that their scores would be rated high in case the exams questions were translated into Arabic. Out of 105 only 7 respondents ticked on "cannot decide" and only 8 respondents see that there would be vital differences in their scores in case the exam questions were translated into their mother tongue. From the respondents' answers, the researcher noticed that the students were not prepared well, or they lacked the natural tendencies of being instructed in English. Eventually, there is a gap between what the students learnt in their schools, and what they are studying now.

The results reflects the fact that in spite of the intensive course 20 hours a week, still respondents could not figure out properly the written questions. Weakness in English leads to weakness in their majors' subjects. The answers supported the main hypothesis that the medical terminology course is beyond the students' standard due to weakness in English, and that the English course they are studying needs to be revised and re-designed to cope with the students' majors, and to cope as well with the medical terminology course. In short weakness in English has its immediate impact on all the aspects of their academic learnings.

Table 4: Illustrates a need for inclusion of medical vocabulary in the language course

		The English program should include vocabularies that are similar to the ones you have encounter in your medical studies					Total
		Highly disagree	Disagree	Cannot decide	Agree	Highly agree	
Major	Medicine	3	3	14	79	58	157
	Pharmacy	0	1	6	54	27	88
	Applied Sciences	2	2	8	61	32	105
Total		5	6	28	194	117	350

Item (13) of the questionnaire, serves the second hypothesis, the question was answered by 350 respondents who constituted the total number of the participants, divided into the three main majors. 250 (71.4%) respondents of all the majors reported that their current English language course does not qualify them properly to conduct and carry out their medical tasks. 106 respondents (68%) reported their view of invalidity of their course as a means of conducting efficiently their medical tasks, whereas 22 respondents (14.0%) kept their opinion hidden by indicating their neutral stance towards the issue. Item (13) was also answered by pharmacy respondents 65 (73.8%) respondents out of 88 participants were disagreed that their current course is sufficient enough to conduct their medical tasks. 10 respondents (11%) have not expressed their opinion either negatively or positively. 79 respondents of Applied Medical Sciences (75%) reported that the course would not help them in conducting their medical tasks.

It is obvious that there is an agreement among most of the respondents with their different majors, that their current general English course has not played any role in helping them conducting and carrying out their numerous medical task.

6. Report Discussion

The data were analyzed in relation to the hypotheses of the study. The results showed that the findings indicated that the medical students find it difficult to cope with their medical terminology course, and other related medical studies, and that their English course was designed in such a pattern which is irrelevant to the other courses that medical students usually undergo. The tragedy is that there is no difference between their level when they joined as new students and their level when they passed the course.

References

[1] Sultan, Al-H. (2003). Teacher Preparation Program in Saudi Arabia: Trends and Challenges. TESOL Quarterly. 37(2).
[2] Shehdeh. F. (2010). Challenges of teaching English in the Arab world: whycan't EFL ipac.kast.edu.sa/eDoc/2011/195630_1pdf.
[3] Jackson, J. (2005). An inter-university, cross-disciplinary analysis of business education: perceptions of business faculty in Hong Kong. English for Specific Purposes, 24(3). Pp.293-306.
[4] Ministry of Education. The General aims of teahing English in Saudi Arabia. {online} available at http:/ www.mkgedu.gov.sa/vb/showthread.php?t=1329
[5] Rahman, M.M. (2011). ELT in Saudi Arabia: A study of Learners" Needs Analysis. Germany: LAP lambert Academic Publishing. P.2.
[6] Sayegh. & Rahman, A. (2009). Development of Public Education in the Kingdom of Saudi Arabia: Current Indicators and Future Dimensions. (unpublished) paper presented to the workshop held at the College of Education at King Saud University.
[7] ESP Learners' Needs: A case Study of Medicine Students at some Sudanese Universities. Fatah-ElrahmanDafa- Allah. A. M.
[8] Al-Gorashi, A. K. (1988). The English communication needs of military cadets in Saudi Arabia as perceived by junior officers in the Saudi Army and Air defense. Unpublished PhD dissertation. Indiana University.
[9] Al-Harabi, M. (2005), ESP target situation needs analysis: The English language communicative needs as perceived by the health professional in Riyadh area. Unpublished PhD dissertation, Athens: The University of Georgia.
[10] Al-Khatib, M.A. (2005). English in the workplace. An analysis of the communication needs of tourism and banking personnel. Asian EFL journal, (7), 175-195.
[11] Almulhim, A.M. (2001). An English language needs assessment of Saudi college.
[12] Javid- C.Z. (2011) EMP needs of medical Undergraduates in a Saudi Context. Kashmir Journal Research. 14 (1), 89-110.
[13] Assuhaimi, S. & Al-Barr, A.A. (1992). Medical students' attitudes towards medical education. Arabian Gulf Journal, 42/41-65
[14] Basturkmen, H. (1998). A needs analysis project at Kuwait University. English Teaching Fourm, 36(4). Retrieved September 10/2007/ from. http:// exchanges. Stste.gov/forum/vols/vol36/no 4/p2-htm.
[15] Bosher. S. &Smalkosk, K. (2002). From needs analysis to curriculum development: designing a course in health-care communication for immigrants students in the USA. English for Specific Purposes,21(1), 59-79.