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DESIGNING AND IMPLEMENTING AN ESP COURSE FOR MEDICAL STUDENTS: A STEP TOWARDS BUILDING UP A KNOWLEDGE SOCIETY

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and T.E.F.L

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To my dear mother and late father.

To Tewfik, my husband.

To my children, Alicia and Hacine.

To all my family.

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ABSTRACT

The need for English as a professional language in medicine is nowadays beyond doubt. Scientific literature and the internet are just two examples that reveal the overriding necessity for medical professionals to understand and express themselves in written and spoken English. For this reason, English education, not least ESP, has gained ground to become the most prominent branch of EFL teaching worldwide and our country is no exception. ESP courses in the Algerian university are programmed and offered in most, if not all, scientific departments. For the medical field, however; ESP is still at the experimental level; an optional ESP course was recently implemented which makes the task difficult, challenging, and lacking efficiency as for every first step.

The present investigation is a case study conducted in the Department of Medicine at Abou Bekr Belkaid University of Tlemcen with postgraduate medical students. It is meant to design a consistent ESP course to meet the requirements and exigencies of the newly-emerging knowledge society. It investigates medical students' needs and expectations, and the existing ESP teaching situation in order to sort out the difficulties and barriers, faced by both the teacher and the students, that hinder successful teaching and learning.

The purpose of this study is firstly, to propose the official implementation of an ESP course as part of medical students' curriculum, secondly to explore the ESP situation in the Department of Medicine through the identification of target students' needs, the elicitation of ESP teaching problems, and how to remedy to the existing lacks by the incorporation of new elements in the intended course to make it respond to global changes. In view of this, four chapters were set up; the first chapter introduces a review of the literature related to both ESP and the new concept of knowledge society, the second attempts to describe the target situation and the population involved in the study with more focus on the research instruments used and research methodology. The third chapter provides an analysis of the collected data. Based on the research findings, chapter four displays a set of recommendations and pedagogical proposals.

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KEY TO ABBREVIATIONS / ACRONYMS

CEIL : Centre d'Enseignement Intensif des Langues.

CHOP : Cyclophosphamide, Hydroxydaunomycin, Oncovin and Prednisone.

CXR : Chest X-Ray.

DEMS: Diplôme d'Edudes Médicales Spécialisées.

EAP: English for Academic Purposes.

EBE: English for Business and Economics.

EEP: English for Educational Purposes.

EFL: English as a Foreign Language.

EGP: English for General Purposes.

ELT: English Language Teaching.

EOP: English for Occupational Purposes.

ESP: English for Specific Purposes.

ESS: English for Social Studies (Sciences).

EST: English for Science and Technology.

EVP : English for Vocational Purposes.

GE: General English.

ICT: Information and Communication Technology.

ICU: Intensive Care Unit.

LAM: Lymphangiomyomatosis.

L1: Mother Tongue or First Language.

L2 : Second Language.

NIA: Needs Identification and Analysis.

OECD: Organization for Economic, Co-operation and Development.

SONATRACH: Société Nationale de Transformation des Hydrocarbures.

TEFL: Teaching English as a Foreign Language.

UN: United Nations.

UNESCO: United Nations Educational Scientific and Cultural Organization.

USA: United States of America.

GENERAL INTRODUCTION

GENERAL INTRODUCTION

The re-emergence of English from a *lingua franca* to a global language is nothing but an overt and direct result of the on-going globalization process. What is more, the globalization of English is further driven by the growing global economy. People from all walks of life around the world are getting involved in the global market of goods, jobs, science and technology. To fully participate in the economic, professional, scientific and technological arenas respectively, a good working knowledge of the English language imposes itself *de facto* and an excellent command of it is very likely to lead to career advancement. In the light of such growing importance, one should note that English education, not least, English for Specific Purposes; needs to respond positively to the newly-established world order by developing and designing adequate programmes and courses to better prepare both students and teachers to cope with the multi-dimensional aspects of the globalization process.

Within the globalization framework, the transition from a literate society to a knowledge society through tertiary education creates new and tremendously important demands and exigencies which cannot be attained without first and foremost a good command of the English language, mainly ESP. Scientific research and development of technologies are crucial activities in a knowledge and information-driven society. In this very specific context, it is common knowledge that over two thirds of the world's scientists write in English and that over three quarters of all information in the world's electronic retrieval system is stored in English. In view of this, ESP courses are called upon to take new responsibilities in knowledge society building.

As Algeria, like many other developing countries, is bound to 'bend to the globalization's will', ESP courses offered in our universities and the teaching of ESP itself have to be viewed and reviewed since they have always been subject of discussion, complain, and dissatisfaction from the part of both ESP teachers and students, despite their presence for a long time in almost all scientific Faculties and Departments.

The teaching of ESP is seen as a complex task and this complexity stems from its multi-disciplinary activity, ranging from syllabus and course design, materials production, teaching, assessing and evaluating. For this reason a large body of literature emerged in order to help ESP practitioners and guide them to make ESP courses more efficient and respond to global changes. Thus, the present research work calls into question the efficiency of the teaching of ESP in the Algerian university, and tries to diminish the hindering factors as a step to improve the teaching of ESP in the Algerian University, and facilitating the process of knowledge society building.

The study aims at investigating the ESP situation in the Department of Medicine at **ABOU BAKR BELKAID University** in order to identify medical postgraduate students' needs, sort out the teaching inconsistencies, and identify the most important elements in designing a consistent ESP course that meets both students' aspirations and the requirements of the newly-emerging knowledge society. Therefore, the purpose of this research is:

> ➢ To demonstrate the significance and importance of ESP courses in the medical field, and identify target students' needs and expectations.

> ➢ To elicit the ESP teaching/learning inconsistencies and their causes.

> ➢ To sort out the elements to be incorporated in the intended course to make it effective and remedy to the existing lacks. This is to think about:

> **How to reform the teaching of ESP in the Algerian University and make the ESP course an active factor in knowledge society building.**

This broad statement, led to the formulation of three research questions which the investigator tries to answer:

1- What do medical students need English for?

2- What are the teaching/learning barriers that hinder successful teaching and learning?

3- What are the ingredients that should be accounted for a consistent ESP course?

This would lead us to put forward the following hypotheses:

- In order to keep abreast of the latest scientific developments, Algerian medical doctors need first to develop their reading skills to be able to exploit medical literature be it web-retrieved or through books and magazines. They also need to develop listening and speaking skills so that to be active participants in international medical manifestations. Finally, they have to improve the writing skills to reach a wider international readership and more importantly because in the few coming years, any paper that is not written in English will have little chance to be read and published.

- Students' attitudes towards the ESP course are one of the most important elements inhibiting the teaching-learning process, The ESP teacher is the second factor that should be taken into consideration as well as the administrative actors.

- To have a good working knowledge of the English language, three elements are to be taken into consideration: the teacher, the learner, and the ESP course itself.

Framing this paper, chapter one spells out the important concepts related to the teaching of ESP, identifies its main branches, and highlights the difference between ESP and General English. It also gives some key notions about needs analysis and ESP course design, and the concept of the knowledge society, its emergence, and its requirements regarding the educational system.

Chapter two, in which the researcher selected a descriptive approach, aims primarily at providing descriptions and explanations of the target situation. It describes the situation and population under study, and displays the research instruments used to investigate the case.

The aim of the third chapter is to illustrate how ESP teaching is carried out in the department of Medicine, it strives to analyse both quantitatively and qualitatively the data obtained.

Chapter four is devoted to the recommendations proposed in the light of the results of the study. Taken into consideration, these suggestions may give the ESP course its share of attention and therefore improve the teaching of ESP in the Algerian university in general and in the Department of Medicine in particular.

CHAPTER ONE

THE ESP COURSE: A FACTOR IN KNOWLEDGE SOCIETY BUILDING

CHAPTER ONE

The ESP Course: A Factor in Knowledge Society Building

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1.1 INTRODUCTION

Formerly, English instruction was seen as a sign of prestige and a well-rounded education, now it becomes a necessity and obligation. It is widely acknowledged that English emerged as a world language in the post-world war period and this was mainly due to the important role played by the USA in many domains including the technological and scientific ones. These historical events gave birth to the TEFL industry with its branch, ESP which kept developing, expanding, and flourishing ever since.

The promotion of ESP teaching is further driven by the globalization process with its many requirements including the emergence and evolution of knowledge societies. Scientists and economists claim that the building up of knowledge societies is achieved through both the large use of the information and communication technologies for short ICTs, and the mastery of the English language, since 80% of the scientific information and knowledge are written and stored electronically in English. Hence, ESP courses become the sole medium and the most important factor in knowledge society building as they are designed and destined to researchers, scientists, economists, technologists and the like. Indeed, the ESP course acts as a hyphen to bridge the gap between a literate and a knowledge society.

Therefore, this chapter is concerned with a literature review; it is divided into two parts: aspects related to the teaching of ESP and practice where key notions about needs analysis and ESP course design are emphasized, as it also strives to shed some light on the new concept of knowledge society and its requirements as far as the teaching of ESP is concerned.

1.2 DEFINITIONS OF ESP

Researchers argue that all language teaching can be described as being for 'Specific Purposes' in the sense that most 'general' language courses are designed to enable students to use the foreign language for a variety of purposes such as passing an examination to satisfy a requirement for entry to higher studies. However, Candlin's (1978) advocacy of English for Special (Specific) Purposes has given a new version to English Language Teaching (ELT), course planning, and materials design. This new trend, in which the foreign language course should be tailored to the specific requirements of the learners, resulted not only in the production of a growing number of ESP courses for adult learners, but also in the emergence of ESP teaching as a learner-centred approach.

Nowadays, ESP can be referred to as the teaching of a specific genre of mainly scientific or technical English for students with specific goals, careers or fields of study. ESP meets the needs of mostly adult learners who need to learn a foreign language for use in their specific fields, such as science, technology, medicine, leisure, or academic learning.

Clear differences in how people interpret the meaning of ESP can be seen as cited in Anthony (1997: 9-10):

> **Some people described ESP as simply being the teaching of English for any purpose that could be specified. Others, however, were more precise, describing it as the teaching of English used in academic studies or the teaching of English for vocational or professional purposes.**

This means that some people claim a tight relation between ESP and the purpose of study, if the latter is clearly specified so there is a teaching of ESP, while others make a link between ESP and the context in which it is taught whether it be academic or professional.

Mackay and Mountford (1978: 2) write to this effect: *"ESP is generally used to refer to the teaching of English for a clearly utilitarian purpose."* The point is that learners should be taught English in a way that enables them to read textbooks written in English relevant to their field of specialism, or to use English in their future career. As Robinson (1991: 2) states:

> **Students study English not   because they   are   interested
> in   the   English Language   or   English   culture   as   such
> but because   they need English   for study or work purposes.**

For Robinson students study English not because they want to study it, but simply because they need it either in their studies or for professional advancement.

In the same vein, Basturkmen (2006: 18) asserts that:

> **In ESP, language   is learnt   not for its   own   sake   or   for
> the sake of gaining a general   education, but   to   smooth
> the path to   entry or greater linguistic efficiency in academic,
> professional or workplace   environments.**

This means that typically, ESP has functioned to help language learners cope with the features of language or to develop the competencies needed to function in a specific discipline, profession, or workplace.

According to the above definitions, one can say that ESP is goal-directed, it is an approach to language teaching based on learners' goals and reasons for learning a language as summarized by Hutchinson and Waters (1987: 19) who state, ***"ESP is an approach to language teaching in which all decisions as to content and method are based on the learner's reason for learning"*** It is then clearly stated that ESP is a new approach to language teaching based on students' needs.

1.3 GROWTH OF ESP

From the early 1960's, ESP has grown to become one of the most prominent areas of EFL teaching today. Its development is reflected in the increasing number of ESP courses offered all over the world. The ESP movement has shown a slow but definite growth over the past four decades. As stated by Hutchinson and Waters (1987: 6): ***"ESP was not a planned and coherent movement, but rather a phenomenon that grew out of a number of converging trends."*** The growth of ESP then was brought about by a combination of three important factors:

➢ The demands of a Brave New World generated by an age of enormous and unprecedented expansion in scientific, technical and economic activity on an international scale; those demands concern an international language, more specifically ***"… a restricted repertoire of words and expressions selected from the whole language because that restricted repertoire covers every requirement within a well-defined context, task or vocation."*** (Mackay and Mountford, 1978: 4). That is to say, there was the emergence of a new fringe of society that consists of scientists and technologists who need English to perform their jobs, the type of English they need was only a limited set of vocabulary, expressions and grammatical structures.

➢ A revolution in linguistics when new influential ideas began to emerge in the study of language. Whereas traditional linguists set out to describe the features of language, new studies began to focus on the ways in which language is used in real communication, the idea was that if language in different situations varies, then tailoring language instruction to meet the needs of learners in specific contexts is also possible.

➢ New developments in educational psychology also contributed to the rise of ESP, by emphasizing the central importance of the learners and their attitudes to learning. Learners were seen to employ different learning strategies, use different skills, and be motivated by different needs and interests. Therefore, focus on the learners' needs became equally paramount as the methods employed to disseminate linguistic knowledge. Designing specific courses to better meet these individual needs was a natural extension of this thinking.

The general effect of all this development was to exert pressure on the language teaching profession to deliver the required goods. Whereas English had previously decided its own destiny, it now became subject to the wishes, needs and demands of people other than language teachers. (Hutchinson & Waters, 1987)

1.4 CHARACTERISTICS OF ESP

Strevens (1988: 1-2) defined ESP by identifying its absolute and variable characteristics. His definition makes a distinction between four absolute and two variable characteristics:

➢ **Absolute characteristics**

ESP consists of English language teaching which is:

- designed to meet specified needs of the learner;
- related in content (i.e. in its themes and topics) to particular disciplines, occupations and activities;
- centred on the language appropriate to those activities in syntax, lexis, discourse, semantics, etc., and analysis of this discourse;
- in contrast with General English.

➢ **Variable characteristics**

ESP may be, but is not necessarily:

- restricted as to the language skills to be learned;
- not taught according to any pre-ordained methodology.

Dudley-Evans & St. John (1998: 4-5) modified Strevens's definition to postulate their own which is as follows:

➢ **Absolute Characteristics**

- ESP is defined to meet specific needs of the learner;
- ESP makes use of the underlying methodology and activities of the discipline it serves;
- ESP is centred on the language (grammar, lexis, and register), skills, discourse and genres appropriate to these activities.

➢ **Variable Characteristics**

- ESP may be related to or designed for specific disciplines;
- ESP may use, in specific teaching situations, a different methodology from that of general English;

- ESP is likely to be designed for adult learners, either at a tertiary level institution or in a professional work situation. It could, however, be for learners at secondary school level;
- ESP is generally designed for intermediate or advanced students;
- Most ESP courses assume some basic knowledge of the language system, but it can be used with beginners.

Dudley-Evans and St. John have removed the absolute characteristic that 'ESP is in contrast with General English' and added more variable characteristics. They assert that ESP is not necessarily related to a specific discipline or a certain age group. Furthermore, ESP is likely to be used with a different methodology from that of General English.

1.5 THE ESP-EGP DICHOTOMY

ESP, like any other language teaching enterprise, is based on ideas about the nature of language, learning, and teaching, it is; nevertheless, often contrasted with General English, and so one would expect the TEFL community to make a clear distinction between the two; however, the line between where General English courses stop and ESP courses start is very vague indeed. Trying to make a distinction between ESP and General English may be inappropriate and not easy as claimed by Strevens (1977, 10): ***"…. difficulties of drawing a line between general and special purposes is not easy to overcome…"***

This is to support Hutchinson and Waters' (1987:53) view when they say about the difference between ESP and EGP: ***"in theory nothing, in practice a great deal."***

In fact, the most important difference lies in the contrasted approaches themselves. That is to say, ESP is recognized as a learner-centred approach in which the learner, his needs and objectives are of paramount importance, while General English is seen as a language-centred approach which focuses on the study of the language from a general perspective covering all skills, target culture, and literature. In ESP, it is needs analysis that determines

which language skills are most needed by the students and the syllabus is designed accordingly. In this vein, Robinson (1980: 6) asserts:

> **The general with which we are contrasting the specific is that of General education for life, culture and literature oriented language course in which the language itself is the subject matter and the purpose of the course. The student of ESP , however , is learning English en route to the acquisition of some quite different body of knowledge and set of skills.**

In addition to that, General English courses are provided at different levels, i.e. in middle and secondary schools where pupils are taught all areas of the language such as phonology, syntax, and lexis. Furthermore these young learners are generally not aware of their need or objective in learning English, their sole aim is to pass examinations and tests as opposed to ESP courses which are offered to mostly adult learners who are aware of their needs to learn a language as explained by Hutchinson & Waters (1987: 5) who say: ***"What distinguishes ESP from General English is not the existence of a need as such but rather an awareness of the need."***

Basturkmen (2006) argues that what distinguishes ESP from General English is that the former is essentially a practical endeavour; it is goal-directed and has specific objectives to reach, she says:

> **Whereas General English teaching tends to set out from point A towards an often ... indeterminate destination ..... ESP aims to speed learners through to a known destination.**
> **(Basturkmen, 2006: 9)**

What can be said about the divergence of the two approaches is that ESP differs from General English not only in the nature of the learner and the course, but also in the aims and objectives of the instruction, and the subject matter as well.

1.6 BRANCHES OF ESP

Due to its development, ESP has been broken down into different types to suit different teaching situations. A major distinction is often drawn between EOP (English for Occupational Purposes), and EAP (English for Academic Purposes). In the 'Tree of ELT' (Hutchinson & Waters, 1987: 17), ESP is broken down into three branches:

a) English for Science and Technology (EST),

b) English for Business and Economics (EBE),

c) English for Social Studies (ESS).

Each of these subject areas is further divided into two types:

➤ English for Academic Purposes (EAP).

➤ English for Occupational Purposes (EOP) as shown in the following figure:
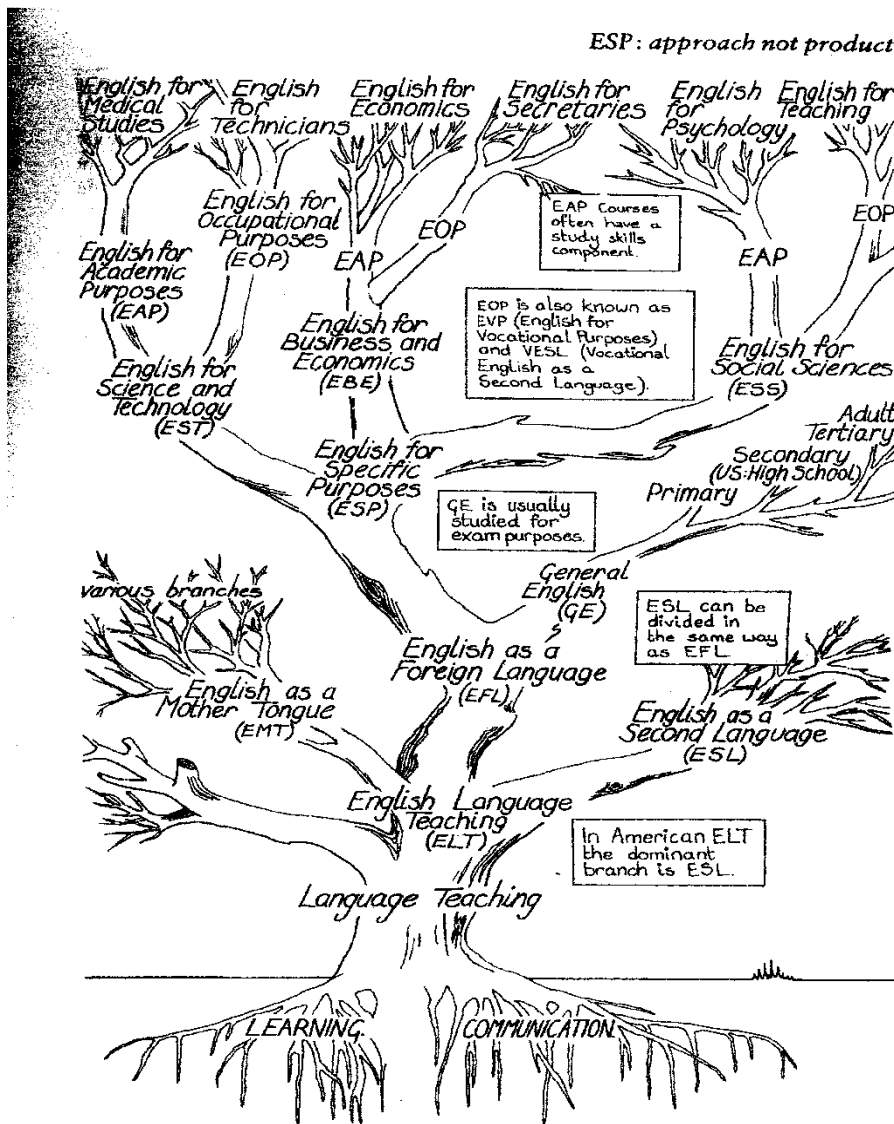
Figure 1.1: 'The Tree of ELT'
Source: Hutchinson & Waters 1987 : 17

Robinson (1991:3), regardless of the different branches that ESP has generated, emphasizes the context in which the ESP course is administered as shown in the figure:

```
                                    Pre-experience
                        EOP         Simultaneous / In-service
                                    Post-experience

    ESP                             For study in              Pre-study
                                    a specific discipline     In-study
                                                              Post-study

            EEP/EAP
                                    As a school subject       Independent
                                                              Integrated
```
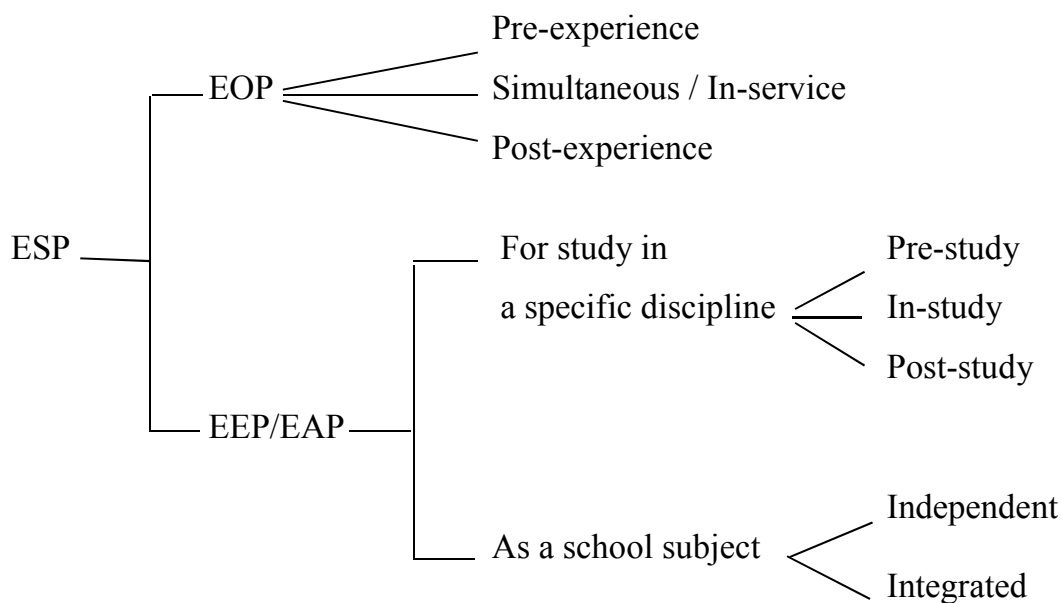
Figure 1.2: The ESP 'Family Tree'
Source: Robinson 1991:3

Within EOP, three types of language course are made distinct:

➢ Pre-experience: It describes the English courses that precede the training or work.

➢ Simultaneous: Means that the English course takes place alongside with the training / work.

➢ Post-experience: English instruction comes after the training.

As far as EAP is concerned, English instruction is either:

➢ Discipline-based: Here again, the language course can either precede (pre-study) or be simultaneous (in-study) with the specialisation, or follow the studies (post-study).

➢ A school subject, where the language course can be either isolated from the other courses (independent), or integrated in one or more courses.

1.6.1 English for Academic (Educational) Purposes (EAP / EEP)

EAP courses aim to help the students specialise in a particular field of study in an educational institution so as to enable them to read in the specialized field, listening to lectures, making oral presentations, writing reports, and keep in touch with the latest developments in their specialities. English in this context is used as a medium of study and not as a subject matter as supported by Robinson (1980: 7) who writes: *" English for Academic Purposes or study skills, i.e. how to study through the medium of English regardless of the subject matter or of the studies."* In the same vein Kennedy and Bolitho (1984: 4) assert that: *"EAP is taught generally within educational institutions to students needing English in their studies."*

1.6.2 English for Occupational (Vocational) Purposes (EOP/EVP)

In this context, English is required in employment situations. The teaching of English for Occupational Purposes meets the needs of the learner in order to practise his job, this learner needs to use English as part of his work or profession as explained by (Kennedy and Bolitho, 1984: 4): *" EOP is taught in a situation in which learners need to use English as part of their work or profession."*

The aim of EOP courses is to meet the everyday needs of working people. This type of courses would be useful for waiters or hotel employees who need English to perform their professional duties.

1.6.3 EAP VS EOP

The only difference that exists between EAP and EOP lies in the nature of the learner, that is to say, the learner in an EAP context is a student while in an EOP context he is an employee as supported by Robinson when she says: *" EAP is thus specific purpose language teaching, differentiated from EOP by the type of the learner : future or practising student as opposed to employee or worker."* (Robinson, 1991: 100).

Hutchinson and Waters (1987: 16); however, do note that there is not a clear-cut distinction between EAP and EOP: *".... people can work and study simultaneously; it is also likely that in many cases the language learnt for immediate use in a study environment will be used later when the student takes up, or returns to, a job"* .

Whether it is taught in an educational institution or a professional environment, one of the major types of ESP which is widely taught and in which the researcher is interested is that branch of ESP called English for Science and Technology, henceforth EST.

1.6.4   English for Science and Technology (EST)

In addition to giving a useful view of the various types of ESP, Robinson enhances the importance of EST which is highlighted by Hutchinson & Waters (1987: 9) who state: **"One area of activity has been particularly important   in the development of ESP: this   is the area usually known as EST."**

English for science and technology or EST is a sub category of the larger field of ESP dealing with scientific topics, it grew out of the demand of **"...scientists and technologists who need to learn English for a number of purposes connected with their specialities."** (Kennedy & Bolitho 1984: 6)

Some writers such as Kennedy & Bolitho (1984), and Hutchinson & Waters (1987) consider EST as an individual branch of ESP, others such as Robinson (1980, 1991) maintain that EST is a sub-branch shared by EAP and EOP depending on the area English would be used for.

Therefore, EST can be either activity-oriented when used in a professional context, or study-oriented if it is applied in a formal educational system.

The relationship between the three sub-branches of ESP, namely EAP, EOP, and EST has been subject of discussion amongst researchers, the following diagram shows how these branches are related to each other:

```
        ┌───────────┐
        │    ESP    │
        └─────┬─────┘
              │
        ┌─────▼─────┐
        │    EST    │
        └──┬─────┬──┘
           │     │
    ┌──────▼─┐ ┌─▼──────┐
    │  EAP   │ │  EOP   │
    └────────┘ └────────┘
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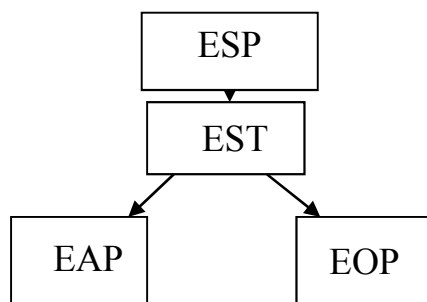
Figure 1.3: Subdivisions of ESP
Adapted from Hutchinson & Waters: "The Tree of ELT", 1987: 17

As shown in the diagram, in Hutchinson and Waters' view, EST is a sub-branch of ESP which can be taught either for academic or for occupational purposes. Robinson (1991: 2); however, proposes another classification displayed below:

```
          ┌───────────┐
          │    ESP    │
          └──┬─────┬──┘
             │     │
    ┌────────▼┐   ┌▼────────┐
    │   EAP   │   │   EOP   │
    └────────┬┘   └┬────────┘
             │     │
          ┌──▼─────▼──┐
          │    EST    │
          └───────────┘
```
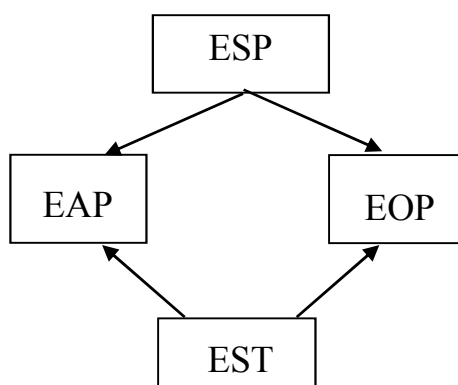
Figure 1.4: Subdivisions of ESP 2
Source: Robinson 1991: 2

Here, it is clearly seen that EST is a sub-branch shared by both EAP and EOP, while McDonough (1984), has a completely different opinion about the field of EST, the following diagram illustrates his view:

```
          ┌───────────┐
          │    ESP    │
          └──┬─────┬──┘
             │     │
    ┌────────▼┐   ┌▼────────┐
    │   EAP   │   │   EOP   │
    └────┬────┘   └─────────┘
         │
    ┌────▼────┐
    │   EST   │
    └─────────┘
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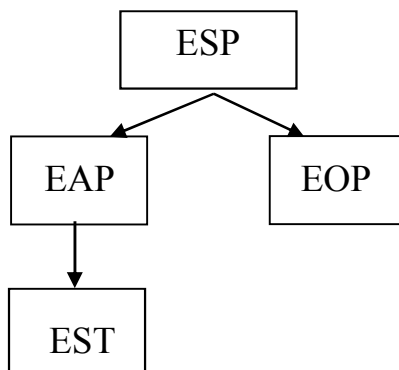
Figure 1.5: Subdivisions of ESP 3
Source: McDonough 1984: 6

According to the diagram, McDonough considers EST as a sub-branch of EAP claiming that EST is exclusively an Academic concern.

One of the EST courses that are becoming more and more demanded all over the world are those offered to medical students who feel the need for such courses to keep abreast of the latest discoveries and read medical documents.

1.6.5 English for Medical Sciences

English has gradually become the lingua franca of medical publications and conferences across the world with scholars from 'smaller' languages opting for English because of the greater scientific impact and prestige associated with a wide international audience. In this sense, Ammon and Hollinger (1992, quoted in Hemche, 2007: 12-13) state:

> **English has become so dominant as the   international Language of science, especially of scientific publications, that its use seems to be necessary if   one wants to be read or discussed outside of one's own country.**

The use of the English language in the scientific world is steadily increasing, and most specialized medical literature is published in English (Piquet et al, 1997). In his article on the study of English as an international language of Medicine, Villar (1988) gives the example of Latin America, where 80% of articles were written in English in the period he studied (1978 to 1982), even though Spanish and Portuguese, the languages normally spoken in Latin America, accounted for only 17% of the articles published. (Piquet et al, 1997: 98)

Furthermore, Webber who has taught English to medical students for several years at the University of Rome, states that ***"It is well known that 90% of scientific articles are published in English because they have a higher probability of being read and cited."*** (Webber 1993: 39, quoted in Piquet et al, 1997: 98)

Consequently, medical students are required to obtain ideas and information about medicine by listening to talks and lectures, viewing multimedia resources, and reading a variety of science and technology materials. **20**

In this context, the EST syllabus is more content-oriented and focuses mainly on the desired outcome that students can understand ideas and information in a wide range of medical materials. However, students are also required to write descriptions and reports in simple language as well as present information orally to their peers. Thus, they need to be familiar with the main scientific concepts and ideas of science in English as well as the register and related vocabulary. This means that students are expected to have a comprehensive knowledge on the topics and themes in EST. Mackay & Mountford (1978) added that it is evident where science is taught in English or science reference materials are in English, students need to acquire a considerably higher standard of language proficiency to enable them to comprehend and manipulate difficult intellectual material. In such situations success or failure in science is in large a standard measure of consequence of success or failure in English.

1.7 THE ESP TEACHING-LEARNING PROCESS

Though the learning content in an ESP approach may vary from that of General English, Hutchinson & Waters (1987) maintain that the ESP process is not different in kind from any other form of language teaching, in that it should be based in the first instance on principles of effective and efficient learning. In a similar vein, Strevens (1988: 44) notes that:

> **The methodologies of ESP conform to the same model of the language teaching / learning process as does any other form of language teaching. That is to say, the basic teaching activities are these:**
> - **Shaping the input.**
> - **Encouraging the learners' intention to learn.**
> - **Managing the learning strategies.**
> - **Promoting practice and use.**

The main feature of the ESP process is that it makes use of an underlying methodology and activities of the discipline it serves. In the ESP teaching-learning process, several elements have to be taken into consideration, the most important of which is the learner. The learner, his needs, goals, motivation and attitudes towards learning as well as his learning strategies are emphasized and seen as central to the ESP process.

Placing students in the centre of the learning process expects them to be active participants in their learning both in and out of the classroom. Students set the pace and use their own preferred learning strategies. Learning is more individualized than standardized and students are more open to new ideas. They take responsibility for their own actions and accept related consequences. (Kashani et al 2007: 87).

The ESP process also implies a change in the role of the teacher who becomes ***"… a knowledge provider and a facilitator of students' learning and no more as a resourceful authority."*** (Kashani et al 2007: 85).

Besides the roles assigned to the ESP teacher in the classroom, much of the work done by ESP teachers is concerned with designing appropriate courses for various groups of learners. Thus, whereas course design plays a relatively minor part in the life of General English teacher, courses here usually being determined either by tradition, choice of textbook or ministerial decree, for the ESP teacher, course design is often a substantial and important part of the workload. (Hutchinson & Waters, 1987)

1.8 ESP COURSE DESIGN

ESP course design is the product of a dynamic interaction between a number of elements: the results of the needs analysis, the course designer's approach to syllabus and methodology, and existing materials (if any) (Robinson, 1991).

Thus, designing an ESP course that suits target ESP groups is governed by many important and interrelated parameters which have great impact on the relevance and success of the ESP course, namely:

➢ The identification of needs.

➢ Syllabus design.

➢ Materials production.

➢ Teaching.

➢ Evaluation / Assessment.

Strevens (1977 :90) describes ESP courses as:

> **Those in which the aims and the context are**
> **determined principally or wholly not by criteria**
> **of general education but by functional and practical**
> **English language requirements of the learner.**

For Mumby (1978: 2, quoted in Benkaza 1999: 31) ESP courses are:

> **Those where the syllabus and the material are**
> **determined by the prior analysis of the communication**
> **needs of the learner.**

The above definitions share the view that the learners' needs should be identified first, and that the ESP teacher should organize the ESP course in line with those needs and requirements. These needs will, then, act as a guide to the design of a syllabus, course materials as well as teaching and testing methods.

1.8.1 Needs Identification and Analysis (NIA)

A key feature of ESP course design is that the syllabus is based on an analysis of the needs of the students, and as McDonough (1984: 29) writes:

> **The idea of analysing the language needs of the learner**
> **as a basis for course development has become almost**
> **synonymous with ESP.**

Hutchinson & Waters (1987: 53) too acknowledge the central importance of needs analysis for ESP, they add ***"… we would still maintain that any course should be based on an analysis of learner need."***

Thus, needs analysis is not only considered as a characteristic of ESP, but more than that, it is the basis upon which teaching materials will be selected, in this respect, Senhadje (1993, quoted in Hemche, 2007: 15) notes: ***"If you define the need, you define the content of the course."***

Needs analysis is seen as central to ESP because ESP course designers are faced with the criterion of time. As students in ESP classes often have restricted time to learn English, it makes sense to teach them only the bits of English they need. Thus the task of the ESP course designer is to identify the needs of the learner and design a course around them. In this sense, West says: ***"Most ESP courses are subject to time constraints, and time must be effectively utilized."*** (West, 1994, quoted in Basturkmen, 2006: 18)

It is to be noted that though the issue of needs analysis is central, it would be misleading to believe that it is exclusive to ESP as Robinson (1991: 7) states:

> **Needs analysis is generally regarded as criterial to ESP,**
> **Although ESP is by no means the only educational**
> **enterprise which makes use of it.**

1.8.1.1 Types of Needs

According to Hutchinson & Waters (1987), and Robinson (1980, 1991), the word "needs" is often used as an umbrella term covering two (02) types, namely: - Target Needs and – Learning Needs.

a Target Needs

Target needs represent what the learners need to do in the target situation, that is, what they have to be able to do at the end of their language course. In this sense, needs ***"are perhaps more appropriately described as "objectives."*** (Berwick,55:57, quoted in Robinson,1991: 7). Under this term, we can identify further divisions which are: Necessities, Lacks, and Wants.

- **Necessities :**

    These are the type of need determined by the demands of the target situation, that is, what the learner has to know in order to function effectively in the target situation.

- **Lacks :**

    They refer to what the learners do not know or cannot do in English. Lacks, then, are defined as being the gap between the existing language proficiency of the learners and the one required at the end of the language course.

- **Wants :**

    Wants are defined as being what the learners themselves would like to gain from the language course. This view of needs implies that the students may have personal aims in addition to (or even in opposition to) the requirements of their field of studies or jobs, in this sense, wants are often referred to as 'subjective needs'

b Learning Needs

Robinson (1991: 7) defines learning needs as ***"…what the learner needs to do to actually acquire the language."*** In the same vein, Hutchinson & Waters (1987) point out that a relevant needs analysis must take into consideration not only the target situation needs where the question "**What** the learners need to learn" is central, but also the learning needs, that is, "**How** the learners will learn".

Teachers need to determine which aspects of ESP learning will be included, emphasized, integrated and used as a core of course to address students' needs and interests. Learning needs seek information about the learners, their learning styles and strategies, language skills, selection of teaching materials, the setting and the time load.

It is only after the learners' needs have been identified that the ESP teacher can move on to the next step, i.e. syllabus design.

1.8.2 Syllabus Design

Hutchinson & Waters (1987: 80) define "Syllabus" as *"... a document which says what will (or at least what should) be learnt".* For Robinson (1991: 34) "syllabus" is *"a plan of work and is thus essentially for the teacher, as a guideline and context of class content."* These statements indicate that the syllabus first concerns the teacher, and that it helps him/her plan courses.

A further definition of "syllabus" is provided by Hutchinson & Waters (1987) who consider that there are various kinds of syllabus. One such syllabus is the "Evaluation syllabus" which they define as an official document that states what learners should know by the end of the course while the "Organisational syllabus" states "the order in which content is to be learnt".

Designing an ESP syllabus is not an easy task to fulfil because of its important and complex role. Yet, it clearly satisfies a lot of needs since it has a multi-functional purpose. Thus, syllabus designers need to be crucially aware of the different functions the syllabus fulfils so that it can be designed and used most appropriately. The syllabus is also an important document in the teaching/learning process because it provides a set of criteria for materials production, teaching, and testing; this is why, it should be flexible, open-ended, and subject to constant revision.

ESP learners need to use English appropriately in order to handle communication acts in the target situation. Therefore; syllabus designers, in this case the ESP teachers themselves, try to plan suitable teaching syllabuses and materials for the ESP teaching situations. Such syllabuses are constructed on the target needs as formulated by the students and analysed by ESP teachers and subject specialists, the fact that leads to syllabus relevance and a good selection of materials.

1.8.3 Materials Production

Materials writing is a fact of life for a large number of ESP teachers; however, in an ESP situation appropriate materials are most of the time not available as supported by Hutchinson & Waters (1987 : 106) who state: *" It is likely that a course tailored to the needs of specific group of learners will not be available," .*

Therefore, the ESP teacher has to devise materials which present an obviously useful area of the language so that learners can see the direct link between the course content and their needs. The production of such materials and suitable activities is not an easy task since the ESP teacher is neither a subject specialist nor a materials writer; besides, few teachers have had any training in the techniques and skills of materials production.

The ESP learner needs to acquire the linguistic repertoire and to handle the communicative acts related to the field he is/will working or studying in. This is why, the use of authentic materials is, generally, viewed as necessary in ESP teaching as claimed by Robinson (1991: 54) : *"A key concept ...felt to be particularly relevant for ESP, is that of authenticity."*

In order to help and guide ESP teachers in producing adequate materials, Hutchinson & Waters (1987: 106) assert that good materials help to organise the teaching-learning process, by providing a path through the complex mass of the language to be learnt, they also provide a stimulus to learning, in other words, they do not teach but, encourage learners to learn, they will; therefore, contain:

- Interesting (stimulating) texts;
- Enjoyable activities which engage the learners' thinking capacities;
- Opportunities for learners to use their existing knowledge and skills;
- Content which both learner and teacher can cope with.

1.8.4 Teaching

ESP teachers are said to be facing many problems. A number of these problems arose from the new task they are called upon to perform and for which the majority have received no training. In this respect, Strevens (1988: 41) describes the ESP teacher as ***"...a teacher of General English who has unexpectedly found him/herself required to teach students with special needs."*** That is to say, the ESP teacher is a teacher of General English who is assigned to teach learners with specific needs and has to accommodate and orientate himself to a new environment for which he has generally been ill-prepared.

Hutchinson & Waters (1987: 157); however, assert that the ESP teacher's role is one of many parts; ***"Indeed Swales (1985) prefers... to use the term 'ESP practitioner' ... It is likely that in addition to the normal functions of a classroom teacher, the ESP teacher will have to deal with needs analysis, syllabus design, materials writing or adaptation and evaluation."*** This means that the ESP teacher does not only teach, he/she is involved in designing, setting up and administering the ESP course , for this reason he is no more called a 'teacher', but a 'practitioner'.

Accordingly, Robinson (1991) states that flexibility is a key quality needed by the ESP teacher, in order to change from being a general language teacher to being a specific purpose teacher, to cope with different groups of learners, and to perform different tasks in diverse contexts.

1.8.5 Evaluation / Assessment

An ESP course is supposed to be successful; it is set up to enable particular learners to do particular things with language. Since the ESP course has normally specified objectives, there is a need, as in any teaching situation, to assess how well these objectives have been served.

Hutchinson & Waters (1987) emphasize two levels of evaluation:

a Learner Assessment

Its main task is to check learners' performance and level of proficiency. Assessment is designed not only to measure students' performance and language knowledge, but also to elicit their linguistic problems and difficulties, and set the ground for remedies in the following courses.

b Course Evaluation

In this case, the ESP course itself is under evaluation. Course evaluation helps assess whether or not the course objectives are being met.

Both course and learner evaluation help providing the teacher with feedback on the ESP course, the teaching methods and materials, and whether new things and procedures should be involved in the ESP course design.

1.9 THE INFORMATION AGE

In the final quarter of the twentieth century, the imperial era of industrialization and modernization was fading away, and at century's turn, a new economy and society, emerging from the ashes of old industrialism, began to take shape.

This era was commonly labelled by historians, sociologists, and economists as "the post-industrial era" or the "information era" which predicted a shift from traditional industry that the Industrial Revolution brought through industrialization, to an economy based on the manipulation of information and its transfer through information and communication technologies.

1.9.1 Definitions of the Information Age

A simple definition of this new concept may be summarized as the age where information and knowledge are easily and freely transferred from an individual to another as explained:

> **The Information Age, also commonly known as the Computer Age or Information Era, is an idea that the current age will be characterized by the ability of individuals to transfer information freely, and to have instant access to knowledge that would have been difficult or impossible to find previously.**
> **(Wikipedia, 2010)**

In effect, the advent of the personal computer in the late 1970s and the transition to the internet reaching a global mass in the early 1990s has allowed rapid global communications, networking, and transfer of knowledge to shape modern society. In 1976, the American sociologist Daniel Bell first foretold this coming social age and invented a new phrase to describe it: the *knowledge society.* (Hargreaves, 2003)

Bell in his book: *The Coming of Post-Industrial Society,* heralded an economic shift from an industrial economy in which most people were engaged in producing things, to a post-industrial economy in which the workforce was increasingly concentrated in services, ideas, and communication. Much of this new emphasis, Bell argued, would be increasingly dependent on people and institutions that produced knowledge in science, technology, research, and development. "The post-industrial society," he said,

> **is a knowledge society in a double sense: first the sources of innovation are increasingly derived from research and development . . . second, the weight of the society….. is increasingly in the knowledge field.**
> **(Bell, 1980, quoted in Hargreaves, 2003: 15)**

Indeed, the information age is widely described by sociologists, economists, and researchers as being centrally concerned with knowledge and learning. The distinguishing feature of work in the information age is the centrality of knowledge, especially "transportable" general knowledge that is not specific to a single job or firm. The best jobs are those that require high levels of education (high levels of general knowledge) and provide opportunities to accumulate more knowledge. The best firms are those that create the best environment for teaching, learning, and interchanging information. It is knowledge and information that create flexibility in work, the capacity of firms to improve product lines, production processes, and marketing strategies, all with the same work force; and the capacity of workers to learn new processes as they change; to shift jobs several times in the course of a work life; to move geographically, and, if necessary, to learn entirely new vocations.(Carnoy & Castells quoted in Hargreaves, 2003)

1.9.2 The Concept of "Knowledge Society"

Before trying to define the new concept of knowledge society we need to understand that this concept is a very fluid one. In this sense, it is worth mentioning that the labels *"Information society"* and *"knowledge society"* are used by economists and researchers interchangeably making little distinction between knowledge and information.

In effect, a vision of what would come to be called the knowledge society began to crystallize in the post-second World War period as scientists, engineers, and mathematicians at this time were interested in information and communication control systems and new technologies.

Some sociologists associate the term 'knowledge society' to the use of information and communication technologies in the exploitation and manipulation of information as supported by Mansell (2008: 2) when he says:

> **…I use the label "the Information Society" to designate a particular vision of developments arising from the growing use of information and communication technologies (ICTs) in the acquisition, storage, and processing of information.**

The view that information societies are closely linked to the use of ICTs, resulting from an intensified pace of scientific and technological progress, is also highlighted by David & Foray (2003, quoted in Mansell 2008: 7). They claim:

> **Knowledge-based activities emerge when people, supported by information and communication technologies, interact in concerted efforts to co-produce (i.e. create and exchange) new knowledge.**

In the same lines, Rivoltella (2003, quoted in Cartelli, 2006: 55) asserts:

> **The information society today is one of the scenarios most frequently described by media. They speak about it as the great new revolution, after the revolutions of the alphabet and the press. The essential part of this revolution is technological and relates to new and original ways of elaborating and transmitting information.**

Others emphasize the relationship between the emergence of this new concept and its impact on the well-being of individuals and societal progress, they say:

> **The axial principle of the post-industrial society… is the centrality of theoretical knowledge and its new role, when codified, as the director of social change.** (Bell, 1980:501)

This view was echoed by the UNESCO's (2005:5) definition of knowledge society which says:

> **Knowledge societies are about capabilities to identify, produce, transform, disseminate and use information to build and apply knowledge for human development.**

In the same line of thought, Wikipedia's (2010) definition focuses on the prosperity and well-being of people it claims: ***"A Knowledge society 'creates, shares and uses knowledge for the prosperity and well-being of its people'".***

To sum up, one may define a knowledge society as a society in which information and knowledge are a driving force for economic progress and social development, and is characterized by an important use of the information and communication technologies that ease the exchange and transfer of knowledge**.**

1.9.3 Building up a knowledge society

In the words of Hargreaves (2003) the knowledge society has three dimensions:

> ➢ First, it comprises an expanded scientific, technical, and educational sphere.

> ➢ Second, it involves complex ways of processing and circulating knowledge and information in a service-based economy.

> ➢ Third, it entails basic changes in how corporate organizations function so that they enhance continuous innovation in products and services by creating systems, teams, and cultures that maximize the opportunities for mutual, spontaneous learning.

The second and third aspects of the knowledge society depend on having a sophisticated infrastructure of information and communication technology that makes all this learning faster and easier. This informational infrastructure, according to Hargreaves (2003: 18) is crucial not only in the leading economies, but also in those less-developed countries. In this respect, he claims:

> **… becoming electronically switched on to the knowledge or informational society is just as important a priority in less-developed countries. Those countries most excluded from the informational economy, or that have been the latest starters with information technology have fared least well economically.**

This means that, in order to build up a knowledge society, the less-developed countries face real challenges of expanding and developing their fields of science, technology, and education, to possess or develop an important infrastructure of transfer of knowledge and communication, and to promote and enhance opportunities for continuous learning and innovation; otherwise, they will be left behind as highlighted by Hargreaves (2003: 18): *" Nations and groups that do not or cannot participate in the informational society become increasingly marginalized by it."*

To possess a sophisticated infrastructure of information and communication technology is a good thing, but the key to a strong knowledge society is not only whether people can access information but also how well they can process that information, and here again lies the crucial role of teaching and learning. Sociologists point out that the knowledge society is a learning society; economic success and a culture of continuous innovation depend on the capacity of workers to keep learning themselves and from one another. A knowledge economy runs not on machine power but on brain power the power to think, learn, an innovate (Hargreaves, 2003). As the economist Drucker (1994 quoted in Hargreaves, 2003: 19) puts it:

> **Knowledge workers will give the emerging knowledge society its character, its leadership and its profile. They may not be the ruling class of the knowledge society, but they are already its leading class.**

Michael Fullan (2001), who is an international educational-change expert concludes that knowledge-creation using the world of ideas about learning, including the best of brain research, cognitive science, and so on must be at the heart of teaching and schooling. Leading social theorists and policy advisers of all political stripes are recognizing that high-quality public education is essential to developing knowledge workers and the knowledge society everywhere. Castells advises that education is the key quality of labour; the new producers of informational capitalism are those knowledge generators and information processors whose contribution is most valuable to the firm, the region and the national economy. (Hargreaves, 2003)

To sum up, it is worth mentioning the saying of Homer-Dixon (2000 quoted in Hargreaves, 2003: 22): ***"What the knowledge society needs, is lots of ingenuity."***

He defines ingenuity as:

> **ideas that can be applied to solve practical, technical and social problems, ….Ingenuity includes not only true new ideas, often called "innovation", but also ideas that though not fundamentally novel are nevertheless useful.**

Thus, the task of education is to teach people or to make them learn how to access and process information, how to use this information in building up new knowledge, how to be innovative, and flexible enough to cope with changing situations.

1.9.4 Education as an agent of social change

Of all the jobs, teaching has always been expected to create the human skills, to prepare people, nations, and countries to changes, new challenges and responsibilities. teachers have been expected to rescue children from poverty and destitution; to rebuild nationhood in the aftermath of war; to develop universal literacy as a platform for economic survival; to create skilled workers; to develop tolerance among people; to cultivate democratic sentiments; to keep developed nations economically competitive and help developing ones become so; and to eliminate drugs, and violence, and make restitution for the sins of the present generation by reshaping how educators prepare the generations of the future. Expectations for public education have always been high. In the 30 years following the Second World War, education in the world's leading economies was widely viewed as an investment in human capital, in scientific and technological development, in a commitment to progress. (Hargreaves, 2003)

Once again education is called upon to take new responsibilities in creating new skills and capacities that will enable individuals and organizations to survive and succeed in today's knowledge society. Teachers, more than anyone, are expected to build learning communities, create the knowledge society, and develop the capacities for innovation; flexibility and commitment to change that are essential to economic prosperity as supported by Hargreaves (2003: 2):

> **Teachers must take their place again among society's most respected Intellectuals, moving beyond the citadel of the classroom to being, and preparing their students to be, citizens of the world.**

Writers and policymakers of quite different ideological persuasions increasingly concur that a strong and improved public educational system is essential to producing a vigorous knowledge economy and to enabling poorer communities and countries to participate in and not be marginalized by it as supported by Hargreaves (2003: 21):

> **But schools and their teachers cannot and should not stand aside from their responsibilities to promote young people's opportunities in, engagements with, and inclusion within the high-skill world of knowledge, information, communication, and innovation.**

Here again, the role of schools and teachers is emphasized in creating and promoting a world of knowledge and preparing knowledge bases creators through teaching.

1.9.5 Teaching for the Knowledge Society

As it has been argued, the very profession that is so often said to be of vital importance for the knowledge economy is teaching. The knowledge society craves higher standards of learning and teaching and makes teaching a true learning profession as claimed by Hargreaves (2003: 9):

> **Teachers, more than anyone, are expected to build learning communities, create the knowledge society, and develop the capacities for innovation, flexibility and commitment to change that are essential to economic prosperity.**

According to Hargreaves (2003), to be the key agents who can bring the knowledge society into being, teachers today thus find themselves caught in a triangle of competing interests and imperatives:

➢ To be *catalysts* of the knowledge society and all the opportunity and prosperity it promises to bring;

➢ To be *counterpoints* for the knowledge society and its threats to inclusiveness, security and public life;

➢ To be *casualties* of the knowledge society in a world where escalating expectations for education are being met with standardized solutions provided at minimum cost.

The interactions and effects of the three forces shown in Figure 1.6 are shaping the nature of teaching as a profession in the knowledge society.

Counterpoints   **Catalysts**

**Teachers
and
Teaching**

Casualties
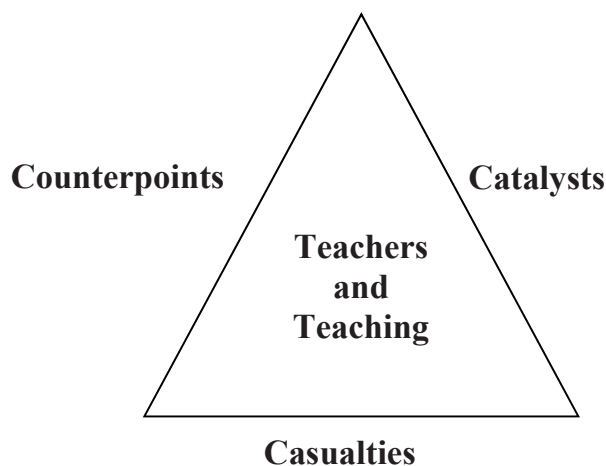
**Figure 1.6: The Knowledge Society Triangle
Source Hargreaves 2003: 17**

As catalysts of successful knowledge societies, teachers must be able to build a special kind of professionalism totally different from that old one, in which they had the autonomy to teach anything they liked in the ways they wished. They; rather, must review their old methods of teaching in order to foster and promote cognitive learning, develop new ways of teaching, and be committed to lifelong learning and professional development as supported by Hargreaves (2003: 24):

Teachers who are catalysts of the knowledge society must build a new professionalism where they:
• Promote deep cognitive learning;
• Learn to teach in ways they were not taught;
• Commit to continuous professional learning;
• Work and learn in collegial teams;
• Treat parents as partners in learning;
• Develop and draw on collective intelligence;
• Build a capacity for change and risk; and
• Foster trust in processes.

In effect, in the past, teachers learned the teaching job by watching the teachers who taught them. In today's knowledge society, teaching is technically more complex and wide-ranging than teaching has ever been. It draws on a base of research and experience about effective teaching that is always changing and expanding. Today's teachers therefore need to be committed to and continually engaged in pursuing, upgrading, self-monitoring, and reviewing their own professional learning.

 Moreover, knowledge society teachers need to be themselves creative and innovative to be able to develop ingenuity and creativity within their students, otherwise, the society will miss the information age. Hargreaves (2003: 1) sums it as follows:

We live in a knowledge economy, a knowledge society. Knowledge economies are stimulated and driven by creativity and ingenuity. Knowledge-society schools have to create these qualities; otherwise, their people and their nations will be left behind.

Teachers in the knowledge society are urged to commit themselves to standards-based learning in which all students achieve high standards of cognitive learning, employing a wide range of assessment techniques, and using computer-based and other information technology that enables students to gain access to information independently.

For many teachers, the impact of new developments in the science of learning has meant learning to teach differently from how they were taught as students, improving their teaching by themselves through trial and error in their own classes, working in collegial teams, developing capacities for risk-taking, and dealing with change, all this under the same heading: professional learning. In this respect, Hargreaves (2003: 25) says:

> **It is vital that teachers engage in action , inquiry, and problem-solving together in collegial teams or professional learning communities. Through such teams, teachers can undertake joint curriculum development, respond effectively and creatively to external reform imperatives, engage in collaborative action research, and analyze students' achievement data together in ways that benefit their students' learning.**

In all, in the words of Hargreaves (2003), teaching in and for the knowledge society fosters:

• Creativity

• Flexibility

• Problem-solving

• Ingenuity

• Collective intelligence

• Professional trust

• Risk-taking

• Continuous improvement.

1.9.6 ICTs and Education

It is clear that the pace of change in society is constantly accelerating; changes affect all domains of life and ways of living. Education, as already said, is the most important sector that is expected to be responsive to the changes that occur in society. These changes that will gain educational institutions have been foretold by Druker (1993 quoted in Zanker, 2006: 10) who claims:

> **What will be taught and learned; how it will be taught and learned; who will make use of schooling; and the position of school in society - all of this will change greatly during ensuing decades. Indeed, no other institution faces changes as radical as those that will transform the school.**

In fact, it is widely acknowledged that the most important thing that is changing our lives and characterizing the knowledge society is the growing use of information and communication technologies for short ICTs. To this effect, Cartelli (2006: 6) writes:

> **We all are persuaded that ICTs are strongly influencing our lives and are changing our way of thinking. Since their first   appearance in everyday life, many scholars have tried to find possible explanations for the effects they could   have   on mankind. They have also drafted possible scenarios for the evolution of human activities and ways of living under the influence of these new instruments.**

Indeed, interventions of the ICTs on knowledge construction are recognized, and as education is concerned with building knowledge and new skills and capacities within the learners, educationists and applied linguists in the leading countries see that technology is a tool that enables learners to freely access scientific knowledge, and eases knowledge construction processes, it; therefore, becomes an essential aid in education. ICTs are being looked at as the instrument for overcoming students' difficulties and helping them in obtaining better performances.

However, it is to be noted that, in the educational field, the main importance of this technological revolution is its effectiveness; that is, its capacity to impact school systems that brings a deep change in their configuration. The most common words describing this process are: modernization, integration, innovation, and extension. In other words technologies can aid systems to renovate teaching and learning practices (modernization), build up networking systems among different schools (integration), actualize structures and processes (innovation), and also make the personalization of learning possible outside the school building and school hours (extension). (Rivoltella, 2003 quoted in Cartelli, 2006)

1.9.7 The Role of Tertiary Education in Knowledge Society Building

Formerly, tertiary or higher education for most of people was synonymous to studies at universities, covering teaching and learning requiring high level intellectual skills in the humanities, sciences and social sciences, the preparation of students for entry to a limited number of professions such as medicine, engineering and law. Today, the scope and importance of tertiary education have changed significantly to become a major priority on national agendas.

Indeed, in the knowledge society, the imperative for countries is to raise higher-level employment skills, to sustain a globally competitive research base, and to improve knowledge dissemination to the benefit of society, this entails universities which are knowledge centres to respond positively to the needs of society and the economy. In this sense, the Organization for Economic, Co-operation and Development (OECD) (2008: 2) claims:

> **The widespread recognition that tertiary education is a major driver of economic competitiveness in an increasingly knowledge-driven global economy has made high-quality tertiary education more important than ever before.**

As it has become more common for universities, not only to engage in teaching and research, but also to provide consultancy services to industry and government and to contribute to national and regional economic and social development, substantial reforms are taking place in tertiary education systems worldwide to make them contribute to the global social and economic changes by generating the human capital and the knowledge base required in the knowledge society. Tertiary education today is much more diversified and encompasses new types of institutions, specialisations and skills to develop a closer relationship with the external world, including greater responsiveness to labour market needs, and enhance social and geographical access to a far wider range of occupational preparation. Tertiary education, the OECD (2008: 2) asserts:

…contributes to social and economic development through four major missions:

➢ **The formation of human capital (primarily through teaching);**
➢ **The building of knowledge bases (primarily through research and knowledge development);**
➢ **The dissemination and use of knowledge (primarily through interactions with knowledge users); and**
➢ **The maintenance of knowledge (inter-generational storage and transmission of knowledge).**

1.10 THE ESP COURSE AND ACCESS TO KNOWLEDGE

More than twenty years ago the eminent linguist Kashru (1987) noted that knowing English is like possessing the fabled Aladin's lamp which permits one to open the linguistic gates to international business, technology, science and travel. In short, English provides linguistic power in the sense that it has *de facto* become the language of science and technology. What is more is that the hegemony of this language is reinforced when it came to have such a dominant position on the Internet as supported by Crystal (1997:110): *" English is essential for progress as it provides the main means of access to high-tech communication and information".*

In the light of these changes, the Algerian researchers, scientists, doctors, and future doctors are not only required to use the ICTs, but also to have a solid command of the English language in order to access knowledge, exploit it properly and build up new knowledge. This process is regarded by scientists as the first and more important step in building up a knowledge society, first generalizing the use of a large amount of computers in all fields, second by providing, promoting and enhancing the teaching of English, not least, ESP. Indeed, the ESP course is the key to build up a knowledge society since it is offered to learners belonging to the scientific field, and enabling these learners with the sole and unique linguistic tool of the Internet and scientific publications is opening for them the linguistic path to knowledge. In this sense Crystal (1997:110) claims:

English is the medium of a great deal of the world's knowledge,
Especially in such areas as science and technology. And   access
To knowledge is the business of education.

Undoubtedly, education and educators are emphasized, and pointed out as the most important agents in knowledge dissemination and construction processes, and as most of the world's knowledge is available in English, the English language is; therefore, the only way to access knowledge, well process and exploit it, and develop a knowledge base.

In sum, it is true that the use of English will bring extraordinary advantages. The US President William J. Clinton said on a certain occasion that in the future, mankind could be divided into "educated and non-educated people", and that the imaginary boundary that would separate the two worlds would be knowledge of English and computers. (Ribes & Ros, 2006)

1.11 CONCLUSION

As it is widely acknowledged and recognized, ESP teaching is becoming more and more important in our globalized world with its many requirements and exigencies. ESP teaching needs to be refreshed and reformulated in order to be closer in line with the challenges facing the Algerian society. This chapter is, in fact, the theoretical part of an investigative case-study; it tries to shed   light on the key-concepts used in this work, and seeks to set out the various views and practices in ESP course design. The focus was also on demonstrating the relationship between enhancing and promoting ESP teaching and the building up of a knowledge society. It is acknowledged that almost all world's scientific knowledge is written and stored electronically in English, and without a good command of the English language, scientists, technologists, and economists are likely to miss their mission as researchers, generators of knowledge, and constructors of knowledge bases.

As in any investigation, the review of literature is always supported by an account of the situation and population studied as well as a description of the methodological approach and research design. This will be the task of the next chapter.

CHAPTER TWO

SITUATION ANALYSIS & RESEARCH DESIGN

2.1. INTRODUCTION

2.2. THE ESP SITUATION IN ALGERIA

2.2.1 Status of the ESP Course at University

2.2.2 Period of Instruction and Time Allocation

2.3. THE FACULTY OF MEDICINE

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2.4.1 Target Students' Profile

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2.4.4 Administrators' Profile

2.5 RESEARCH INSTRUMENT: THE CASE STUDY

2.5.1 Types of Case Study Research

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2.6 TRIANGULATION

2.6.1 Students and Subject Specialists' Questionnaires

2.6.2 ESP Teachers and Administrators' Interviews

2.6.3 Classroom Observation

2.7 CONCLUSION

2.1 INTRODUCTION

Despite the long period of ESP practices in many scientific and social sciences departments, and with the recognition that ESP courses are goal-directed, ESP teachers and learners in Algeria still complain about students' low achievement and their poor proficiency level in English. In the Faculty of Medicine, the implementation of ESP courses is at its first step, it is reflected through an optional course introduced recently and offered to both medical students and teachers. Thus, the present investigation attempts to focus on the ESP teaching/learning process in the Department of Medicine to remedy to lacks and deficiencies from the starting point, and sort out the most important elements in designing a consistent ESP course for medical students.

This chapter seeks to present the situation of ESP in the Algerian university by giving a well-rounded idea about its teaching in different departments at ABOU BAKR BELKAID university of Tlemcen with special emphasis on the ESP teaching situation in the Department of Medicine. Based on the theoretical framework displayed in chapter one, this chapter is narrower in scope, it describes the practical side of the study; its main concern lies in the description of the ESP situation in the Algerian university, more precisely in the scientific field, and the elicitation of the teaching deficiencies and the major reasons lying behind such negative outcomes.

This inquest starts by a detailed account on the situation and population under study; it also describes the selected research instruments used in gathering data and conducting this investigation.

2.2 THE ESP SITUATION IN ALGERIA

As the English language has become by all means the language of globalization, the internet, and of scientific and technological developments, its teaching and learning is consequently viewed as synonymous with economic and social progress.

In Algeria, as in many young developing countries, the educational authorities and policy-makers strive to develop and promote the status of English by introducing English education at all levels including middle and secondary ones. At university level, apart from those courses offered to students specialized in the English language, English is taught for more specific purposes; these ESP courses are offered in scientific and social sciences Departments such as Economics, Engineering, Biology and Psychology. The aim of such an enterprise is to equip students from scientific and technological streams with the linguistic tool that enables them to handle communication acts in the target situation, to achieve either academic or professional purposes. It is, nevertheless; to be mentioned that ESP courses in Algeria are offered not only in universities, but also in private schools, and some professional settings such as SONATRACH, the Algerian oil producing company, and luxury hotels such as the SHERATON.

2.2.1 Status of the ESP course at University

In Algerian higher educational institutions, Arabic and French languages are used as a medium of instruction while the role of English is purely functional; it is taught as a pedagogical support, for most of the documentation and scientific literature is available in English. Consequently, ESP courses are supposed to gain a certain status of importance; however, they are often underestimated because of administrative decisions, teachers' attitudes, and learners' behaviour as well.

From an administrative perspective, the ESP course, despite its relevant importance, holds a low status in the different curricula compared with the other subject-specific modules; its coefficient is of one only whereas those of the other modules vary from two to four or five depending on the special field.

In addition to this, curriculum developers give no particular attention to ESP courses and do not provide specifications for the course content and methodology. The ESP teacher, who is neither a syllabus designer nor a materials developer, is then free to teach whatever he/she sees or judges relevant to his/her students. It should also be noted that the administrative unawareness of what it means to be an ESP teacher is reflected in assigning the teaching of ESP to novice teachers for whom the teaching of this component is seen as something additional, unplanned and not so important, only done to acquire some experience. This is clearly explained by Al-Humaidi who claims:

> **A good example of this situation (Underestimation) is "English in the other departments" …..where teaching this component of the students' program of studies is generally the responsibility of junior members of staff and where it is a "slot-filling" subject in the teachers' time-tables. (Al-Humaidi, 2009: 1)**

2.2.2 Period of Instruction & Time Allocation

One important feature of the learning context is that of time. In this respect, it is a share knowledge that in designing a syllabus or a language course the question of how many hours are allocated to that teaching obviously has much to do with setting aims and objectives, and determining what level of attainment can be reached. The period of instruction and the number of hours inevitably determine the level of proficiency and also the content of the course.

At Abou Bakr Belkaid University, the time allotted to ESP courses differs according to the field and level of study. Therefore, students in different departments do not share the same time of ESP courses; in some departments ESP courses are offered at graduate level, in other departments, students receive these courses at both graduate and post-graduate levels, while in some others, English instruction never exists.

Moreover, most of the time, the session allocated in the time table is placed at the end of the day if not at the end of the week, this in itself signals the importance given to the course and the poor expectation of both the Administration as well as the students. The rate of absence in the English course is naturally the highest.

The following table shows the timing in terms of hours and years of study allocated to ESP in the Faculty of Sciences which comprises six (06) departments. The investigator has chosen the aforementioned Faculty because of its close link to the Faculty of Medicine since both of them belong to the field of sciences.

Departments	Time allotted to the teaching of English						
	Graduation					Post-graduation	
	1st year	2nd year	3rd year	4th year	5th year	1st year	2nd year
Biology	1h30	1h30	1h30	1h30	-	2h	?
Chemistry	1h30	1h30	1h30	1h30	-	1h.30	?
Agronomy	1h30	1h30	1h30	1h30	-	1h.30	?
Mathematics	1h30	1h30	1h30	1h30	-	1h.30	?
Physics	1h30	1h30	1h30	1h30	-	1h30	?
Earth Sciences	-	-	-	-	-	1h.30	?

**Table 2.1: Time allocated to the teaching of ESP
in the Faculty of Sciences.**

In the above table, the use of the dash represents the absence of the ESP course, while the question mark indicates that the number of hours of ESP instruction is judged and fixed by the teacher in charge of the magister. In addition to this, it is worth mentioning that the number of hours indicated in each department is variable, it depends, in fact, on the availability of ESP teachers; if the latters are available, the ESP course will be programmed, in the contrary case, English instruction is nullified.

The end product of this situation is, on one hand, an Algerian administration, English Departments, and target ones not caring about the teaching of ESP. The ESP teacher, on the other hand, whose attitudes are characterized either by condescension or reluctance, finish by feeling stressed, helpless whenever he/she has a lesson, and lacking administrative support. His/her self-esteem as a professional and as a human being is diminished and most of the time he/she quits the job since it is a part time one and not so motivating financially. The learner; as a consequence, does not pay much attention to the English course and regards it as an additional subject, even if it is compulsory.

In these same lines, it is to be mentioned that in 2009, the opening of English for Specific Purposes as a specialization in post-graduation at Tlemcen University was a very ambitious step demonstrating that the Algerian educational authorities are well-aware of the central role that English is playing nowadays, and are deploying efforts to cater for the teaching of this component, aiming at providing other faculties with well-trained and specialized teachers.

2.3 THE FACULTY OF MEDICINE

In 1989, the Faculty of Medicine of Tlemcen was called The Institute of Medical Sciences of Tlemcen which was under a double supervision: an administrative supervision of the University of Tlemcen, and a pedagogical one of the National Institute of Higher Studies in Medical Sciences of Oran. The year 1998 saw the official creation of the Faculty of Medicine of Tlemcen which became fully attached to Abou Bakr Belkaid University of Tlemcen. The faculty comprises three (03) departments:

1- The Department of Medicine.
2- The Department of Dental Surgery.
3- The Department of Pharmacy.

Enrolled students come from different neighbouring towns being Baccalaureate holders from Scientific and Mathematic streams; in the Department of Medicine, they go through a curriculum of seven (07) years to have a degree in Generalized Medicine.

This degree opens door for students to enter the professional life and become general practitioners, they can also continue their studies to become specialized in a specific field of Medicine.

In the department of Medicine, the curriculum is divided into three (03) main stages:

1- <u>From the 1st to the 3rd year</u>: A pre-clinic cycle where students receive a theoretical instruction.

2- <u>From the 4th to the 6th year</u>: the clinic cycle deals with diagnosing and treating diseases.

3- <u>The 7th year</u>: is a purely practical stage. Students are required to have full-time training sessions in hospitals.

Having gained the degree of Generalized Medicine, students aspiring to continue their studies have to pass a competitive examination to access the postgraduate level within a large choice of specializations such as: General surgery, Inner (internal) Medicine, Cardiology, Gynaecology, nuclear Medicine, and many other sub-fields.

At post-graduate level, students, who are also called 'residents', go through a curriculum varying from three (03) to five (05) years of studies depending on the specialization studied; they are at the same time postgraduate students, and part-time physicians practising in hospitals. By the end of this specialized medical instruction and training, the residents gain the 'DEMS' degree, called in French 'Diplôme d'Etudes Médicales Spécialisées' translated to English: 'Diploma of Specialized Medical Studies'; they are no more residents, but specialized doctors who can practise the medical profession either privately, or in governmental institutions.

2.4 SAMPLE POPULATION

As in any ESP situation, the investigation should be supported by subjects on whom the study is built. Because of the complexity of needs analysis, the multiplication of data sources would be of great value in obtaining valid results as supported by Robinson:

> **Who provides the information for the needs analysis?**
> **The sources of information are the potential students,**
> **the language - teaching institution (teachers and**
> **administrators)….we might also want to consider**
> **past students. (Robinson, 1991:11)**

Robinson claims that those who would provide useful data for the needs analysis process are the target students, and the teaching institution including both teachers and administrators; thus, to obtain information regarding students' needs and the situation of the ESP course at the Department of Medicine, the investigator will deal with the following population:

- ➢ **Target Students:** who are postgraduate medical students from different specializations. As the researcher has already mentioned, the ESP course is optional and offered to whoever wants to learn English, and since only postgraduates and medical teachers showed interest in the ESP course, the language teachers decided to form two classes one of postgraduates and the other of medical teachers.

Of these two classes the researcher chose postgraduates as subjects of the study because they are still students, but more advanced than the graduates, and therefore, more aware of the importance of the ESP course. Indeed, the degree of awareness is associated with the advancement in the target field, as supported by (Kennedy and Bolitho, 1984:13-14) when they assert:

> **The older the learner is, the more likely he is to have his**
> **own definition ideas on what and why he is learning English.**
> **The utility of learning English is likely to be more apparent.**

What explains the presence of teachers and postgraduates in the English course which is, the investigator still maintain, optional.

For the above reasons, the researcher has chosen postgraduate medical students and not graduates.

➢ **Subject Specialists** who are considered as:
  - Former medical students.
  - Medical practitioners.
  - And ESP students themselves.

➢ **ESP Teachers:** The teachers of English at the Department of Medicine are only two (02), this may look a small sample, it however covers all the ESP teachers at this department.

➢ **Administrators**: On one hand; the Dean of the Faculty of Medicine and the head of the Department of Medicine were chosen by the researcher to check their opinions on the ESP course.

On the other, the head of the English Section was also solicited to give her opinion about both the ESP course, and the ESP teachers in question.

2.4.1 Target Students' Profile

This study is concerned with second, third, fourth and fifth-year postgraduate medical students from Tlemcen University, Faculty of Medicine, Department of Medicine. The students involved in this investigation are from different levels of study, prepare different specializations, but are enrolled in the same ESP course. Twenty five (25) of them were randomly chosen by the investigator to answer the questionnaires handed out during the ESP course in the third term of the academic year (2009-2010); however, only fifteen (15) students answered and returned back the questionnaires while the majority of the remaining students started not attending the ESP course until the end of the year.

The subjects are in the age group of 26 to 32 years old, five of them are 5th year students specialized in general surgery, four other students are 3rd year residents specialized in gastroenterology, the remaining six students are specialized in nephrology; four of them are 4th year students while the two others are still in their 2nd year of study.

Before entering university, these ESP students, come from government schools; therefore, they share the same educational background. Arabic is their mother tongue, French is their first foreign language, and the language of instruction at university, while English is their second foreign language. They learned the English language during two years in the foundation school and three years at the secondary level, which makes a sum of five years. At university level; however, they had never received any kind of English instruction. These post-graduates, before starting the ESP course, went through an evaluation test which revealed, according to the ESP teacher, that they are false beginners in the English language.

2.4.2 Subject Specialists' Profile

The viewpoint of subject specialists in needs analysis is regarded as very important, if not more important than that of target students themselves for the needs in this situation are not immediate but rather future needs, for this reason the opinion of subject specialists, who are practitioners, medical teachers, and ESP students themselves, is highly needed.

To carry out the process of data collection, ten (10) subject specialists were chosen at random to check their different opinions. The informants are doctors specialized in gynaecology, inner medicine, nephrology, haematology, and general surgery. They are in the age group of 35 to 52 years old, and have practised the Medical profession for three (03) to twenty eight (28) years. Their teaching experience in the Faculty of Medicine varies from two (02) to fifteen (15) years.

2.4.3 ESP Teachers' Profile

Both of the ESP teachers in the Faculty of Medicine hold a 'licence' degree and are postgraduate students specialized in ESP. One of them is a volunteer teacher, while the second works in the Centre of Intensive Teaching of Languages for short CEIL, called in French: "Centre d'Enseignement Intensif des Langues". The first teacher has no teaching experience; he is in his first year of teaching, whereas the second counts some 10 years in teaching English in the aforementioned centre.

2.4.5 Administrators' Profile

As it is important to have the opinions of people directly concerned with the management of both departments (English and Medical ones), the investigator focused on the following informants:

- ➢ **The Dean of the Faculty of Medicine** who is a professor specialized in nuclear medicine. He has been a teacher in the Faculty for twenty eight (28) years, and dean of   the same Faculty since two (02) years.

- ➢ **The Head of the Department of Medicine**: She is a professor specialized in haematology who has been practising the medical profession for twenty six (26) years and teaching in the Faculty for twenty two (22) years. She is Head of the Department of Medicine since four (04) years.

- ➢ **The Head of the English Section** who holds a 'Doctorate' in Applied Linguistics and TEFL. Her teaching experience is of sixteen (16) years including seven (07) years of teaching ESP in the Departments of Biology, Economics, and Exact Sciences. She is head of the English Section since five (05) years.

2.5 RESEARCH INSTRUMENT: THE CASE STUDY

Case study is a type of research design and analysis, which Gall, Gall, and Borg (2003: 433) characterize as the ***"most widely used approach to qualitative research in education".*** Case Study is, in fact, an approach to research that enables the investigator to study a phenomenon as it occurs in its natural environment, providing in-depth and detailed examination of a single person or a few people. The goal of the case study is to provide an accurate and complete description of the case. In an attempt to define case studies, Stephen and Michael (1981:48) say:

> **Case studies are in-depth investigations of a given social unit resulting in a complete, well-organized picture of that unit. Depending upon the purpose, the scope… may concentrate upon specific factors or take in the totality of elements and events.**

The case study thus, enables the researcher to either globally depict a situation, or focus on specific factors or elements. Its aim from observing the particular is to reach the wider sphere and make generalizations as supported by Cohen and Manion (1989: 124-125):

> **Unlike the experimenter who manipulates variables to determine their causal significance or the surveyor who asks standardized questions of large, representative samples of individuals, the case study researcher typically observes the characteristics of an individual unit - a child, a clique, a class, a school or a community. The purpose of such observation is to probe deeply and to analyse intensively the multifarious phenomena that constitute the life cycle of the unit with a view to establishing generalisations about the wider population to which that unit belongs.**

In a similar vein, Merriam (1988: 16) defines the case study as an approach that either provides global and holistic descriptions of the phenomenon studied, or depicts the particularities and specificities relying on a variety of data sources, it is phrased as follows:

The qualitative case study can be defined as an intensive, holistic description and analysis of a single entity, phenomenon, or social unit. Case studies are particularistic, descriptive, and heuristic and rely heavily on inductive reasoning in handling multiple data sources.

Yin (2003); however, provides a definition of the case study that addresses issues of scope, data collection, and analysis strategies, he claims that this type of research is an empirical inquiry that investigates a contemporary phenomenon within its real-life context, it:

- copes with the technically distinctive situation in which there will be many more variables of interest than data points, and as one result

- relies on multiple sources of evidence, with data needing to converge in a triangulating fashion, and as another result

- benefits from the prior development of theoretical propositions to guide data collection and analysis.

2.5.1 Types of Case Study Research

The case study is used as an umbrella term covering many types of case study research designs. According to Stenhouse (1985), case study research covers four broad styles as shown in the following diagram:
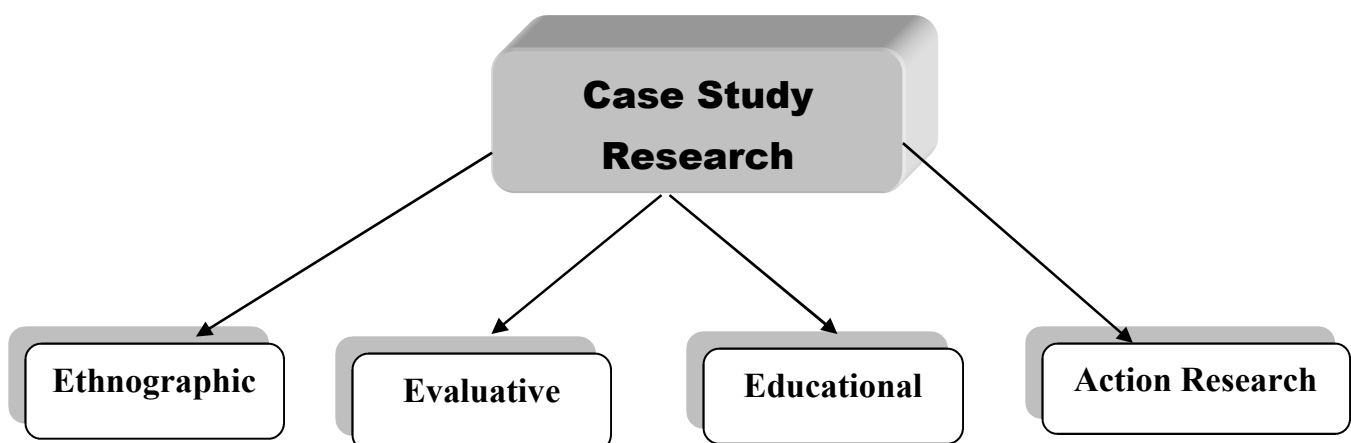
Figure 2.1: Types of Case Study Research
Adapted from Stenhouse (1985:49-50)

➢ **Ethnographic Case Study:** It is the in-depth study of a single case using participant observation supported by interviews as in cultural or social anthropology. *"…Ethnographic case study…calls into question the apparent understandings of the actors in the case and offers from the outsider's standpoint explanations that emphasize causal or structural patterns of which participants in the case are unaware."* (Stenhouse, 1985: 49)

➢ **Evaluative Case Study:** This type of research involves the in-depth study of a single case or collection of cases with the purpose of providing educational actors or decision-makers (administrators, teachers, parents,…) with the information that will help them to judge the merit and worth of policies, programmes, or institutions.

➢ **Educational Case Study:** Here the researcher is exclusively interested in the educational practices and how to enrich and improve them. *"Educational case study [is where] many researchers using case study methods are concerned neither with social theory nor with evaluative judgment, but rather with the understanding of educational action… They are concerned to enrich the thinking and discourse of educators either by the development of educational theory or by the refinement of prudence through the systematic and reflective documentation of evidence."* (Stenhouse, 1985: 50)

➢ **Case Study in Action Research:** The researcher is integrally involved in the case he is studying; he contributes to the development of the case. *"Case study in action research…is concerned with contributing to the development of the case or cases under study by feedback of information which can guide revision and refinement of the action."* (Stenhouse, 1985: 50)

About this four-style categorization established by Stenhouse; Sturman, who is an eminent Australian methodologist, added that while ethnographic case study and action research case study are usually single site studies, evaluative case study and educational case study may involve either single or multiple sites. (Sturman, 1994, quoted in Bassey, 1999)

Yin's categorization of the case study is in terms of three different forms which are illustrated in the diagram below:
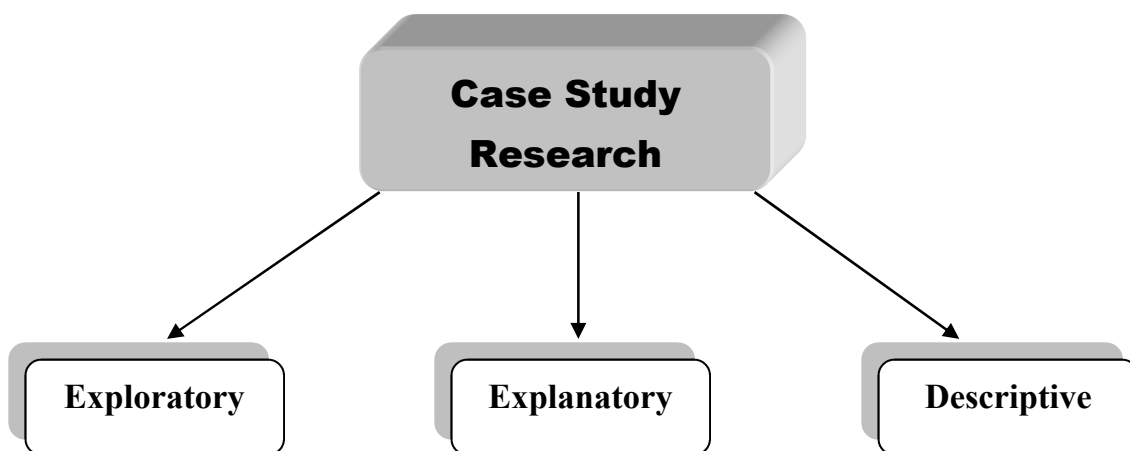
Figure 2.2: Other Types of case study Research
Adapted from Yin (1993: 5)

✓ **Exploratory case study:** As its name indicates, in this type the researcher tries to explore the situation he/she is investigating by gathering data mainly through observation, in Yin's words exploratory case study, explores a certain case to prepare the ground and raise questions for further research, he wrote: ***"Exploratory case study…is aimed at defining the questions and hypotheses of a subsequent (not necessarily case) study… It attempts to discover theory by directly observing a social phenomenon in its "raw" form."*** (Yin, 1993: 5)

✓ **Explanatory case study:** The researcher undertaking an explanatory case study is rather interested in giving explanations of what happened and why it happened. *"…explanatory case study…presents data bearing on cause-effect relationships – explaining which causes produced which effects"* (Yin, 1993:5)

✓ **Descriptive case study:** *"…presents a complete description of a phenomenon within its context."* (Yin, Ibid)

Stake (1995) instead, distinguished between *intrinsic case study* and *instrumental case study*, he based this distinction on the methods used to collect and analyse data, and these methods differ from one type to the other. He went on to write: *"I am making the distinction…because the methods we will use will be different, depending upon intrinsic and instrumental interests."* (Stake, 1995: 4)

By intrinsic case study, he pointed out research into a particular situation for its own sake regardless of outside concerns. *"The case is given. We are interested in it, not because studying it we learn about other cases or about some general problem, but because we need to learn about that particular case. We have an intrinsic interest in the case."* (Stake, 1995: 3)

On the other hand, by instrumental case study, he referred to research into one or more particular situations not because of the situation itself, but in order to understand an outside issue. *"This use of case study is to understand something else. Case study here is instrumental to accomplishing something other than understanding the particular case."* (Bassey, 1999: 30)

2.5.2 Features of Case Study Research

In addition to the existence of such varieties of case study research and the multiple methods used in each type, the characteristics of this type of research are also multiple and highlighted by different theorists, Adelman et al (1980: 49) reported that:

> **Case study research may be initially set up in one of two ways:**
> **i: An issue or hypothesis is given, and a bounded system (the case) is selected as an instance drawn from a class.**
> **ii: A 'bounded system' (the case) is given, within which issues are indicated, discovered or studied so that a tolerably full understanding of the case is possible.**

This means that in case study research we can either start by a theoretical issue, hypothesis, or question, choose a case to be studied, and conduct investigation to illuminate, prove, or disapprove that theory; or begin by investigating a situation, which itself calls for research, and try to have a full understanding of it to enrich theory, in other words, theory fuels and generates case study research, and the same type of research investigates and illuminates theory.

According to Merriam (1988), the major characteristics of case studies are the following:

- ✓ They involve the intensive study of an individual, family, group, institution, or other level that can be conceived of as a single unit.

- ✓ The information is highly detailed, comprehensive, and typically reported in a narrative form as opposed to the quantified scores on a dependent measure.

- ✓ They attempt to convey the nuances of the case, including specific contexts, extraneous influences, and special idiosyncratic details.

- ✓ The information they examine may be retrospective or archival.

In these same lines, it is to be noted that there are several features characterizing the case study that differ from one researcher to the other, each according to his views and practices, Hitchcock and Hughes (1995: 317) for instance consider that a case study has several hallmarks:

- It is concerned with a rich and vivid description of events relevant to the case.

- It provides a chronological narrative of events relevant to the case.

- It blends a description of events with the analysis of them.

- It focuses on individual actors or groups of actors, and seeks to understand their perceptions of events.

- It highlights specific events that are relevant to the case.

- The researcher is integrally involved in the case.

- An attempt is made to portray the richness of the case in writing up the report.

Hitchcock & Hughes in the last but one characteristic claim that the case study researcher is integrally involved in the case, they further suggest that the case study approach is particularly valuable when the researcher has little control over the events. (H&H, 1995: 322)

Undoubtedly, researchers diverge on the many features characterizing the case study research, they however have nearly the same view on the steps that the investigator should go through to conduct a case study; in this respect, Stephen & Michael (1981: 48-49) list five steps in conducting a case study research which are:

➢ 1- State the objectives.

➢ 2- Design the approach (What sources of data are available? What data collection methods will be used?).

➢ 3- Collect the data.

➢ 4- Organize the information to form a coherent, well-ordered reconstitution of the unit of study.

➢ 5- Report the results and discuss their significance.

The following diagram provides a visual display of the overall process of how to conduct case studies and other forms of qualitative research.

Ethical considerations
- Preparing IRB review protocols
- Negotiating access, permissions, informed consent, reciprocity, procedures
- Reporting

Research "problem" and Design
- Research objectives
- Conceptual or theoretical Framework
- Research questions
- Identifying context(s), case(s), units of analysis, sampling strategy, timeframe, etc.

Data collection
- Observing
- Interviewing
- Triangulating
- Collecting artifacts, etc.
- Keeping research journal/log

Data analysis
- Transcribing
- Sorting/organizing/ Managing database
- Creating conceptual maps
- Memoing
- Coding
- Comparing cases
- Reducing data/narrowing analysis
- Triangulating
- Pattern-matching
- Inducing themes
- Finding counterexamples (etc.)

Interpretation
- Identifying and Understanding key themes or patterns
- Considering rival explanations or data
- Drawing conclusions

Writing, reporting, and revising
- Determining Audience, genre
- Selecting representative evidence
- Displaying data
- Creating coherent, complete narrative or expository report
- Producing final report(s)

Verification/validation of interpretations
- Presenting (preliminary) observations/findings to participants/cases or other stakeholders (member-checking) if appropriate
- Getting feedback from others
- Seeking additional data or re-examining existing data, as needed

Understanding and generating theory

- Becoming familiar with relevant theoretical issues
- Situating case(s)/findings within existing research literature
- Finding/filling gaps in the literature
- Arriving at new insights based on data analysis/interpretation
- Relating findings to existing literature
- Identifying remaining or new issues to be explored in future

Figure 2.3: How to Conduct a Case Study: Crucial components, steps, and interactions.
Adapted from Duff (2008: 100)

The present investigation is carried out to identify postgraduate medical students' needs, and propose the implementation of an ESP course in the Department of Medicine as a step to build up a knowledge society. The researcher follows the above steps of conducting a case study research. It is carried out as follows:

➢ **Research "Problem" and Design:** the researcher has identified the problematic situation or the case to be studied, asked research questions, and stated the objectives of the investigation in the general introduction, and has devoted the theoretical chapter to the issues and concepts related to the area of focus. In the second chapter, the researcher attempted to describe the target situation and population, as well as the research tools used to investigate the case, while in the third one, she reported the results to be analysed.

➢ **Data Collection:** The process of data collection began by a direct observation of the ESP course in question and a whole description of it focusing on: course conduct and content, the teacher's and students' attitudes, students proficiency level, their motivation and attitude vis-à-vis the ESP course, and teacher-students interaction, then in the course of classroom observation, the investigator continues the plan to be used to collect data by administering two (02) questionnaires to the students under study and subject specialists, and two (02) interviews to both the ESP teachers and the administrators.

➢ **Data Analysis:** Although the case study is regarded by researchers as a qualitative approach to research, indeed it focuses on the exploration of the case rather than measurement of proof; the investigator has nevertheless, analyzed the data gathered by using a combination of both:

-       Quantitative research methods: through the analysis of information yielded by questionnaires. And

-       Qualitative research methods: By analyzing the data gathered through interviews and classroom observation,

➢   **Interpretation:** The researcher assumes that sufficient evidence (data) has been provided for the interpretations and conclusions drawn from the study. This data was essentially and primarily drawn from the target students' questionnaire to identify their lacks and difficulties in the language, target needs and expectations. The information yielded from subject specialists' questionnaire also helped the researcher compare views of students with those of their teachers, and identify their future needs. Classroom observation was a very effective way to check students' proficiency level, its progress over the ESP course and their motivation and attitudes as well. While the administrators' viewpoints on the ESP course and teachers assisted the researcher to identify and elicit the causes and effects of the whole ESP situation in the Department of Medicine.

It should be noted, at this level, that counter-examples from former research are provided and explained in this section to show differences among informants and prove theory.

➢   **Writing, reporting, and revising:** The researcher, in this phase, based the process of writing the whole report on what is called 'structured reporting' as supported by Bassey (1999: 84): ***"Research reports often read as though the researchers knew from the start exactly what they were setting out to do and moved in a linear direction towards that end. This is called 'structured reporting'."*,** that is the researcher, according to the methodology, knew from the beginning what will be the shape of her report starting by the abstract, the general introduction in which the objectives and purpose of the study are set, to display a review of literature in the first chapter, while in the second the research design and methods used are emphasized, and finish by analyzing, interpreting and discussing the results and findings in the third chapter. In the same vein, Mackey & Gass (2005, quoted in Duff, 2008: 185) speak about the same steps, they claim:

➢

> **The typical   organization of the social   science   research report published   in   journals is   abstract,   introduction,   literature review   or   background / context,   research   design and   methods (including a full description of the case or cases), results or   findings, discussion, and conclusions. Sometimes the results and discussion are combined especially in interpretive qualitative research.**

That is to say that both views converge on the different steps to be followed in conducting the case study, starting from the general introduction to finish with writing the final report.

2.6 TRIANGULATION

In view of the complexity of the situation under study, and the influential role of the information obtained in designing the intended course, data collection procedures were thoroughly selected. The information gathered aimed at providing evidence for the hypotheses put forward; identifying the various types of needs of the population under study, and eliciting the present situation lacks.

Based on a triangular approach, which requires a multiple sources of data collection, the researcher built the study. It includes the use of questionnaires for target students and subject specialists, two interviews designed for teachers in charge of the ESP course and the administrators of both departments, in addition to classroom observation. This was done to cross-check the validity of the results and to enable the researcher tackle the problem from different angles as Weir and Robert (1993:137) state:

> **A combination of data sources is likely to be necessary in most evaluations because often no one source can describe adequately such a diversity to features as is found in educational settings, and because of the need for corroboration of findings by using data from these different sources, collected by different methods and by different people (i.e. "triangulation").**

"Triangulation" is, then, seen as a very effective procedure of gathering valid data, since a one-source-based investigation may be inadequate and, to some extent, may distort the researcher's view of the situation under investigation.

In the same line of thought, in an ESP context, Hutchinson & Waters (1987: 58-59) assume that:

> **There are a number of ways in which information can be gathered about needs. The most frequently used are : Questionnaires; Interviews; Observation… In view of the complexity of needs which we have seen, it is desirable to use more than one of these methods.**

This means that, because of the complexity of subjects' needs sought for by the researcher, the latter is advised to adopt a triangular approach in which she is required to use multiple sources and instruments to gather information. For this purpose, the first instrument put into practice was the questionnaire.

2.6.1 Students' and Subject Specialists Questionnaires

Questionnaires are assumed to be one of the most common methods of data collection in foreign language research, as claimed by Richards (2005: 60):

> **Questionnaires are one of the most common instruments used. They are relatively easy to prepare, they can be used with large numbers of subjects, and they obtain information that is relatively easy to tabulate and analyze.**

Indeed, the investigator has chosen the questionnaire as a research tool because it can be analysed in a shorter period of time compared to interviews, and it allows a large sampling. In effect, the interview is time-consuming since each question is dealt with in isolation for each informant. In an attempt to define the questionnaire, Brown (2001: 6) reports that the questionnaire is:

> **Any written instrument that present respondents with a series of questions or statements to which they are to react either by writing out their answers or selecting from among existing answers.**

In this study, two (02) questionnaires were designed to elicit data from the informants to investigate the research questions and hypotheses.

✓ The first questionnaire was administered to twenty five (25) ESP students.

✓ While the second one was addressed to ten (10) subject specialists.

The administration of both questionnaires was undertaken during the third term of the academic year 2009-2010. Questionnaires addressed to students and subject specialists were translated in French to avoid any kind of misunderstanding and enable the informants to answer the questions as clearly as possible. Moreover, a pilot study was conducted in order to assess the validity of questions, their relevance and the appropriate wording as pointed out by Cohen et al (2005:260):

> **The wording of questionnaires is of paramount importance and that pretesting is crucial to its success. A pilot has several functions, principally to increase the reliability, validity and practicability of the questionnaire.**

The pilot questionnaire of the present study proved satisfactory, except for three questions, two of them were reformulated being misunderstood, while the third one was completely omitted. In this respect, Oppenheim (1992:48) says: *"everything about the questionnaire should be piloted; nothing should be excluded, not even the type face or the quality of the paper!"*

In the aforementioned questionnaires, three (03) types of questions were used:

- Closed - Open - and Mixed.

Closed Questions:

Consist of a range of possible answers; the informants have to choose the response that best fits their opinion without commenting as explained by Wilson and McLean, (1994:21): ***"Closed questions prescribe the range of responses from which the respondent may choose. In general closed questions are quick to complete and straightforward to code and do not discriminate unduly on the basis of how articulate the respondents are."***

e.g. - Which type of English do you want to learn?

- General English

- Medical English

- Both

Open Questions:

In such type of questions, the informants are entirely free to express their own ideas and give judgement and opinion. Indeed as mentioned by Richterich and Chancerel (1980: 59): ***"Open questions do not call in advance for ready-made answers and therefore allow the person questioned more freedom of expression."***

e.g. – What do you think about the collaboration between language teachers and subject specialists?

Mixed Questions:

Are more a combination of both closed and open questions, they ask the informant to choose one of the proposed possibilities, then justify his answer.

e.g. As a doctor, is English important for you?

yes ⬜   No ⬜

Why?..

(The three samples of questions have been taken from the ESP students' and subject specialists' questionnaires, and ESP teachers' interview ("see Appendices A, B and C").

Target students questionnaire was divided into four main parts, in the first category of questions, the researcher tried to draw the profile of the informants, to know about their educational background as far as the English language is concerned; she also attempted to examine their attitudes towards the target language and to check their viewpoints on the importance of learning English.

The second category of questions were devoted to the ESP course in question, the researcher intended to get an idea about students' attitudes towards this course and assess their behaviours and motivation to learn English.

As for the third part of questions, it aimed to elicit students' lacks and enumerate the difficulties they encounter in using the English language. Additionally, the researcher endeavoured to discover the degree of priority and importance the students give to the different language skills in comparison to their future use.

The last part of students' questionnaire was concerned with the identification of students' needs and wants. The informants, at this level, were asked about their objectives from learning English, the time allocation, and number of years of English instruction they want to receive, and the type of English they want to learn. The last two questions asked the students about other means they use to learn English and invited them to suggest remarks or comments about their needs in the language.

Subject specialists' questionnaire also contained open, closed, and mixed questions. Its aim was to check the different standpoints of the teachers in question about the importance of English and its usefulness in scientific research and as a linguistic tool in a foreign setting. The main objective of this questionnaire was to assess the frequency of use of the different language skills, and to have a combination of teachers' opinions about the ESP course intended for medical students in terms of developing the four language skills, the time that should be allocated to the course, and other factors contributing to its effectiveness.

Accordingly, the questionnaire contained three distinct rubrics, the first one was concerned with general information about the informants; it sought for their age, specialization, experience in the medical field and in the teaching profession.

In the second rubric, the investigator tried to see the position of medical teachers vis-à-vis the English language; its importance for them as doctors and researchers, their different needs in the language, the frequency of use the four skills, and the difficulties they face when using English.

As a last class of questions, the researcher draws the attention of the subjects to the implementation of an official ESP course in the Department of Medicine and asked their opinions about the course, its duration and content.

In Foreign language research, it is acknowledged that the questionnaire is widely used to gather data; however, it does not seem to be sufficient for the research reliability.   Thus, another method was used in this study to cross-check the findings achieved.

2.6.2 ESP Teachers' and Administrators' Interviews

When conducting research in education, the interview is considered as a useful tool of data collection, it provides a more in-depth exploration of issues, as put by Duff (2008: 134): ***"Interviews are one of the richest sources of data in a case study and usually the most important type of data to be collected. Interviews provide the researcher with information from a variety of perspectives."***

In the same line of thought, Yin (1994) highlights the crucial importance of using interviews specially when conducting a case study research which is concerned with human behaviours; those behaviours, he says, should be seen through the eyes of the interviewees, it is explained as follows:

> **… interviews are an essential source of case study evidence because most case studies are about human affairs. These human affairs should be reported and interpreted through the eyes of specific interviewees, and well-informed respondents can provide important insights into a situation. (Yin, 1994: 20)**

At this level, it is worth mentioning that in the wide range of approaches to language research and according to many researchers and applied linguists, different types of interview exist. For instance, LeCompte and Preissle (1993) give six types: *standardized interviews*; *in-depth interviews; ethnographic interviews; elite interviews; life history interviews; and focus groups interviews*. Bogdan and Biklen (1992) claim the use of *semi-structured interviews; and group interviews*. Lincoln and Guba (1985) add: *structured interviews*. Patton (1980: 206) outlines four categories: *informal conversational interviews; interview guide approaches; standardized open-ended interviews;* and *closed quantitative interviews*. (Djebbari, 2009)

In the present study, the investigator adopted a type of a semi-structured interview. In this type, the same sort of questions is asked as in the structured interview, but the style is rather more flexible and conversational. The interview process is not disturbed by some extra questions; instead, the researcher asks for explanations or clarifications, and makes remarks, depending on the responses of the interviewee. It is worth mentioning that while interviewing the informants, the interviewer tried to be as objective and neutral as possible in order not to influence the subject's views and deviate the interview to get valid and truthful data.

Accordingly, three semi-structured interviews were designed. The first was administered to two ESP teachers in charge of the ESP course in the Department of Medicine, and the second concerned the administrators from the same Department, while the third interview was addressed to the head of the English Section (see appendix "C", appendix "D", and appendix "E"). At this level, it should be said that at first, the investigator addressed only two interviews to the ESP teachers and the administrators of the Medical Department at the end of the third term of the academic year 2009-2010, but in the course of data analysis the researcher realized that the point of view of the head of the English section was needed, for this reason a third interview was addressed to the administrator in question in order to cross-check data sources.

Being abroad, and thus unable to directly interview the head of the English section, the investigator addressed the interview by e-mail during the second term of the academic year 2011-2012. Indeed, when face-to-face interviews are difficult or impossible to be held, the use of e-mails in interviewing people is advised as supported by Duff (2008: 135):

> **Qualitative research interviews are normally conducted face to face, especially with L2 users, but if it is difficult to arrange meeting times or places, the telephone may provide a useful…substitute. Audio equipment can be easily found to record the talk, if permission has been granted to do so. Increasingly, email exchanges or threaded discussions can also supplement or take the place of formal interviews, depending on their purpose.**

ESP teachers' interview was designed to elicit some useful information about the different practices of ESP teaching in the Department of Medicine, in terms of syllabus, teaching materials, and course content, attempting at the same time to have an idea about their students' proficiency level in the language, their attitudes and motivation, and their perceived needs and difficulties. The investigator also tried to get teacher's views on how to design and conduct the ESP course and check their opinions and suggestions to improve the teaching situation.

It was divided into four parts; the first category of questions was a sort of a warm up to collect information about the informants such as their qualification, their experience in teaching English in general and ESP in particular, and whether they received any training in teaching ESP. The subjects' answers were recorded by the researcher to be analysed later.

Regarding the second part of questions, it was devoted to the practice of ESP teaching in the Department of Medicine; the investigator tried to focus on the conditions in which the teachers in question work, attempting to know about the number of classes the teachers are in charge of, the number of students in each class, and the weekly teaching time.

As for the third category of questions, it was concerned with the students, their proficiency level, their attitudes and motivation towards the course, and their strengths and weaknesses in the language, this was on one hand. On the other, the investigator concentrated on both the ESP teacher and the course. The teachers were asked questions about the syllabus and materials they work with, how do they plan their courses, the type of activities they use, and the importance they devote to each language macro skill. In addition to this, the researcher attempted to check teachers' views about the degree of relevance of the course content to their students, and know about the various problems encountered when teaching ESP.

The last part of the interview stressed teachers' opinions about the current teaching situation with its advantages and drawbacks, and their suggestions to improve that situation, highlighting the collaboration with subject specialists and between ESP teachers themselves.

As previously mentioned, the second interview was addressed to the administrators of the Department of Medicine, its aim was to check the informants' views about the ESP course programmed for the first time, though unofficially, in the Department and its importance for them.

It was divided into two main parts; the first one was concerned with drawing a profile to the subjects, asking them about the degree they hold, their specialization in the field of Medicine, in addition to their experiences as administrators, doctors, and medical teachers as well.

In the second part of the interview, the researcher tried to get their opinions about the ESP course being held in the department and its usefulness for both medical students and teachers, and about the eventual reasons that pushed them to program such a course. The remaining questions revolved around the introduction of an official ESP course, the period during which it will last, and its content as well.

Concerning the third interview, which was addressed to the head of the English section, it focused on the practice of ESP teaching. In conducting this interview, the investigator tried to find answers to the conditions in which the ESP teachers work.

It was made up of two rubrics; the first one concerned the informant's personal information such as her degree and specialization, her experience as an administrator and as a teacher as well.

The second part of questions concerned the ESP teachers and the way they were supervised by the English section, in terms of training be it pre-service or in-service, the provision of syllabi or teaching materials, and the reason behind assigning a novice and inexperienced teachers to such a difficult and complex task. As a last question, the researcher invited the informant to give her suggestions to improve the conditions of work of the ESP teachers.

In order to get reliable data, the use of multiple research methods is always recommended by researchers and applied linguists. In this study, the use of questionnaires and interviews was supported by a third research instrument which seems to be very popular in conducting case studies.

2.6.3 Classroom Observation

This type of research method deals with teachers and learners classroom practices. Regarded by researchers as an important component in any scientific investigation, observation is a procedure which allows the investigator to know many things about the area under study, to see the world of the subject group in its natural environment, and contributes to collect truthful information.

According to Yin (1994) observation in case studies is the sole tool that permits to see things as they occur naturally in their context, and to have an accurate picture of the situation, especially when we aim to get information about the interaction of individuals, he claims:

> **Observations are another important source of information in case studies. This is especially true in case studies involving classrooms or schools, because the interaction of individuals cannot be understood without observation. (Yin, 1994: 22)**

As the researcher's aim from directly observing the subject group is to know more about the students' attitudes and proficiency level and its progress during the ESP course, in addition to see the interactions that take place between the different participants, classroom observation was then a very appropriate mean to collect this type of data as supported by Van Lier (1988):

> **Many case studies in applied linguistics include the systematic, focused observation of case participants in their natural contexts (classrooms, homes, community centres, workplaces), especially if one of the objectives of the study is to examine people's linguistic performance or interaction in naturally occurring social situations. (van Lier, 1988, quoted in Duff, 2008: 138)**

In this sense, it should be mentioned that throughout the different approaches to language research, various labels and types of classroom observation are proposed, such as the terms 'direct observation' and 'Naturalistic observation' which are used interchangeably by researchers. In effect, 'direct observation' or 'naturalistic observation'; as their name implies; involve observing directly organisms in their natural settings. According to Mackey & Gass (2005), naturalistic observation has four defining principles:

➢ The first and fundamental principle is that of non-interference. Researchers who engage in naturalistic observation must not disrupt the natural course of events they are observing so that to observe things the way they truly happen.

➢ Naturalistic observation involves the observation of behaviour patterns or other phenomena that exist in the real world.

➢ The naturalistic observation approach is particularly useful for exploratory purposes, when we know little or nothing about a certain subject.

➢ Finally, this type of method is basically descriptive; although it can provide a detailed description of a phenomenon, it cannot tell us why the phenomenon occurred.

Regarding the principle of non-interference; there are some theorists who make a distinction between two kinds of naturalistic observation:

❖ Participant observation: where the researcher; in addition to his role of investigator; is part of the observation process, for instance in a learning context he is either the teacher or one of the learners. In this case, the observer participates in the observation process.

❖ Non-participant observation: in this type of observation; the investigator is someone stranger to the classroom, he tries to observe how events happen without any kind of interference. He can be a researcher; an inspector; or a colleague (a teacher).

Watching people, and writing down what they do, has certain ethical implications, especially when we are observing adults; it seems then obvious to ask for their permission. For this reason, a pre-observation briefing, which is considered as a fundamental step in the observation process, was held during which the investigator the observer) and the teacher in charge of the ESP course identified the goals for the observation, the specific aspects of classroom practices the investigator will be focusing on during the classes, and the period devoted to the observation process. However; it is worth mentioning that during this meeting, the investigator wanted to be vague and general about the aspects she will observe and avoided to give details in order not to influence the ESP teacher and distort the image she has about her proper teaching.

The purpose of this meeting was also to make it clear for the instructor that classroom observation is used for formative and investigative, not summative purposes, and is in any case a judgment of the instructor's teaching techniques; styles, abilities, and knowledge. Rather, it is a developmental process in which the observer's role is entirely one of constructive observation designed to support the teaching of ESP.

As expected, the ESP teacher welcomed the researcher in her classroom, and invited her to attend as much classes as needed to carry out the observation process attempting to answer the following research questions:

- What are the teaching deficiencies that hinder successful teaching/learning?
- What are the ingredients that should be accounted for a consistent ESP course?

2.6.3.1 Description of the classroom

The classroom we have observed consists of 33 students among whom 15 boys and 18 girls; however, the instructor told us that at the beginning of the course they were 40 students. The ESP course is offered in the Department of Medicine twice a week; on Tuesday and Thursday and lasts one hour and a half from 4.00 to 5.30.pm. The course has begun in March 2010 and will end in June 2010 it is therefore programmed for four (04) months. The teacher is a young lady who holds a 'licence' degree and is a postgraduate student specialized in ESP. She has been teaching English in the "CEIL", "Centre d'Enseignement Intensif des Langues" translated to English "Centre of Intensive Teaching of Languages", for approximately ten (10) Years. During the observation task; the investigator tried to shed light on the following aspects:

- Course conduct and content.
- Teacher-students interaction.
- Students' attitudes and motivation.
- Students' proficiency level and its progress.

2.6.3.2 Length of Observation

Since one cannot get a full impression of the teaching/learning practices from a single lecture and in order to get a broad overview of the situation under study, it was important for the researcher to negotiate the number of class sessions she would attend.

To collect the required data, the researcher attended different class sessions, sat in the back of the classroom in order not to disturb the course of the lecture and tried to be as invisible as possible. The observation was carried out through note-taking, it lasted for approximately two months where the investigator attended four (04) sessions in May and four (04) other sessions during the month of June 2010 . The investigator chose the review to be of such time frame for better examining the pedagogy being used, students' attitudes, motivation, and proficiency level and its progress during the course.

2.6.3.3 Types of Data collected

During this classroom observation, the researcher tried to collect information about teacher's as well as learners' practices; she attempted to focus on observing the teacher and the students while doing several language tasks. While observing the classroom, the researcher bears in mind answering the following questions:

1-Does the teacher follow a fixed syllabus?

2-How does she begin the lecture?

3-Does she state the objectives of the lecture from the beginning?

4-What is the approach adopted?

5-What are the teaching materials used?

6-Does she use visual aids?

7-Does she use educational technology?

8-What are the patterns of interaction and class work?

9-What is the amount of teacher talking time?

10-What is the amount of students talking time?

11-Does the lecture's content arouse students' interest?

12-Are the students active participants in the lecture?

13-What are the classroom activities used?

14- Which skills the lecturer intends to develop?

15-How does the teacher end the lecture?

The investigator tried to answer the above questions following the observation sheet used during the observation process. (See appendix "F")

To sum up, the following diagram summarizes the different steps that the researcher went through during the data collection and analysis process.

Research Design

```
                    Research Design
         ┌──────────────┬──────────────┐
  Questionnaires   Classroom      Interviews
                   observation
   ┌────────┐        │          ┌──────────┐
ESP      Subject   ESP Teacher  ESP        Administrators
Students Specialists And Students Teachers
```

ESP Students	Subject Specialists

ESP Teacher And Students

ESP Teachers   Administrators

Data Analysis & Interpretation

Qualitative Analysis   Quantitative Analysis

Research Results & Conclusion
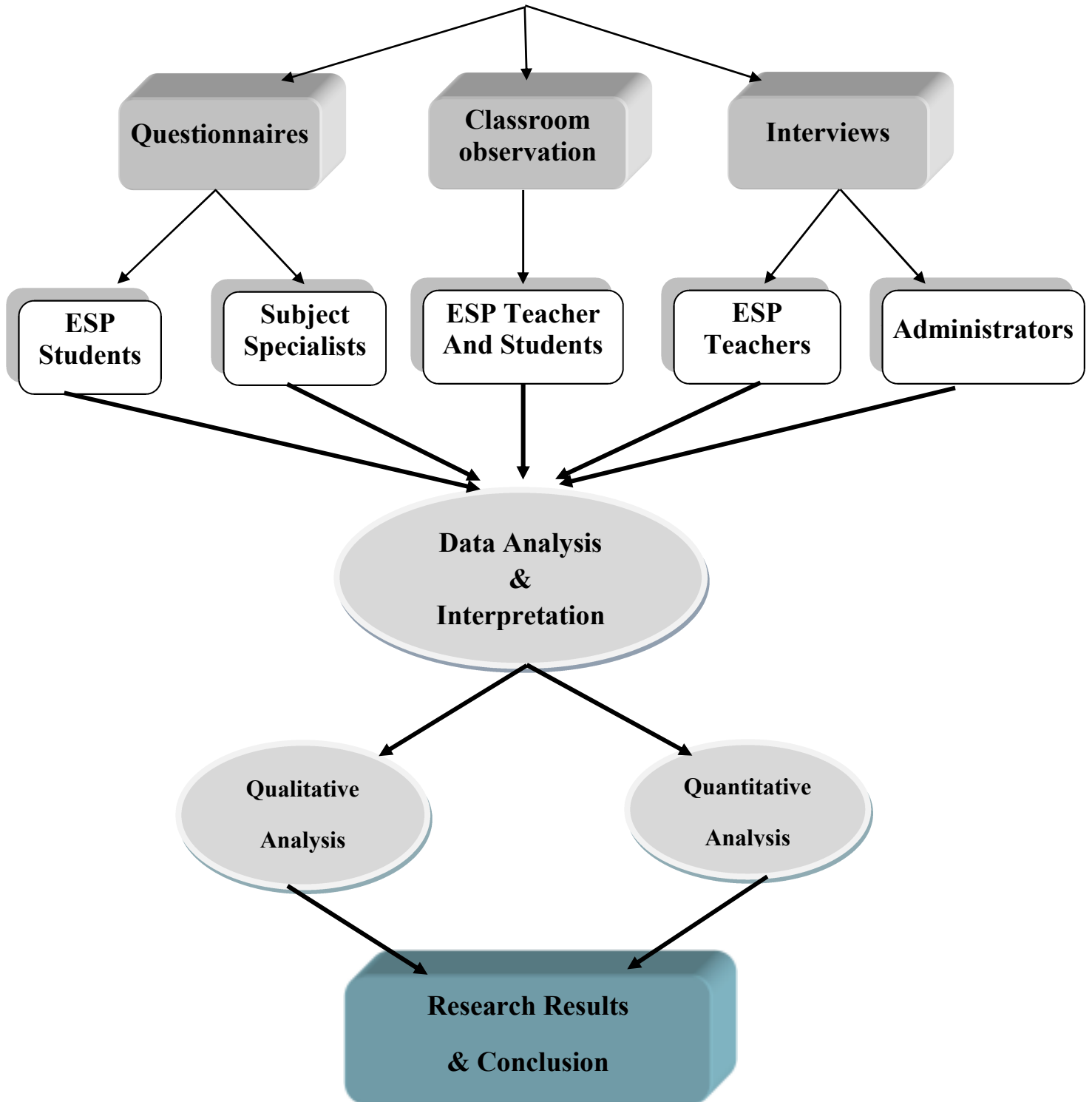
Figure 2.4: Research Design

2.7 CONCLUSION

This chapter was devoted to the description of the ESP teaching/ learning situation at Abu-Bakr Belkaid University of Tlemcen with a special focus on the Department of Medicine; in this part, the investigator tried to give a clear picture on the ESP practices in that department. She also attempted to shed light on the sampling chosen, describe the methodology and the different research instruments used to gather data and; therefore, find out satisfactory answers to the research questions and test the hypotheses put forward.

As acknowledged, needs analysis is the cornerstone upon which any ESP investigation is based. Indeed, before the design of any syllabus or course destined to ESP learners, the ESP teacher or the investigator is first faced with the assessment of learners' needs, this task is the concern of the next chapter.

CHAPTER THREE:

DATA ANALYSIS & INTERPRETATION

3.1 INTRODUCTION

3.2 DATA ANALYSIS
3.2.1 The Qualitative Approach
3.2.2 The Quantitative Approach

3.3 ESP STUDENTS' QUESTIONNAIRE
3.3.1 Methodology of the Questionnaire
3.3.2 The Questionnaire Analysis
3.3.3 Summary of the Results

3.4 SUBJECT SPECIALISTS' QUESTIONNAIRE
3.4.1 Methodology of the Questionnaire
3.4.2 The Questionnaire Analysis
3.4.3 Summary of the Results

3.5 ESP TEACHERS' INTERVIEW
3.5.1 Methodology of the Interview
3.5.2 The Interview Analysis
3.5.3 Summary of the Results

3.6 MEDICAL ADMINISTRATORS' INTERVIEW
3.6.1 Methodology of the Interview
3.6.2 The Interview Analysis
3.6.3 Summary of the Results

3.7 ENGLISH ADMINISTRATORS' INTERVIEW
3.7.1 Methodology of the Interview
3.7.2 The Interview Analysis
3.7.3 Summary of the Results

3.8 CLASSROOM OBSERVATION RESULTS

3.9 SUMMARY OF THE MAIN RESULTS & DISCUSSION

3.10 CONCLUSION

3.1 INTRODUCTION

This chapter represents the empirical phase of the research work for it stands for its practical side. The researcher, at this stage, strives to analyze the information obtained from the ESP students' and subject specialists' questionnaires, ESP teachers' and administrators' interviews, and the data collected through classroom observation. The investigator tries to manage the data obtained bearing in mind the empirical importance of the identification of medical students' needs, and sort out the teaching/learning deficiencies.

Data analysis, as acknowledged, is a structured and organized process which permits the investigator to gain insights from a big amount of data, and by which this mass of raw data is brought to order, structured, and summarized in order to help find answers to the research questions and produce meaningful and trustworthy conclusions.

3.2 DATA ANALYSIS

Data analysis is an important stage of the research process. It is the process of inspecting, cleaning, transforming, and modeling data with the goal of highlighting useful information, suggesting conclusions, and supporting decision making. This process is usually concerned by theorists as (if not more) important as the process of data collection since data in and of itself will not provide any meaning unless it can be delivered in a proper way. In this sense Cohen et al (2007: 19) claims: *"Data analysis is a body of methods that help to describe facts, detect patterns, develop explanations, and test hypotheses. It is used in all of the sciences."*

This means that the Data analysis process is not restricted to a single method but rather has multiple facets and approaches, encompassing diverse techniques under a variety of names, of which the most known and highlighted approaches are the qualitative and the quantitative ones which the researcher adopted in her study in order to draw plausible and coherent conclusions well supported by evidence, because much educational research combines qualitative and quantitative methods in various ways and to varying degrees. In addition, it is generally believed that any investigator may use a: *"combination of qualitative and quantitative constructs which are often regarded as a matter of continuum rather than a clear-cut dichotomy"* (Newman and Benz, 1998 quoted in Djebbari 2009: 95).

3.2.1 The Qualitative Approach

This is the process of interpreting data collected during the course of qualitative research. Qualitative data is a categorical measurement expressed not in terms of numbers, but rather by means of verbal accounts in a natural language description. Such data cannot be subjected to counting or measurement and therefore are not susceptible to quantitative analysis.

This type of analysis describes items in terms of some quality or categorization that in some cases may be 'informal' or 'subjective'. Such 'subjective' data are sometimes of less value to scientific research than quantitative data; however, it can include well-defined concepts such as gender, attitude, nationality, motivation and the like.

The researcher used this approach in analyzing the ESP teachers and administrators' interviews, in addition to the data collected during the classroom observation process.

3.2.2 The Quantitative Approach

This type of analysis is the process of presenting and interpreting numerical data which is measured or identified on a numerical scale. Items are described and expressed not by means of natural language description, but in terms of quantity, and a range of numerical values are used without implying that a particular numerical value refers to a particular distinct category. This quantitative data can be analyzed using statistical methods, and results can be displayed using tables, charts, histograms and graphs.

This approach is very appropriate to analyze questionnaires; this is why the researcher relied on this type of analysis when dealing with the ESP students' and subject specialists' questionnaires.

3.3 ESP STUDENTS' QUESTIONNAIRE

In this study, a questionnaire (see appendix "A") was chosen for eliciting some required data from the ESP students which are regarded by the researcher as the most important informants in the investigation. Therefore, this part will deal with the methodology and analysis of ESP students' questionnaire.

3.3.1 Methodology of the Questionnaire

The questionnaire was submitted to twenty-five (25) postgraduate medical students during the third term of the academic year (2009-2010). The informants are from different levels of study and prepare different specializations. The questionnaire was essentially based on a needs analysis. It was employed to investigate the research questions and hypotheses and to gather useful data about the students' needs which will, hopefully, help the researcher define course content and specify its objectives. It focused mainly on checking the respondents' views and attitudes towards English instruction and assesses their needs in this field.

The questionnaire consisted of twenty-one (21) questions of different types: closed, mixed, and open (See Appendix "A")

Questions 1 to 5: Are informative questions about students' English language background.

Questions 6 and 7: Are devoted to the ESP course, students are questioned about the usefulness of the course and the degree to which it satisfies them.

Questions 8 and 9: these questions are used in an attempt to measure students' motivation in terms of class attendance and participation.

Question 10: Asks the informants to classify the four language skills in terms of importance.

Question 11: Inquires about the difficulties encountered by the students when using English.

Question 12: The students are solicited to give the reasons lying behind such difficulties.

Question 13: Asks the students to specify the different areas in which English is used.

Question 14: Aims at knowing whether students use the ICT's.

Question 15: Checks students' opinion about the course time allocation; whether it is

sufficient or not.

Question 16: Asks students about the introduction of an ESP course in the official curriculum.

Question 17: Deals with the period of English instruction.

Question 18: Intends to know students' opinion on the nature of the ESP course.

Question 19: Is concerned with students' objectives from learning English.

Question 20: Aims at knowing whether students have recourse to other means to learn

English.

Question 21: Invites students to make suggestions or remarks about their needs in learning

English.

3.3.2 Questionnaire' Analysis

The data obtained from students' questionnaire were highly important and enabled the researcher to get a clear picture of the target situation and helped her determine students' lacks, difficulties and needs in English.

The questionnaire was submitted to twenty-five (25) students, but only fifteen (15) of them answered and returned it.

Question 1: Students' Age and specialty.

Number of Respondents	Age group	Level of study & Specialization
05	31-32	5th year, General Surgery
04	27-28	4th year, Nephrology
04	26-29	3rd year, Gastroenterology
02	26	2nd year, Nephrology

Table 3.1: Students' age & specialty

Question 2: Students' previous experience in English

This question revealed that before entering university, most of the informants (80%) Studied English for only 5 years, while for the rest (20%) English instruction lasted for 6 years.

Question 3: Period during which students stopped practising English

It appears that students' answers to this question differ from one student to the other; they are better illustrated in the following table:

Period of absence of English Instruction	Absolute Frequency	Relative Frequency
14 years	02	13.33 %
13 years	03	20 %
12 years	03	20 %
10 years	04	26.66 %
9 years	03	20 %

Table 3.2: Period of Absence of English Instruction

Question 4: Students' English instruction at University level

Concerning this question, all the respondents (100 %) revealed that during their medical studies English courses are nonexistent.

Question 5: The Importance of English

Regarding the importance of English in the medical studies and profession, almost all the students admitted that the mastery of English is very important for them and justified their answers by saying that all scientific publications are in English. Only one informant qualified the language as only 'important' and added that it helps him (her) understand articles and speak with international colleagues. Statistically, the answers are as follows:

Importance of the English Language	Absolute Frequency	Relative Frequency
Very important	14	93.33 %
Important	01	6.66 %
Not so important	00	0.00 %

Table 3.3: Importance of English for Medical Students
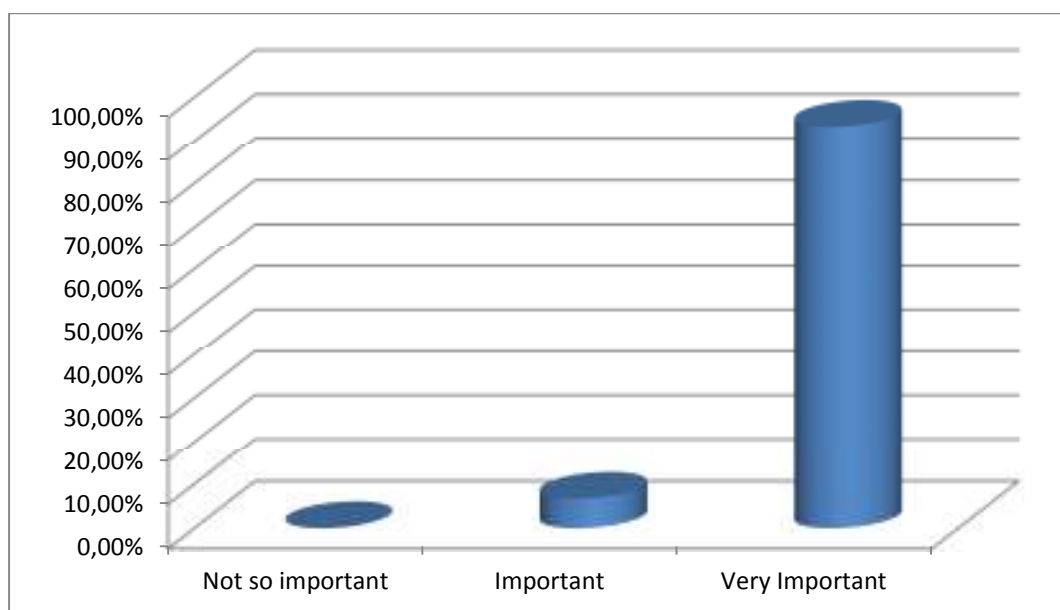
Figure 3.1: Importance of English for Medical Students

Question 6: Benefit and Usefulness of the ESP course

All of respondents (100 %) said that the ESP course is very beneficial form them since it is a rare opportunity to practise and learn English.

Question 7: Degree of satisfaction with the ESP course

The majority of the students were satisfied with the ESP course at 50% because they learned a good deal of medical terminology. The remaining ones chose 25% as a degree of satisfaction adding that there were not enough topic discussions and the time span was not sufficient. The results are quantified in the following table:

Degree of satisfaction with the ESP course	Absolute Frequency	Relative Frequency
75%	00	00.00%
50%	09	60%
25%	06	40%

Table 3.4: Degree of Satisfaction with the ESP Course
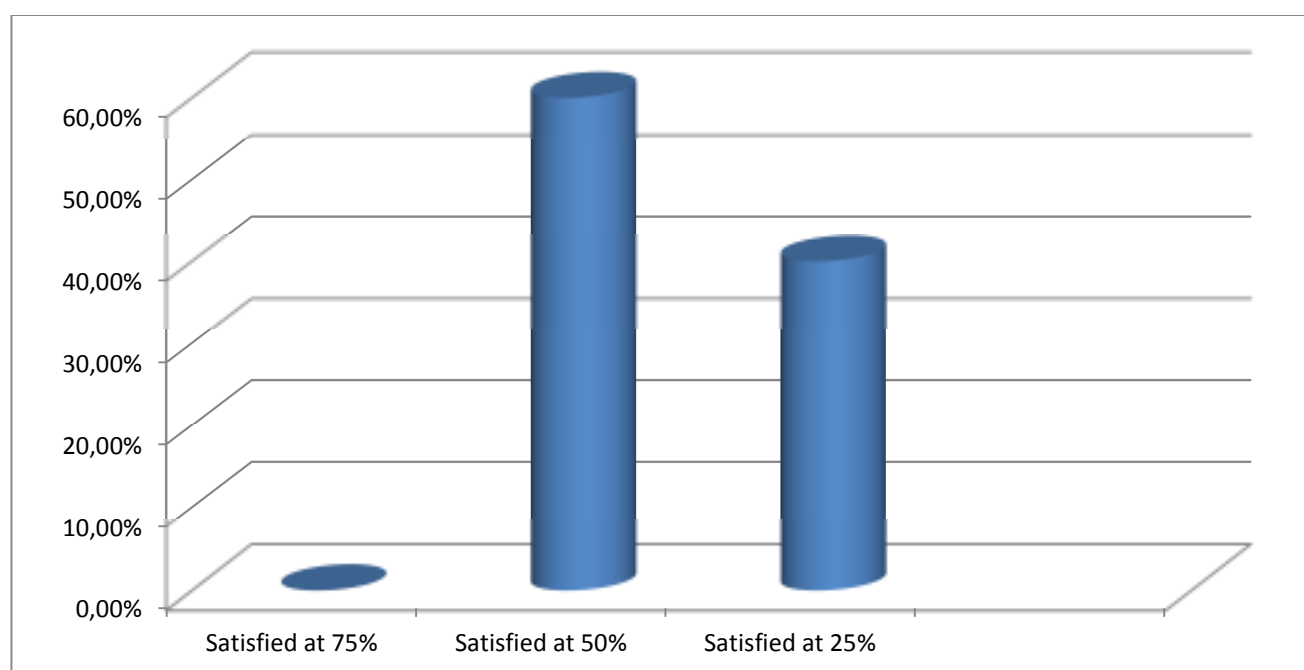
Figure 3.2: Degree of Satisfaction with the ESP Course

Question 8: Classroom Attendance

Regarding this question, nearly 67% of the informants admitted not attending regularly the ESP course claiming that by the end of the day they became tired or they could be kept in the hospital for work. The rest of them (33.33%) said that despite the constraints they tried to attend the lecture. The following figure demonstrates the answers:
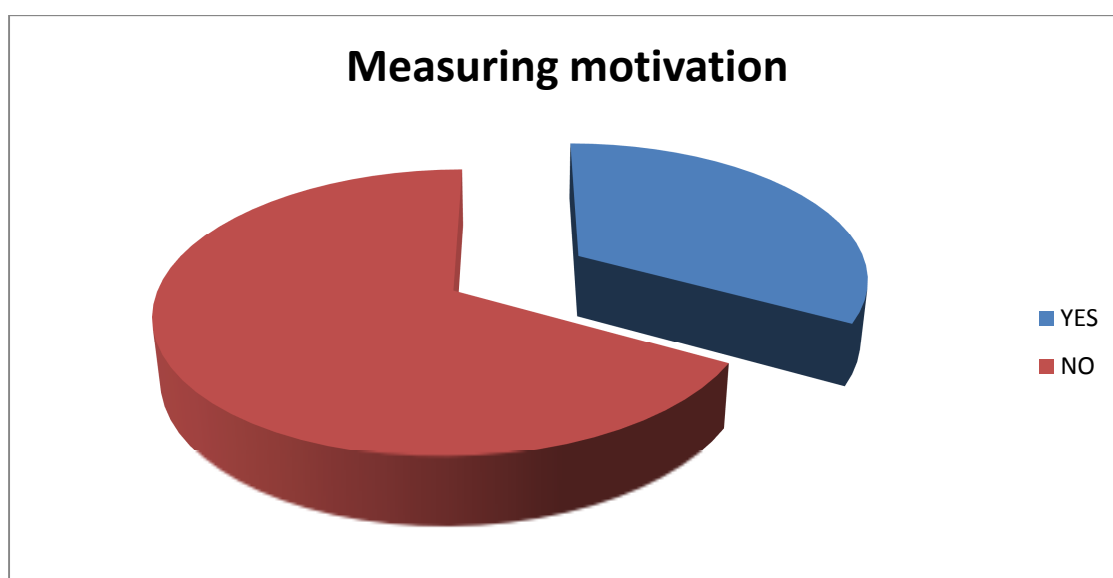
Figure 3.3: Students' Attendance to the ESP course

Question 9: Classroom Participation

80% of the students answered positively to the question, arguing that it was an opportunity for them to speak, one of them instead, said that the ESP course was a moment of relax for him (her), where he (she) could recall souvenirs when he was a pupil. The other informants (20%) said they could not participate because they have difficulties in expressing themselves.
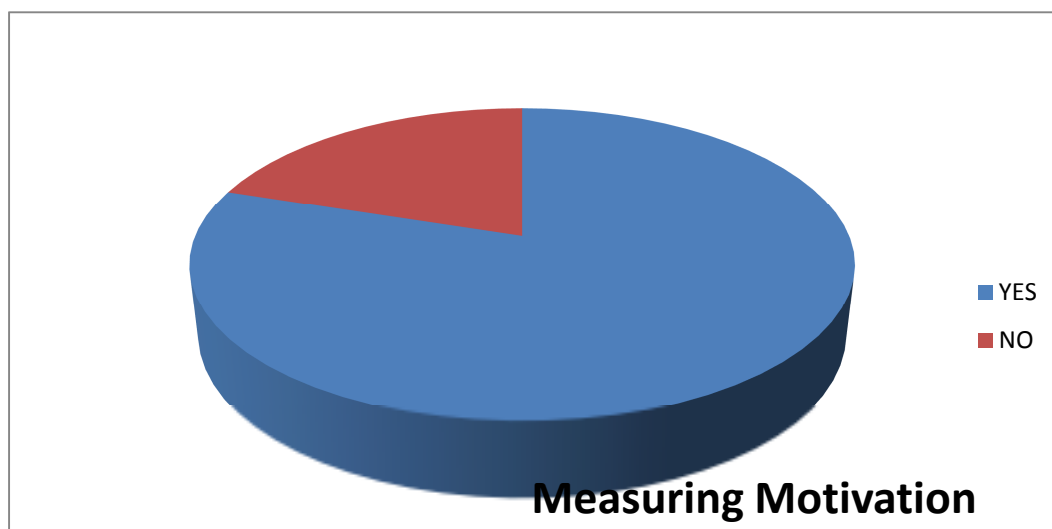
Figure 3.4: Students' Participation during the ESP Course

Question 10: Skills' Importance

The students' answers demonstrated that the four language skills are important, they however, focused more on the reading and listening skills with 80 % of them in favour of. The speaking skill comes right after with 60% followed by writing scored at 33%.

Thus, language skills are ranked as follows:

1- Reading & Listening

2- Speaking

3- Writing
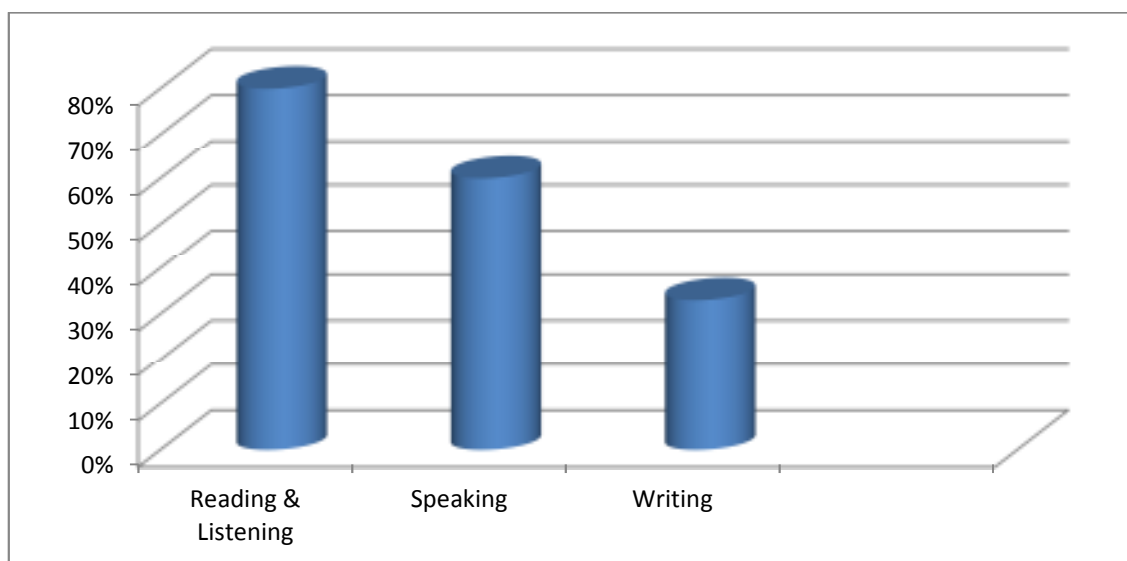
Figure 3.5: Classification of the four skills according to their importance

Question 11: Difficulties Faced by the students

From this question, it clearly appears that all the informants (100%) agree that speaking is the chief barrier in English, then (93%) see that listening is another real difficulty followed by writing considered by (80%) of them. Finally, comes reading with (53%) which is regarded as less difficult.

Difficulty encountered	**Absolute Frequency**	**Relative Frequency**
Speaking with foreign colleagues.	15	100 %
Listening to & understanding others' speech.	14	93 %
Writing.	12	80 %
Reading scientific texts & medical articles.	08	53 %

Table 3.5: Difficulties Faced in English
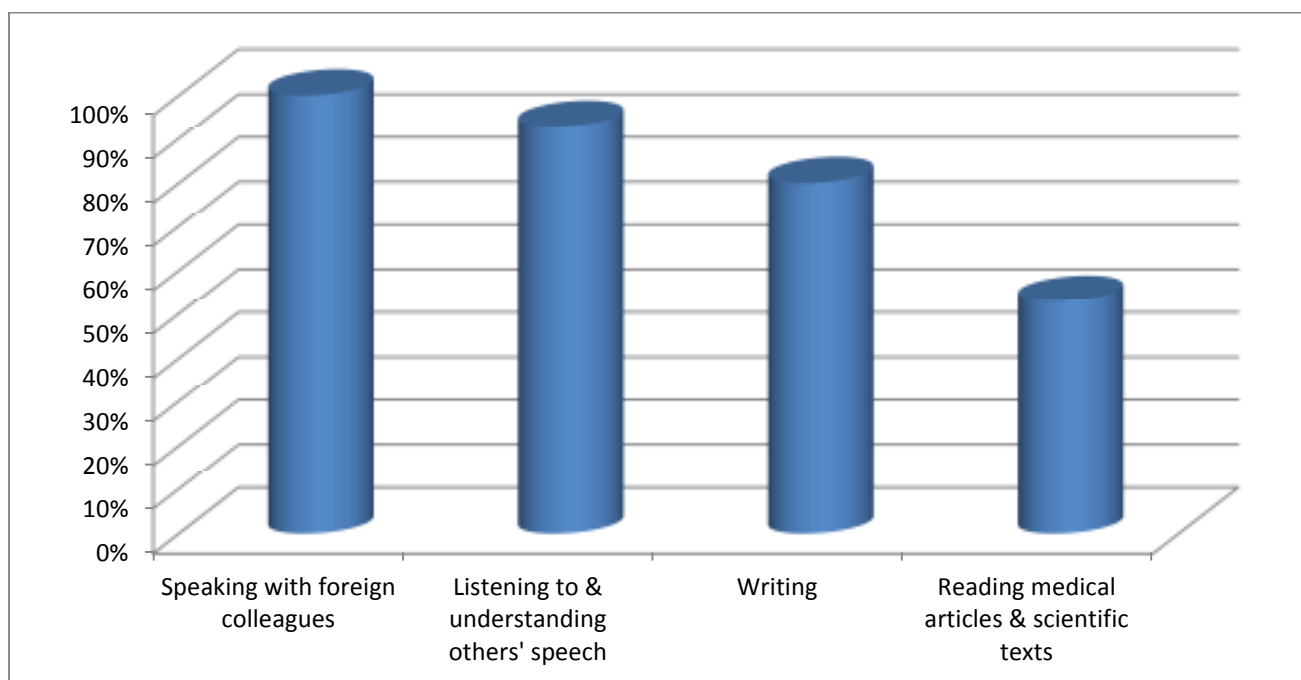
Figure 3.6: Difficulties encountered in English

<u>Question 12</u>: <u>Reasons for The Difficulties</u>

Regarding this issue, most of the answers (93%) converged to the insufficient period of instruction and lack of practice, while 80% of them related the difficulties they face to lack of motivation. In the last position came lack of reading mentioned by 26% of the subjects.

Reasons	**Absolute Frequency**	**Relative Frequency**
Insufficient period of instruction	14	93 %
Lack of practice	14	93 %
Lack of motivation	12	80 %
Lack of Reading	04	26 %
Other	00	00.00%

Table 3.6: Reasons for students' Difficulties in English
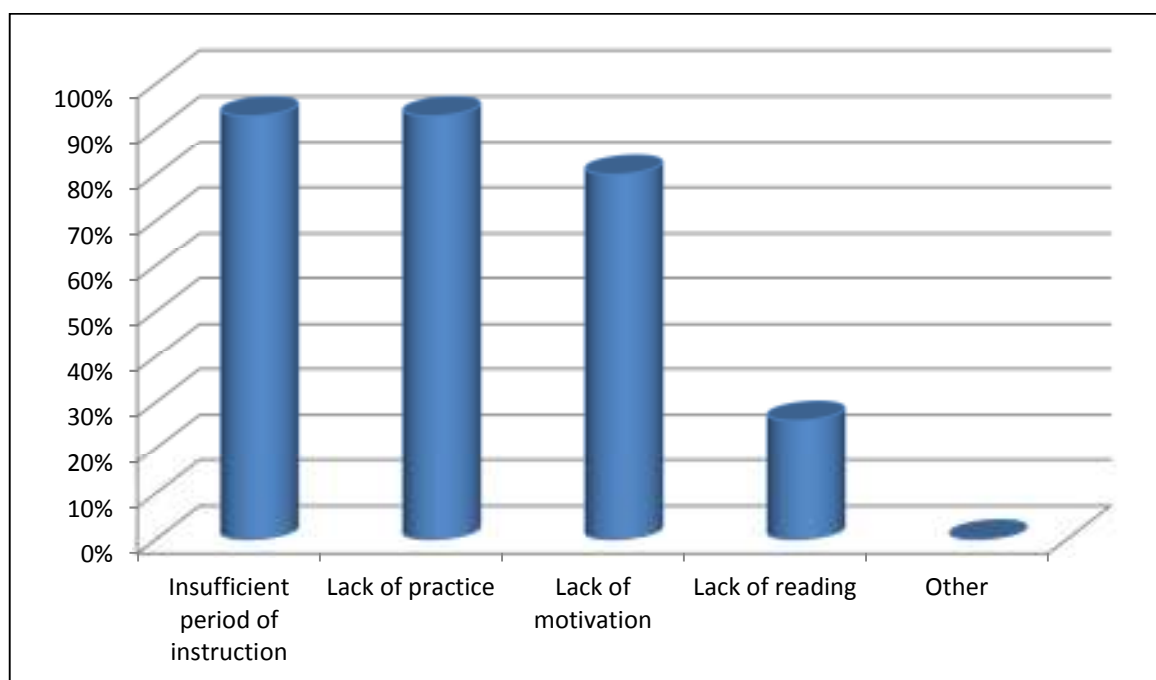
Figure 3.7: Reasons for students' Difficulties in English

Question 13: Areas of language use

From this question, it is noticeable that postgraduate medical students use English when accessing the internet and in their studies since all of them (100 %) answered positively to these two items. Undertaking research comes after with 60%, and last we find the international conferences scored at 27 %. It should be said that in this question the students were only asked to give the answers without justification; however, when the investigator read the answers, she was curious to know the reasons behind such classification. In an informal discussion with an informant, she knew that in their studies, medical students consult a website called "Springer" in which all lectures and tests are in English and this website is extremely important for them in the studies and especially when preparing the competitive exam of post-graduation. As for research, the informant said that most of the time students use French, and English is only used to read and exploit documents, while international conferences, he said, concern only professionals and as residents they are rarely invited to these manifestations. The following table summarizes the results:

Areas of Language Use	Absolute Frequency	Relative Frequency
The Internet	15	100 %
In the Studies	15	100 %
Undertaking Research	09	60 %
In International Conferences	04	27 %

Table 3.7: Areas of Language Use
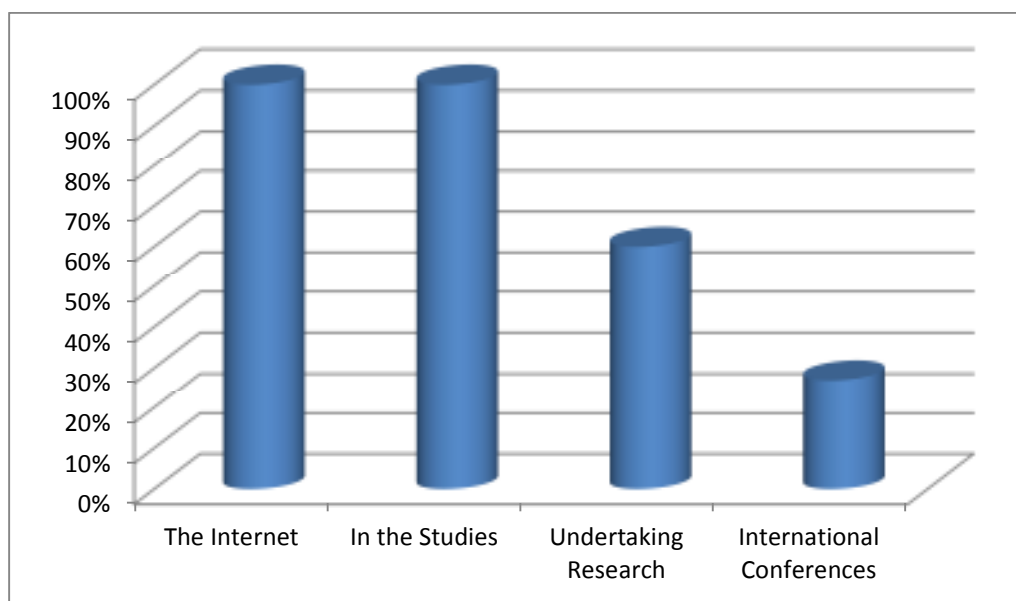
Figure 3.8: Areas of Language Use

Question 14: Use of the ICT's

For all the students (100 %) the use the information and communication technologies is very important either in their studies or for their research works. It is worth clarifying that the students' use of the ICT's is closely linked to the internet where they read and download medical lectures, articles, tests, and evaluations especially on the website "Springer" to which the University of Tlemcen is connected since January 2008, so the students mentioned that they could access the site for free from the cyber-space of the faculty. They said, in addition, that a computer is still a luxury product in Algeria and not all students can frequently use it.

Question 15: Time Allocation to the ESP Course

On one hand, 53% of the informants were not satisfied with the time span of the English course and suggested to have six hours per week of instruction. On the other, 47% of them said that the time allotted to the course is satisfactory.

Question 16: Introduction of an official ESP course

All the informants (100 %) expressed their wish to have an English course in the official curriculum and answered positively the question. They justified their answers by saying that it is the language of science; others said that it will help them read and understand medical articles, while others claimed that the American medicine is much more advanced than the French one.

Question 17: Duration of the ESP course

The data revealed that 67% of the students want to receive English instruction for a period of four years, while the remainder of them (33%) claimed that two years are sufficient to acquire an acceptable English knowledge. The results obtained are shown in the figure below:
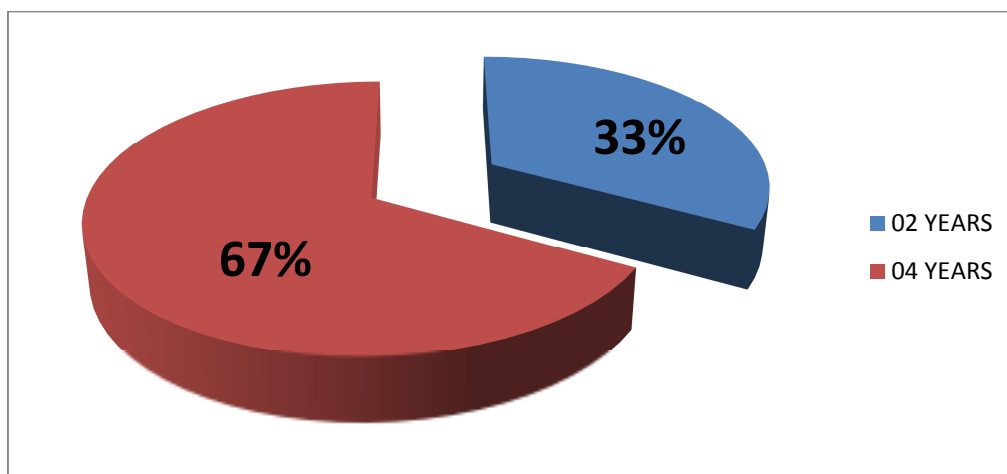
Figure 3.9: Duration of the ESP course

Question 18: Nature of the ESP course

Regarding students' opinions on which type of English to learn, 80% of them reported that learning a mixture of general English and medical terminology is preferable. For the rest of them, (20%) they emphasized the learning of medical English only.
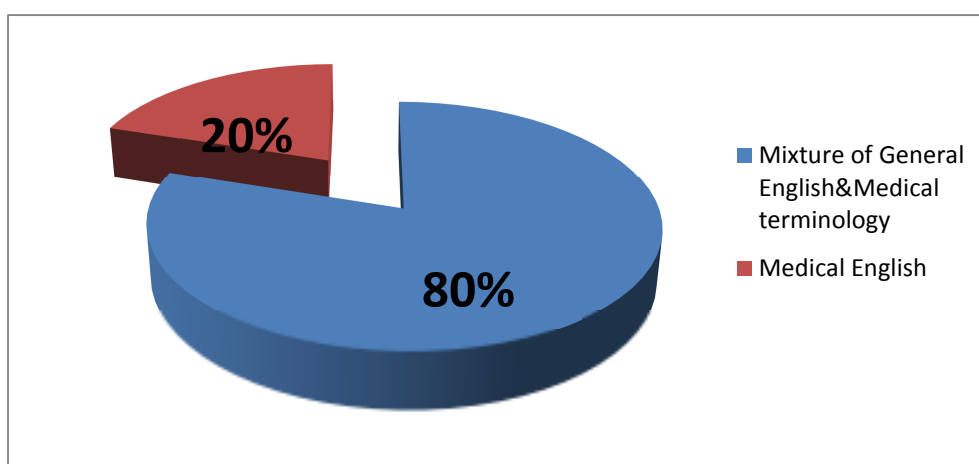
Figure 3.10: Nature of the ESP course

Question 19: Students' objectives for learning English

Students' answers to this question were vague; they expressed their objectives in general terms such as attaining a good level in English or improving one's knowledge in the language. However, only two students focused on the skills they want to develop; one spoke about understanding medical publications, knowing how to speak, and to write texts. As for the second informant, he stressed listening to and speaking English.

Question 20: Students' own means to learn English

The great majority of the respondents' answers were negative; except the course provided at University, no one of them has recourse to other means to learn English. Only two informants claimed the use of English speaking channels, CD's and books to improve their level in the field.

Question 21: Students' suggestions

All the informants are enthusiastic to the introduction of English instruction in their field of study, and show a positive attitude vis-à-vis the idea. Some did not give specific suggestions to enrich the ESP course, while others gave illuminating ideas about it, they suggested the use of audiovisual techniques or simply photos to consolidate understanding, in addition to the use of translation. They also expressed their wish to have more topic discussions in the future lectures.

3.3.3 Summary of the Results

Students' questionnaire was used in this study to investigate their needs in terms of language skills, check their attitudes and motivation towards English and the ESP course, in addition to elicit their lacks and difficulties in this field, and the reasons behind such difficulties.

The results revealed that postgraduate medical students are increasingly interested in learning English, they are well aware of its importance for them, the reason that pushed them to enroll in the ESP course which is optional: 100 % of them are in favour of implementing an official English course claiming that English has, by no means, become the language of science. They strongly believe that English plays a facilitator role not only in medicine but in all carriers.

From needs analysis, it appears that the students devote a particular attention to developing first the reading and listening skills, then the speaking skill, and finally the writing one. They also assumed that they encounter great difficulties in English due, according to 93% of them, to the insufficient period of instruction and lack of practice. The difficulties they face start by the speaking skill which is followed by listening, then comes writing to finally find the reading skill.

The informants claim that they frequently use English since 100 % of them use it when dealing with the internet and in the studies, and 60% use it in research. They say they are motivated to learn English, though some statistical results show the opposite. They express their need for English instruction; 67% of them suggest 04 years of instruction while 53% propose to have six hours per week devoted to English.

3.4 SUBJECT SPECIALISTS' QUESTIONNAIRE

This part deals with the methodology of the subject specialists' questionnaire and the analysis of the results obtained.

3.4.1 Methodology of the questionnaire

Ten (10) subject specialists were randomly chosen by the investigator to answer the questionnaire distributed to them during an ESP course in the third term of the academic year (2009-2010).

The aim of such a questionnaire was to know medical teachers' opinions about the usefulness of English and English instruction for doctors and future doctors, to elicit the target situation needs, lacks and difficulties; in addition to check their opinions, as teachers, about the appropriate content of a medical-oriented ESP course.

Thirteen (13) questions of different types: closed, mixed, and open were asked (See Appendix "B").

Questions 1 to 5: Are informative questions seeking to draw a profile to medical teachers. The questions asked were about teachers' ages, qualifications, their experience in the medical profession as well as in teaching, and the modules they were in charge of.

Question 6: Seeks to know specialists' opinions about the importance of English for them.

Question 7: Inquires about their needs in English.

Question 8: Asks the informants to classify the four skills in terms of frequency of use.

Question 9: Is related to the difficulties the physicians face in English when Performing their tasks.

Question 10: Inquires about the language used in national and international medical conferences.

Question 11: Check their point of view on the introduction of English in the Curriculum.

Question 12: Deals with the duration of the ESP course.

Question 13: Invites the respondents to make suggestions on the content of the ESP Course.

3.4.2 Questionnaire' Analysis

The analysis of subject specialists' questionnaire revealed the following data:

Questions 1 to 5: Subject Specialists' Profile

Number of respondents	Age group	Qualification	Experience		Modules in charge of
			In Medicine	In teaching	
05	36-52	Assistant & Assistant professor in General Surgery.	03 to 28 years.	03 to 15 years.	Surgical semiology, surgical emergency, gastroenterology, Anatomy.
02	35-47	Doctor specialized in Haematology.	13 to 18 years	03 to 10 years	Medical emergency, semiology, clinical haematology, physiology.
01	35	Doctor specialized in Inner Medicine.	03 years	03 years	Endocrinology.
01	35	Assistant professor in Nephrology.	10 years	02 years	Medical emergency, semiology, nephrology, physiopathology.
01	37	Doctor specialized in Gynaecology.	12 years	-	-

Table 3.8: Subject specialists' Profile

Question 6: Importance of English for Doctors

None of the informants denied the importance of English in their carriers; all of them (100 %) recognized the hegemony of the English language, they justified their answers by saying that it was the language of science and of all interesting medical publications since the American medicine and research is the most advanced nowadays. Some of them added that almost all international conferences are held in English and even if an Algerian doctor wants to participate, his article should be written in that language.

Question 7: Needs in English

This question revealed that all the informants (100%) need English to read medical documents and to do research, followed by the access to the internet considered positively by 90% of them. For attending international conferences, it was chosen by 80% of the respondents, finally comes writing medical articles with 50% of answers.

The results are listed in the following table:

Needs in English	Absolute Frequency	Relative Frequency
To read medical documents.	10	100 %
To do research.	10	100 %
To access the internet.	09	90 %
To attend international conferences.	08	80 %
To write medical articles.	05	50 %

Table 3.9: Areas of language Needs
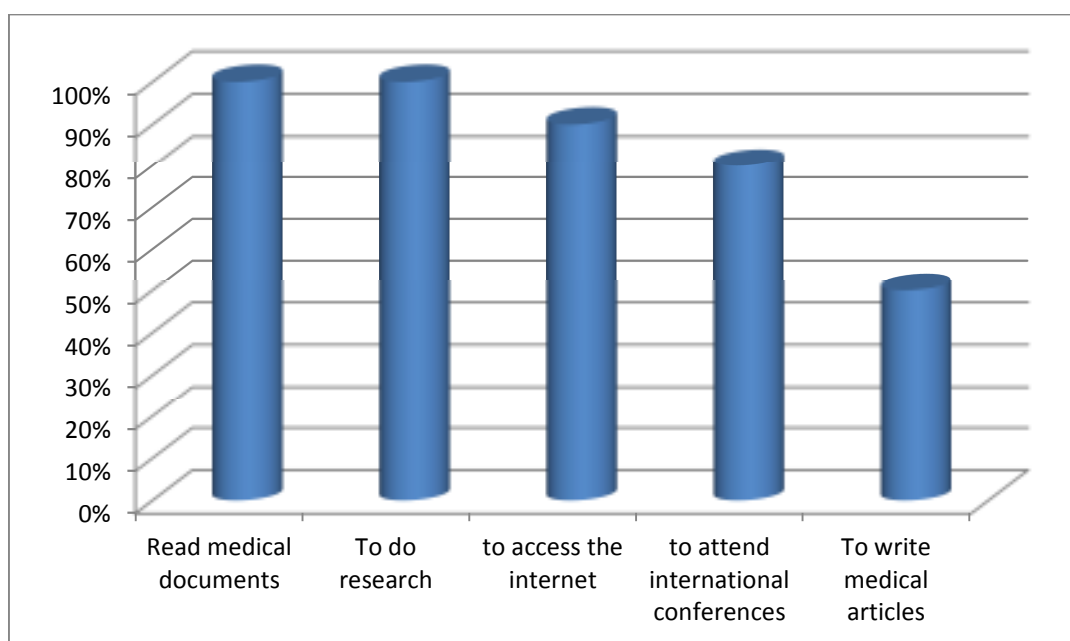
Figure 3.11: Areas of language needs

Question 8: Classification of the four skills in terms of frequency of use

80% of subject specialists' answers demonstrated that reading is the most frequently used skill, followed by listening with 70%. Speaking comes in the third position with 50 %, and last comes writing scored at 30 % of the answers.
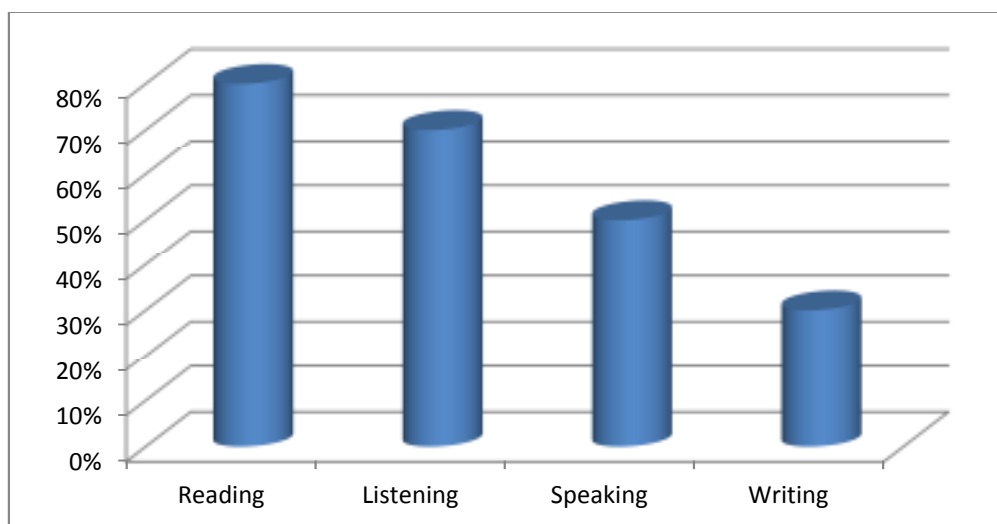
Figure 3.12: Classification of skills in terms of frequency of use

Question 9: Difficulties encountered in English

One of the respondents (10%) was vague in his (her) answer saying that the difficulty lies in undertaking research. However, the rest of the informants were nearly equally divided; 50% of them encounter difficulties in reading and understanding texts, and in medical vocabulary which they consider as very difficult to comprehend. The remaining 40% find difficulties in listening and speaking arguing that reading and writing are less difficult.
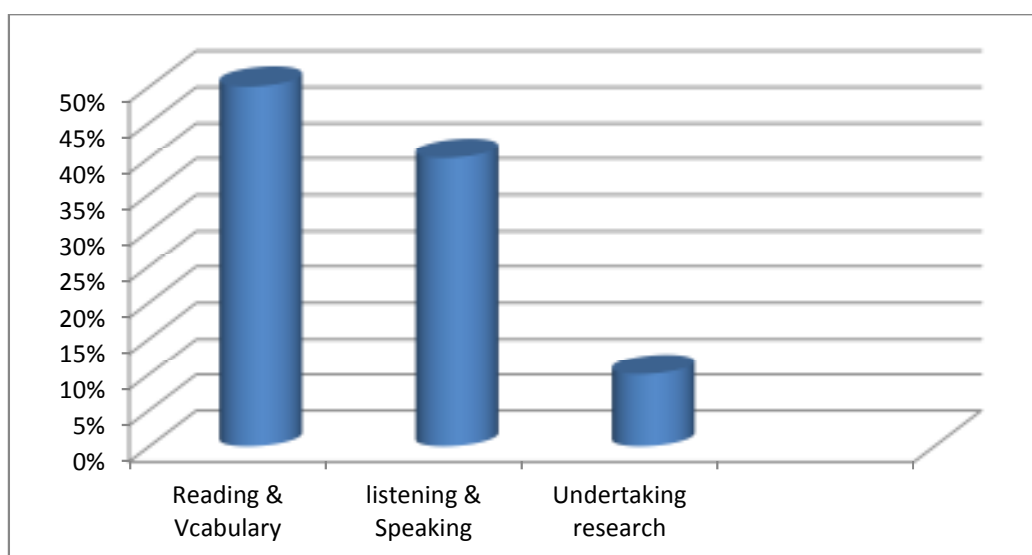
Figure 3.13: Difficulties encountered in English by subject specialists   **106**

Question 10: The language used in national & International conferences

All the informants (100%) said that the language used in national medical conferences was French, while in an international context, most of the time, the language used is English, this meant that German, Spanish, Chinese and Italian are also used.

Question 11: The introduction of an ESP course in the medical curriculum

This question revealed that all the informants are in favour of the introduction of English instruction in medical studies and welcome it.

Question 12: Duration of the ESP course

40% of the teachers informants want the ESP course to last for four (04) years, and 30% of them suggest only two (02) years, while 20% chose three (03) as a duration of the course in question. There is only one informant (10%) who sees English instruction as highly important and wants the course to last for the whole curriculum, i.e.: seven (07) years.
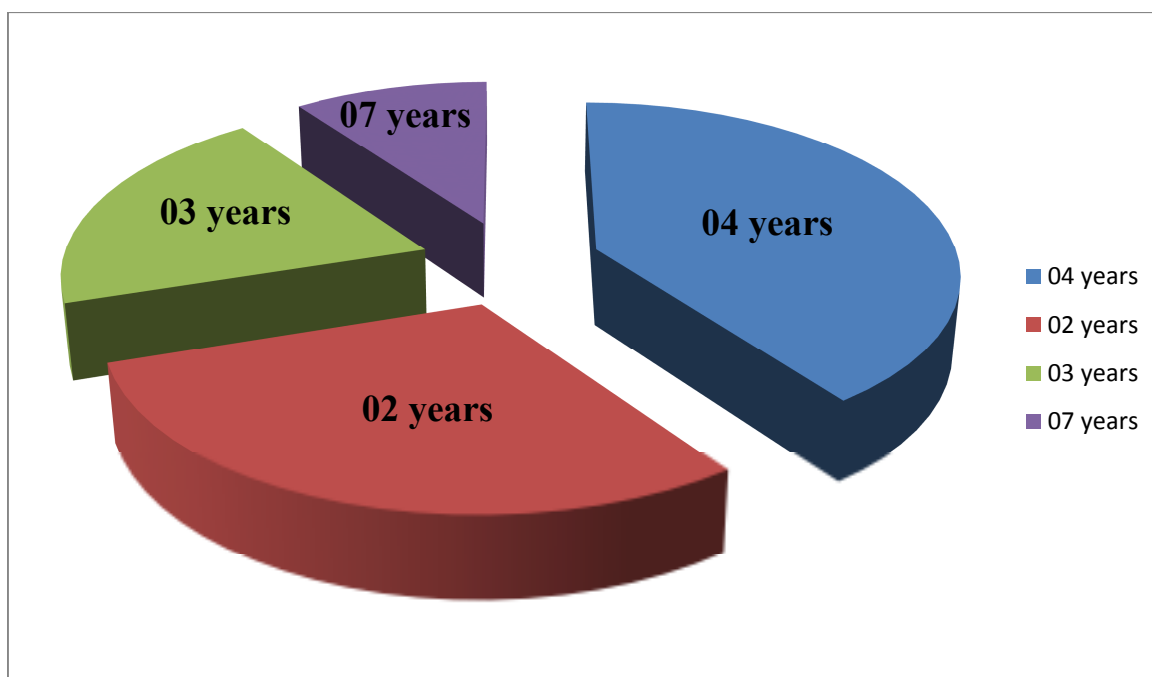
Figure 3.14: Duration of the ESP course for Subject specialists

<u>Question 13</u>: <u>Subject specialists' suggestions regarding the content of the ESP</u>
<u>Course</u>

From subject specialists' answers, it clearly seems that they are well aware of their needs in the language and know what they want; their answers were concise and precise. According to them, the focus should be on:

1- Understanding medical texts.

2- Learning the technical terms (medical vocabulary)

3- The use of translation

4- Speaking a minimum

They also mentioned the difficulty of pronunciation and suggested to have some lectures in phonetics.

3.4.3 Summary of the Results

To sum up, the subject specialists have a considerable experience either in medicine or in teaching, the fact that made their answers clear and precise about their needs in the English language. All of them recognized the pivotal role of English in their carriers, in the sense that it is the sole tool to exploit the most interesting medical publications.

They expressed their needs in English especially in terms of reading medical texts, doing research, and accessing the internet. This is why, they most frequently use the reading skill followed by listening, while the remaining skills are less frequently used.

For them, the thing that handicaps and limits them is to read and understand the texts at hand, in addition to the daunting task of decoding difficult technical terms, for the simple reason, they say with regret, that they did not receive English instruction since ages and urge its introduction in the medical curriculum to save the future generation.

Regarding the course content, subject specialists proposed that the focus should be on the reading skills and teaching medical vocabulary, they also highlighted the usefulness of translation, and the importance of speaking with an acceptable pronunciation.

3.5 ESP TEACHERS' INTERVIEW

The interview was the second research tool used in this work to collect data about the various practices of ESP teaching in the department of medicine. Thus, this part is concerned with the methodology and analysis of ESP teachers' interview.

3.5.1 Methodology of the Interview

Through this interview, the researcher endeavours to find out the areas of ease and those of difficulty in the practice of ESP teaching. It aims to unveil teachers' methodologies and techniques used to conduct their lectures, in terms of syllabus, teaching materials, and choice of course content. The investigator attempts at the same time, to identify students' needs and lacks in the language, their proficiency level, and get teachers' views about the effective ESP course and its components.

The ESP teachers concerned with the interview are of the number of two (02), this sampling covers all the ESP teachers working in the department of medicine.

The interview consists of thirty-three questions:

Questions 1 to 5: Are informative questions seeking to know teachers' personal information. The questions concerned teachers' qualifications, their experience in English teaching including ESP teaching, the departments they worked or are working in, and whether they had any training in teaching ESP.

Question 6: Intends to know teachers' opinions about the introduction of English Instruction in the Department of Medicine.

Question 7: Deals with the number of classes the teachers are in charge of.

Question 8: Concerns the size of the ESP classes.

Question 9: Inquires about the degree to which the class size affects ESP teaching.

Question 10: Asks the teachers about the weekly teaching time of each class.

Question 11: Intends to know students' proficiency level in the language.

Question 12: Deals with students' motivation during the ESP course.

Question 13: Is concerned with the reasons for such motivation or demotivation.

Question 14: Inquires about the assessment of students' needs before deciding on course content.

Questions 15 & 16: Intend to know whether there are any syllabi or teaching materials provided by the department.

Question 17: Asks teachers about how they plan a course.

Question 18: Seeks to know the type of syllabus chosen by the teacher.

Question 19: Aims at knowing the time spent to cover a unit.

Question 20: This question is concerned with the activities planned for a given unit.

Question 21: The importance devoted to each language skill.

Question 22: Relevance of course content to students' needs.

Question 23: Problems encountered in teaching ESP.

Questions 24 & 25: Teachers and students' use of French and/or Arabic during the course.

Question 26: Seeks to know teachers' satisfaction or dissatisfaction with the time devoted to ESP teaching.

Question 27: Intends to know teachers' views on the period during which the ESP Course should last.

Questions 28 & 29: The collaboration between language teachers and subject specialists, and between language teachers themselves.

Question 30: The most appropriate activities for an ESP course.

Question 31: The number of students that an ESP class should comprise.

Question 32: Teachers' use of the ICTs

Question 33: Invites the ESP teachers to make remarks and give suggestions on the Design of an ESP course for medical students.

3.5.2: Interview' Analysis

The analysis of ESP teachers' interview yielded interesting and valuable results. They are presented as follows:

Questions 1 to 4: Teachers' qualifications and experience

Both of the ESP teachers in the Department of Medicine hold a 'licence' degree and are first year 'magister' students specialized in ESP. the first teacher has been teaching ESP in the aforementioned Department for only six (06) months, while the second has a considerable teaching experience, she has been teaching General English for ten (10) years including a period of five (05) years of ESP teaching in different departments such as that of Medicine, Chemistry, and some private schools.

Question 5: Training in teaching ESP

To this question, teachers' answers were divergent; one considered his (her) magister lectures as a kind of theoretical training saying that these lectures helped him (her) acquire some knowledge about the teaching of ESP. Instead, the second informant could not see a link between those lectures and the teaching of ESP; he (she) argued that the magister lectures did not prepare them for such a task and have nothing to do with the true practice of ESP teaching.

Question 6: Introduction of ESP lectures in the Department of Medicine

Both of the informant teachers are in favour for the introduction of English instruction in the medical Department for it has become a very important element in research development and carrier advancement, they said that these students face difficulties in understanding the documents available and medical conferences are most of the time held in English; and added that an ESP practitioner can help medical students focus on the necessary elements concerning a specialized English, and therefore achieve their aspirations.

Questions 7 & 8: Number & size of the ESP classes

Each one of the informants has one class; one is teaching subject specialists (medical teachers), and the other is in charge of postgraduates. Subject specialists are of the number of 20, while the other class counts nearly 40 postgraduates.

Question 9: Degree to which the class size affects ESP teaching

Both of the respondents see that a small class size as 20 students or even 30 helps more the teacher to properly conduct his lecture and facilitates his work, enabling him (her) to better control the class and even lead him to create a kind of motivation by soliciting all the students, while a large size will play an opposite and obviously negative role.

Question 10: Time allocation to ESP teaching

Subject specialists have two (02) hours a week devoted to English instruction. As for postgraduates, they have two English lectures per week which makes, for them, a sum of four (04) hours per week.

Question 11: Students' English proficiency level

According to the teachers' answers, subject specialists have a certain knowledge in English they have an intermediate level, while postgraduates are still beginners.

Questions 12 & 13: Students' motivation during the ESP course and its reasons

Teachers' answers to this question revealed a certain kind of satisfaction with students' performances during the ESP course. They employed the terms 'really' and 'highly' motivated to express students' interest and motivation. As for the reasons lying behind such motivation, the teachers reported that their students are eager to become better in the language since they are well aware of its importance for them, they also mentioned the appropriate selection of the teaching materials and the way the lecture is constructed and conducted as important elements in raising students' motivation.

Question 14: Assessing students' needs

Teachers' answers to this question were completely contradictory. One sees needs analysis as the core of any ESP course and before embarking upon teaching, he (she) distributed questionnaires to his (her) students and identified their needs, after that he (she) decided about the course content and programmed his (her) lectures. The second informant teacher does not believe in needs analysis and reported that he (she) has never done it because ESP students have generally a low level in the language and are not aware of their needs. The teacher; therefore, sees himself as more aware of students' needs and decides alone about course content. He (she) added that students' opinions about their needs could be valuable in further stages but not at the beginning of the ESP course.

Questions 15& 16: Provision of syllabi and teaching materials

The informants' answers to this question were negative, i.e. they were not provided with any kind of help from their Department, they claimed that no syllabus or teaching materials such as textbooks are provided, and that they owe their knowledge in teaching ESP to the internet, or some published materials taken from diverse sources.

Question 17: Course planning

This question revealed that both of the ESP teachers did not have a specific course plan; they however, began their lectures by teaching the same component which is grammar. Teachers justified their answers by saying that medical students have a low level in English, and grammar lectures help to refresh their minds and introduce them to the language. Besides, these students need to know how to construct meaningful sentences and be familiar with the medical vocabulary so that they can embark upon learning the other skills.

Question 18: Choice of the syllabus

The first informant opted for a skills-based syllabus, he said that he began with some grammar lectures, considered by the informant as warm-up or revision lectures,   followed by courses on the reading skill, and then came writing lectures. The speaking/ listening skills are tackled together in the last lectures of the syllabus.

The second informant teacher said that he 'preferred' the communicative syllabus, but since we cannot achieve communication without linguistic competence, the ESP syllabus should start with grammar and vocabulary lectures and then try to create opportunities to speak.

Question 19: Time spent to cover a unit

Both of the respondents claimed the non-use of units, they rather prepare lectures or courses, they explained that they have guidelines which help them in their day-to-day preparation of lectures since it was difficult for them to prepare well organized lectures with an overloaded programme of magister studies.

Question 20: Activities planned for a given unit/ lecture

From this question, it seems that grammar and vocabulary activities have the lion share in the teaching of ESP in the Department of Medicine. The ESP teachers reported that the focus, in courses for beginners, should be on vocabulary acquisition and the practice of grammar; these two components are key elements in attaining a certain proficiency level in the language.

Question 21: Importance of the language skills

The respondents answers to this question are divergent; while one informant sees the most important skill to be developed is reading, followed by writing and then the focus should be on teaching the speaking and listening skills together, the other could not favour one skill on the other, he sees them as equally important and should be developed altogether, he; nevertheless, admitted the non-teaching of the listening skill through lack of means.

Question 22: Relevance of course content to Students' needs

Both of the informants' answers were positive, they claimed that the content of the course provided was relevant to their students' needs as the latter interact and participate during the lectures, they added that sometimes they even ask their students whether or not they liked the activities planned, and/or the topic chosen.

Question 23: Problems encountered in teaching ESP

The main problem faced and stressed by the ESP teachers is the use and understanding of the technical terms; none of them denied the real difficulty of medical terminology and some acronyms encountered, they said that having no idea about medicine and being unfamiliar with new medical concepts really handicaps and limits them.

Question 24: Teachers' use of translation

One teacher assumed the use of French and Arabic in his lectures as a time-saving procedure, he explained that sometimes he prefers giving equivalents in another language rather than wasting time in working things out, while the second informant was totally against the use of another language during his classes.

Question 25: Students' use of translation

To this question, both of the ESP teachers reported that their students do have recourse especially to French, since it is the language of instruction in the medical field, to check the meaning of words.

Question 26: <u>Time-span of ESP teaching</u>

Concerning the weekly teaching time devoted to English instruction, the first informant indicated that he had two sessions a week to administer, which makes a sum of four (04) hours per week, a period which he considers as fair enough. The second informant, instead, encountered his students once a week during two (02) hours, a period considered as insufficient and proposed four (04) hours a week.

Question 27: <u>Duration of the ESP course</u>

Regarding this question, the informants agreed on the fact that with a good programme and a well-structured syllabus, the period of two (02) years will be sufficient for medical students to grasp the necessary knowledge in the language.

Question 28: <u>Collaboration between the ESP teachers and the Subject specialists</u>

None of the informant teachers denied the capital importance of consulting subject specialists before preparing their lectures; though, they admitted the non-existence of such collaboration arguing that they have no contact with them except with their students, in addition to their complete reliance on the internet to prepare their ESP courses. One informant added that since he did not conduct a needs analysis in his ESP teaching experience, he judged unnecessary to consult a subject specialist, yet he reported that he is planning to do so for future lectures as the latter better knows what he needs to do with the language.

Question 29: <u>Collaboration between ESP teachers</u>

Although the informants claimed the complete absence of this type of collaboration, they recognized its importance for them. This collaboration, they said, would be very fruitful if put into practice; to profit from other teachers' experiences, see the lacks, and change wrong things.

Question 30: The most appropriate activities for an ESP course

From this question, it appears that the most important activities that both of the ESP teachers focus on are: teaching vocabulary, speaking and topic discussions, and grammar; while the other activities are seen as less important. The results are better displayed in the following table:

Activities for the ESP course	ESP Teacher 1	ESP teacher 2
Teaching vocabulary & medical terminology	100 %	70 %
Speaking & Topic discussions	100 %	50 %
Teaching Grammar	50 %	70 %
Writing-oriented courses	50 %	60 %
Reading comprehension	50 %	50 %
Listening comprehension	10 %	30 %

Table 3.10: Activities for the ESP course

Question 31: ESP class size

To this question, both of the respondents agree on the fact that for the efficiency of the course, and in order to achieve the objectives set, all the students should have the same share of the teachers' attention, for this reason they propose that the class size should not exceed 20 students.

Question 32: Teachers' Use of the ICTs

None of the ESP teachers denied the positive and facilitating role of using, for instance, pre-prepared lectures through PowerPoint slides or some video projections to maintain students' stimulation; however one of them uses his personal computer and technological materials while the other lacks them and said that they are not provided by the administration.

Question 33: Teachers' Suggestions

The ESP teachers maintain that the English instruction is a highly important tool for medical students either in their studies, or in their future carriers, thus its introduction to their field of study will bring a plus for them. As for the teaching of ESP, they said that it was a hard task and as novice teachers lacking experience, they need supervision and insist on the provision of syllabi or even guide lines. They also evoked their need to be trained on how to design a course, how to organize lectures, and the non-existence of teaching aids.

3.5.3 Summary of the results

The collected data from the ESP teachers' interview showed that although these teachers have little experience in the domain of ESP teaching, they enriched the interview with interesting viewpoints. Despite the fact of being untrained to teach ESP, except the magister lectures which helped them acquire some knowledge, the ESP teachers struggled to plan and administer their lectures, furthermore their inexperience in teaching ESP especially in the medical field made it difficult for them to understand technical terms which they see as the chief barrier inhibiting their teaching task. Besides the non-provision of syllabi and teaching materials, the absence of supervision, and lack of collaboration with others are important factors that hinder effective teaching.

Needs analysis, which is the cornerstone in any ESP project, is seen differently by the informants, they nevertheless maintain that the course content provided to the students is relevant to their needs translated into a high motivation, interest, and active participation during the classes. These courses evolve around the exclusive teaching of grammar and vocabulary, the activities most used by the teachers and judged as the most appropriate to inculcate within the learners the necessary knowledge they need.

The ESP teachers, before embarking on the teaching task, chose two types of syllabi; the skills-based syllabus and the communicative one, reporting that all the skills should be developed altogether since they are equally important for one informant. For the other, the reading skills should be developed first, followed by writing and then teaching speaking and listening.

Regarding their suggestions, the ESP teachers qualify the English language as highly important for medical students and urge its official introduction in the field, the ESP course should, at least, last 02 years with 04 hours a week administered to maximum 20 students per class to achieve teaching/learning efficiency and enable the teacher interact with all the ESP students.

3.6 MEDICAL ADMINISTRATORS' INTERVIEWS

The present section deals with the methodology and the analysis of the results obtained from the interview addressed to the administrators of the Faculty of Medicine. The aim was to seek information about the introduction of the ESP course in the department, and the importance of English for medical students and doctors.

3.6.1 Methodology of the interview

The administrators concerned with the interview are the Dean of the Faculty of Medicine and the head of the Department of Medicine. The interview addressed to them aimed at knowing the administrative standpoint of lack of ESP courses in the faculty and its reasons. It also attempted to unveil their opinions about the optional ESP course recently programmed and the reasons behind such a step. In addition, the researcher tried to check their views about the usefulness of English instruction and its impact on medical students.

The interview is composed of eight (8) questions, each with a specific aim. (See Appendix "D")

Question 1, 2 & 3: Are designed to draw the informants' profile.

Question 4: Inquires about the existence of former ESP courses.

Question 5: Intends to know the reasons for lack of ESP courses.

Question 6: Seeks the informants' opinions on the introduction of ESP instruction.

Question 7: Asks about the duration of the ESP course.

Question 8: Asks the informants to make suggestions on course content.

3.6.2 Interview Analysis

The interview revealed the following information:

Questions 1,2 & 3: The informants' qualifications and experiences

The Informants	Qualification	Experience	
		As an Administrator	**As a Teacher**
Dean of the Faculty of Medicine.	Professor in Nuclear Medicine.	05 years	30 years
Head of the Department of Medicine.	Professor in haematology.	07 years	23 years

Table 3.11: Medical Administrators' qualifications

Question 4: Existence of former English courses in the Faculty

The informants' answers to this question were negative; there were no English courses offered in the Faculty, except some attempts made for subject specialists (teachers) and the residents who requested ESP courses because they found difficulties in reading medical publications and in expressing themselves during international conferences; however, these attempts did not last long and failed.

Question 5: Reasons for lack of ESP courses in the faculty

The first reason evoked by the Head of the Department of medicine is that medical students have a long and heavy curriculum of seven years; the program, she says, is already overloaded and adding a new component to the students, especially when it is optional, will certainly fail, as the students will not 'waste' their time in a module which is not evaluated.

The Dean of the Faculty was very explicit and highlighted three main reasons of non-existence or failure of attempts to introduce English in the Faculty. The first reason evoked is that

- The ESP teachers recruited should be paid by the Faculty which was, financially, not enough strong to support some extra salaries, furthermore

- The teachers and residents, who were in need of English courses and requested them, could not find time to follow these courses, with the heavy charges they had between hospitals and the faculty, and consequently finish by giving up.

- The third reason concerned the students who came from the secondary schools 'arabophones' with a very weak level in French. And as French is the language of instruction in the Faculty, Medical administrators then, introduced optional French courses to help the students cope with the new situation, and find a solution to teachers' complains. As a consequence, the dean said that the introduction of English would not interest the students since they were already overloaded with a heavy programme, and do not need English as needed by postgraduates and teachers.

Question 6: Introduction of ESP in the Department of Medicine

Both of the informants are in favour with the 'official' introduction of ESP courses not only in the Department of Medicine but also in the whole Faculty; even students of Pharmacy and Dental Surgery need English, the Dean reported. They added that an official course is the unique solution to make the students follow it since it will be evaluated.

Question 7: Duration of the ESP course

The informants before answering the question considered three elements:

- English is indispensable for scientific access, and medical doctors need it to read high-level medical publications, to speak and understand it in conferences.

- Medical studies are long and difficult, so the introduction of ESP for a long period could not be possible.

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- The teachers' constant complains about poor students' level in French, so French courses are important and should be maintained.

For the above reasons, and in order not to transform the Faculty of Medicine into a Faculty of foreign languages, both of the informants said that the period of the ESP course should not exceed two (02) years for graduates and should continue at postgraduate level.

Question 8: Suggestions and comments

The thing clearly said by the informants is that medical students, by the end of the ESP course, should know how to read and understand English, speak it in an acceptable way, and why not write it.

From this answer, it obviously seems that the skills in the medical field are classified as follows:

- Reading

- Listening

- Speaking and

- Writing.

3.6.3 Summary of the results

In sum, according to medical administrators' answers, English is synonymous with carrier advancement and a solid link with up-to-date medical research. English is needed by the medical practitioners especially to read high-level medical publications, and to interact with foreign colleagues in international conferences. Despite this fact, English instruction has never existed in all the Faculty of Medicine except the recent implementation of an optional ESP course, or some attempts made on the demand of medical teachers and postgraduates. Those attempts, unfortunately, failed mainly because of ESP students' lack of time.

In this sense, the administrators were in favour to 'officially' introduce an ESP course that should not last more than two (02) years because of the long and heavy curriculum the medical students have, they however; suggest to continue English instruction at postgraduate level and focus more on the reading skill first, then the listening and speaking one to finish why not with the writing one.

3.7 ENGLISH ADMINISTRATORS' INTERVIEWS

In order to find answers to ESP teachers' difficulties and complains, the researcher addressed another interview to the head of the English section as an attempt to uncover the conditions in which the ESP teachers work. Accordingly, this part takes in charge the methodology and analysis of English administrator's interview.

3.7.1 Methodology of the interview

The interview in question concerned the ESP teachers and the way they were supervised by the English section, in terms of training, the provision of syllabi or teaching materials, and the reason behind assigning an inexperienced teacher to such a complex task.

The interview comprises nine (9) questions, each will be dealt with separately. (See Appendix "E")

Questions 1 to 4: Are concerned with the informant's qualification, and her experience as an administrator and a teacher.

Question 5: Deals with the number of full-time and part-time teachers in the English section.

Question 6: Inquires about the reasons for lack of ESP training.

Question 7: Intends to know the reason for assigning new teachers to ESP teaching.

Question 8: Is concerned with ESP teachers' supervision.

Question 9: Looks for the informant's suggestions on how to improve ESP teachers' conditions of work.

3.7.2 Interview Analysis

This part is concerned with the analysis and interpretation of the questions.

Questions1 to 4: The informants' qualification and experience

The informant before being the head of the English section is an English teacher who holds a 'doctorate' degree in applied linguistics and TEFL. She has been teaching English for nineteen (19) years including a period of five (05) years in teaching ESP in the departments of Economics, Biology, and Anthropology. She is head of the English section since six (06) years.

Question 5: Number of teachers in the English section

The total number of teachers in the English section is fifty-two (52). Forty-two (42) of them are full-time teachers, while the remaining ten (10) ones are part-time teachers.

Question 6: Reasons for lack of ESP training

The head of the English section reported that the section has no plans for such a training, and added that as an attempt to provide other departments with well-trained ESP teachers, two years ago a 'magister' in ESP was opened through which ESP training was provided to fifteen (15) 'magister' students among whom four students have already submitted their theses.

Question 7: Reasons for assigning novice teachers to ESP teaching

The respondents' answer to this question was clear and explicit; she explained that this was simply due to the lack of English teachers as a whole. Facing a very important demand from the other departments, with a limited number of teachers, the English administrators prefer to send novice teachers and maintain the teaching of ES rather than having nothing to offer and therefore, cancel the ESP course. Knowing that the students specialized in English have the priority to be taught by skilled teachers.

Question 8: <u>Supervision of ESP teachers</u>

According to the administrator's answer, except the 'magister' students previously mentioned, no ESP teachers are supervised by the section because of lack or absence of collaboration between the different departments of the university.

Question 9: <u>Suggestions to improve ESP teachers' conditions of work</u>

The Head of the English section assumed that during the last years, they have attempted to do different things such as the opening of a research project in ESP to try to solve the problem of teachers training, as well as the proposal of creating an ESP teaching laboratory which is indeed an ambitious step. The administrator also highlighted a very important issue, that of the rehabilitation of the ESP centres in all Algeria, the thing she said, that is not encouraged by the Algerian linguistic policy as Algeria belongs to the countries of 'francophonie'.

3.7.3 Summary of the results

As a summary, we can say that the recent opening of a 'magister' in ESP was the only opportunity to train future ESP teachers, except this step there were no other plans to provide any kind of ESP training. As for the assignment of ESP teaching to new and inexperienced teachers, it can be explained by the limited number of English teachers in comparison with the high demand of the other departments, the English administrators therefore, prefer to maintain ESP teaching even if it is administered by novice teachers, rather than nullify it through lack of skilled teachers.

Concerning the issue of supervision of ESP teachers by the English section, it is noticed that the ESP 'magister' students trained in the section are also supervised by it; for the other teachers; however, there is no supervision because of lack of collaboration between the other departments and the English section. Despite this fact, there are attempts from the part of the English administrators to solve the problem of teachers training through the opening of a research project in ESP, in addition to the creation of an ESP laboratory and the eventual rehabilitation of the ESP centres.

3.8 CLASSROOM OBSERVATION RESULTS

Classroom observation was a useful tool in collecting interesting data about the teaching-learning situation. Such type of information allowed the researcher to gain direct and truthful insights in the teaching and learning practices.

The class was observed during eight sessions for a period of two months (May and June 2010). According to the ESP teacher, it normally consisted of forty (40) students; however, by the beginning of the observation process, there were only thirty-three students under observation, and the number began decreasing until it reached four to three students at the end of the process. The information collected is summarized and presented in accordance with the different aspects previously mentioned and focused on by the researcher.

- **Course conduct and content:**

Based on careful examination of data collected throughout the eight sessions of classroom observation, the researcher noticed that the teaching was not done through units, but through lectures which where grammar-based; all the ESP courses observed revolved around grammar, grammar rules, and grammar activities. All the lectures and grammar rules were written on the blackboard; however, for the activities the teacher always used handouts which were distributed to the students. Sometimes, the teacher arrived to the Department before the students and began writing the lecture on the blackboard, this was used as a saving-time technique, the teacher explained, in addition, she always began the lecture by a revision of what was done previously as a warm-up technique, and focused on the use of visual aids (printed photos and images) especially when dealing with technical terms, explains in English and never uses Arabic or French. As for the nonuse of educational technology, the teacher's opinion was reported in teachers' interview, question 32 (See page 117).

The approach adopted seemed to be teacher-centred; the student, his opinion, lacks, and wants were not taken into consideration. This means that the teacher was not a facilitator of learning, but the resourceful authority and the knowledge provider, she provided the lecture, explained the grammar rules, and asked the students to do the activities without stating the objectives of the lecture from the beginning, or asking for their opinions about what will be done, for her, the students were not partners, but knowledge receivers. She, nevertheless, had a technique of ending the lecture in a relaxed atmosphere, by asking the students to think about a proverb, a riddle and an idiom.

The syllabus used was the structural one; it was clearly noticeable that for the ESP teacher, learning language meant learning grammar rules and then applying them to practical language use.

To sum up, all the lectures attended to by the researcher were concentrated on grammar and the acquisition of medical vocabulary presented and selected at random through pieces of authentic language extracted from some authentic sources, and which were generally web-retrieved.

- **Teacher-students interaction:**

As previously mentioned, the approach used was teacher-centred which means that there was not much interaction between the teacher and the students since the former wrote on the blackboard, explained the lecture and the activities, while the latter were only asked to concentrate and follow the explanations.

However, when dealing with the activities which all of them were grammar-based, though the students were not asked to work in pairs or in groups, they tried to interact between them asking about the meaning of words or the correct structures using French. There was little interaction when correcting the activities on the blackboard, here the teacher asks the students about the correct answer, one of them gave it, and the teacher writes it without inviting the student to write himself the answer.

Through the type of activities the students were introduced to, the researcher understood that the skills the instructor intends to develop are grammar and vocabulary acquisition.

Here it should be said that the researcher tried to calculate the teacher and the students talking time, but in vain since she was not equipped with the adequate tools, and realized that the amount of data focused on was too big; thus, she found herself unable to collect such amount of data at the same time.

- **Students' attitudes and motivation:**

At the beginning of the observation process, the students seemed interested by the lectures and were active participants when fulfilling different tasks, the same thing could be said on their class attendance. However, during the last four lectures their number considerably decreased to reach only three students, which embarrassed the ESP instructor who was a good and very motivated teacher, and who transformed a one hour and half lecture to two hours one for the sake of the students. This decrease of attendance, consequently of motivation, meant that either they were too busy in the hospital, or too tired to attend a lecture programmed at the end of the day, or the lecture's content was no more stimulating, as if they got bored with grammar.
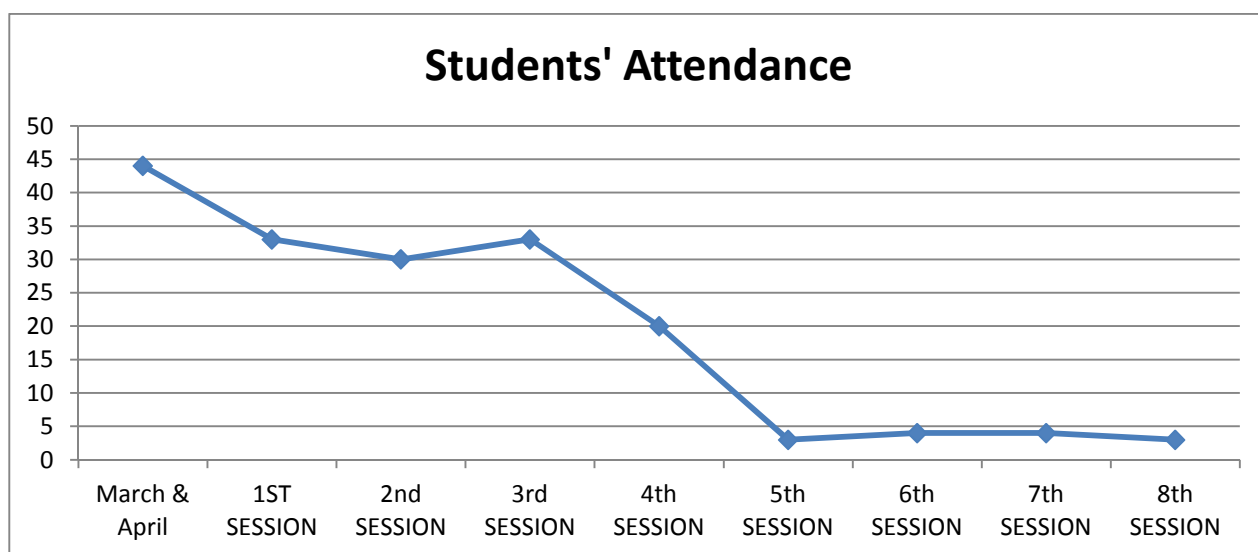
Figure 3.15: Students' Attendance decrease

- **Students' proficiency level and its progress:**

At the beginning of the observation process, the observer noticed that the students' proficiency level in English was poor; during the lecture, they seemed to be lost as the teacher kept explaining things exclusively in English, refusing and totally rejecting the use of Arabic or French in her classes. At those moments, the students consulted each other in an attempt to understand what was being said. To the teachers' questions they could not answer as they were unable to construct a correct sentence, or to correctly pronounce difficult medical lexicon; sometimes, the researcher heard them saying: *"I have the answer, but I cannot tell it in English"*. Despite this fact, the students struggled, kept trying to do the activities, and frequently asked the teacher about the right pronunciation of words.

In the course of classroom observation, the researcher could record some instances of students' linguistic difficulties. Generally speaking, medical students encounter serious problems in dealing with English be it in the written or the spoken form. However, through the verbal answers and the written activities, the researcher noticed that the main difficulties lie in:

- **Grammar:**

It has been noted that constructing a correct sentence respecting, especially, the use of prepositions, phrasal verbs, auxiliaries, and tenses was a challenge for the students. The table below exemplifies some of students' erroneous use of the auxiliary verb 'have', the simple past, and the past participle.

Sentence used by the students	Right sentence
I was <u>keeped</u> in the hospital.	'I was <u>kept</u> in the hospital.'
The surgeon have accepted to operate the patient.	'The surgeon has accepted to operate on the patient.'
We haven't understand.	'We haven't understood.'

Table 3.12: Students' grammatical errors.

- **Vocabulary:**

     Besides grammar deficiencies, the students' vocabulary repertoire was limited to some French terms that already exist in English, thus, when they had the opportunity to speak, they often make use of French and mispronounce the rare English words used. In addition to this, profiting from the linguistic affinities that exist between French and English, the students often overgeneralize and make negative transfers. The following table illustrates students' negative transfer of French words into English.

Words used by the students	French Equivalents	English terms
Secondary effects	'Effets secondaires'	Side effects
Legal Doctor	'Medecin Légiste'	Pathologist
Doctor of urgency	'Medecin d'urgence'	Emergency doctor

Table 3.13: Instances of students' negative transfer

- **Phonology:**

     At the phonological level, the students face serious difficulties in pronouncing new, complex, and difficult technical terms, and tend to pronounce them in French either in the pronunciation of vowels, or of consonants as shown in the table below:

Examples of words	Wrong pronunciation	Right pronunciation
Pathologist	/ ˈpætɔlɔʒist /	/ pəˈɵɔlədʒist /
Osteopathy	/ˈ ɔsteɔpæti /	/ ɔsteˈɔpəɵi /
Disorder	/ ˈ dizɔːrder /	/ disˈ ɔːdə /
Homeopathy	/ ˈ ɔmeɔpæti /	/ ˌhəʊmiˈɔpəɵi /
Paralysis	/ ˈ pærælizis /	/ pəˈræləsis /

Table 3.14: Students' realization of consonants

The following table illustrates students' mispronunciation of English diphthongs and triphthongs which are most of the time shifted to French pronunciation.

Examples of words	Wrong pronunciation	Right pronunciation
Patient	/ˈpæ ʃnt/	/ˈpei ʃnt/
Antibiotic	/ˈæntibiɔtik /	/ˌæntibaɪˈɔtik/
Hypertension	/ˈipertenʃn/	/ˌhaɪpəˈtenʃn/
X-ray	/ˈiks reɪ/	/ˈeks reɪ/
Blood	/ˈblʊːd/	/ˈblʌd/
Diabetic	/ˈdiæbetik/	/daɪəbˈetik/

Table 3.15: Students' realization of vowels

As the course progressed, the researcher could notice a slight change in the attitudes of the students; they became more open to the lecture and the instructor as well, they seemed to be at ease and even tried to joke with the teacher 'in English', and laughed at the pronunciation of some medical terms. This fact led them interact more with the teacher, and therefore, progress at the level of sentence construction and pronunciation.

By the end of the observation process, though the students still had difficulties in constructing correct sentences, using the correct tenses, and interact in an acceptable way, they became able to understand the activities instructions without the teachers' help, did the activities in a relaxed atmosphere, correct them with the teacher, and understood what was said.

To summarize, the researcher during the observation phase noticed that:

- Medical postgraduate students have a positive attitude vis-à-vis English and are well aware of its importance for them, for this reason they were, at the beginning of the ESP course, quite motivated to learn it, though they had and still have serious difficulties in manipulating the language. By the end of June, their number considerably decreased which could be due to:

1- They were too busy to continue attending the ESP course.

2- Too tired to follow a course administered at the end of the day.

3- All the lectures were grammar-based; consequently, they got bored with grammar.

4- Course content was not linked to any communicative purposes.

5- The course was optional.

- The ESP teacher, though extremely serious, did not conduct a needs analysis, and does not believe in it, before deciding about the content of the course.

- For her, language is a system and its learners need first to know this system and then apply their knowledge in language use, thus grammar is the basis of any course.

- There was not much interaction between the teacher and the students.

- She does use visual supports to consolidate students' knowledge, but lacks technological means which are not provided by the administration.

- The approach used is not learner-centred, it is teacher-centred.

- The teacher through the activities tried to focus on grammar and acquisition of vocabulary.

3.9 SUMMARY OF THE MAIN RESULTS AND DISCUSSION

Through students' and subject specialists' questionnaires, the researcher could investigate medical students' language needs required in the target situation; these research instruments also enabled her to check the subjects' opinions, about the importance of English in their studies and future carriers, on one hand, and the eventual implementation of an ESP course in the medical studies, on the other. Furthermore, the investigator tried to identify students' lacks in the language and elicit the reasons for such difficulties. The interviews conducted with some medical and English administrators, and ESP teachers enabled the researcher to uncover the conditions of ESP teaching in the Department of Medicine, teachers' methodologies in designing and conducting the ESP courses, and choice of course content. In addition, it was an opportunity to check ESP teachers' views about the effective ESP course, its components, and appropriate content.

As for classroom observation, it was used to get direct insights in the true practice of ESP teaching, measure students' motivation and attitudes, and observe the teacher-learner relationship.

The most important data that surfaced in the results revealed that medical postgraduates are poor manipulators of the English language and face a great deal of barriers in acquiring the necessary knowledge, because of the long period during which they stopped learning the language. They are; however, along with subject specialists increasingly interested in learning English, they assert that in this era, English has, by no means, become the language of science, and assume that its command is synonymous with carrier advancement and scientific progress. They; therefore, show a positive attitude towards the language, and urge its official implementation in the Department of Medicine because it plays a facilitator role either in the academic life, or in the professional one.

Both questionnaires yielded interesting results on students' and doctors' needs in terms of skills; all of them agree that the four language skills are important and deserve to be developed all together; however, they see that the first skill which has the priority to focus on is reading followed by the listening skill, after that comes speaking and last writing. Additionally, the informants claim encountering great difficulties in English, mainly in speaking and listening which is due, according to 93% of them, to the insufficient period of instruction and lack of practice. For this reason, most of them want to have at least four years of English instruction with six hours, which makes three sessions, per week. This demonstrates that they are eager to learn the language because of their awareness of its importance for them. they; however, reported that because of lack of time, they do not have recourse to other means to learn it, only few of them make efforts to learn it through the use of the internet, and watching TV programmes on English-speaking channels.

Regarding the ESP course, the data collected through teachers' interviews and classroom observation showed that the ESP course is administered by novice and inexperienced teachers who lack training in teaching ESP, administrative supervision, and support. Needs analysis for one of them is not so important, consequently, course content is selected according to the teachers' opinions and views. As a result of non-provision of any syllabus or teaching materials, the ESP teachers do not follow a fixed syllabus, nor do they select appropriate teaching materials. These are presented to the students in the form of authentic pieces taken from some medical books or from the internet. Course content is concentrated on grammar lectures and activities, and acquisition of medical vocabulary.

As a consequence, the students who devoted a particular attention to English instruction, and who were motivated to learn it, became gradually demotivated and bored with grammar-based lectures administered by the end of an overloaded day between medical lectures and hospital tasks.

The medical administrators, who are themselves specialized doctors and medical teachers, do not deny the crucial role of English as a bridge to good and high-level medical publications, and as the unique linguistic tool in international conferences. This awareness made them program optional English courses offered to doctors and postgraduates, yet these attempts to introduce English instruction failed because of doctors' lack of time. For this reason the administrative staff favours the idea of an 'official' English course which will certainly be taken into consideration since it will be compulsory. This course, they say, should concentrate on teaching the receptive skills and medical terminology.

One of the most important findings in this research is that important decisions have been made at the level of the English section, translated into the recent opening of a 'magister' in ESP, which is in itself a very ambitious action, aiming at providing other departments with well-trained and specialized teachers who are under close supervision. Moreover, the English administrators, in an attempt to eradicate the problem of teachers' training, have proposed the opening of a research project in ESP and the creation of an ESP laboratory.

In sum, all the informants agree on the importance of teaching the receptive skills which are much more needed than the productive ones, to concentrate on the acquisition of medical vocabulary and its correct pronunciation, and to focus on translation activities because of their usefulness in the field. All this should be done within an interactive and communicative lecture to make students speak more, to stimulate and keep them interested and motivated, especially through the use of visual aids and educational technology which proved to be efficient in catching students' attention.

3.10 CONCLUSION

The third chapter attempted to analyze and interpret the results drawn from the students' and subject specialists' questionnaires, ESP teachers' and administrators interviews, and the data yielded through classroom observation. Interesting findings were achieved in terms of students' needs, interests, and objectives as well as teachers' opinions, assumptions, and recommendations. The interviews' and classroom observation results enabled the investigator to see and assess by herself the conditions in which ESP teachers work, and how learning takes place. It has been found that medical administrators, postgraduates, and doctors are aware of the place that English holds in their academic and professional lives and deploy efforts to attain a certain proficiency level in the language.

In addition to this, the other actors involved in the ESP enterprise, such as the English administrators, seem to have found the path towards effective ESP teaching by making important decisions to train and supervise the ESP teachers through the creation of an ESP laboratory which will be a fresh start of a new vision of ESP teaching.

The identification and analysis of students' needs is an important parameter highly considered as the main pillar to fulfill the design of a suitable syllabus and the production of appropriate ESP materials. Additionally, the research results enabled the investigator to identify the teaching deficiencies, and the remedying ingredients that hopefully, will enrich the ESP course and make it respond to the required objectives.

CHAPTER FOUR:

RECOMMENDATIONS & INSTRUCTIONAL PRACTICES

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4.2.2 The Role of the English Section

4.3 THE ROLE OF THE TEACHER
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4.3.2 Conducting Action research
4.3.3 The Communicative Approach
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4.4 THE ROLE OF THE LEARNER

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4.8 CONCLUSION

4.1 INTRODUCTION

In the previous chapter, the researcher attempted to analyze and interpret the data collected in order to identify medical students' target and learning needs, in addition to find out the teaching/learning deficiencies. The results that surfaced during the analysis process showed that, despite the existence of some positive factors that help and encourage the acquisition of English, effective teaching and learning does not take place. In the light of such results, the investigator tries to propose some remedial suggestions and recommendations that will; hopefully, inspire researchers and help ESP teachers in designing efficient courses and; therefore, improve the teaching of ESP.

Accordingly, this chapter aims at providing theoretical suggestions related to the role that each actor in the ESP process should play, starting from the administrative staff to the ESP teachers, and the learners as well. Such recommendations focus on the adoption of the communicative approach, the teaching of the receptive skills, the promotion of translation, and the use of educational technology.

Additionally, the last chapter puts into practice the theoretical assumptions about the course in question and endeavours to provide a sample unit to interpret the results obtained and exemplify course components.

4.2 ADMINISTRATIVE PERSPECTIVES

The results obtained from the research instruments used in this investigation uncovered important issues that have to be taken into consideration. It has been noticed that the administrative actors are totally absent from the ESP scene, though they have a large share of responsibility either to supervise, support and help the ESP teachers in fulfilling their tasks, or to sensitize the target students about the importance of English for them. The following points consider the roles of both the Medicine Department and the English Section in more details.

4.2.1. The Role of the Department of Medicine

During this investigation and after the analysis of the situation and the population under study, according to the results of data analysis, the researcher strongly believes that the reforms should first start from the administration.

In the department of Medicine, except the very few attempts to incorporate an informal English instruction, ESP courses have never existed before. This situation calls into question the role that the Medical administrative staff should play in seizing the ministerial authorities and requesting the official implementation of an ESP course destined to undergraduate medical students starting from the second year of study, as the first year of the medical curriculum is overloaded with speciality modules.

The research results revealed that medical students and professionals display a poor proficiency level in English, despite the existence of a huge need to handle communication acts with foreign counterparts. In addition, NIA results showed that medical students need English to exploit medical literature as reinforcing lectures, prepare examinations, and conduct research; for this reason it is high time to set up administrative reforms by officially stating the introduction of English instruction as a compulsory module in the students' curriculum, especially when seeing that the informants welcome it and show a great enthusiasm to such an idea. This step will help medical students acquire the necessary knowledge, and equip them with the required skills and abilities to reach their objectives. Introducing this module at the undergraduate level will be beneficial for the students as it will be considered as a continuation of the secondary school studies and therefore erase or minimise the gap which the lack of practice has generated.

In order to reach course efficiency, the researcher, based on medical professionals answers, recommends a four-year-English instruction with two sessions per week. In addition, the ESP course should have a coefficient of 2 or 3 so that to give the module importance and more consideration especially from the part of the students.

The ESP teacher who was an efficient and devoted individual, arriving soon and leaving late, struggled to successfully fulfil her teaching task. To consolidate students' knowledge she used pictures and images which were web-retrieved and printed on normal paper, because she lacked the technological means which were not provided by the Department of Medicine. Indeed, it is necessary that the medical administrators make a link with the ESP teacher, and provide him with the necessary and least means such as a computer and a data-show device that should be put at the disposal of any teacher who need this type of instruments that will ease and support him in his teaching task.

As for the learner, the researcher has noticed that there is not enough awareness from the part of the undergraduates who regard the language as 'Important' but still 'additional'. Moreover, the researcher, when conducting administrators' interviews, discovered that French, since it is the language of instruction, is given much more importance than English. Seminars were held, in collaboration with the French section, to sensitize the students and think about effective French courses that will help the students in their academic studies.

In these same lines, the medical administrators should also organize seminars and campaigns of sensitization to guide the medical students and make them aware of the vital importance of English as a world language and that of science too. The organization of such seminars and campaigns of sensitization will catch students' focus and make them think about the role that English plays in our lives, especially when using catch-phrase slogans that emphasize the requirements of globalization and the knowledge society such as *" English makes you a citizen of the world"* , *"You don't speak English! So you are illiterate"* , or *" A good doctor is a well-informed one"*. These suggestions, if considered by the medical administrators and put into practice will bring into being a new vision of ESP teaching.

4.2.2 The Role of the English Section

The rich literature written within the field of ESP, and the surveys carried out in many institutions demonstrate the complexity of ESP teaching and agree that it has not been given its share of attention. In this sense, the English section has a good deal of responsibility in supporting and helping the ESP teachers to fulfil their hard task successfully.

From the research results, the investigator could understand that, except the opening of a 'magister' in ESP, there is no other possibility to train the ESP teachers because of the absence of formal plans devoted to such training. However, the researcher recommends that in the absence of training, supervision can take place. With the creation of an ESP project and an ESP laboratory in the English section, it will be possible to supervise the ESP teachers through the organization of weekly or monthly meetings gathering ESP teachers who should be supervised by an experienced teacher. This opportunity will enable them to meet with their peers, discuss about the difficulties and the problems they face, think about their teaching approaches, and exchange opinions about their lectures' and students' progress.

Moreover, the ESP teachers, the investigator still maintain, are novice and inexperienced ones; thus, unable to elaborate appropriate syllabi or design well organized and structured courses. For that reason, it is necessary that the English section provides them, not with syllabi since they are supposed to teach different groups of learners with different needs, but with guide lines and techniques about how to incorporate target needs within a syllabus and translate them into teaching objectives, sensitize them about the central importance of the students, and their wants, to consider them as partners and take into account their learning styles. More importantly, these teachers should be taught how to teach the language skills and the type of activities appropriate to each skill.

Put into practice, these meetings will be the major factor in enhancing effective professional development, and creating ongoing learning opportunities available to ESP teachers.

As for the provision of teaching materials, the researcher suggests to create an ESP library which will gather all and any type of books, course books, journals, and texts in relation with ESP with all its sub-fields so that to be a reference for the ESP teachers who encounter difficulties in finding the appropriate materials for their lectures. In addition, this initiative will reinforce and support the ESP laboratory that has been recently created at the level of the English section.

Regarding the use of educational technology, the researcher noticed that the ESP teachers are underestimated by the other departments and not given any consideration when it comes to provide them with the minimal help. The English administrators should intervene, at this level, and collaborate with the other departments to provide the ESP teachers with a data-show and a laptop whenever needed, as the provision of these materials is the task of the host department and not the source one.

4.3 THE ROLE OF THE TEACHER

In any type of language teaching/learning, be it for general or specific purposes, it is widely assumed that how students learn is affected by how teachers teach. Regarding ESP teaching, teachers should know that the starting point of their teaching task is 'needs assessment' which is a crucial step that cannot be avoided; conducting a needs assessment helps the teachers determine what learners already know and what they need to know. Then the teacher must determine goals and objectives for his learners, and then develop effective teaching strategies to reach those goals and objectives, this hierarchy of stages is better displayed in the following figure:

OVERALL GOALS → **LEARNING OBJECTIVES** → **TEACHING STRATEGIES** → **ASSESSMENT OF LEARNING**
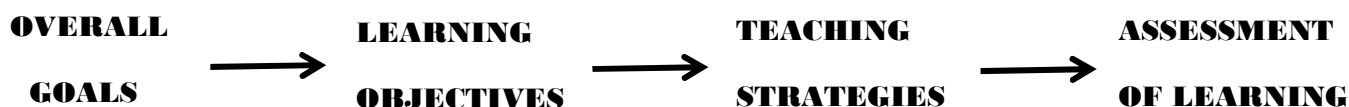
Figure 4.1: Aligning goals, objectives, strategies, and assessment
Adopted from (Jeffries & Huggett, 2010:4)

In our case, i.e. in the Department of Medicine, the researcher noticed that ESP educators, too often, select a teaching strategy without a clear idea of what they are trying to accomplish, and thus, decisions about syllabus and course content are often made without first determining the overall goals and learning objectives. Goals are statements about the overall purposes of a curriculum. Objectives must be specific and measurable. Each must be written in a way that allows for measurement to determine whether the objective has been achieved. Then strategies must be selected that allow the learner to achieve the desired objectives. Once the curriculum has been implemented, learners and the curriculum are evaluated, feedback is provided, and the cycle continues. (Jeffries & Huggett, 2010)

After having determined the overall goals and objectives, the teacher must put into practice the teaching strategies that will speed the learners through to reach the desired objectives. Bearing in mind that we are in an ESP context, learner-centeredness and ideas about language teaching are the most important factors that the ESP teacher should consider.

As previously mentioned, the approach adopted by the observed teacher was teacher-centred based on the exclusive teaching of grammar. This pushed the researcher to think that it was the main reason of course failure and students' demotivation. To remedy to this situation, and taking into consideration students' needs, the researcher believes that language teaching/learning should be done in a way that fosters communication, thus the adoption of the communicative language teaching approach, that is more stress on learner-centred class than teacher-centred one. Teaching should be based on the beliefs in modern learning theories including:

1) 'learning is a thinking process' (Robinson cites Hutchinson 1991:46), 'language can only be properly understood as a reflection of human thought process' (Hutchinson and Waters 1987:39), 'the cognitive view takes the learner to be an active processor of information' (ibid:43);

2) 'learning is an emotional/affective experience' (ibid:129), success of learning depending on learner's internal generated motivation or wants;

3) 'learning a language is not just a matter of linguistic knowledge' (ibid), but a developmental process with existing knowledge to make the new information comprehensible (ibid:128);

4) classroom procedure should reflect the purposeful, task-based, interactive nature (Williams, 1986);

5) more learner-directed activity, less dominant role of teacher (Littlewood, 1981);

6) learn in natural setting (a lot of exposure) (Krashen, 1981);

7) speaking encourages intake (ibid:108).

Combining these elements altogether, one should say that the ESP teacher is to understand that in the classroom he is no more a 'teacher' but a facilitator of learning, a person who is not going to 'teach' students and make them passive recipients of information, but to transform them into active learners who interact with the teaching material in a way that enables them to control the objectives as well as the approach to their learning, didactically speaking , it is the application of active learning, and self-directed learning.

Moreover, it is well known that medical practice often involves interacting with other professionals as well as with patients, having practice interacting with colleagues in a learning environment is particularly valuable, so it is important to create a learning environment in which collaboration is encouraged, and thus put into practice team-based learning which builds small-group learning activities. In such type of learning, students are given frequent feedback from each other and are encouraged to reflect on the feedback which is proved to be an effective procedure in enhancing students' learning.

In sum, one should say that how well students learn is influenced by several factors; their own prior knowledge and motivation is certainly important, input from their fellow students can also be important, the environment can also have a profound effect on learning. For that reason, teachers have an important role in designing learning activities and assessment strategies that foster independent learning and higher-order thinking skills, create a supportive environment that reinforces self-directed learning, feedback, and reflection opportunities, to make of students active processors of information, and thus foster long-term retention of knowledge and maintain students' natural curiosity about what is being taught. Students who have choices about their learning and can maintain intrinsic motivation will learn better and be able to apply their knowledge outside the classroom. (Jeffries & Huggett, 2010)

Taking these issues into consideration is of paramount importance for teachers as catalysts of the knowledge society they are to build, by inculcating within their students creativity and ingenuity so that to make of them citizens of the world, good researchers, and knowledge base creators.

This is as far as the teachers' teaching role is concerned; however, a teacher does not only teach, he is a professional who aspires to progress in his function, and constantly thinks about his teaching assumptions, methods and techniques. This process involves assessing one's professional development, soliciting feedback from colleagues and experts, and conducting Action Research; these issues are examined in more details in the following sections.

4.3.1 Teachers' Professional Development

The building up of a knowledge society requires from the part of teachers to promote Life-long learning and create learning communities by helping and pushing students to be active learners and seekers of knowledge inside and outside the classroom. This does not mean that only students need to learn, the teachers also need to upgrade their skills-base to meet their learners' demands and stay competitive; to do so, ESP teachers should themselves be members of a learning community since their professional development is often seen as vital to instruction success and teacher satisfaction, more importantly, because the teaching profession is constantly changing , especially in the field of ESP where education is facing an array of complex challenges from working with an increasingly diverse population of students, to integrating new technology in the classroom, and meeting rigorous academic standards and goals.

The obtained data revealed that ESP teachers generally spend more time instructing students and less time in professional learning opportunities with their peers; they, themselves, revealed to the researcher during the interviews that they have never worked in collaboration with other ESP teachers. This situation is the consequence of Administrative disinterest, and the absence of a solid link between the administration and the ESP teacher (see the role of the English section).

Consequently, with theorists and applied linguists continuing to stress the need for teachers who are able to enhance and build on their instructional knowledge, one should highlight and focus on some strategies that are already put into practice in other countries to remedy to this problematic factor.

One of the most known programmes set up to invest in teachers' knowledge and skills; and, most of the time, favoured by administrators is the workshop approach, in which an institution brings in an outside consultant or expert on a staff-development day to give teachers a training seminar on a variety of pedagogic or subject-area topics. This approach, according to the researcher's view, is very appropriate to our context and can be easily put into practice, though criticized for its lack of continuity and coherence.

As an alternative to the workshop model of professional development, qualitative literature began to support new ideas that include activities that "are not one-day or short-term workshops or conferences." This preferred approach holds that for teachers learning, to truly matter, it needs to take place in a more active and coherent intellectual environment, one in which ideas can be exchanged and an explicit connection to the bigger picture of school improvement is made. This vision holds that professional development should be sustained, coherent, take place during the school day and become part of a teacher's professional responsibilities, and focus on student results (Wei, et al, 2009).

Another strategy for teachers' professional development, as its name indicates, consists of gathering teachers many times a week or a month to discuss the problems and difficulties encountered, it is called "professional learning communities", also known as "inquiry teams" or "learning teams." In this model, teachers in either grade-level or content-area teams meet several times a week to collaborate on teaching strategies and solve problems. In the most sophisticated examples, teachers set common instructional goals, teach lessons in their individual classrooms, administer informal assessments to determine levels of student mastery, and then regroup as a team to analyze the data together. Then, they pinpoint areas of success, identify areas for improvement, and set goals for future teaching (Honawar, 2008).

Such practices can be paired with other opportunities for deepening practice, including observing fellow teachers and working one-on-one with classroom-based "coaches", or content experts (Keller, 2007).

In addition, there are other variations of site-based professional development including the Japanese practice of "lesson study", in which a teacher creates and teaches a model lesson. The lesson is observed and sometimes videotaped so that colleagues can analyze the lesson's strengths and weaknesses and determine how to strengthen the lesson (Viadero, 2004).

In essence, professional development relies on a two-part transfer of knowledge: It must inculcate in teachers new knowledge and skills such that they change their behaviour, and those changes must subsequently result in improved student mastery of subject matter. (Sawchuk, 2010c)

4.3.2 Conducting Action research

For ESP teachers, developing and delivering an effective lecture is a daunting challenge; for this reason, it is important to review the feedback gained from students and peers and to continue to improve the quality and the amount of learning that takes place during the classes. The strategy that enables the teacher to ask the necessary questions about his teaching outcomes, looking for adequate answers and solutions is called action research.

Action research is a reflective and systematic process conducted to discover a plan for innovation or intervention or for problem-solving situations. Teachers generally use action research to find out their own classroom practices to better understand and improve such practices, it is a process that helps them get a true picture of their teaching and thus contribute in their professional development as pointed out by McNiff and Whitehead (2002:1):

> **Action research is a common-sense approach to personal and professional development that enables practitioners everywhere to investigate and evaluate their work, and to create their own theories of practice.**

The obtained data revealed that the ESP teachers are satisfied with both their lectures and the content administered to the students, and with their students 'outcomes, they assume that the lectures' content is relevant to students' needs since these attend, interact and participate in the classroom. This is on one hand.

On the other, the ESP students do not seem satisfied as such with the lectures' content as 60% of them claim being satisfied at 50% with the ESP lectures, while 40% of them say that the lectures are satisfactory to only 25%.

From the collected data, one suggests that the ESP teachers should be aware of the gap existing between their opinions and those of their students. Through the use of action research, they would be well informed about their students' interests and views, explore their own practices, and thus may develop a sense of professionalism. The following figure illustrates the main stages through which teachers and researchers should go when conducting action research.
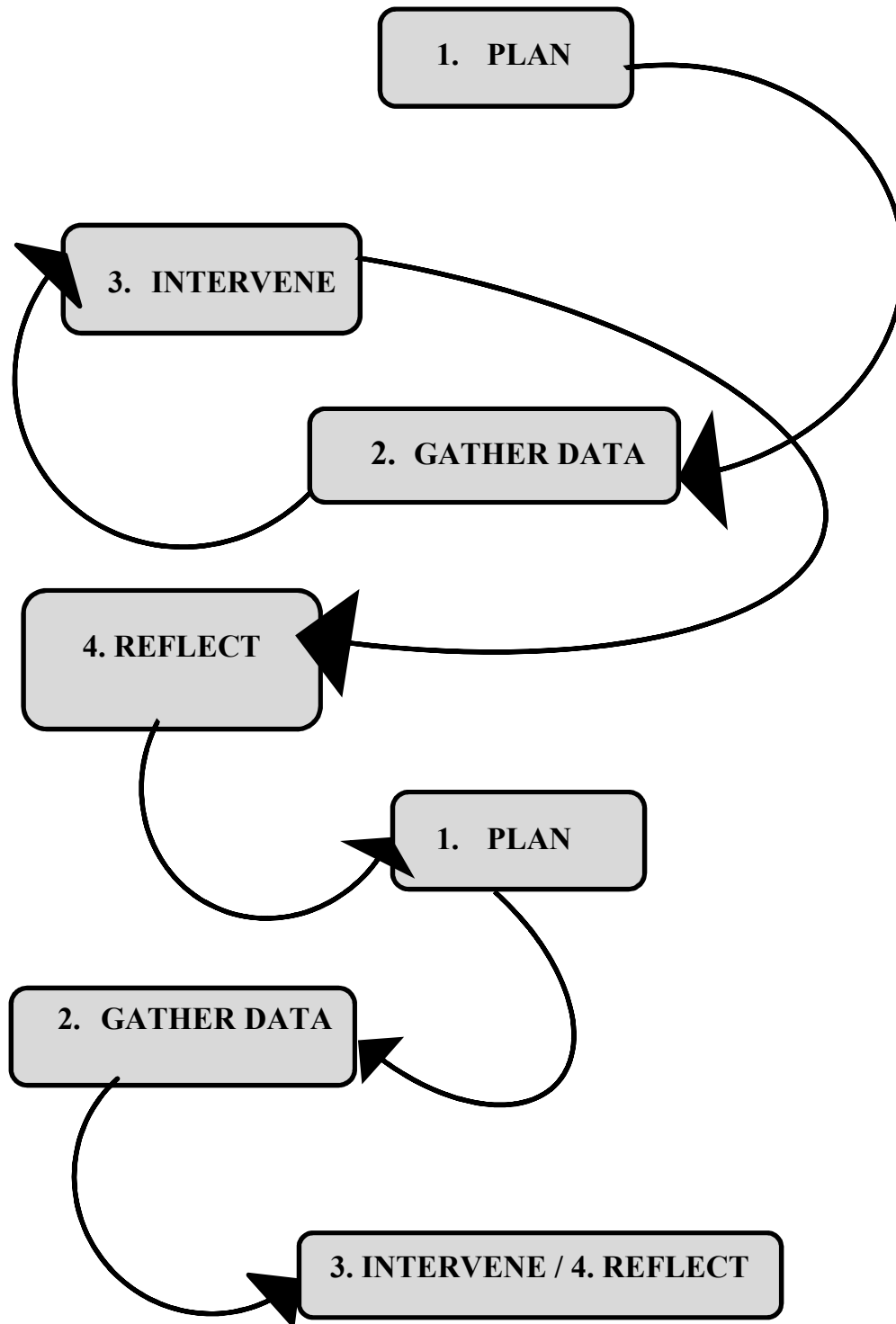
**Figure 4.2: Cycle of action research
(Richards & Farrell, 2005: 183)**

4.3.3 The Communicative Approach

It has been a long time since language teaching has shifted away from the structural approach with its focus on language usage to the communicative one which stresses language use. The essence of the communicative approach is to enable the learners handle communication acts in the target situation, and its most important principle is to link language learning to everyday life and to the interests of learners and their future communicative needs.

The data obtained through classroom observation demonstrated that the structural approach is still present within the mind of the ESP teacher under observation and fully practised in the classroom, while there is no existence of communicative language teaching, though needs analysis revealed that ESP students devote a particular attention to communication, need it and aspire to learn how to communicate with foreign counterparts.

In the light of such results, ESP teachers are urged to take into consideration students' needs, since these are closely linked to communication, and adopt communicative language teaching, the approach that is used worldwide and which has proved its efficiency. This permits the teacher to create a supportive, communicative, and enjoyable environment in which students will learn and interact with the teaching materials in a motivated way and therefore, feel that their learning objectives are being met. Adopting this principle will enhance students' learning, raise their motivation, and keep them stimulated.

Savignon (1983) believes that if a language is being learnt specifically for use as is the case when the communicative approach is used, the methodological implications are very significant: the role of the teacher and the student, the content of the lessons and the material are very different from those of the traditional class and learning routine of the structural approaches. The communicative methodology begins, as already said, with:

- the assessment of learners' needs and interests, which provides the most effective basis for materials development,
- mechanical teacher drilling disappears since accuracy will not be focused on for its own sake,

- the teacher assumes various roles to encourage learners' participation,

- a shift of focus from form to meaning through appropriate stimulating cognitive tasks,

- fluency is a priority for communication rather than formal accuracy,

- a flexible and enlightened attitude towards learners' errors as an evidence that learning is taking place, and

- an authenticity of material and classroom activities, which is assumed will enhance attempts to create the real-life language.

This means that the emphasis is not entirely on the teaching, but rather on the learning process and the learners' contribution to the methodology, making it a learner-centred approach.

4.3.4 Developing the receptive skills

NIA results revealed that for medical students, the four language skills are all important and should be developed altogether; however, students put much emphasis on developing the reading and listening ones, especially reading which is subject of an immediate need. Moreover, often in the process of learning new language, learners begin with receptive understanding of the new items, then later move on to productive use. For this reason, the researcher proposes the teaching of the receptive skills at first, so that to introduce students to new vocabulary and grammatical structures, and thus facilitate the teaching of the productive skills, as pointed out by Krashen who says: ***"reading exposure is the primary stage of developing language skills"*** (Krashen, 1985: 109), this view is echoed by Laviosa & Cleverton who insist on the fact that ***" building reading skills can contribute to the development of writing"*** (Laviosa & Cleverton, 2006 :5)

Indeed, reading or listening to authentic material can be quite difficult to understand, students may not be accustomed to the specialist vocabulary and the level of language. But through intensive reading and listening activities, students will be well trained and improve their language level. So, it is essential to familiarize the students in question with the vocabulary related to their discipline, especially the medical one which is qualified as difficult to pronounce. Through regular listening and reading in a foreign language, teachers can achieve the following:

- Develop students' comprehension skills, including speed of comprehension,

- Develop students' range of vocabulary,

- Develop students' range of useful functional expressions,

- Develop students' awareness of stylistics,

- Contribute to students' improved Speaking and Writing Skills.

In these same lines, ESP teachers, when selecting texts and topics, and designing reading and listening activities, have to take into consideration students' current proficiency level, and make them aware of the objectives of such activities. The selected activities should develop the reading-listening skills appropriate to a variety of reading-listening situations and purposes, thus tasks set for the receptive skills should clearly reflect the interrelationship between text, situation, purpose, and the sub-skill to be developed.

Practically speaking, when teaching reading and listening, the ESP teacher tries to build within the students the following competences:

➢ Predict the Content: Training students to predict content and encourage them to guess what the text is about on the basis of clues they already have.

➢ Skim through the text: Reading or listening for an overall, general understanding; Students are encouraged to devote less attention to the individual meaning of words and phrases. In reading, this activity is called "skimming", while for listening it is referred to as "extensive listening".

➢ Scan in more depth: Here, students read or listen for specific information. They are encouraged to understand information or specific language items in more detail in order to answer a specific question. "Intensive listening" or "listening for detail" is where the students concentrate on a small part of the tape-script in order to understand some subtle points of detail.

4.3.5 Teaching of Grammar

The teaching and learning of languages has always been synonymous with teaching grammar, this is to say that grammar remains central to language teaching and deserves its fair share of attention in this domain. Cunningsworth states that:

> **Few, if any, writers on language learning would disagree that the internalisation of grammar rules is central to language learning and that any teaching programme that omits grammar is not really teaching language in the full sense of the word.**
>
> (Cunningsworth, 1987: 18)

In effect, no one can dismiss the role of grammar in learning a language, however the way it is taught is still subject of heated debates. For some, language is a set of static rules and forms, and its mastery means knowing and mastering those rules and forms, thus grammar should be taught directly and overtly. This results in bored and disaffected students who can produce correct forms on exercises and tests, but consistently make errors when they try to use the language in context.

The communicative competence model recognizes that overt grammar instruction helps students acquire the language more efficiently, but it incorporates grammar teaching and learning into the larger context of teaching students to use the language. Instructors using this model teach students the grammar they need to know to accomplish defined communication tasks. They assume that, in this way, students will absorb grammar rules as they hear, read, and use the language in communication activities.

In this study, medical students expressed a need to communicate in the target situation, however what the researcher observed is an ESP teacher adopting overt and explicit teaching of grammar which resulted in bored and demotivated students who started abandoning the ESP course. To remedy to this issue, ESP teachers have to take into consideration that the end product of any language learning process is not "How much we know about language" but rather, "how well we can use it in appropriate situations". Language is not only a matter of form, it *"can also be looked at from the point of view of function, that is, what people do with it"* (Hutchinson & Waters, 1987: 28).

Admittedly, one may say that grammar can be taught in many ways, yet in ESP, teachers are faced with the constraint of time, and since learning particular grammatical distinctions requires a great deal of time even for the most skilled learners, ESP teachers have to choose the appropriate approach and teach students the specific grammatical items needed in their special field. Instead of viewing grammar as a static system of arbitrary rules, it should be seen as a rational, dynamic system that is comprised of structures characterized by the three dimensions of form, meaning, and use. In this respect, ESP teachers should adopt the communicative approach to presenting grammar, so that to make students learn this component in an enjoyable communicative environment.

Thus, according to the research results, the researcher argues that regarding the medical field, grammar should be taught inductively and in context focusing on functions and notions, this approach will activate students' prior grammatical knowledge, and keep them motivated and interested, as they feel their communicative needs are being met without getting bored of grammatical rules and forms.

However, ESP teachers may certainly ask how to present and practice grammar inductively? This question is as controversial in medical English as it is in general English, yet the simplest answer in linking grammar with students' real uses of English is to find a common grammar point in some of the phrases that have been practised for functions like describing, presenting, or arguing. Then use that as the basis of a grammar presentation, for instance, giving them sentences they have seen before like *"The resident fell asleep during the operation"* with the prepositions blanked out. This also works well for tenses, determiners and modal verbs. Teachers can also do something similar with articles on medical topics by giving the students the text or parts of it with bits blanked out or with mistakes added. (Gardner, 2008)

According to Ribes&Ros (2006), the most important grammatical items frequently used and highlighted in the medical field are the following:

- Tenses;

- Modal verbs;

- Conditionals;

- The Passive voice;

- Reported Speech;

- Questions;

- Infinitive/- ing;

- Articles; / - Word order;

- Relative clauses;

- Adjectives and Prepositions. (Ribes&Ros, 2006: 13 - 63).

  As for the functions that students should be introduced to, they include the following:

- Stating diagnoses;

- Describing facts, diseases, or processes;

- Presenting cases;

- Arguing for;

- Arguing against;

- Reporting;

- Lecturing;

- Examining patients;

- Comparing cases;

- Addressing issues;

- Identifying effects, causes;

- Persuading patients, colleagues;

- Expressing assumptions, objectives, conclusions;

- Explaining processes, symptoms, cures

- Congratulating,

- Greeting;

- Introducing oneself or other people.

Obviously, teaching language functions has to be incorporated within notions in order to make students see the link between functions and notions and thus produce correct and meaningful discourse. The language notions that should be integrated in the ESP course are:

- Existential;

- Spatial

- Dimensional;

- Temporal;

- Quantitative;

- Qualitative;

- Evaluative;

- Relational;

- Logical relations;

- Contrastive relations;

- Mental (Reflection, expression).

4.3.6 Promoting Translation

Most instructors would agree that the use of the target language (L2) in the EFL classroom is a primary goal of instruction, in effect, the state-of-the-art teaching of languages is based on the communicative method which emphasizes teaching English through English (Willis, 1981). However, the idea of abandoning the native tongue (L1) may be stressful to many learners, who need the L1 security in learning a foreign language.

It should be said that the negative view about the use of L1 and especially translation activities in the EFL classroom was associated to the grammar translation method which resulted in students unable to speak fluently after having studied the language for a long time.

For this reason, translation has been defined as **" *uncommunicative, boring, pointless, difficult, and irrelevant"*** (Duff, 1994 quoted in Kavaliauskienë & Kaminskienë, 2007: 132).

However, nowadays there has been a revival of interest to translation due to its shift of emphasis to using L1 as a resource to the promotion of language learning. Indeed, the use of translation activities involving L1 input material and various translation tasks for non-native English learners resulted in increased relevance of and motivation for communicative activities and fostered acquisition of new language resources. Therefore, translation can serve as both a tool for improving language skills and as a vocational skill itself.

Translation is mainly useful with young and adult learners at beginner level when these are unable to fulfill tasks through the retrieval of their L2 lexicon, here the use of L1 ***"may be useful in the procedural stages of a class, for example setting up pair and group work, giving instructions, sorting out an activity which is clearly not working and checking comprehension in reading and oral activities."*** (Kourou, 2008) Moreover, some of the possible uses of L1 in the EFL classroom could be ***"for presenting the meaning of a new lexical item or expression, in activities based on translation for the development of fluency in L2, for discussing classroom methodology and for giving rules of usage in order to facilitate the learning process."*** (Dedrinos, 2006) Additionally, translation ***"can be used positively for conveying meaning, for explaining grammar, for organizing the class, and for student use."*** (Cook, 2001) However, As it was already mentioned, translation should not only be used as a teaching tool, it should be developed and emphasized for its own sake as it is often considered as the fifth language skill alongside with the other four basic skills.

Based on the research results and the subject specialists' suggestions, when teaching medical English, the ESP teacher should first consider that translation is of paramount importance for students with special needs, it acts as a consolidating procedure to the acquisition of medical register; moreover the researcher, during the observation phase, noticed that the ESP teacher kept refusing and rejecting the use of L1 though the students were linguistically incapable of activating vocabulary for a chosen task.

Teachers thus should understand that translation is a natural thing to do in learning a language, and code-switching between L1 and L2 is regarded as naturally developmental. ***"No one is in any doubt that students will use their L1 in class, whatever teachers say or do"*** (Harmer 2001, quoted in Kavaliauskienë & Kaminskienë, 2007: 133). It has also been noticed that for medical students L1 is French, as it is the language of instruction, and because of the linguistic affinities that exist between the two languages, students make use of frequent transfer from L1 to L2, and vice versa, to a degree of overgeneralization (see 3.8 Vocabulary), in this situation the teacher should use translation to contrast L1 and L2 and make students aware of the problems that language negative transfer can cause, and of the existence of false friends.

Due to its inevitable use and consolidating function in acquiring the necessary lexical and structural knowledge, translation should be introduced from the first steps of the medical syllabus, and translation activities could be integrated within the reading/listening comprehension activities and tasks, and later within the language production activities. These activities are to be graded from simple tasks to more complex ones depending on students' aptitudes.

At the beginning of the learning process, students could be asked to match words, translate, and give L1 equivalents of simple terms and expressions. More complex tasks are gradually incorporated at the level of sentence structure, paragraphs and texts that the students have already dealt with in reading/listening comprehension activities. Shifting away from overt translation activities, the ESP teacher may ask the students to describe a case, a disease and its symptoms, or a certain issue in L1 followed by a presentation in L2; this strategy will enable them to use L1 as a bridge to acquire knowledge in L2 in a communicative way, raise their lexical, structural, and stylistic awareness, and enhance their consciousness of the non-parallel nature of language when communicating in the target situation.

4.3.7 The Medical terminology, Acronyms and Abbreviations

      Medical professionals, in their way to becoming fluent in English, have to overcome the most important and major obstacle; that of medical terminology, abbreviations, and acronyms. In effect, medical students need to know the terminology related to their special field in order to read a medical record, or a clinical history chart, to complete forms, to decode another physician's handwriting, and to communicate with others in a professional manner either in hospitals or in conferences. These medical terms need to be understood accurately so that to eliminate any misunderstanding or misconception of terms especially in hospital language as it could be a fact of life for patients and for doctors conveying meaning about medical conditions, diagnoses, and treatments. Also in conferences, lectures, or seminars without the complete mastery of medical terms, doctors are likely to miss what is being said.

However, the ESP teachers and medical students should not be misled on this daunting and challenging task, most doctors and researchers regard medical terminology as "strange", "bewildering" and "extremely difficult" either in pronunciation or in spelling.

Latin and Greek terms are one of the factors making the medical terminology complex. ***"Those who write papers do know that Latin/Greek terminology is always a nightmare and needs thorough revision, and that terms seldom used on day-to-day basis have to be properly written in a scientific article."***(Ribes&Ros, 2006:118) Students then, need a thorough understanding and use of this type of terminology in terms of both pronunciation and use of plural forms. There are, nevertheless, some plural rules that are useful to at least give students self-confidence in the use of usual Latin or Greek terms such as:

Metastasis - Metastases

Pelvis   - Pelves

Bronchus - Bronchi

Another feature to be emphasized is that, in medical English, singular and plural forms are not equivalent terms, for instance a "unique liver metastasis" and a "multiple liver metastases" are two completely different diseases. In addition, there are ***"many Latin and Greek words whose singular forms are almost never used in medicine."*** (Ribes&Ros, 2006: 117), thus learners of medical English, easily, get confused.

In addition to the problematic use of Latin and Greek terms, there is another type of vocabulary and expressions which is extremely difficult to pronounce, and thus, replaced by the use of abbreviations and acronyms. In this sense, let us consider the following expression: "Cyclophosphamide, hydroxydaunomycin, oncovin and prednisone", a regimen used in cancer chemotherapy. To save energy and time, doctors conventionally say "CHOP". It is the type of abbreviation which has become an acronym, in addition to other types of abbreviations such as "the spelt abbreviations" like "CXR" which stands for "Chest X-Ray", and the "read abbreviations" like "LAM" which replaces "Lymphangiomyomatosis". In this sense, medical students should be aware of the important differences that exist between a read abbreviation, a spelt one, and an acronym, they therefore, should never read a spelt abbreviation or spell a read abbreviation, it would seem unnatural and they would never be understood.

Accordingly, the ESP teacher needs to provide his students with the most common medical terms they will encounter with an intensive practice, so that to be familiar with and master them, this should be the primary goal of English instruction. However, just knowing the meaning of the medical terms is not enough. Developing one's medical vocabulary requires refining; as students add words to their medical vocabulary, they must constantly work to use the words correctly, they may also refine and sharpen their medical vocabulary through the correct use of a medical dictionary.

As for the correct command of the acquired vocabulary, fortunately, there is a logical method found in medical terminology. Many of the words used in medicine are made up of parts which are also used in other words. Once students know the meanings of the basic parts of the words, they can put them together to understand the meanings of many medical terms. These basic parts of medical terms are called stems (roots), prefixes, and suffixes that medical students should also learn how they are used in combination to describe a medical term. For instance, let us consider the following terms:

The suffix "itis" means in medicine "inflammation" thus,

- Appendic**itis** means an inflamed appendix.
- Arthr**itis** means an inflamed joint.
  Let us break down the word "chemotherapy"

- Chem : is the root, it means "chemical"
- 'o' : the combining vowel, most often used with suffixes beginning with a consonant.
- Therapy: which means "treatment"

Breaking down complex medical terms into these parts helps students learn the necessary meaning because understanding medical terms is critical in order to perform safely and successfully in a health care setting.

4.3.8 Use of Educational Technology

As already pointed out by the researcher, the building up of a knowledge society is based on two major factors; the wide use of the ICTs and the mastery of English. In this respect, it is acknowledged that the new technologies, for their facilitating role, are nowadays, widely used in all domains of life and all professional settings including education. Indeed computers, used as a tool to support learning, have found an increasing role in education for it comes as no surprise *that* *" graphics, photographs, animations, and short video clips can greatly enhance learning. Graphics help learners construct effective mental representations. Relevant graphics can also be used to illustrate examples (and non-examples) of an object, to provide a topic overview or an organization scheme, to demonstrate steps in a procedure or process, or to illuminate complex relationships among content, concepts, or time or space."* (Jeffries & Huggett, 2010:103).

In this study, the researcher noticed that one of the two ESP teachers uses lectures and images projections via his personal computer saying that this technological tool enabled him to save time, as all is prepared within the slides rather than written on the board, illustrate and contextualize language items, and provide learners with a visual support that attracts their attention, keeps them stimulated and therefore, raise their motivation. In effect, With the growing needs to address the challenges that new teachers face and the popularity of social networking technology, all teachers are recommended to increase the effectives of teaching through the use of such technology, simply because on one hand, it is new and educators must become comfortable using it, on the other hand, because people learn more from graphics and words than from words alone, and because it helps and *"encourages learners to construct robust and meaningful knowledge structures"* (Jeffries & Huggett, 2010:102).

However, teachers should consider all of the technologies available and use those methods that best serve the needs of the learner. They should focus on helping learners effectively construct new knowledge rather than trying to effectively transmit information. Learning is more than an accumulation of information, but rather linking new information and experiences with prior knowledge, past experience, and real-world problems.

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This process constitutes the core of all learning. This is to state that new educational technology is important, yet it will never replace a true teacher, *"no technology, no matter how sophisticated, will supplant a skilled teacher, effective instructional methods and designs, or ,most importantly, the central role of the student in the learning process."* (Jeffries & Huggett, 2010: 101)

4.3.9 Students' Assessment

Assessment bridges the gap between teaching and learning. Any thoughtful teacher realizes the important role that students' assessment plays in their lives as teachers as well as in the lives of their students, as it provides feedback about students' proficiency level as well as about teachers' own practices and whether course objectives have been met. *"Assessing student performance is a fundamental role in the life of a teacher because it provides students with feedback about their performance which reinforces their areas of strength and highlights areas of weakness. Using this feedback, students can direct their study strategies and seek additional resources to improve their performance."*(Jeffries & Huggett, 2010:143)

From the perspective of the teacher, the various students' assessments are designed to measure learners' language and skill progress in relation to the syllabus they have been following, and thus define the types and levels of achievement expected of students. Tests can also help teachers *"to decide on changes to future teaching programmes where students do significantly worse in (parts of) the test than we might have expected."* (Harmer, 2001: 321)

In this study, the researcher noticed that before starting the ESP course, students went through an evaluation test which was grammar-based (see chapter two: ESP students' profile), the ESP course was also grammar-based, and the achievement tests designed at the end of the term were about grammar. In this sense, the researcher proposes that students assessment should be similar to the tasks performed during the lectures, *"achievement tests only work if they contain item types which the students are familiar with"* (Harmer, 2001:321), this is to say that if students during the classes do different tasks in reading and listening comprehension, tests also should measure the reading and listening comprehension skills, they should be in the written form as well as in the oral one.

In addition, since teaching is based on building competencies within the learners, tests also should reflect this issue, i.e. students should be tested in terms of competencies, and the competency highlighted in the test should be similar to that set in course or unit objectives. Moreover, it is especially valuable to give students multiple chances for practice and feedback which means testing them frequently so that to make them learn from their errors. in Harmer's words there are two types of tests; progress tests administered at the end of each unit whose objectives are too specific, and achievement tests which are generally undertaken at the end of a term to measure course overall goals. Such methods of assessment and feedback may have powerful effects on students' motivation.

4.4 THE ROLE OF THE LEARNER

The growth of medical knowledge is accelerating exponentially, making it impossible for prospective physicians to learn everything they need to know during medical school, and making it essential for them to learn the skills related to lifelong learning that will serve them for their entire medical careers. Here comes the role of the teacher who, as previously mentioned, is concerned with building within the learners the capacities of independent learning and make of them lifelong learners (See the role of the teacher). For that reason, the researcher proposed (in the role of the teacher) that teachers should not teach but rather guide students to learn alone, they should not make of learner passive recipients of information but rather curious learners and seekers of knowledge, and since the time-span spent in the classroom will never be sufficient for them to learn, they will be, indirectly driven to look for information outside the classroom, and thus become autonomous. In such a way, teachers would consider themselves as true catalysts of knowledge societies and builders of learning communities. ***"However good a teacher may be, students will never learn a language, or anything else, unless they aim to learn outside as well as during class time. This is because language is too complex and varied for there to be enough time for students to learn all they need to in a classroom."*** (Harmer, 2010:335).

Thus prospective physicians, as adult learners, must learn how to identify their own learning needs, and identify appropriate sources for addressing those needs, in such a way they become responsible for their own learning.

According to (Marchese, 1998, quoted in Jeffries & Huggett, 2010: 3) several criteria are associated with long-term learning and retention; they concern the learner as well as the learning activities. The autonomous learner must:

> ➢ function independently;

> ➢ have choices about what to learn and how to learn;

> ➢ have opportunities to build on intrinsic motivation and natural curiosity;

However, preparing the learner to be autonomous, the teacher through the learning activities should:

> ➢ require the application of higher-order thinking skills;

> ➢ mirror the tasks that learners will face in the real world.

In sum, one believes that the learners' contribution to the teaching/learning process is of a great value, in that they can identify what they need, and the eventual sources that would help them in satisfying their needs, rather than relying on the teacher and the classroom environment.

4.5 A SYLLABUS FOR MEDICAL STUDENTS

Designing a suitable syllabus that will cater for the needs of medical students is a true challenge for any ESP teacher or researcher as ESP courses have never existed in the Department of medicine, and as this research work is a pioneering step in the field. It requires a thorough knowledge and effort from the part of the teacher and the sensible consideration of learners needs for it is considered as a device helping learners to arrive at their objectives in the most economical way. (Widdowson & Brumfit, 1981)

White (1983) compares the syllabus to a plan for a journey which must specify the destination and the starting point and negotiate the route. For this reason, the researcher in this section tries to give guidelines or an overall picture about the syllabus in question taking into consideration NIA outcomes.

As already mentioned, the decision as to which syllabus type or types to employ will result from the judicious consideration of the students' needs and the objectives of the course. In this study, needs analysis revealed that medical students wish to develop the four language skills, but express an immediate need for the reading one, as they are required to read medical articles and texts either to undertake research or to prepare lectures and examinations. As for the other skills, they are used only in professional settings as attending international medical conferences and seminars, in which they need to listen to talks and lectures and take notes, converse with foreign counterparts, and why not communicate and give lectures.

Accordingly, and in response to these needs, the syllabus that best fits this situation should be communicatively based ; however, in all teaching procedures there is never one definite way to teach language so, in the researcher's view, an ESP teacher should proceed in an eclectic manner and be flexible enough to cover the four skills in addition to translation, shifting from one teaching method or approach to another depending on students' performances and learning styles, and bring about positive teaching and learning results.

The medical syllabus, to the researcher's opinion should be divided in two main parts; The first may be implemented at undergraduate level, focusing on basic medical terminology acquisition, grammar structures learnt within the reading skill, then the listening one, and translation. Learners at this stage are introduced to general health topics such as the human body, illnesses and complaints, addictions, doctor-patient dialogues, in addition to general communication skills such as greeting, congratulating, and introducing. It should be said that at this stage, the ESP teacher should focus on the receptive skills and not on developing students' fluency, as general practitioners do read medical texts to be informed, but are rarely invited to international seminars, thus they do not need to speak nor do they need to write. Later on, further themes are to be introduced in the syllabus concerning infectious diseases, medical disorders, and especially themes on human anatomy, undergraduate medical students should know, by the end of the first part of the syllabus, all the medical terminology related to the human anatomy and its various systems.

As for the second part of the syllabus, it begins at postgraduate level with residents specialized in different medical disciplines. At this level, the residents are supposed to have gained a certain degree of language proficiency, being able to read or listen to a text and understand it, and knowing the basic medical terminology. Now the syllabus objectives are to make them fluent communicators with a mastery of another type of medical terminology, i.e. focusing on developing the productive skills coped with translation activities of specialized terminology. Here different groups of students, each according to his specialty, are introduced to the specialized vocabulary related to his discipline, a vocabulary which has nothing to do with the basics of human anatomy, it is rather related to hospital and conferences language including complex and very difficult medical terms, acronyms, and abbreviations; however, since each specialty is concerned with its specific set of terminology, i.e. residents specialized in cardiology will learn only the terminology related to cardiology, this will ease the task for both the teacher and the students and efficiently prepare them to engage in successful spoken and written exchanges in their studies and future careers.

4.6 MEDICAL COURSE INSTRUCTIONAL DESIGN

It takes a lot of time and effort to create a course, for this reason the ESP teacher needs to be as specific as possible so that to exploit appropriately the amount of time devoted to the course and address the needs expressed by the students.

NIA revealed that indeed there is a performance problem; medical students have a low proficiency level in English. They are required to read medical literature, and listen to professional talks; however, they are incompetent in doing so.

For the researcher's view, a course is far from being a list of topics or content to be covered; in effect, the ESP teacher when trying to design his course will, of course, choose a set of topics and content that are relevant to the specific discipline they serve, for instance, he is not going to provide medical students with texts about architecture. Thus the design of a true course is rather ***"a series of integrated instructional units that result in learners' acquisition of knowledge, skills and attitudes."*** (Jeffries & Huggett, 2010, 123)

To design a course, there are several principles represented by Yelon (1996, quoted in Jeffries & Huggett, 2010: 123). All well-designed instruction contains certain elements:

• It meets an educational need.

• A description of the real world performance problem the course addresses, a course goal, an overall course objective, a visual model of the course units, and a description of the course content.

• Course units that lead learners to attainment of the course goal. Each unit contains its own objective, content, instructional/learning strategies, and learner evaluation strategies. This is better displayed in the following figure:

```
                    ┌─────────────────────────┐
                    │  Real World Performance │
                    │         Problem         │
                    └─────────────────────────┘
                                ↕
                    ┌─────────────────────────┐
                    │  Real World Performance │
                    │          Goals          │
                    └─────────────────────────┘
                                ↕
                    ┌─────────────────────────┐
                    │   Learning Objectives   │
                    └─────────────────────────┘
```

┌──────────────────────┐   ┌──────────────────────────┐
│ Content   organized │   │ Teaching/Learning   │
│ &   sequenced   to │   │   Methods   │
│ achieve objective   │   │ Introduction   │
│   │   │   - Instruction   │
│   │   │   - Explanation   │
│   │   │   - Demonstration   │
│   │   │   - Practice/feedback │
│   │   │ Conclusion   │
└──────────────────────┘   └──────────────────────────┘

┌──────────────────────┐
│   Evaluation   │
│   Tests   │
│   Observations   │
└──────────────────────┘
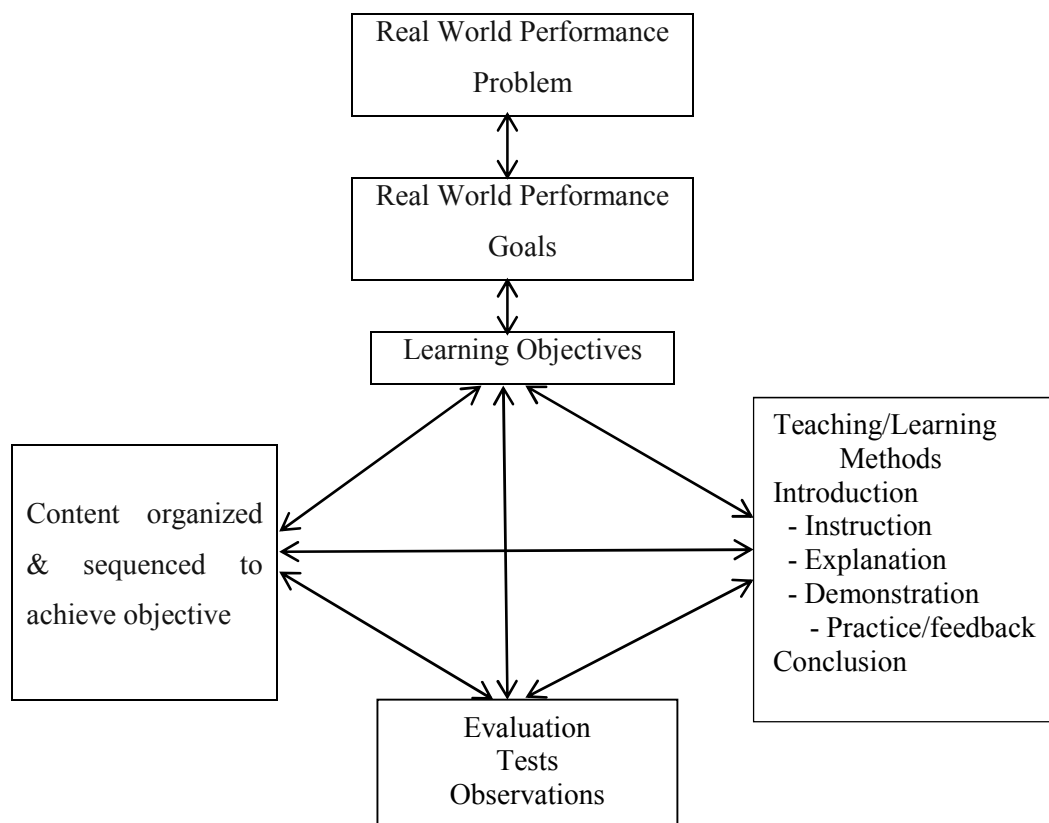
Figure 4.3: The components of instructional design
(Jeffries & Huggett, 2010: 124)

After the analysis of students' needs which leads the ESP teacher to have a holistic image of what his course will be like, and which aspects of language use are going to be focused on, the teacher then, will try to elaborate his course frame.

4.6.1 Designing the "Big Picture" of the Course

This step allows the teacher as well as his learners to know what to expect from the complete learning experience. This big picture serves several useful functions:

➢ It describes the real world performance problem the course addresses through a clear rationale for the course.

➢ It orients your learners to the course "destination" or goal, and the major course components and their sequence. This is often accomplished through a goal and a visible model of course units.

➢ It establishes course objectives, which inform your learners of how they will be assessed.

Course Rationale:

The teacher should provide the target learners with the reasons why they should learn what the course has to offer them. It could be done through: statement of the problem, cause of the problem, and exploration of why this course is the solution to the problem. In this case, Algerian medical students and doctors face problems in using medical English either academically or professionally, and since English is the language of science and doctors need it, they have to follow a course to learn the knowledge and skills required in their field.

Course Goal:

Too often, learners have no idea about what to do with all the content they have memorized, and what they will be able to do after they have finished the course. a well-designed course provides learners with a clear destination in the form of a course goal; the knowledge and skills as they are applied in the real world to solve the problem presented in the course rationale. In this case, medical students, by the end of the course, should know the basic medical terminology related to the human anatomy, read and listen to medical texts and understand them, in addition to translating them into and out of English.

Course Objectives:

Objectives are narrower in scope they address the measurable learning outcomes required to achieve the course goal; they enable the teacher to know that his learners have learned, and whether they are ready to perform in the real world. Objectives should inform learners about the content of the assessment.

In this case, medical students should know the medical terminology related to each system of the human body, translate it into and out of English, give terms equivalents in French. They should know how to skim through a text to understand a general idea, scan the text and answer detailed questions. Listen to an extract understand its general idea, its details and know how to take notes.

Content Outline:

Content refers to the knowledge and skills teachers want their learners to acquire. As they design the big picture of the course, they develop a brief content outline for each of the units, and determine what is essential in order to learn the knowledge and skills described by the course goals and objectives. For instance, the goal of this course is that: as future residents and general practitioners, students will be able to read and listen to a medical article, text, or lecture and understand it, they also will be able to translate a text into and out of English. Thus, the different course units should include content that will gradually develop the knowledge and skills needed to achieve the goal. Content outline could be as follows:

Units	Content

Unit 1: - Knowing simple medical terms and their pronunciation;
  - Predict text content;
  - Skim through a text by listening, then reading it to understand a general idea.
	Identifying parts of the body:
	• Matching English terms and their French equivalents;
	• Guess text meaning through clues;
	• Listen to the teacher reading the text;
	• Answer a general question;
	• Students read the text out loud.

Unit 2: - Knowing medical terms related to Body systems; - Scan a text in depth to know details.	Identifying the major systems of the body: • Giving terms equivalents; • Listen to the teacher reading the text; • Answer detailed questions; • Students read the text out loud.
Unit 3: - Knowing the Digestive System; - Skim through the text; - Scan the text for specificities; - Pronunciation Practice; - Vocabulary Practice.	Identifying the digestive system organs & their different functions: • Identify the general idea; • Name the diverse organs; • Identify their functions; • Words and word parts analysis; • Reading the text out loud;
Unit 4: The Cardiovascular System - Skimming through the text; - Scanning for understanding; - Pronunciation practice; - Vocabulary practice.	Identifying the organs related to the system: • Name the organs; • Identify the different organs functions; • Reading the text out loud; • Text translation to French.
Unit 10: Identify and know clinical terms:	Introducing diseases, symptoms and treatments:

Table 4.1: Sample content outline

4.6.2 Designing Individual Units

Once the ESP teacher has a well-developed course big picture, he can begin to design the specific pieces of his course; the units that will help the learners acquire the knowledge and skills they need to attain the course goal. Each unit contains its own goal, objectives, content, instructional learning strategies, and learner evaluation methods.

Unit Goals

The unit goal describes what the learners will be able to do in the real world after they finish a unit of instruction. In this case we can have the following goal: By the end of the unit, students will be able to translate a small passage from English to French.

Unit Learner Evaluation

If the teacher knows his unit goal, it is relatively easy to determine how best to evaluate his learners. The ultimate test of learning is performance of the knowledge and skill in the real world, under real world conditions. Thus the teacher's assessments of learners should be realistic. In our case we can state this example:

If the teacher's goal is:

Students will be able to translate a medical text from English to French.

Then the best test should be:

The students translate a text from English to French.

Unit Objectives

After deciding how he will evaluate the learners, the ESP teacher can write his unit objectives bearing in mind that an objective is a measurable learning outcome that is required to achieve the course goal. Any student reading the objective should have a good idea what the unit assessment will look like.

Unit Content

The unit objectives specify the knowledge, skills and attitudes needed to accomplish the unit goals. But what will the unit actually teach is the unit content. It is; therefore, important for teachers to have a sound idea about the type of content learners should be introduced to. As the ESP teachers think about their course, they need to specify clearly what are the knowledge and skills they expect their learners to learn, and thus, choose, adapt or select the content that will help learners acquire the knowledge and practice the skills needed. When analyzing the content of instruction, there are levels which may guide the teacher to deal especially with medical content. This four-level-instruction, called "Miller's Pyramid," addresses clinical performance, yet it can be applied to the acquisition of other skills.
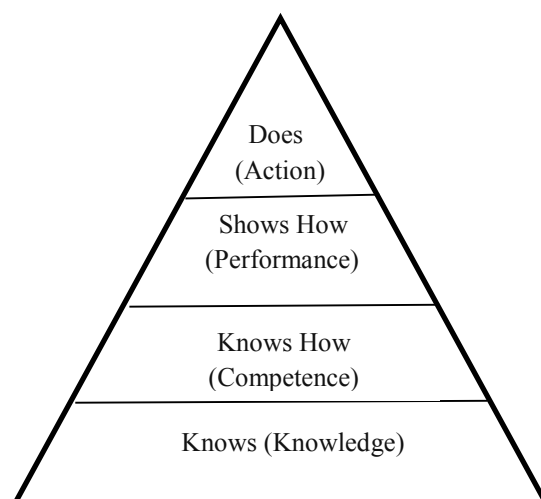
Figure 4.4: Miller's Pyramid
(1990, quoted in Jeffries & Huggett, 2010:137)

Knows (Knowledge): Evaluation of knowledge base.

Knows How (Competence): Appropriate application of knowledge, skill in acquiring information, analysis, interpretation. Done in an academic setting.

Shows How (Performance): Can document what learner will do in real world setting.

Does (Action): Individual functioning independently in practice.

Unit Instructional Methods

The ultimate purpose of any unit instructional method should be to promote learner practice of the unit content. A simple way to conceive instructional methods that includes student practice is given by Yelon (2001, quoted in Jeffries & Huggett, 2010: 136-137-138):

• Explaining the content: provide students with a dialogue about doctor/patient interaction.

• Demonstrating how the content is used: present a video of how a doctor asks questions and patient answers.

• Allowing time for learner practice of the content: invite students to the head of the classroom where they take turns interacting together.

• Providing feedback on learner performance of the content: instructor observes students' performance interacting with each other, and provides corrective feedback.

4.7 A SAMPLE UNIT

The unit chosen by the researcher is destined to second year undergraduate medical students. It is, normally, programmed and administered during the first term of their first year of English instruction, thus after several units of acquisition of basic medical terminology and skills. The goals and objectives of the unit are as follows:

Goals: to familiarize learners with the medical terminology at hand. The students, by the end of the unit, will be able to understand the meaning and function of the digestive system and its organs discussed in the unit, in addition to other medical terms. They also will be able to translate terms, expressions, and little texts from English to French, and produce correct pieces of writing.

Objectives: By the end of the unit, the students will be able to:

- **Listening:** To listen to the teacher and then to peers reading the text and understand what is being read.

- **Reading:** To read the text silently and then out loud with correct pronunciation, and answer general and detailed questions.

- **Speaking:** to be able to answer the questions asked through the construction of correct sentences.

- **Writing:** - To write related essays.

       - To translate a medical paragraph from English to French and vice versa.

Unit content:

The Human Digestive System
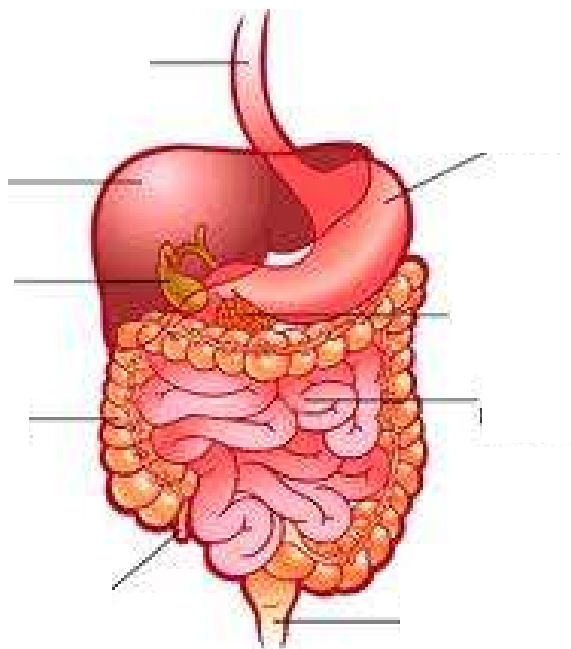
(Picture adopted from www.enchantedlearning.com)

Part One: Reading Comprehension

Look at the diagram and read the following text (Text 1):

The human digestive system is a complex series of organs and glands that processes food. In order to use the food we eat, our body has to break the food down into smaller molecules that it can process; it also has to excrete waste. Most of the digestive organs (like the stomach and intestines) are tube-like and contain the food as it makes its way through the body. The digestive system is essentially a long, twisting tube that runs from the mouth to the anus, plus a few other organs (like the liver and pancreas) that produce or store digestive chemicals.

(Adopted from www.enchantedlearning.com)

Task 1

1. What is the text about?
2. What is the function of the digestive system?
3. Name the different organs mentioned in the text.
4. Mention the organs that are tube-like.
5. With which organs does the digestive system begin and end?

Task 2

Read the definitions below, then label the digestive system anatomy diagram.

anus - the opening at the end of the digestive system from which feces exit the body. **appendix** - a small sac located near the start of the large intestine. **esophagus** - the long tube between the mouth and the stomach. It uses rhythmic muscle movements (called peristalsis) to force food from the throat into the stomach. **gall bladder** - a small, sac-like organ located by the duodenum. It stores and releases bile (a digestive chemical which is produced in the liver) into the small intestine. **large intestine** - the long, wide tube that food goes through after it goes through the small intestine.

liver - a large organ located above and in front of the stomach. It filters toxins from the blood, and makes bile (which breaks down fats) and some blood proteins.
mouth - the first part of the digestive system, where food enters the body. Chewing and salivary enzymes in the mouth are the beginning of the digestive process (breaking down the food).

pancreas - an enzyme-producing gland located below the stomach and above the intestines. Enzymes from the pancreas help in the digestion of carbohydrates, fats and proteins in the small   intestine.

rectum - the lower part of the large intestine, where feces are stored before they are excreted from   the   body.

small intestine - the long, thin winding tube that food goes through after it leaves the stomach.

stomach - a sack-like, muscular organ that is attached to the esophagus. When food enters the stomach, it is churned in an acid bath.

(www.talkingmedicine.com)

Task 3

   Read the text again and say whether the following statements are 'True' or 'False'?

1. The digestive system is a set of glands.
2. The digestive process begins in the stomach.
3. The digestive system organs are tube-like.
4. The pancreas is an organ that produces enzymes.
5. The liver is a small organ that stores food.
6. Bile is a digestive chemical produced by the gall bladder.

Task 4

   Read the text again and match each function with the corresponding organ

a- break down the food into smaller molecules.   1- The liver

b- Produce and store digestive chemicals.   2- The body

c- Excrete waste.   3- The digestive system

d- Process food.   4- The pancreas

Part Two: Listening Comprehension

Listen carefully to the following text (Text 2) and answer the questions.

The Liver

Thirty per cent of the blood pumped through the heart in one minute passes through the body's chemical factory, which is called the liver. The liver cleanses the blood and processes nutritional molecules, which are distributed to the tissues. The liver also receives bright red blood from the lungs, filled with vital oxygen to be delivered to the heart. The only part of the body which receives more blood than the liver is the brain. The liver is located at the top of the abdomen, just below the diaphragm and has two main lobes. It is the largest gland in the body.

"Liver" is probably an appropriate name for this gland, which makes the important decision as to whether incoming substances are useful to the body or whether they are waste. The liver is an extremely important organ and has multiple functions. The liver detoxifies blood cells by mixing them with bile and by chemical alteration to less toxic substances.

(Adopted from www.enchantedlearning.com)

Task 1:

1. Choose an appropriate title for the text.

a- The structure of the Liver.

b- The Liver.

c-The different functions of the Liver.

2. Listen to the text and answer the following questions:

a-How do we call the liver?

b-What is the amount of blood that passes through the liver in one minute?

c-What is the major function of the liver?

d- Name the organ that receives more blood than the liver.

e-Is the liver an organ or a gland?

f-How does the liver detoxify blood cells and other substances?

Task 2

Listen again to the text and try to find as much functions as possible to the following organs:

    1- The heart.

    2- The lungs.

    3- The tissues.

    4- The liver.

Task 3

Listen again to Text 2 and:

    a- Write down the terms that you have never heard before.

    b- Find out their meaning in your dictionary.

    c- Give their synonyms in French.

Part Three : Vocabulary Acquisition and Practice

Task 1

Complete the following statements with the appropriate word:

    1- Many chemical compounds are inactivated by ------------------ through modification of ---------------------- structures. (the glands- the liver- the pancreas- chemical- enzymes)

    2- The liver converts --------------- to a storage form of energy called glycogen. (glucose- sugar- proteins).

    3- The ----------------- is a long, twisting tube that runs from the mouth to the anus. (the esophagus- the small intestine- the digestive system)

    4- -------------- produces glucose from sugars, starches, and proteins. (The liver- the pancreas - some glands)

    5- The only part of the body which receives more blood than the liver is the ----------. (tissues – brain – pancreas)

    6- The liver synthesizes triglycerides and cholesterol, breaks down fatty acids, and -------------------- plasma proteins necessary for the clotting of blood. (produces- excretes- releases)

7-   The liver detoxifies blood cells by -------------- them with bile, (mixing – releasing – replacing)

8-   and by chemical alteration to less ------------- substances. (soft - toxic – heavy)

9- The liver also produces bile ------------ and excretes bilirubin.
      (salts – enzymes – substances)

10- The liver receives bright red blood from the -------------. (lungs- heart – tissues).

Task 2

Cross the odd one out.

1. chewing - salivary gland - tongue – intestine - .

2. gall bladder- digestion- stomach- acid production- bones .

3. blood cleansing – nutritional molecules process- blood cells detoxification- passage of the air.

Task 3

Match each term with its definition

- **Gland**	- Protein which serves as a catalyst in bodily Chemical reactions, example saliva secreted In the mouth contains different……. Which break down carbohydrates to begin the digestive process.
- **Tissue**	Tissue composed with fibers which shorten by contraction to produce movement.
- **Muscle**	Organ in the body which produce secretions.
- **Enzyme**	Group of cells organized in a particular fashion with a similar function.

(Bloom, 1982: 13-14)

Part Four: Grammar in use

Task 1

The words in this list are all verbs. What are the noun forms? Write them in the second column. The first one has been done for you.

1. Diagnose …Diagnosis...........
2. Examine ……………………
3. Prescribe ……………………
4. Suffer ……………………
5. Operate ……………………
6. Cure ……………………
7. Recover ……………………
8. Analyse ……………………

9. Infect ……………………..
10. Carry ……………………..
11. Replace …………………..
12. Degenerate ……………………..
13. Refer ……………………..
14. Paralyse ………………
15. Obstruct ……………………..

Task 2

Rewrite the sentences below, changing the verbs (in bold) to nouns. Do not change the meaning of the sentences, but be prepared to make grammatical changes if necessary. The first one has been done for you as an example.

1. I **diagnosed** that the patient had a heart condition.
- My diagnosis was that the patient had a heart condition.
2. I **examined** the patient fully.
- I made a full……………………………………………….
3. I **prescribed** a course of antibiotics.
- I wrote a……………………………………………….
4. He **suffered** very little.
- He experienced …………………………………………..
5. We **operated** immediately.
- The…………………………………………………
6. This disease cannot be **cured**.
- There is no…………………………………………………

7. He has **recovered** fully.

-   He has made a………………………………………………………………………...

8. The laboratory **analysed** the blood sample.

-   The lab made an……………………………………………...………………………

9. We found that the tissue was **infected**.

-   We found an……………………………………………………………………………

10. Ten per cent of the population are thought to **carry** the bacteria.

-   Ten per cent of the population are thought to be ………………………………….

11. We **replaced** the patient's hip.

-   The patient was given a …………………………………………………………………

12. His condition has **degenerated**.

-   There has been a……………………………………………………………………………

13. The patient was **referred** to a specialist.

-   The patient was given a………………………………………………………………….

14. His arm was **paralysed** after the stroke.

-   He suffered ……………………………………………………………………………

15. The artery was **obstructed** by a blood clot.

-   The blood clot was forming an …………………………………………………………..

Part Five: Translation & Writing

Task 1

Translate the following paragraph into French

The Mouth

The function of the mouth and its associated structures is to form a receptacle for food, to begin mechanical digestion through chewing (mastication), to swallow food, and to form words in speech. It can also assist the respiratory system in the passage of air.

(www.enchantedlearning.com)

Task 2

The following text is an extract from an undergraduate British prospectus, read it carefully.

The MBChB (Bachelor of Medicine, Bachelor of Surgery) is a five-year undergraduate medical degree course. Most of your learning takes place in small groups. The main components are:

Core (Years 1–3)
An integrated programme of clinical and scientific topics mainly presented through **problem-based learning (PBL)**, where you work with others on a series of case problems.

Student Selected Modules
Student selected modules (SSMs) allow you to choose from a menu of subjects such as Sports Medicine or even study a language as preparation for an **overseas elective**, a hospital attachment of your own choice, between Years 4 and 5.

Vocational Studies and Clinical Skills
This component prepares you for the **clinical skills** required for contact with patients from Year 1 of your course, through periods of practical training where you are attached to a hospital department or general practice.

Clinical Attachments (Years 4 and 5)
A series of four-week **clinical attachments** in Medicine, Surgery, Psychological Medicine, Child Health, Obstetrics & Gynaecology and General Practice.

(Adopted From Cambridge Professional English in Use Medicine p:30)

Now, you need to be divided into groups of three, and write a similar paragraph of about 8 to 10 lines in which you describe the main components of your undergraduate course.

Exchange your texts with your friends from the other groups. Read each other's texts carefully and try to correct each other's mistakes.

Task 3

Translate the following passage into English.

Le foie, un organe multifonctions

Organe volumineux, le foie avec ses 1,5 kg chez l'adulte est la plus grande glande de l'organisme qui se situe sous le diaphragme. L'une des fonctions principales du foie et de la vésicule biliaire est relative à la digestion et à la production d'enzymes digestives qui sont déversées dans l'intestin grêle.

(Adopted from www.doctissimo.fr)

Task 4

Read the following text.

Choosing a specialty

Jill Mathews has just graduated from medical school and is talking about her future.

'I haven't decided what to **specialize in** yet. I need more experience before I decide, but I'm quite attracted to the idea of paediatrics because I like **working with** children. I'd certainly prefer to work with children than, say, elderly patients – so I don't fancy geriatrics. I was never very **interested in** detailed anatomy, so the **surgical specialties** like **neurosurgery** don't really appeal. You have to be **good with** your hands, which I don't think is a problem for me – I've **assisted at** operations several times, and I've even done some minor ops by myself – but surgeons have to be able to do the same thing again and again without getting bored, like tying off cut arteries and so on. I don't think that would be a problem for me, but they need to make decisions fast and I'm not too **good at** that. I like to have time to think, which means surgery's probably not right for me.'

(Cambridge Professional English in Use Medicine p:18)

Re-read what Dr. Jill Mathews says and:

1- Make a list of the qualities she thinks are needed to be a good surgeon.

2- Make a similar list of qualities for another specialty.

3- As an undergraduate student, which branch of medicine do you think you have the qualities for? Write a paragraph on the topic.

4.8 CONCLUSION

This concluding chapter aimed at providing some remedial recommendations and instructional practices that will, hopefully, enrich the teaching of ESP in the Department of Medicine. The researcher started by the administrative recommendations which are the basis to give ESP teaching the importance it deserves and officially implement it in students' curriculum, in addition to giving some pedagogical proposals related to the ESP teacher and students who, the researcher believes, are very important actors in this process.

The second part of the chapter was devoted to the application of the theoretical assumptions about the syllabus and the course intended for medical undergraduate students, exemplified in a sample unit that covers the teaching of the language skills most needed by the informants in addition to translation.

It is hoped that the suggestions proposed will meet the different needs and expectations of the target students and be reflected in an efficient and effective ESP course.

GENERAL CONCLUSION

GENERAL CONCLUSION

It has been a long time since English became the language of science. Today in modern medical practice, medical professionals are constantly exposed, either when searching the literature or attending international meetings, to the English language. Unless you know enough English to read the medical publications, it is almost impossible to keep up to date with medical advance. The scientific importance of English is as such, especially within the globalization process and the emergence of knowledge societies, that the researcher emphasizes the need for Algerian medical students and professionals to learn English; whenever we hear about how our medical doctors struggle in conferences to understand a lecture or to speak with foreign colleagues, we strongly feel that we should try to do something to prevent this from happening to future generations.

In the same line of thought, The Algerian doctors need the English language to reinforce their position in the international medical network; they are required to read scientific texts and medical articles, to keep in touch with foreign colleagues, and to attend international conferences. The fulfilment of these tasks is realized only through the mastery of the English language. Despite this fact, English instruction is not given its share of attention in the Department of Medicine at the University of Tlemcen; it is reflected in an optional ESP course which has been recently implemented.

Accordingly, this investigation aimed at designing and implementing a compulsory ESP course in the curriculum of undergraduate and postgraduate medical students as a step to build up a knowledge society. The research is a case study which reveals a great awareness and need, expressed by the postgraduate medical students, for English instruction.

Seeing that English instruction is an important element to equip the target students with the linguistic tool which will ease for them their future job, the investigator based her research on a needs analysis to check students lacks in the target language, their expectations, and their attitudes towards English instruction, in addition to sorting out the teaching/learning deficiencies from the starting step so that to design an efficient ESP course enriched with new elements that make it respond to the newly emerging requirements.

This inquest started by chapter one in which, the researcher set the background related to the ESP literature and key notions used in this investigation. In addition, a clear idea was given about the new concept of the information age and the emergence of the knowledge society. Chapter two was concerned with the detailed description of the situation under investigation in terms of sampling, the research instruments used to gather data, and research methodology. The third chapter strived the analyse the data collected through students' and subjects specialists' questionnaires, ESP teachers' and administrators interviews, and classroom observation in order to answer the research questions. Finally based on the research results, the researcher in chapter four proposed some pedagogical issues that may contribute to educational change starting by the administrative role of requesting and urging the official implementation of an ESP course, as well as suggestions concerning the ESP teacher and his role as a catalyst of the knowledge society, it is to be said that the researcher focused more on the role of the teacher and gave suggestions as an attempt to help and guide them in their difficult and complex profession . The second part of the chapter was devoted to some instructional practices in the process of course design, and the provision of a holistic vision about the syllabus for medical students In addition to this, a sample unit was proposed including some language activities that would be appropriate for medical students.

The adoption of a case study approach was very effective and helpful in the sense that it allowed the researcher to depict an accurate vision about the situation studied, and gain interesting insights into the teaching of ESP in the Department of medicine   besides, the triangulation of the research instruments and data sources enabled the researcher to collect a large amount of information and contributed to the in-depth exploration of the case.

Interesting results were achieved, medical students need and are increasingly interested in learning English, they welcome its implementation in their curriculum and the subject specialist support the idea. NIA revealed that medical students display a high degree of motivation and enthusiasm to learn English; however, they are poor manipulators of the language. Such difficulties are due to lack of practice and insufficient period of instruction. They expressed a primary need to develop first the reading and listening skills, then the speaking skill and finally the writing one. This means that regarding the first hypothesis, the order of the language skills put forward by the researcher is the same expressed by medical postgraduate students and by subject specialists as well.

As far as the second hypothesis is concerned, multiple teaching/learning deficiencies have been uncovered, accusing not only the ESP teacher, who is always the first casualty, but also the administration and the learner as well. This is from a macro view, yet when mentioning the details, the researcher noticed that the medical administrators though they see English as very important in the medical career, do not translate it in facts and actions, they give no support to the ESP teacher who relies on his proper means to administer the course, do not sensitize students about the importance of this course, and even when intensive English instruction is recommended, they often mention the heavy and difficult medical curriculum and students' lack of time.

As for the responsibility of the English administrators, ESP teachers lack training, supervision and support; besides, they are not provided with any type of teaching materials or syllabi. The ESP teacher has also his share of responsibility in the ESP process; the course administered to students was not based on NIA and was grammar –based, thus it was far from any communicative purposes. Moreover, the approach adopted was not students-centred which made the ESP course a simple process of transmitting information, there was no stimulation or motivation-raising from the part of the teacher who lacked the technological means to make his course more attractive.

The learners displayed a low degree of motivation and interest, they were not active participants in the classroom and relied on the teacher in every task, it should be said that classroom activities were not stimulating and there was not the least sign of active learning or self-directed learning. This is to state that these findings corroborate the second hypothesis put by the researcher.

Concerning the third hypothesis, it was based and closely linked to the second one as what was found as hindering factors is recommended as remedial suggestions to improve the present situation, help teachers overcome the difficult and complex tasks they face, and make learners grasp the necessary knowledge and exploit the limited amount of time to achieve their objectives and become full participants in knowledge society building.

In the light of what was mentioned, the researcher should say that there were a number of limitations in the current case study, for instance, due to the limited access to undergraduate medical students the researcher dealt with postgraduates since they were the ESP students and no undergraduate was interested in the ESP course, this is good in principle since postgraduates are more advanced and therefore, more aware of their needs; however the researcher believes that because of this factor and also because of the limited number of the informants, the representativeness and generalizability of this research are limited. For this reason, this case study calls for further research involving a large and more representative sampling of undergraduates. Also a research at postgraduate level should be

undertaken by adopting action research which is a type of research that enlightens more about

the true practices of the teaching profession. In this study it was impossible for the researcher to undertake it as she was not the teacher moreover the ESP course was just an experimental step.

To sum up, the researcher should highlight the pressing need for English instruction in all domains as Algeria is moving towards a globalized system which requires new and challenging potentials. Our scientists are called upon to build knowledge bases and be creative and innovative; this will only be done through access to knowledge which is synonymous to mastery of English. English, the researcher strongly believes, should be a compulsory subject in medical students' curriculum.

BIBLIOGRAPHY

BIBLIOGRAPHY

- **Adelman, C., Kemmis, S. and Jenkins, D.** (1980)."Rethinking case study: Notes from the second Cambridge conference". In H. Simon (ed.) <u>Towards a Science of the Singular</u>. Norwich: Centre for Applied Research in Education, University of East Anglia, pp. 45-61.

- **Al-Humaidi, M**. (2009). " English for Specific Purposes: Review of Literature".

- **Allwright, D. and K.M. Bailey.** (1996) <u>Focus on the Language Classroom</u>; Cambridge Language Teaching Library.

- **Anthony, L.** (1997) "English for Specific Purposes: What does it mean? Why is it different?" In <u>CUE</u>. Vol.5, N° 3, pp 9-10.

- **Bassey, M.** (1999). <u>Case Study Research in Educational Settings</u>. Open University Press. Buckingham. Philadelphia.

- **Basturkmen, H.** (2006) <u>Ideas and Options in English for Specific Purposes</u>; Lawrence ERLBAUM Associates Publishers, London.

- **Bell, D.** (1976). " The Coming of Post-Industrial Society: A venture in Social Forecasting". New York: Basic Books.

- **-----------** (1980). "The Social Framework of the Information Society". In Forester, T. (Ed) <u>The Microelectronics Revolution</u> (pp. 500-549). Oxford: Blackwell.

- **Benkaza, D.** (1999) A <u>Contribution to an Evaluation of ESP Teaching at the University of Constantine (1980-1990)</u>; Unpublished Magister Thesis; Mentouri University of Constantine.

- **Benmostefa, N.** (2009) "The LMD System: An Alternative Towards the Promotion of ESP at Tertiary Level in the Light of the Globalization Process".

- **Benmoussat, S.** (2003) <u>Mediating Language and Culture: An Investigative Analysis of the Cultural Dimensions in the Algerian Newly-Designed ELT Textbooks</u>. Unpublished Doctorat d'Etat. University of Tlemcen, Algeria.

- **Berwick, R.** (1989) <u>Needs Assessment in Language programming: From Theory to Practice</u>, in R.K. Johnson (Ed) The second Language Curriculum. Cambridge: Cambridge University Press.

- **Bloom, G.** (1982). <u>The Language of Medicine in English</u>; Regents Publishing Company, Inc.

- **Bogdan, R.G and Biklen, S.K.** (1992). <u>Qualitative Research for Education</u> (second edition). Boston, MA: Allyn & Bacon.

- **Bottery, M** (2000). <u>Education, Policy and Ethics</u>. London: Continuum.

- **Brown, D.H.** (2001). <u>Teaching by Principles: An Interactive Approach to Language Pedagogy.</u> (2nd Ed.) Addison Wesley Longman, New York.

- **Brown, J. D.** (2001). <u>Using Surveys in Language Programs</u>. Cambridge, UK, Cambridge University Press.

- **Brown, P. & Lauder, H.** (2001). <u>Capitalism and Social Progress: The Future of Society in a Global Economy</u>, Basingstoke, Hampshire, and New York, Palgrave.

- **Brown, J.D., & Rodgers, T.S.** (2002). <u>Doing second language research</u>. Oxford: Oxford University Press.

- **Candlin, C.N.** (1977). "Doctor-Patient Communication Skills (DOPACS)". Chelmsford: Graves Medical Audio-Visual Library.

- ------------------- (1978). **"**Study Skills in English: Theoretical issues and practical problems". In R. Mackay and A. Mountford (Eds.) English for Specific Purposes. London: Longman.

- **Carnoy, M. and Castells, M. (**2003). "Sustainable flexibility: A prospective study on work, family and society in the information age," OECD Working Papers, 5(29), , OECD, Paris.

- **Cartelli, A.** (2006). Teaching in the Knowledge Society: New skills and Instruments for Teachers. Information Science Publishing. University of Italy.

- **Carver, D.** (1984) "Some Propositions about ESP"; the ESP journal; vol.3; N°1; pp 131-135.

- **Chang, D.** (1988) Globalization and English in Chinese Higher Education. Oxford: Blackwell Publishing.

- **Cohen, L., Manion, L. & Morrison, K. R. B.** (2005). A Guide to Teaching Practice (fifth edition). London: Routledge.

- **Cohen, L., Manion, L. & Morrison, K. R. B.** (2007). Research Methods in Education, New York, Routledge.

- **Cohen, L. and Manion, L.** (1989). Research Methods in Education, 3rd edn. London: Routledge.

- **Cook, V.** (2001). "Using the first language in the classroom". In The Canadian Modern Language Review. University of Toronto Press. Vol 57 N.3, pp 402-423.

- **Crystal, D.** (2001). Language and the Internet. Cambridge: Cambridge. University Press.

- -------------- (1988). The English Language. London: Penguin.

- -------------- (1995). The Cambridge Encyclopedia of the English Language: Cambridge Cambridge University Press.

- -------------- (1997). English as Global Language. Cambridge: Cambridge University Press.

- **Cunningsworth, A.** (1987). <u>Coursebooks and Coversational Skills</u>. In Sheldon (Ed.) ELT Textbooks and Materials: Problems in Evaluation Development. ELT Documents 126.

- **David, P.A. and Foray, D.** (2003). <u>Economic Fundamentals of the Knowledge Society</u>. Policy Futures in Education, 1 (1): 20-49.

- **Dedrinos, B.** (2006). <u>Skills to Communicate Translatable Experiences</u>. Athens: Dedrinos B and Drossou M (eds). Athens University.

- **Derradji, S.** (1995). <u>A Syllabus for Developing Oral Proficiency: A Case study: Institute of Commerce (Algiers)</u>; Unpublished Magister Thesis; Mentouri University of Constantine.

- **Djebbari, Z.** (2009). <u>Pronunciation Training to Develop EFL Learners' Self-Confidence</u>: University of Abou Bakr Belkaid – Tlemcen; Unpublished Magister Thesis; University of Tlemcen.

- **Dornyei, Z.** (2003). <u>Questionnaires in Second Language Research</u>. Lawrence Erlbaum Associates, Inc, New Jersey. USA.

- **Drucker, P.** (1993). <u>Post-capitalist Society</u>, New York, HarperCollins, 1993, p. 8.

- **Drucker, P.** (1994). "The age of social transformation," Atlantic Monthly 27, 53–80.

- **Dudley Evans, T.** (1997). "How far can we, should we go?" In <u>World Englishes</u>; vol. 16, N°3; pp. 351-358.

- **Dudley Evans, T. and St John, M.T.** (1998). <u>Development in English for Specific Purposes: A multi-disciplinary approach</u>; Cambridge University Press.

- **Duff, P.** (2008). <u>Case Study Research in Applied Linguistics</u>. Taylor & Francis group, New York.

- **Duff, A.** (1994). <u>Translation: Resource Books for Teachers</u>. Oxford: Oxford University Press.

- **Flook, D.** (1993). 'Are the Authentic Materials a Pre-requisite for an ESP Course'. The ESP Maghreb Conference. The British Council: London.

- **Fullan, M.** (2001). <u>Leading in a culture of change</u>, San Francisco, Jossey-Bass/Wiley,

- **Fullan, M. & Stiefelbauer, S.,** (2001). <u>The New Meaning of Educational Change</u>, New York, Teachers College Press, 1991.

- **Gall, J., Gall, M.D., & Borg, W.T.** (2005). <u>Applying educational research</u> (5th ed.). Boston: Pearson Education.

- **Gardner, S**. (2008). "Changing Approaches to Teaching Grammar", ELTED. Vol.11 winter 2008.

- **Graddol, D.** (2006). <u>English Next</u>. London: The British Council.

- **Hargreaves, A.** (2003). <u>Teaching in the Knowledge Society: Education in the Age of Insecurity.</u> Teachers College Press, Columbia University, New York,

   Harmer, J. (2001). <u>The Practice of English Language Teaching</u>. London: Longman.

   _____ (2007). <u>How to Teach English</u>. (New edition). Essex: Pearson education.

- **Hasman, M.** (2000). "The Role of English in the 21st Century". English Teaching Forum, January: 2000.

- **Hemche, H.** (2007). <u>The Design of ESP Teaching Material for First-year Post-Graduate Students of Physics: University of Abou Bakr Belkaid –Tlemcen</u>; Unpublished Magister Thesis; University of Tlemcen.

- **Hitchcock and Hughes** (1995). <u>Research and the Teacher</u>. London and New York: Routledge (2nd edition).

- **Homer-Dixon, T.** (2000). "The Ingenuity Gap: Can We Solve the Problems of the Future?" Toronto, Alfred A. Knopf, 2000.

- **Hutchinson, T. and A. Waters,** (1987). <u>English for Specific Purposes: A Learning-Centred Approach</u>; Cambridge University Press.

- **Ibrahim Idrees, A.** (2010). "Information & Communication Technologies in ELT"; Journal of Language teaching and Research, vol.1, No. 3, pp.211-214.

- **International Symposium for the UNESCO** (2001). "Language Diversity in the Information Society"; UNESCO, Paris.

- **Januleviciene, V. and Kavaliauskiene, G.** (2000). "To Translate or Not To Translate in Teaching ESP? Network, a journal for English Language Teacher Education, 3 (3). P. 9-13.

- **Jeffries, W.B. and Huggett, K.N.** (2010). <u>An Introduction to Medical Teaching</u>, Springer Dordrecht Heidelberg, London, New York.

- **Kashani, A.S. Soheili, S. and Hatmi, Z.N.** (2006). "Teaching English to Students of Medicine: A Student-Centred Approach"; Asian ESP Journal, vol.2, pp.85-98.

- **Kavaliauskiene, G. and Kaminskiene, L.** (2007). " Translation as a Learning Tool in English for Specific Purposes", Department of Foreign Languages, Mykolas Romeris University, Vilnius, Lithuania.

- **Kennedy, C. and R. Bolitho, (1984)** <u>English for Specific Purposes</u>; Macmillan Press Ltd; London.

- **Kourou, P.** (2008). "The use of L1 in the Foreign Language Teaching Process". ELT News March 2008.

Krachen, S. (1981). <u>Second Language Acuisition and Second Language Learning</u>. Oxford: Pergamon Press.

--------------- (1985). <u>The Input Hypothesis: issues and applications.</u> N.Y.: Longman.

- **Laviosa, S. and Cleverton, V**. (2006). " Learning by Translation: A Contrastive Methodology for ESP learning and Translation" Scripta Manent 2 (1) p. 3-12.

- **Le Compte, M and Preissle, J.** (1993). Ethnography and Qualitative Design in Educational Research (2nd ed.). London: Academic Press.

- **Lincoln, Y.S and Guba, E.** (1985). Naturalistic Inquiry. Beverly Hills, CA: Sage.

- **Littlewood, W.T.** (1981). Communicative Language Teaching: An Introduction. Cambridge: Cambridge University Press.

- --------------------- (1994). "Language Teaching Methods", in the Encyclopedia of Language and Linguistics (Vol. IV), Edited by R.E. Asher, Pergamon Press, Oxford, pp. 20-27-35

- **Mackey, A. and Gass, S. (2005)** . Second language research: Methodology and design. Mahwah, NJ: Lawrence Erlbaum.

- **Mackey, R. and Mountford, A.J.** (1978). English for Specific Purposes; Longman, London.

- **Mansell, R. (2008).** " The Life and Times of The Information Society: A Critical Review"; Department of Media and Communication, London School of Economics and Political Sciences.

- **McAlpin, J. (1986)** "English Course for First Year Medical Students" in ESP for the University; ELT Documents:123, Pergamon Press in association with the British Council.

- **Mc Donough, J.** (1984). ESP in Perspective: A Practical guide; New Bury House; London.

- **McNiff, J. and Whitehead, J.** (2002). Action Research: Principles and Practice (2nd ed.). London: Routledge Falmer.

- **Merriam, S.** (1988). <u>Case study research in education: A qualitative approach</u>. qualitative research in education. New York: Academic Press.

  Miller, G.E. (1990). "The assessment of clinical skills/competence/performance/ Academic Medicine" 65: S63-S67.

- **Mumby, J.** (1978). <u>Communicative Syllabus Design</u>. Cambridge : Cambridge University Press.

- **Newman, I. &. Benz, C. R.** (1998). <u>Qualitative-Quantitative Research Methodology</u>. *<u>Exploring the Interactive Continuum</u>* (Carbondale, IL: Southern Illinois University Press.

- **Nunan, D.** (1990). "Using Learner Data in Curriculum Development" in ESP Journal vol. 9, N°17. pp.32-35.

- —————— (1988). <u>Syllabus Design</u>. Oxford: Oxford University Press.

- **OECD**, (2008). "Tertiary Education for the Knowledge Society" , Thematic Review of Tertiary Education : Synthesis Report.

- **Oppenheim, A. N.** (1992). <u>Questionnaire Design, Interviewing and Attitude Measurement</u>. London: Pinter.

- **Patton, M.Q.** (1980). <u>Qualitative Evaluation Methods</u>. Beverly Hills: Sage Publications.

- **Piquet et al.** (1997) <u>Applied Languages: Theory and Practice in ESP</u>, pp. 37-44. Valencia; University of Valencia.

- **Popescu Duduiala, L.** (2009) "Globalization and the creation of the information society"; The Ninth International Conference on Investments and Economic Recovery, vol.12, Nr.1 special.

- **Ribes, R. and Ros, P.** (2006). <u>Medical English</u>. Springer Berlin Heidelberg, New York.

- **Richards, J.C.** (2005) <u>Curriculum Development in Language Teaching.</u> New York: Cambridge University Press.

- **Richards, J.C and Farrell, T.S.C.** (2005). <u>Professional Development for Language Teachers: A Description and Analysis</u>. Cambridge University Press.

- **Richterich, R and Chancerell, J.L.** (1980). <u>Identifying the Needs for Adults Learning a Foreign Language.</u> London: Pergamon Press.

- **Rivoltella, P. C.** (2003). <u>Costruttivismo e pragmatica della comunicazione</u> online: Socialitá e didattica in Internet. Trento: Erickson.

- **Robinson, P.** (1980). <u>ESP (English for Specific Purposes)</u>; New Pergamon Press.

- ─────── (1991). <u>ESP Today: A Practitioner's Guide</u>; Prentice Hall International Ltd.

- **Savignon, S.J.** (1983). <u>Communicative Competence, Theory and Practice</u>. Reading M.A. Addison Wesley.

- **Selinger & Shohamy** (1989). <u>Second Language Research Methods</u>. Oxford: Oxford University Press. (Tuckman, 1969 quoted in Argyle, 1969).

- **Senhadje, J.** (1993) . "Needs Analysis and Approaches to Syllabus Design" in ESP Maghreb Conference; (British Council) London.

- **Stake, R.E.** (1995). <u>The art of case study research</u>. Thousand Oaks, CA: Sage.

- **Stenhouse, L.** (1988). <u>Case Study Methods</u>, In J.P. Keeves (ed.) Educational Research, Methodology, and measurement: an International Handbook, 1st edn. Oxford: Pergamon, pp. 49-53.

- **Stephen, I. and Michael, W.B.** (1981). <u>Handbooks in Research and Evaluation.</u> 2nd Edition. San Diego: Edits Publishers.

- **Strevens, P.** (1977). <u>New Orientations in the Teaching of English</u>. Oxford: Oxford University Press.

- ------------------ (1988). "The Learner and the Teacher of ESP", in <u>ESP in the Classroom: Practice and Evaluation</u>, ELT Documents 128, Modern English Publications in Association with the British Council, pp. 39-44.

- **Sturman, A.** (1994). <u>Case Study Methods</u>, In J.P. Keeves (ed.) Educational Research, Methodology, and measurement: an International Handbook, 2nd edn. Oxford: Pergamon, pp. 61-69.

- **Swales, J.** (1985). "Episodes in ESP". Prentice Hall.

- **UNESCO.** (2005). "Towards Knowledge Societies": UNESCO World Report. Paris: UNESCO Publishing.

- **Ur, P.** (2009). "Teaching Grammar: Research, Theory, and Practice" University of Vienna, February 2009.

- **Van Lier (1988)** van Lier, L. (1988). <u>The classroom and the language learner</u>. New York: Longman.

- **Weir, C. and Roberts, J. (1993)** "Education in EFL"; In <u>Applied Language Studies</u>, D. Crystal and K. Johnson (Ed).

- **West, R.** (1994). "Needs Analysis in Teaching: State of Art". In Language Teaching, vol 27. pp 1-19.

- **White, R.V.** (1983). <u>Curriculum Development and English Language Syllabus Design</u>**,** C.U.P

- **Widdowson, H.G.** (1978). <u>Teaching Language as Communication</u>, O.U.P., Oxford.

- **Widdowson, H.G. and Brumfit,** (1981). <u>Issues in Second Language Syllabus Design</u>**.** Education O.U.P

- **Wilkins, D.A.** (1976). <u>Notional Syllabuses</u>; Oxford: Oxford University Press.

- **Williams (1986)** Williams, R. (1986). "'Top Ten' Principles for Teaching Reading", *ELT* Journal, Volume 40.

- **Willis, J.** (1981). Teaching English Through English. Essex. Longman.

- **Wilson, N. & McLean, S.** (1994). Questionnaire Design: A Practical Introduction. Newtown Abbey, Co. Antrim: University of Ulster Press.

- **Wragg, E.C.** (1999). An Introduction to Classroom Observation. Routledge, London.

- **Yalden, J.** (1983). The communicative Syllabus: Evolution, design, and implementation. Oxford: Pergamon Press.

- **---------------** (1987). Principles of Course Design for Language Teaching. Cambridge: Cambridge University Press.

- **Yelon, S.** (1996). Powerful Principles of Instruction. Longman . New York.

- **Yin, R. (**1993). Application of Case Study Research. California: Sage Publication.

- **-----------** (1994.) Case study research: Design and methods. Thousand Oaks, CA: Sage.

- -----------. (2003a). Case study research: Design and methods (3rd ed.). Thousand Oaks, CA: Sage.

- ----------- . (2003b). Applications of case study research (2nd ed.). Thousand Oaks, CA: Sage.

- **Zanker, N.** (2006). Effective Information and Communication Technology. Loughborough: Loughborough University.

WEBIOGRAPHY

- **Glendinning, E.H. and Howard, R.** <u>Professional English in Use Medicine</u>. Cambridge University Press. Retrieved on February 20, 2012 from http//www.4shared.com

- **Honawar, V.** (2008). "Working Smarter by Working Together," *Education Week*, April 2, 2008. Retrieved on February 18, 2012 from <u>http//www.edweek.org/ew/issues/professional-development</u>

- **Keller, B.** (2007), "Coaching Teachers to Help Students Learn," *Education Week*, Dec. 12, 2007. Retrieved on February 18, 2012 from <u>http//www.edweek.org/ew/issues/professional-development</u>

- **"Le Foie un organe multifonctions",** retrieved on February 28, 2012 from   http// www.doctissimo.fr.

- **Marchese, T.J.** (1998). "The new conversations about learning insights from neuroscience and anthropology, cognitive science and workplace studies". In: New horizons for learning. Retrieved on January 15, 2012 from <u>http://www.newhorizons.org/lifelong/higher_ed/marchese.htm</u>

- **Sawchuk, S.** (2010a). "Professional Development for Teachers at Crossroads," *Education Week*, Nov. 10, Retrieved on February 20, 2012 from <u>http//www.edweek.org/ew/issues/professional-development</u>

- ------------ (2010b).   "Full Cost of Professional Development Hidden," *Education Week*, Nov. 10, Retrieved on February 20, 2012 from <u>http//www.edweek.org/ew/issues/professional-development</u>

- ------------ (2010c). "Proof Lacking on Success of Staff Development," *Education Week,* Nov. 10, Retrieved on February 20, 2012 from <u>http//www.edweek.org/ew/issues/professional-development</u>

- ------------ (2010).   "N.Y.C. School Built Around Unorthodox Use of Time," *Education Week*, March 10, Retrieved on February 20, 2012 from <u>http//www.edweek.org/ew/issues/professional-development</u>

- **Stanford Center for Opportunity Policy in Education and the National Staff Development Council, (**2009-2010**).** "Status of Professional Learning,". Retrieved on September 30, 2011 from <u>http//www.edpolicy.stanford.edu</u>.

- **"The Human Digestive System",** retrieved on February 29, from http//www.enchantedlearning.com.

- **"The digestive system anatomy",** retrieved on February 29, 2012 from http//www.talkingmedicine.com.

- **United Nations,** (1948). "Universal Declaration of Human Rights", retrieved on December 20, 2010 from http//www.un.org/Overview/rights.html UDHR.

- **Viadero, D.** (2004), "Complete Coverage In 'Lesson Study' Sessions, Teachers Polish Their Craft," *Education Week*, Feb. 11, retrieved on February 18, 2012 from http//www.edweek.org/ew/issues/professional-development

- **Wei, R.C., Darling-Hammond, L., Andree, A., Richardson, N., Orphanos, S.** (2009), "Professional Learning in the Learning Profession: A Status Report on Teacher Development in the United States and Abroad," National Staff Development Council,. retrieved on January 15, 2012 from http//www.edweek.org/ew/issues/professional-development.

- **Wikipedia** (2010), "The Information Age" retrieved on September 14, 2010 from http://en.wikipedia.org/wiki/Information_Age

APPENDICES

Appendix A

<u>Students' Questionnaire (Questionnaire des étudiants)</u>

Dear Student;

I am presently carrying out a research to identify the most important elements in designing an ESP course that meets both your needs and the requirements of the information society. To do so, you are kindly requested to answer this questionnaire as clearly as possible.

Cher Etudiant;

Dans le cadre d'une recherche ayant pour objet de définir les éléments les plus adéquats pour la conception d'un cours d'Anglais qui répond à vos besoins et aux exigences de la société d'information, veuillez compléter ce questionnaire aussi clairement que possible.

Thank you (Merci)
<u>Mrs. Wahida ALLOUCHE</u>.

01- Age et spécialité preparée

Age and specialty prepared.

02- For how many years have you been studying English?

Pendant combien d'années avez-vous étudié l'Anglais?

03- For how many years did you stop using English after the secondary school?

Pendant combien d'années n'avez-vous pas pratiqué l'Anglais après le lycée ?

04- Have you received English courses at university level?
Avez-vous eu des cours d'Anglais au niveau de l'université?

Yes (oui) (   )   No (non) (   )

If yes, what was the nature of these courses?   Si oui, quelle était la nature de ces cours?
....

05- Do you think that English is important for you?
Pensez-vous que l'Anglais est important pour vous?
-   Not so much (Peu important) ( ) - Important (important) ( ) - Very important (Tres important) ( ).

Why? Pourquoi? ....

06- Do you think that the English course is beneficial for you?
   Pensez-vous que ce cours est bénéfique pour vous?
   Yes (oui) ( )   No (non) ( ).

   Why? Pourquoi?..

07- To what extent are you satisfied with the course content?
    A quel degré le contenu du cours vous satsifait-il?
    25 % ( )   50% ( )   75 % ( )

    Please justify. (Justifiez votre réponse svp)
    …………………………………………………………………………………………

08- Do you regularly attend the English course?
     Etes- vous régulièrement présent au cours d'Anglais?

     Yes (oui) ( ) No (non) ( ).
      Why ? Pourquoi ?...

 09-Do you participate in class? Participez-vous en classe ?

     Yes (oui) ( )   No (non) ( ).

     Why? Pourquoi? ....

10- Would you classify these skills according to their importance to fulfil your needs?
    Voulez-vous claser ces aptitudes en function de leur importance pour atteindre vos objectifs?
     • Writing (l'écriture)   1
     • Reading (la lecture) 2
     • Listening (l'écoute)   3
     • Speaking (le parler)   4
       (1- The most important / 4- Less important)

11- What are the difficulties you encounter in English? Choose one or more amswers.
    Quelles sont les difficultés que vous rencontrez en Anglais? Cocher 1 ou plusieurs lignes.

    1- To Read medical documents. (Lire des documents scientifiques et médicaux.)
    2- To write scientific and medical articles. (Ecrire des articles médicaux.)
    3- To speak with foreign colleagues (Parler à des collègues étrangers)
    4- To understand foreign colleagues speaking about medicine. (Comprendre des collègues étrangers parler de Médecine).

12- In your opinion, what are the problems you encounter in English due to?

A votre avis, les problèmes que vous rencontrez en Anglais sont dus à quoi?

1- Lack of practice (Manque de pratique.)

2- Insufficient period of instruction (Période insuffisante d »enseignement).

3- Lack of reading (Manque de lecture).

4- Lack of motivation and will (Manque de motivation et de volonté).

5- Others, please specify? Autres? Précisez svp…………………………………………..

13- What are the domains in which you use English more?

Quels sont les domains dans lesquels vous utilisez le plus l'Anglais?

- The Internet (L'internet)
- Undertaking research (Faisant de la recherche)
- In the studies (Dans les etudes)
- In international conferences (Dans des conferences internationals).

14- Do you use the ICTs (information and communication technologies)? In which domain?

Utilisez-vous les TICs (technologies d'information et de communication)? En quoi?

15- The time allocated to the English course is:

Le temps alloué au cours d'anglais est-il:

Sufficient / suffisant (   )   Insufficient / insuffisant (   )

If insufficient, how many hours a week do you suggest?

Si insuffisant, combine d'heures par semaine suggerez-vous?

......................Hours (Heures).

16- Are you for the introduction of English in your official programme?

Etes-vous pour l'introduction officielle d'un cours d'anglais au déprtement de Médecine?

Yes (oui) ( )   No (non) ( ) Why ? Pourquoi ? …………………………………………….

17- For how many years?

Pour combien d'années d'études?

02 years (ans) (   )

03 years (ans) (   )

04 years (ans) (   )

More? Plus? Specify (précisez)………………………………………………

18- Which type of English do you want to learn?

- General English (   )
- Medical Terminology   (   )
- Mixture of the two (   )

19- What are the objectives you want to achieve through this course?
   - Quels sont les objectifs que vous voulez atteindre à travers ce cours?

20- Apart from university ESP courses, do you have recourse to other means to learn English?
   - A part le cours prodigué à l'université, avez-vous recours à d'autres moyens pour apprendre l'anglais?

21- Do you have any other remarks or suggestions concerning you need to learn English?
   - Auriez-vous des suggestions ou remarques à faire concernant votre besoin d'apprendre l'Anglais?

Thank you for your co-operation.
Merci pour votre co-opération.

Appendix B

<div align="center">

<u>**Subject Specialists' Questionnaire**</u>
<u>**Questionnaire des Enseignants de Spécialîté**</u>

</div>

Dear Teacher;
    I am presently carrying out a research to identify the most important elements in designing an ESP course that meets both medical students' needs and the requirements of the information society. To do so, you are kindly requested to answer this questionnaire as clearly as possible.

Cher Enseignant;
    Dans le cadre d'une recherche ayant pour objet de définir les éléments les plus adéquats pour la conception d'un cours d'Anglais qui répond aux besoins des étudiants de Médecine et aux exigences de la société d'information, vous êtes priés de bien vouloir compléter ce questionnaire aussi clairement que possible.

<div align="right">

Thank you (<u>Merci</u>)
<u>Mme. Wahida ALLOUCHE.</u>

</div>

1- Age (Age)

2- Diplôme et Spécialité. (Qualification)

3- Expérience dans la profession médicale.

    Experience in the medical profession.

4- Expérience dans l'enseignement de Médecine.
    Experience in teaching medicine.

5- Le (s) module (s) enseigné (s).
    Module (s) taught.

6- Entant que Médecin, l'Anglais est-il important pour vous?
    As a doctor, is English important for you ?
    Yes (oui) ( ) No (non) ( )

  Pourquoi? Why ?...

7- Pourquoi avez-vous besoin de l'Anglais? (Cocher devant la ou les lignes correspondant à vos besoins).
    What do you need English for? Tick one or more lines.
    - To read medical articles (Lire des documents médicaux.)
    - To access the internet (Accéder à Internet.)
    - To do research (Faire des recherches.)
    - To write medical articles (Ecrire des articles médicaux.)
    - To attend international conferences (Assister à des conférences internationales.)

8- Voulez-vous classer ces aptitudes en fonction de leur fréquence d'utilisation ?
Would you classify these skills interms of frequency of use ?
(1- La plus fréquente (most frequently used) / 4- la moins fréquente (less frequent))

- Lire (reading)   - Ecrire (writing) - Ecouter (listening)   - Parler (speaking) .
1-
2-
3-
4-

9- Quelles sont les difficultés que vous rencontrez en utilisant l'Anglais ?
   -   What are the difficulties you face in English ?

10- Etes-vous pour l'introduction d'un cours officiel d'Anglais au department de Médecine?
   Are you in favor for the introduction of an official course in the Department of Medicine ?
   Yes (oui) (   )   No (non) (   )

11- Pour combien d'années d'études? For haw many years?

   -   02 ans (years) (   )

   -   03 ans (years) (   )

   -   04 ans (years) (   )

   -   Plus? (More ?) Veuillez préciser s.v.p (Please specify) ....

12- Que suggérez-vous concernant le contenu d'un cours d'Anglais pour Médecins et futurs Médecins?
   What do you suggest concerning the content of an English course for doctors and future doctors ?

Thank you for your co-operation
Merci pour votre co-opération

Appendix C

<u>ESP Teachers' Interview</u>

Dear Colleague;

I am presently carrying out a research to identify the most important elements in designing an ESP course for medical students. I would be very grateful if you could answer these questions.

<u>Thank you</u>
<u>Mrs. Wahida ALLOUCHE.</u>

1- Qualification

2- Your experience in English language teaching?

3- Your experience in ESP teaching?

4- In which department?

5- Did you have any specialized training in teaching ESP?

Yes ☐   **No** ☐

If yes would you describe it?

6- Do you think that the introduction of an ESP course in the medical department is a good initiative?

Yes ☐   **No** ☐

Why?..

7- How many classes do you have?

8- How large are they?

9- To what extent does it affect your ESP teaching?

10- What is the weekly teaching time devoted to each class as far as your ESP course is concerned?

11- How do you evaluate your students' proficiency level?

- Advanced. ☐
- Intermediate. ☐
- Beginners. ☐

12- Are they motivated during their English course?

Yes ☐   **No** ☐   **Not so much** ☐

13- What is it due to?

14- Did you conduct a needs analysis before deciding about the content of your course?

15- Is there any syllabus provided by your department?

16- Is there any material provided by your department?

17- How do you plan your course?

18- What type of syllabus did you opt for?

19- How much time do you spend to cover a complete unit?

20- What kind of activities do you plan for a given unit?

21- What is the importance devoted to each language skill during an ESP course?

- Writing ....
- Reading ....
- Listening ....
- Speaking ....

22- Do you think that the content provided to your students is relevant to their needs?

23- What are the problems encountered when teaching ESP?

24- Do you use French and / or Arabic in your ESP course?

25- Do your students use French and/or Arabic during their English course?

26- Do you think that the weekly teaching time devoted to English teaching is sufficient?

Sufficient [　　] Insufficient [　　]

If you find it insufficient, what do you suggest?

27- In your opinion, for how many years should the ESP course last?

28- What do you think about the collaboration between language teachers and subject specialists?

29- What about the collaboration between ESP teachers themselves?

30- Among these activities, which are the most appropriate for an ESP course for medical students?

- Listening comprehension...................%
- Reading comprehension...................%
- Speaking & topic discussion............%
- Writing oriented course....................%
- Focusing on grammar......................%
- Teaching vocabulary & medical terminology................%

31- How many students should an ESP class comprise?

- 10 to 20 ☐
- 20 to 30 ☐
- More? ....

32- Do you use the ICTs in your lectures?

33- Do you have any remarks or suggestions concerning the design of an ESP course for medical students?

....

<u>Thank you for your co-operation</u>.

Appendix D

<u>Interview des Administrateurs</u>
<u>De la Faculté de Médecine.</u>
<u>Medical Administrators' Interview.</u>

Monsieur ;

Dans le cadre d'une recherche ayant pour objet de définir les éléments les plus adéquats pour la conception d'un cours d'Anglais qui répond aux besoins des étudiants de Médecine et aux exigences de la société d'information, vous êtes priés de bien vouloir répondre aux questions qui suivent.

Dear Sir;

I am presently carrying out a research to identify the most important elements in designing an ESP course that meets both medical students' needs and the requirements of the information society. To do so, you are kindly requested to answer this questionnaire as clearly as possible.

Merci (Thank you)
Mme. ALLOUCHE Wahida

1- Diplôme et spécialité (Qualification)

2- Avez-vous enseigné ou enseignez-vous actuellement à la faculté de Médecine ?
Pendant combien d'années ?
Have you taught (are you teaching) in the Faculty of Medicine ? For how many years ?

3- Depuis combien d'années occupez-vous le poste de Doyen (chef de Département) de la Faculté de Médecine ?
For how many years have you been Dean of the Faculty (Head of the Department of Medicine)?

4- Avant la programmation de ce cours d'Anglais, y'avait-il d'autres cours d'Anglais offerts aux étudiants de Médecine ?
Before the provision of this ESP course, were there any other English courses ?

5- Quelles sont les raisons de ce manque de cours d'Anglais à la faculté de Médecine sachant que dans toutes les autres Facultés les cours d'Anglais font partie du programme officiel des études?
What are the reasons for such lack, knowing that English courses are officially provided in all the other Faculties?

6- Etes-vous pour l'introduction d'un module d'Anglais au Département de Médecine ?
Are you for the official implementation of an ESP course for medical students ?

7- Pour combien d'années d'études ?
For how many years ?
Pourquoi ? Why ?...

8- Que suggérez-vous quant au contenu de ce cours d'Anglais ?
What do you suggest about the content of the course ?

Thank you (Merci)

Appendix E

<u>Interview of the Head of the English Section</u>

Dear Doctor,

The present interview endeavours to shed some light on the teaching of English for Specific Purposes, and the conditions of work of ESP teachers. Thus, you are kindly requested to answer the following questions and make comments whenever you judge it necessary.

1) Diploma & Specialization.

2) Experience as an administrator (As a head of the English Section).

3) For how many years have you been teaching English?

4) Have you taught ESP?

   - If yes, For how many years?.......................................

   - In which department (s)?...

5) How many teachers are there in the English section?

   Full-time teachers=…………… Part-time teachers=……………….

6) Almost all ESP teachers claim the non-existence of ESP training; could you give me the reasons behind the absence of such training?

7) Why the teaching of ESP, despite its complexity, is always assigned to novice teachers?

8) How are the ESP teachers supervised by the English section?

9) What do you suggest to improve the conditions of work of ESP teachers?

Thank you**.**

Appendix F

LESSON OBSERVATION SHEET

Institution	ESOGNS	
Date	/ / / 2007	
Observer		
ESP teacher		
Major	OPJ	

Academic Year	2007 /2008	
Number of students present		
Aims of the lesson as expressed by the teacher		

Time	Activity	Approach		Patterns of interaction and class work								Materials					Skills developed							classroom activities				
		Teacher – centered	Student – centered	Teacher–Student	Student –Teacher	Individual work	Pair work	Group work	Whole – class work	Mingling	Textbook	Handout	Audio	Video	Authentic materials	Listening	Speaking	Reading	Writing	Grammar	Specialized Vocabulary	Translation	Note-taking	Summarizing	Drills	Discussion / debate	Role play
100"																											
									SESSION ONE																		
10																											
20																											
30																											
40																											
									SESSION TWO																		
10																											
20																											
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الملخص

يهدف التحقيق الحالي إلى تسليط الضوء على الحاجة الماسة والملحة لإدخال تعليم اللغة الإنجليزية المتخصصة في المجال الطبي، وذلك من أجل المساهمة في بناء مجتمع معلوماتي وتزويد أطبائنا بالأداة اللغوية التي تمكنهم من أن يكونوا مشاركين فاعلين في تقدم مجتمعنا، وكذلك في المؤتمرات الطبية الدولية. الغرض من هذه الدراسة هو من جهة، إقتراح إدخال تعليم اللغة الإنجليزية كجزء من المنهج الدراسي الرسمي لطلبة الطب، ومن جهة أخرى، استكشاف وضعية تعليم اللغة الإنجليزية لأغراض خاصة في قسم الطب من خلال تحليل الإحتياجات اللغوية لطلبة العلوم الطبية وتحديد أوجه القصور و الصعوبات في تدريس هذه اللغة و كيفية معالجتها بإدخال عناصر جديدة في الدرس اللغوي بهدف جعله يستجيب للتغيرات العالمية.

الكلمات المفتاحية: مجتمع معلوماتي، الإنجليزية لأغراض خاصة، تصميم درس، تحليل الإحتياجات، الإنجليزية الطبية

</div>

RÉSUMÉ

La présente enquête vise à mettre en évidence la nécessité urgente et impérieuse pour l'introduction de l'enseignement d'anglais dans le domaine médical, afin de contribuer à l'édification d'une société d'information et d'équiper nos médecins avec l'outil linguistique qui leur permet d'être des participants actifs dans le progrès de notre société ainsi que dans les conférences médicales internationales.

Le but de cette étude est d'une part, de proposer l'implémentation officielle d'un cours d'Anglais pour des objectifs spécifiques dans le programme d'études des étudiants de médecine, d'autre part d'explorer la situation d'enseignement d'Anglais dans ce département à travers l'analyse des besoins des étudiants cibles, l'identification des lacunes de l'enseignement d'Anglais, et la façon de remédier à l'actuel manque par l'incorporation de nouveaux éléments dans le cours en question visant à faire face aux changements globaux.

Mots Clés: société d'information, Anglais pour des Objectifs Spécifiques, conception de cours, analyse des besoins, Anglais Médical.

ABSTRACT

The present investigation aims at highlighting the urgent and pressing need for introducing English instruction in the medical field, so that to contribute in the building up of a knowledge society and equip our medical doctors with the linguistic tool that enables them to be active participants in the progress of our society as well as in international medical conferences.

The purpose of this study is firstly, to propose the official implementation of an ESP course as part of medical students' curriculum, secondly to explore the ESP situation in the Department of Medicine through the identification of target students' needs, the elicitation of ESP teaching deficiencies, and how to remedy to the existing lacks by the incorporation of new elements in the intended course to make it respond to global changes.

Key words: knowledge society, ESP, course design, needs analysis, medical English.