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*Theoretical and Pedagogical Applications of English for Specific  
Purposes Courses: Evaluation and Implementation of Some Effective  
Procedures.*

*The Case of First Year Master Students of Computing at Médéa  
University.*

Thesis submitted to the Department of Letters and English Language in Fulfilment of  
the Requirements for the Degree of Doctorate 'LMD' in Didactics of English for Specific  
Purposes.

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## Dedications

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## **Abstract**

English for specific purposes (ESP) is one of the major approaches to language teaching in higher education as it is closely related to the particular needs of the students' specialism. On the other hand, Needs Analysis is an essential and crucial step in preparing and designing distinct types of courses, curricula and syllabuses. Thus, it is of great significance to be acquainted with students' objectives, attitudes, learning habits and expectations of the course. Moreover, specific language skills are required to promote students' academic progress. However, the teaching materials in use do not always meet the students' needs and this is due to the lack of adequate and trained ESP teachers at the Computer Science Department. In accordance with this issue, we hypothesize that a specially analyzed and proposed procedure for the ESP course, would probably improve its efficient implementation. Hence, the study is an attempt to investigate the perceived English language needs of Master One computing students at Médea University to design courses that would better cater their needs. The descriptive /analytical research methodology has been adopted in the present research work. Therefore, the tools in terms of document analysis, questionnaires and interviews were used as data collection. The needs analysis results revealed that the productive skills (speaking and writing) have been rated as the skills that the students' need to develop most. Moreover, the course evaluation validated the successful choice of the topics that are relevant to the target group's interests, together with carefully-planned classroom activities through the use of different teaching methods and techniques. The research work concludes with several pedagogical procedures and implications which seek to improve the design of the ESP course at the Department of Computing Science. It is hoped that findings from this study can assist ESP teachers to consider the importance of the students' actual needs and start designing more feasible ESP teaching materials.

**Key words :** ESP, needs analysis, syllabus and course design, evaluation.

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## **List of Abbreviations**

- AV** : Audio Visual Aids
- CBI** : Content Based Instruction
- CLIL**: Content and Language Integrated Learning
- EAP**: English for Academic Purposes
- EAOP**: English for Academic and Occupational Purposes
- EFL**: English as a Foreign Language
- EGP**: English for General Purposes
- ELL** : English Language Learning
- ELT**: English Language Teaching
- EMP** : English for Medical Purposes
- EOP**: English for Occupational Purposes
- EPP** : English for Professional Purposes
- ESL**: English as a Second Language
- ESP**: English for Specific Purposes
- EST**: English for Science and Technology
- EVP**: English for Vocational Purposes
- GE**: General English
- LSP**: Language for Special Purposes
- NA**: Needs Analysis
- PSA**: Present Situation Analysis
- TBA** : Task Based Approach
- TBALT** : Task Based Approach to Language Teaching
- TEFL**: Teaching English as a Foreign Language
- TENOR** : Teaching English for No Obvious Reason
- TSA**: Target situation analysis

# General Introduction



## General Introduction

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Foreign language teaching and learning programs are mostly linked to English as an international language. Indeed, English is one of the most important languages of communication in the world. Many countries have a long history of teaching English as a foreign language and it has spread to some Arab countries. English is important nowadays due to its global character and its extensive use as a means of communication and a vehicle that makes further advancement in other fields and domains.

Within this context, English for specific purposes (ESP) has been steadily developing since its inception in 1960. Besides, due to the globalization impact, ESP has turned into a key piece of English as Foreign Language (EFL) teaching around the world. English for Specific Purposes (ESP) has emerged due to the awareness that English for General purposes has not met the learners' need. Furthermore, the rationale for the need of ESP may partly be due to the fact that ESP, as compared to English for General Purposes (EGP), is time and cost effective, relevant to the learners, successful in facilitating learning and related to content (that is in its themes and topics) to particular disciplines, occupations and activities (Strevens, 1988).

Moreover, Munby (1975) points out that while ESP is usually defined or stated by the prior analysis of the communicative needs of learners, EGP is usually defined on the basis of predetermined goals set by an organization or other experts. Nevertheless, this does not mean that EGP is completely negligent of the needs of the learners. It is rather to imply that the emphasis given to the learners needs in ESP usually exceeds that of EGP.

Additionally, Needs analysis was implemented into language teaching through the ESP movement. From the 1960s, the demand for specialized language programs grew and applied linguists began to employ needs analysis procedures in language teaching and materials preparation (Richards, 2002). Thus, to design ESP materials in particular or when talking about ESP in general, needs analysis seems mandatory to exist.

Besides, according to Basturkmen (2006, 2010), conducting needs analysis can assist syllabus designers in preparing efficient ESP courses. Indeed, Arslan&Coskun, 2014; Tatzl, 2013 have endorsed Long's (2005) view that a course built without the aid of needs analysis will neither meet nor satisfy the basic requirements of the students needs. Thus, ESP practitioners are expected to acknowledge the essential role of the needs analysis process and, consequently, they should become more familiar with its historical development, methodologies, and implementation.

### Statement of the Problem

English for Specific Purposes is a good option for students of different fields of study since it equips them with the necessary information of their concerned subjects as well as linguistic competence. ESP promotes learners' motivation because it closely addresses their English language needs. Thus, it's essential to identify learners' specific needs when creating a university course or designing a workplace training programme. This can help teachers identify the actual skills that their learners will need for the activities they have to carry out in their academic or professional fields (Hadley, 2006: 4).

However, ESP teaching materials and the courses delivered in Algerian universities do not fully cater to the needs of the students because they have just been managed from different sources regardless of students' level and aim of learning. Moreover, ESP teaching at university level has been confined to the teaching of sentence structures and memorization of professional vocabularies related to the subject field. This can make students feel demotivated since they do not use them in authentic context and it often decreases their English learning motivation. On the other hand, ESP teaching requires well-prepared instructors; however, research has indicated that the number of such ESP practitioners is much beneath the required quality which is the primary reason of inadequate ESP teaching and Algeria doesn't constitute an exception.

Furthermore, despite the importance of ESP courses, especially at the department of computing, there has been no formal survey of the needs and expectations of computer science students in using English for specific purposes courses at Médéa University. These factors negatively impact learners and the learning environment. Therefore, there is an urge to understand what learners actually need, what kind of language acquisition is actually required by the learner and what kind of teaching materials and teaching methodologies should be applied in different teaching scenarios. These needs will then serve as a parameter to elaborate more effective ESP courses that would better meet the students' needs.

## **General Introduction**

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### **Research Questions**

The present work attempts to answer the following research questions:

- 1)\* To what extent is the current ESP course appropriate and efficient in meeting the students' needs?
- 2)\* Is there any particular procedure that should be followed/implemented before designing any ESP course?
- 3)\* What are the most appropriate requirements to put the suggested procedure into application?

### **Research Objectives**

The main concern of the current study is to:

- 1)\* Evaluate the present ESP courses at the department of computing in the light of the students' needs.
- 2)\* Selection and suggestion of a procedure that would make the ESP course more adequate.
- 3)\* Put into application the suggested procedure and evaluate its effectiveness.

### **Research Hypotheses**

The following hypotheses are proposed to conduct the research:

- 1)\* We advance that the ESP course, which is currently taught to First year Master students of computing does not match the standard criteria and requirements of ESP course design.
- 2)\* We hypothesize that a specially conceived procedure for the ESP course, would probably improve its efficient implementation.
- 3)\* We presuppose that once learners' specific needs are identified then relevant teaching materials can be used to teach the course more effectively.

## **General Introduction**

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### **Significance of the work**

The importance of this topic can be attributed, first and foremost, to the shift of focus in the field of language teaching and learning from the teacher to the learner. Hence, it is important to analyze students' needs. The understanding of these needs can then be used as the basis on which to set appropriately the effective objectives, goals, syllabus and teaching methodologies which constitute the major part of the course. Although there has been a lot of research focused on this topic, it still remains one of the most challenging and controversial issues in our country. This study will potentially make a significant contribution by highlighting the importance of using a needs analysis process as a starting point for designing and developing ESP courses. Thus, the findings of this study may be useful for researchers, material designers, students and mainly practitioners as it provides them with a unified procedure that leads to effective ESP courses.

The researcher believes that this research work represents a challenging endeavor that aims at improving in the first place the quality and efficiency of the ESP course at university level and the encouragement of the local ESP teachers with respect to the contents of their courses and performance as instructors. We aspire to elaborate a sample of needs analysis that would insight for further improvement and investigation.

### **Structure of the Thesis**

This work is organized into four chapters.

Chapter One presents a review of literature available on the studies and researches which have investigated the ESP area and closely related to the topic of the present work. It looks at the starting point and history of ESP, parts and sub-parts of ESP, EGP and its correlation to ESP, the roles of the ESP teacher and teacher education.

Chapter Two is devoted to discuss needs assessment and its position in ESP area. It also provides an overview about course design. We have put a special emphasis on the following parameters with regard to course design, namely : steps and procedures in designing the ESP course.

## **General Introduction**

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Chapter Three discusses the methodological framework of the research, explains the techniques and instruments, which are used in collecting the data of the current work. This is followed by an examination of the rationale for selecting a mixed method case study. Furthermore, it gives a full description of the administration processes. The chapter concludes by describing the role of the researcher and the ethical considerations relating to the research process, procedures and data analysis.

Chapter Four is concerned with the discussion and analysis of the data obtained from the findings of the interviews of both teachers and students, documentation analysis and questionnaires with the same respondents. Besides, we have presented in details the proposed schemata of the newly designed course, its application and evaluation.

# Chapter One

## *Pedagogical Applications of ESP*

## Introduction

In the first Chapter, the literature review serves to cover the work, which is closely related to the subject of the present investigation. It provides an exhaustive survey, organized from more general to specific. Besides, this chapter is divided into three main sections. The first explains the reasons that led to the emergence of ESP, highlights the historical factors that gave rise to this kind of English teaching, reviews some definitions of ESP, discusses in detail what is meant by ESP and presents researchers' views of ESP regarding its absolute and variable characteristics and outlines its types namely, English for Academic and Occupational Purposes (EAOP). The second section draws a distinction between ESP and EGP in terms of theory and practice and then goes on to discuss some important approaches to ESP. The last section sheds light on some of the major aspects of ESP discussed in the literature to reach a better understanding of this kind of English teaching.

### 1.1. Brief History of ESP

By the end of the Second World War in 1945, some states of the world started competing in industries for peaceful purposes instead of armaments. A revolution in various aspects of science and technology arose and the new world became more highly industrialized and mechanized. In the 1950's, different states of the world started interacting and conducting trade import and export; hence, it was imperative to have an international language to develop the new revolution in industry and technology. Accordingly, some researchers believe that the English language admirably suited the requirement, but it was necessary to simplify and condense the function of English according to specific contextual needs.

As a result, English has gained the status of an international language because of its use as a language of automation, new technology and science. Moreover, English can be employed in various contacts and dealings between the different states of the world. However, it is noted that the speakers of English as Foreign Language are not as fluent as the native speakers. They do not communicate adequately in different scientific and social settings, as it is not their mother tongue, due to some communicative constraints. Therefore, it was unnecessary and time consuming to teach English to the whole world in general disciplines, particularly for the speakers of English as FL or SL. Then, the need to narrow down the scope of the English language according to the demands of the specific purposes started emerging.

On the other hand, the mid of 1960's witnessed a great revolution in science and technology; therefore, it has become necessary to develop a special language to fulfill the demands of that shift. Thus, the advent of English for science and technology (EST) represented the foundation of ESP. As a matter of fact, Trimble (1985) claims "*most of the work at this time (the 1960's) was in the area of English for science and technology and for a time ESP and EST were regarded as almost synonymous*". In addition, Williams (1984:2) argues that "*ESP began to evolve in the 1960's in response to awareness that certain types of learners had specialized needs that were not being sufficiently and efficiently met by wide-spectrum of EFL courses*".

In the next few years, particularly, in the beginning of 1970's, ESP started growing rapidly according to the demands of the world. As Mackay (1975) puts it: "*For the last ten years or so, the term language for special purposes has begun to appear more and more frequently in language teaching literature*".

## **1.2.ESP Definitions**

ESP (English for Special or Specific Purposes) cannot have a single definition. In fact, ESP can be defined in a number of ways according to its functions and usage. Scholars like Strevens (1977), Hutchinson and Waters (1987), Robinson (1991) are of the opinion that a universally applicable definition of ESP cannot be attempted. Traditionally, ESP was known as Language for Special Purposes (referred to as LSP). English for special purposes relates to restricted languages, which for many people is only a small part of ESP, whereas English for specific purposes focuses attention on the purpose of the learner and refers to the whole range of language resources (Munby, 1978: 167; and Robinson, 1986:5). Despite the fact that there are a number of definitions of ESP provided by renowned linguists, we have decided to incorporate only a limited number of significant definitions since they all seem to be focusing on common aspects of ESP and learner's particular needs.

At first, Mackay and Mountford (1978:2) defined ESP as the teaching of English for a "*clearly utilitarian purpose*". The purpose they refer to is defined by the needs of the learners, which could be academic, occupational, or scientific. These needs in turn determine the content of the ESP curriculum to be taught and learned.



Moreover, Robinson (1984:13) states that: “*ESP course is purposeful and is aimed at the successful performance of occupational or educational roles. It is based on a rigorous analysis of students’ needs and should be tailor made*”.

Besides, another definition of ESP has been suggested by Khan (1986:11) who qualifies it as a working interpretation of ESP. He points out: “*ESP aims at providing instruction in consonance with the learners’ particular needs as related to their designated areas of study, occupation or vocation with an appropriate selection of language content and skills needed*”.

Additionally, Hutchinson and Waters (1987:19) define ESP as follows: “*ESP is not a particular kind of language or methodology, nor does it consist of a particular type of teaching materials, understood properly, it is an approach to language learning which is based on learner needs*”. They also point out that: “*ESP is also an approach to language in which all decisions as to content and method are based on the learner’s reason for learning*”.

Furthermore, Richards and John Platt (1992:125) proposed that: “*ESP refers to the role of English in a language course of instruction in which the content and aims of the course are fixed by the specific needs of a particular group of learners. For example, courses in English for academic purposes and English for science and technology and English for nursing. These courses may be compared with those which aim to teach English for general purposes*”.

From a different perspective, Strevens (1988) defined ESP according to absolute and variable characteristics. Regarding the absolute characteristics, Strevens stated that ESP is in contrast to general English because it is designed to meet specified learners’ needs, related in content to specific discipline, and centered on language appropriate to syntax, lexis, discourse, and semantics and analysis of the discourse. As far as the variable characteristics are concerned, ESP may be restricted to the learning skills to be learned (for example writing only), and may not be taught according to any pre-ordained methodology.

Generally, Strevens' (1988) definition concerning the course content confirms that ESP is always and necessarily related to the subject content. His definition is supported by that of Robinson (1991) who adds that ESP is constrained by a limited period, and taught in homogenous classes regarding the work and studies that the students are engaged in.

On the other hand, Dudley-Evans and St. John (1998) gave a definition of ESP, which is influenced by that of Strevens (1988). Although they removed the absolute characteristic about the distinctions between ESP and general English, they revised and added more variable characteristics. Their revised definition is as follows:

#### **Absolute characteristics**

- \* ESP is designed to meet specific needs of the learners;
- \* ESP makes use of the underlying methodology and activities of the disciplines it serves;
- \* ESP is centred on the language (grammar, lexis, 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 basic knowledge of the language system, but it can be used with beginners (1998: 4-5).

In the 21<sup>st</sup> century, ESP researchers tend to define ESP based on the learners' needs for their subject-specific work and experiences. Indeed, Basturkmen (2003) explained ESP as relevant to the needs of the language use that learners will encounter in their specific work or study-related situation.

Similarly, Master (2005) argued that ESP focuses on the importance of various elements in the real language situations that learners will encounter. Johns and

Salmani (2015) agreed with Dudley-Evans and St. John's (1998) definition of ESP and strongly supported the view that ESP is most effective when it is relevant to adults' academic and professional contexts.

Basturkmen (2010) further described themes of ESP courses that are narrower than English language teaching courses because they focus on learners' needs for work or study purposes. Like Strevens (1988) and Dudley-Evans and St. John (1998), Basturkmen highlighted that ESP has both variable characteristics and absolute characteristics but she referred to these terms as ESP variability and ESP constants, respectively which are indicated below:

### **ESP variability**

- \* ESP stems from the range of areas which ESP courses are developed. These range from the relatively general (for example, academic English writing courses) to the highly specific (for example, English for hotel receptionists);
- \* ESP stems from the differing relationships ESP learners have with their target community of practice;
- \* ESP stems from differences in how familiar ESP teachers are with the target disciplines, professions and vocations and their specialist discourse.

### **ESP constants**

- \* ESP involves discussion of learners' needs and viewing learners primarily in work- and study-related roles.
- \* ESP courses of necessity require a narrowing down of language and skills that are to be taught.
- \* ESP courses make use of texts and draw on descriptions of language use and communication from the target communities of practice and disciplines (p.12).

The definitions of ESP above seem to focus generally on the three main concepts: the specific language needed, the learners' specific purposes for learning, and the specific contexts in which language is taught and used, whether in academic or professional contexts. These definitions also highlight variable and constant characteristics. As far as the present work is concerned, the interpretation of ESP shares some parts of the definitions from the aforementioned ESP scholars and sees ESP as an approach designed to fulfill the particular

needs of the learners and the use of specific language in relation to either academic or occupational contexts.

### 1.3.Types of ESP

ESP as a type of English Language Teaching (ELT) (Hutchinson and Waters, 1987; Robinson, 1989; Dudley-Evans, 2001; Kennedy, 2001; Master, 2005) can be divided into different types (Kennedy and Bolitho, 1984; McDonough, 1984; Robinson, 1991; Carter and Nunan, 2001; Belcher, 2006). This division of ESP can often be useful (Coffey, 1984; McDonough, 1984). As Kennedy and Bolitho (1984: 3) observe, ESP types “*provide an overall picture of the main groups of learners which might be of concern to an ESP teacher*”. In addition, the division of ESP can be helpful in differentiating ESP courses from those of general English (GE). Throughout its history, ESP scholars have suggested different ways of categorizing ESP types, such as those of Stevens (1983: 92), Hutchinson and Waters (1987: 17) and Dudley-Evans and St John (1998: 9).

There are two main types of ESP: EAP (English for Academic Purposes) and EOP (English for Occupational Purposes) (Kennedy and Bolitho, 1984; McDonough, 1984; Hutchinson and Waters, 1987; Robinson, 1991; Jordan, 1997; Dudley-Evans and St John, 1998). This implies that ‘*learners for whom ESP is appropriate are either engaged in studying a particular subject in English, or are following a particular occupation for which they need English, or both*’ (Stevens, 1988b: 39). Hutchinson and Waters (1987: 16) add that ‘*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*’. Thus, the two main purposes of ESP are study and work, while some learners will need it for both. Indeed, the type of ESP under investigation in the present study is assumed to prepare the students mainly for their academic studies and may help them in their professional lives.

As far as EOP is concerned, it ‘*refers to English that is not for academic purposes; it includes professional purposes in administration, medicine, law and business, and vocational purposes for non-professionals in work or pre-work situations*’ (Dudley-Evans and St John,

1998:7). Therefore, EOP is often closely related to students' work or profession, because *'they are most likely required to have a certain level of English proficiency at work which is an indicator of good work performance'* (Kim, 2008: 1). That is, EOP courses often attempt to improve work-related language skills. Kennedy and Bolitho (1984: 4) explain that there may be differences in such courses depending on whether students are learning English before, during or after the time they are being trained in their work or profession. EOP can be subdivided into English for Professional Purposes (EPP; e.g. EMP) and English for Vocational Purposes (EVP) or Vocational English (Dudley-Evans and St John, 1998: 6).

On the other hand, EAP is defined as *'the teaching of English with the specific aim of helping learners to study, conduct research or teach in that language'* (Flowerdew and Peacock, 2001a:8). This seems to imply that the nature of EAP is often educational. Watson Todd (2003: 149) observes that *'the main goal of EAP is for students to communicate effectively in academic environments'*. In fact, EAP focuses on equipping students with the specific communicative skills to participate in these environments (Hyland and Hamp-Lyons, 2002: 2). EAP is also subdivided into many types. According to McDonough (1984: 6), Dudley-Evans and St John, (1998: 7) and Jordan (2002: 73), the main type of EAP is considered to be English for Science and Technology (EST).

However, it appears that EST can correspond to both occupational and academic uses of English. For example, it is occupational when it addresses the needs of oilfield workers, engineers, etc.; whereas it is academic when it is for school and university students studying physics, maths and chemistry through the medium of English (Robinson, 1980: 8). In addition, Holme (1996: 2) explains that EAP was developed along with ESP as one of its types, concerned with the specific purpose of following academic courses at university level. Another explanation views EAP as having a quite different, general study-skills orientation, rather than requiring specific language context analysis (Jordan 1997: 4). Accordingly, EAP is subsumed under ESP, which could be reflected in the names of its sub-specializations (e.g. English for Studying Biological Sciences, English for Law).

Yet, the impression given here is that ESP refers to any English teaching situation where the target language context is known and can inform the teaching syllabus about the language skills, language context or language types of the necessary teaching tasks. As

Widdowson (1998: 3) argues, the danger is that this might result in a view of all language teaching as a kind of ESP, so that there would be subcategories such as English for issuing train tickets. Nevertheless, if one adds a discourse community requirement and looks for a more widely practised concept of language use, one sets some limitations on what is ESP and what is not.

Besides, the designation then seems to apply only if one is preparing students for entry into a community of product and discourse, imposing demands on the intake to the ESP course. At present, it could be said that ESP is a very large and expanding research field. Accordingly, the types that can be listed under ESP have expanded too. McDonough (1984: 7) lists sixteen ESP course titles and asserts that *'the list is almost endless'*. It seems that as many as sixteen or twenty types of language study can be identified under ESP and the process is continuing to expand as fields of research and practice develop.

One difficulty is that in spite of its simplicity, the distinction between EAP and EOP can lead to confusion, because the distinction is not clear-cut (Hutchinson and Waters, 1987; Flowerdew and Peacock, 2001a) in that these two broad categories often overlap (Belcher, 2004: 179). Thus, this distinction is not always valid and its vagueness can be ascribed, as Belcher (2006: 134) notes the fact that *'the goals of EAP and EOP are not always easily separable'*. For instance, English for Economics may be for either academic or occupational purposes. In other words, *"an English course designed to help students read economics textbooks would clearly be EAP, but a course designed to teach learners how to participate in business meetings or take phone calls definitely has an EOP dimension to it"* (Flowerdew and Peacock, 2001a: 11-12).

### 1.4.A General Comparison of EGP and ESP

ELT can broadly be divided into EGP and ESP. There are some theoretical and practical similarities and differences between the two. Orr (1998) in differentiating between EGP and ESP states that:

“English for general purposes (EGP) is essentially the English language education in junior and senior high schools where needs can not readily be specified. Students are introduced to the sounds and symbols of English, as well as to the lexical/grammatical/rhetorical elements that compose spoken and written discourse ... University instruction that introduces students to common features of academic discourse in the sciences or humanities, frequently called English for Academic Purposes (EAP), is equally ESP.”

#### 1.4.1. English for General Purposes

English for General Purposes is abbreviated as EGP and it is also called General English. The significant role of EGP is that it endeavors to teach English for general purposes, in other words, for various situational settings and not for restricted or specific reasons. Indeed, Orr (1998:1) brings up that English for general purposes is basically English language training in junior and senior high schools where the learners are acquainted with the sounds and symbols of English in addition to the lexical/syntactic/explanatory components that form expressed and composed discourse.

Moreover, EGP also puts emphasis on applications in different situations: discourse with bank authorities, postal agents, phone administrators, and English instructors as well as providing courses on the most proficient method to peruse and/or compose the English found in textbooks, papers and magazine articles, phone directories, shopping inventories, application frames, individual letters, email, and home pages. He argues that information about appropriate gestures, cultural rules, and social taboos are also incorporated into EGP educational programs. EGP directed in English-speaking countries is commonly called ESL, and EGP in non-English-speaking countries is known as EFL.

Furthermore, EGP might be implanted in the themes and topics of English as a school subject in which it focuses on the use of English for general purposes and not for specific needs. It can likewise be administered in subjects of specific fields of ELT for the individuals who have practical experience in English language major, for instance, English literature stream or applied linguistic stream. It might be brought up that general English language is not required distinctly by the students of EGP yet is commonly required by the students of ESP.

In short, General English is a significant component for both ESP students and EGP ones. We should not look at ESP as a separate entity of EGP. Both of them ought to be considered under the umbrella of ELT. Indeed, Kennedy and Bolitho (1991) put : "*It is significant not to view ESP as a zone of advancement isolated from the remainder of English language instructing. This is a piece of an ongoing move inside ELT towards an increasingly informative reason for instructing and learning*".

#### **1.4.2. EGP Application**

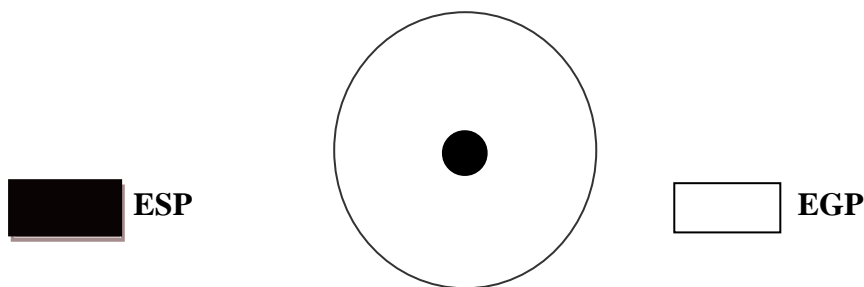
EGP is used to denote the role of English in a language curriculum or specialization in ELT where the course content and objectives are not identified for a limited communication or specific learners. This can be contrasted with those courses which are determined by the specific needs of a particular group of learners, which is known as English for specific purposes programmes. EGP focuses on teaching English that can be employed for various purposes and situations. It seeks to qualify the participants to be competent in English language and enable them to interact effectively in different situations.

##### **1.4.2.1. The Distinction between ESP and EGP**

ESP is well known to have its own features that can usually differ from those of EGP ones. The main characteristic that distinguishes ESP from EGP is that, ESP focuses on a limited use of language intended to meet the specific needs of a particular group of learners, whereas EGP provides an infinite variety of language that can be used for different purposes without identifying the specific needs or people. The other difference that distinguishes between ESP and EGP is that, ESP stresses the role of needs analysis whereas EGP does not. In other words, in ESP the language is identified on the basis of the learner's needs of a



particular field or discipline. For Example, English for computing for computer science students. However, EGP is not concerned with needs analysis, because it is targeted to unlimited people and its language has no defined limits, thus, it is not possible to identify precise needs. In this respect, the following figure may demonstrate the difference between ESP and EGP.



**Figure 1.1: The distinction between ESP and EGP (Gamal Mohammed, 2005).**

In Figure 1.1, EGP covers the entire globe, and it is very difficult and even impossible to define a particular variety of language, as it is very extensive. ESP is fixed at a specific point, which can be described as the eye of the bull. It is therefore very easy to define this particular point on a target situation and analyze it according to the demands of the learners' specialized area. Moreover, the existence of the need is not the only feature that differentiates ESP from EGP. The awareness of the need is a very significant aspect. Besides, whether in an EAP situation or an EOP situation, ESP learners are aware of what they need English for. In this regard, (Hutchinson and Waters, 1987: 53) claim that: *“what distinguishes ESP from General English is not the existence of a need as such but rather an awareness of the need”*.

### **1.5. Approaches to Teaching English for Specific Purposes**

Traditionally, ESP teaching concentrates on learning the language for professional communication in a specific area (Robinson, 1991). The traditional approach connects the language with the content matter of the students' target occupation, and the content matter

is used as a tool for learning language forms and provides background for acquiring those forms.

Traditional ESP teaching methodologies are concerned with specific skills and language aspects such as grammar and vocabulary, because they can interfere with the students' essential English language skills. In the field of ESP, the importance of teaching grammar and vocabulary has been extensively accepted by many scholars (Coxhead, 2013; Dudley-Evans & St. John, 1998; Zhou, 2009). In this approach, students are not expected to acquire new knowledge and skills directly related to their discipline but acquire the language forms of the target language for the target discipline. The content can be in related areas, such as, science, or technology. Accordingly, the traditional ESP approach is considered often to be suitable for the lower level students at the university because they have insufficient English proficiency and content matter in their ESP area (Tarnopolsky, 2013). This is similar to Dudley-Evans and St. John's (1998) concept, that ESP can be used with beginners.

Recently, ESP teaching approaches at tertiary levels in non-English speaking countries have shifted from primarily language focus for professional communication, to the integration of language with the content matter of the target disciplines (Tarnopolsky, 2013). This includes that the integration of learning the target language, a foreign language which a person intends to learn, and the target occupational content matter can be seen in two methods: content-based instruction, and content and language integrated learning. These approaches are more integrated approaches to ESP teaching.

Within this context, the content-based instruction approach balances language teaching and content teaching, but the main focus is the language (Tarnopolsky, 2013). In other words, this approach integrates reading, speaking, listening and writing in the teaching and learning process (Brinton, 2013). This approach uses functional and thematic syllabi with a focus on the language appropriate to the activities and content relevant to the specific discipline or occupation (Robinson, 1991). Learning the language is the major concern of content-based instruction, and the subject content is often adopted and simplified to suit the learner's proficiency level (Liew & Khor, 2014).

Another development of an integrated ESP approach is the content and language integrated learning approach. The content and language integrated learning method is widely used, especially in European countries, rather than the traditional ESP approach. In fact, in the content-based instruction teaching content subjects through English can be offered instead of ESP subjects and students can learn English and a subject at the same time (Räsänen & Fortanet-Gómez, 2008). The learning of content can help students learn the language naturally, and the language mastery facilitates students' access to their target subject matter too. ESP teachers apply scaffolding strategies to facilitate learners in mastering the content, without changing much of its content level in contrast to content-based instruction (Arnó-Macià & Mancho-Barés, 2015).

However, studies have shown that for a successful integrated ESP learning approach, the learners should have a basic language ability in English that implies the absence of major difficulties with vocabulary or syntax and the ability to read and write at a minimally skilled level (Rosa Maria Jimenez Catalan & Fontecha, 2015; Tarnopolsky, 2013).

Nevertheless, many scholars have pointed out some major limitations of content and language integrated learning (e.g. Aguilar & Muñoz, 2014; Tarnopolsky, 2013). Firstly, an integrated ESP course cannot necessarily achieve two challenging goals, subject content and linguistic development. Once the subject content is integrated, the focus on the language is often substantially reduced. Secondly, many studies have shown that the integrated approach is not effective for students with low levels of English proficiency if the course does not provide enough language activity for linguistic development. Also, Arnó-Macià and Mancho-Barés (2015) discussed some issues with ESP in the integrated teaching approach as the role of the ESP instructors can become a subsidiary role to the content instructors.

On the whole, awareness of these different ESP teaching approaches is useful because one of these approaches is selected for the development of the redesigned ESP course based on the results of the needs analysis.

## 1.6. Skills in ESP

While many general English courses integrate the skills of listening, speaking, reading, and writing, traditional ESP courses often teach individual language skills with the particular register and styles needed in the target situations (Chalikandy, 2013; Dudley-Evans & St. John, 1998; Hutchinson & Waters, 1987). In addition, ESP courses focus on teaching language skills that are mostly needed by the students determined by a needs analysis, and the courses and teaching methods are designed accordingly (Bojovic, 2006; Dudley-Evans & St. John, 1998; Fiorito, 2005; Jaglowska, 2012).

This chapter also reviews the six English language skills (listening, speaking, reading, writing, grammar and vocabulary) for the reasons above and this fits with the work of many scholars, e.g. Basturkmen (2010), Dudley-Evans and St. John (1998), and Shing and Sim (2011), who viewed teaching a specific skill appropriate to the tasks and activities that learners will encounter within the target situations as an ESP constant or absolute characteristic. It, then, reviews the literature on language skills and the teaching of these skills, the students' difficulties, and the tasks and activities relevant to the English language skills in English for academic context. The literature will help the researcher focus on the requirements of each of these language skills needed for the tasks and activities in the target situations.

### 1.6.1. Listening

Listening is essential and is considered as a primary channel for learning a language (Bidabadi & Yamat, 2011; Nunan, 2001; Rost, 2001). In other words, listening affects the development of speaking, reading, and writing abilities in learning a language. The listening skills are necessary for all learners in order to become effective communicators. While learners are listening to a message, they apply three types of knowledge: "*knowledge about the language (phonology, syntax, and vocabulary), knowledge about language use (discourse and pragmatic), and knowledge about context, facts and experiences (prior or background knowledge)*" (Goh, 2013, p. 58). Learners need to integrate these three types of knowledge with two types of processing, which involve different cognitive skills, in order to recognise the sound they hear and to understand the message.

Many second language learners consider that listening is one of their most difficult skills because of the complexity of its process and the different types of knowledge required for successful listening (Kavaliauskienė, 2011; Nowrouzi, Shu Sim, Zareian, & Nimehchisalem, 2015). Moreover, second language learners require a wider range of word recognition and segmentation skills so that they can have comprehension than when they are listening to the first language. Their cognitive deficits lead to difficulties with processing information in the second language (Kavaliauskienė, 2011; Sura, 2013).

Listening in ESP has many similarities with listening in English as a second language, as it shares the same cognitive processes and requires the use of the same macro (core) skills in accord with the purpose for listening (Goh, 2013; Rost, 2001). The distinctions between the two types of listening are that ESP listening requires more additional skills and specific types of knowledge and vocabulary required for English for academic purposes and English for occupational purposes. In addition, developing ESP listening may require more high-level emerging technologies and accessibility into it. Accordingly, listening to multimedia has been introduced in many ESP classrooms, for example listening to Internet audio or watching video over the Internet. This research will fill in a gap in the literature of ESP listening, particularly regarding English for academic purposes for Computing Science discipline, and will help to discover the needs of the students in this particular context.

### 1.6.2. Speaking

Teaching speaking is a challenging task for second language teachers and ESP teachers because it depends on many factors. Many studies have shown that teachers lacking a clear understanding of an approach to teaching second language leads to difficulty in teaching speaking (Rotschild, 2015; Tavit, 2010). Effective teaching of speaking provides students with opportunities to practise a range of speaking tasks and activities in the target situations. These tasks and activities should engage students at the cognitive and affective level (Goh & Burns, 2012), and help them develop sociolinguistic competence (Qamar, 2016).

In ESP, speaking and listening are both employed within real communicative events, including one-to-one spoken interactions, and multi-person spoken interactions. Like second language teachers, ESP teachers should raise their awareness of their students regarding the features of successful interaction by paying attention to appropriate language and

skills, and providing effective evaluation at the feedback stage (Dudley-Evans & St. John, 1998). To sum up, ESP teachers' roles are to help students assimilate and produce discourse for the purpose of interpersonal communication and comprehension and the production of academic language, and provide chances for students to practise speaking in a wide range of language functions and situations.

Several studies have investigated speaking difficulties faced by ESP students at the university level. For example, Gan (2012) pointed out that lack of vocabulary can be regarded as the main obstacle to spoken communication. Communication challenges frequently surface in the workplace for students during internship placements or active employment following graduation. In addition, the work of Myles (2009) showed that engineering students faced difficulties with answering questions after a presentation, communicating in informal social interaction, understanding and using colloquial language (idioms, slang), and understanding native English speakers that talk very fast and change the topic to another one before the students continue their conversation.

In addition, studies in English as a second language context have shown that students fear the loss of face when speaking out in their English classes, as with cellular and molecular biology students in Algeria (Faiza, 2010) and undergraduates in Taiwan (Liu & Chu, 2010). However, Fujiwara (2014) observed that students with high proficiency levels were less likely to hesitate to speak English with other people compared to those with lower levels. The present study also investigates the speaking activities and tasks which the students in computing science have difficulties with in academic contexts.

Studies on speaking in ESP have been varied and insightful in both English for academic and English for occupational purposes contexts (Feak, 2013). According to Dudley-Evans and St. John (1998), the speaking tasks and activities in ESP refer to oral presentations, which are a feature of both English for academic purposes and English for occupational purposes. Speaking English for academic purposes might be expanded to various situations such as informal and social interactions, participation in conferences, and oral presentations in seminars (Dudley-Evans & St. John, 1998; Jordan, 1997; Robinson, 1991). These tasks and activities are relevant to the present study in terms of determining the need for speaking tasks and activities in the academic context for such types of students.

Based on the literature in the ESP contexts, deciding on the needs analysis for speaking would help the researcher identify the speaking tasks and activities needed for the computer science students. Research into speaking in ESP contexts indicates that it is challenging for both teachers and learners. This is because speaking in both academic and occupational contexts is complex and occurs in both formal and informal situations. Learners need not only to have confidence and motivation to speak but knowledge of appropriate vocabulary and language functions in various situations as well.

### 1.6.3. Reading

Research on reading in ESP began with the study of register analysis or sentence-level analysis and the use of reading in different communicative settings. Later, research in reading shifted to discourse or rhetorical analysis, which was often closely linked with writing discourse (Jordan, 1997; Trimble, 1985). Many studies have revealed that although reading is often seen to be the less difficult skill of all the language skills, reading difficulties are still addressed in some ESP contexts. For example, engineering students were usually seen to have difficulties with reading engineering-related articles, inter-office documents, project reports, and manuals (Rajprasisit, 2015). Additionally, engineers in Taiwan faced difficulties when they read emails, reports, and memos written in English (Spence & Liu, 2013), cellular and molecular biology students in Algeria had problems in reading scientific texts (Faiza, 2010), and chemistry students in Iran found that reading speed and reading comprehension of chemistry texts were difficult (Rostami & Zafarghandi, 2014).

Various strategies and skills have been seen to be paramount in developing ESP readers (Hirvela, 2013). Jordan (1997) identified some of the main reading strategies, skills, and subskills that can be applied in ESP involving prediction, skimming, scanning, distinguishing between factual and non-factual information, drawing inferences and conclusions, and understanding graphic presentation. Moreover, Dudley-Evans and St. John (1998) highlighted skimming and scanning as the key skills that are useful in the first stages for ESP readers to decide whether to read all of the text or which parts to read carefully. Furthermore, the ESP readers in scientific contexts need to determine the author's attitude, which is important in scientific discourse. It is also useful for ESP readers to learn some of the key skills, such as selecting what is relevant for the current purposes, identifying organisational patterns, and using cohesive and discourse markers.

Much of the more recent literature about reading in ESP relates to comprehension building. This comprehension revolves around core reading skills and discourses analytic skills, rhetorical features of texts, reading strategy-related approaches, and the development of reading skills and improved comprehension (Hirvela, 2013). Studies in ESP have revealed that insufficient vocabulary, inadequate knowledge of sentence structure, tenses and textual organization (Kavaliauskiene, 2002), and learners' prior knowledge (Kendeou & van den Broek, 2007) affect learners' reading comprehension process.

Many researchers have suggested that the reading passages should be relevant to the area of the learners because it generates learners' motivation (Nunan, 1988, 2015). Kaewpet (2009a) argued that it is not the responsibility of the ESP teachers to teach the students the content area, but it is the teachers' task to develop the students' English ability associated with their content area that the students already have. Further, many scholars have emphasised that ESP language teaching should not be separated from subject areas with which the learners are already familiar but there should include some integration (Nunan, 1988). Therefore, it is necessary for ESP readers to process the language, text structure and then link the ideas to their background knowledge. The reading component of an ESP course, thus, requires a balance between skills and language development (Gatehouse, 2001; Richards & Rodgers, 2014).

To sum up, in English for academic purposes, students typically need to read books or journals, to take notes, to summarise, to paraphrase, and then to write essays. In these settings, students must have some knowledge about reading strategies and sub-skills (Jordan, 1997).

#### **1.6.4. Writing**

Like other skills, writing is also regarded as one of the difficult skills among second language learners. Writing in English as a second language began back to the 1970s with a focus on form and grammar. During this period, students copied sentences and changed them in terms of person or tense. In the 1980s, due to the study of composition techniques and strategies, the language-based writing classroom shifted to the focus on the teaching of the organizational patterns common in academic English writing (Reid, 2001). Like speaking, writing is a productive skill with regard to modes of communication.



Successful writers, who can achieve the appropriate purpose of the writing and meet the needs of the target readers, require several skills, especially the skills of planning, drafting, and revising (Reid, 2001). Accordingly, scholars have introduced a range of approaches to the teaching of writing, generally referred to as process and product approaches (Hashemnezhad & Hashemnezhad, 2012; Swales, 1990). The process approach emphasises the concept of problem-solving or the procedures involved. The first stage of this approach is the thinking stage and followed by the process, which involves dividing the plan for writing into paragraphs, reviewing the first draft, and revising the text to produce several subsequent drafts (Pasand & Haghi, 2013). The product approach focuses on the importance of the actual text features, and the end-product or the final text that the writer will produce. This approach involves the presentation of a model text which forms the path for a writer to write a similar or parallel text.

This approach helps ESP writers adapt the model for their specific purposes in writing (Hyland, 2013; Nunan, 2015). In teaching ESP writing, genre analysis has become the most widely-used and effective methodology (Bhatia, 2002a; Hyland, 2013). Unlike other approaches, genre analysis attempts to reveal the purposes and functions of the target genre. Building on the results of genre analysis and sociological studies of academic and professional discourse, Dudley-Evans and St. John (1998) proposed a constructionist approach which integrates the product and process approaches.

This concept is similar to that of Nunan (2015), who noted that during the process approach, writers need to gather information to write multiple drafts and to receive feedback on successive drafts for a desired final product. Nunan also believes that the process and the product approaches are complementary and can be integrated. Two well-known works on genre analysis focus on academic written texts (Swales, 1990), and professional written texts, such as business letters (Bhatia, 2002a). These works guide ESP writers to capture the patterns of how writers express their communicative purposes in those particular genres.

Many studies have investigated ESP writing according to disciplines and professional fields. ESP writing covers various genres, such as writing basic personal information, emails, resumes, and business letters (Kaewpet, 2009a; J.-Y. Liu et al., 2011). Written texts dominate all of the tasks of students of English for academic purposes. Writing

lab reports, field trip reports, taking notes in lectures, writing test/exam answers, and abstracts for projects are specific writing genres used by science students (Al-Tamimi & Shuib, 2010; Kaewpet, 2009a; Liu et al., 2011).

The writing tasks and activities in the English for occupational purposes context are much wider than those of English for academic purposes. For example, studies related to engineering revealed a wide range of writing tasks and activities needed, such as safety checklists/forms, writing minutes of meetings, abstracts of projects, business letters, and preparing and presenting slides for oral presentation (Kaewpet, 2009a; Kassim & Ali, 2010). Writing tasks and activities in business communication include formal and informal emails, reports, instructions, brochures, memos, sales-related materials, contracts, resumes, and official notices and minutes (Vaghari & Shuib, 2013). The findings in the ESP area are important for this study as there may be similarities in the English for academic purposes writing genres for the targeted population of this study.

### 1.6.5. Grammar

Research studies have shown that knowledge of grammar and vocabulary is a fundamental aspect of the English language and students that receive no grammar instruction seem to be unable to expand their linguistic competence (Robinson, 1991; Zhang, 2009). In ESP, Trimble (1985) noted that the rhetorical elements in scientific discourse exist at several levels and should be taught in ESP courses. These are descriptions, definitions, classifications, instructions, and visual-verbal relationships. He also found that passive-active distinctions, modals, definite articles, tenses, and relative clauses have been found to cause non-native learners the greatest problems.

Unlike Trimble, who focused on teaching rhetorical elements, Dudley-Evans and St. John (1998) focused on teaching morphology and syntax as grammatical forms that are necessary for ESP learners. Their concept was expanded by the work of Jianfeng, Qingdong, and Shibo (2009), who analysed the sentence structure features in ESP contexts and revealed that basic tenses—the present tense, the past tense, and the perfect tense—should be taught. Their study also found that ESP written texts in ESP are organized with numbers of sentences using the passive voice, gerunds, participles, and the infinitive. In general, studies of teaching ESP grammar has varied from morphology to rhetorical functions. However, many

ESP scholars' argued that teaching grammar in ESP contexts should be relevant to learners' needs, and ESP teachers should be aware of the use of grammar forms in specific contexts (Hinkel, Hinkel, & Fotos, 2002; Nook-Ura, 2013; Zhang, 2009).

Teaching grammar in a second language context is similar to that in the ESP context, where there have been many arguments about the necessity of teaching grammar explicitly. In one view, teaching grammar is unnecessary because learners can learn grammar subconsciously once they engage in communicative tasks. The other view is that teaching grammar is still useful for second language acquisition (Cook, 2013). The extent to which the priority is given to teaching grammar relies on the English levels of the learners and whether there should be a focus on using grammar accurately or using the language fluently (Dudley-Evans & St. John, 1998; Nassaji & Fotos, 2012). Recently, Nunan (2015) described the approaches to grammar teaching in terms of the deductive and inductive. Teachers should employ a deductive approach in instructing their students in grammar rules and let the students complete tasks afterwards, while teachers that employ the inductive approach will ask the students to study examples and work out the grammar rules by themselves. The integration of these two approaches to teaching grammar will make the learning more meaningful and memorable.

To sum up, even, grammar should be undoubtedly incorporated in the process of language learning. Receiving less time and energy from ESP teachers, grammar should not be absent from an ESP course. It is also worth pointing out that, when it is dealt with, this activity should be as efficient as possible. This present study, then, will fill in the gap of grammar in ESP regarding the amount of grammar to be taught, the features of grammar needed and the teaching of grammar in the ESP context.

### **1.6.6. Vocabulary**

Vocabulary is an important element in second language acquisition (Piribabadi & Rahmany, 2014). When teaching vocabulary one should be aware of the eight dimensions of word knowledge. They are meaning, written form, spoken form, grammatical behaviour (patterns the word occurs), collocations, register, association (the relation to other words), and frequency (Nation, 2001). Vocabulary knowledge can be reflected in the students'

productive use of the language, as with writing (Akbarian, 2010). For example, Laufer and Nation (1995) found that the vocabulary size of a student affects that person's writing production. Zhou's (2009) study also found that when students increased the amount of their vocabulary it contributed to their writing improvement.

Recently, Al-Khasawneh (2012) pointed out that a student that lacks vocabulary learning strategies would lose his or her motivation and confidence in learning. The study suggested that the teachers should realise their students' needs when they teach vocabulary. However, teaching vocabulary especially in ESP courses is becoming a challenge for English language teachers. Vocabulary is an inseparable part of any teaching syllabus and it should be taught in a well-planned and regular basis. It is essential to carefully decide what vocabulary will be selected for teaching, and what approach or activities will be used to teach it.

#### 1.6.6.1. Types of Vocabulary

Dudley-Evans and St John (1998:83) suggest resolving overlapping categories (Baker, 1988:91) into two broader groupings:

- a). vocabulary that has specialized and restricted meanings in certain disciplines and which may vary in meaning across disciplines.
- b). vocabulary that is used in general language but has a higher frequency of occurrence in specific and technical descriptions and discussions.

The first group should be referred to as *technical vocabulary* and the second area would be regarded as *semi-technical* vocabulary. It is important to make a distinction between these two categories of vocabulary because they are of great importance to learners studying English for specific and academic purposes.

\* Technical vocabulary (Jargon)

Vocabulary used by a specific or occupational group, it is usually only partly understood by outsiders. The special vocabularies of architecture, computing, medicine, science, and technology all fall under the heading of "jargon", so the term jargon is applied

chiefly to the words and phrases that are used and understood by people within a specific profession or field of study but not by others.

\*Semi- technical or Core vocabulary

The term "semi-technical" covers a whole range of items which are neither highly technical and specific to a certain field of knowledge nor obviously general in the sense of being every days words which are not used in a distinctive way in specialized texts.

### **1.6.6.2. The Role of Vocabulary in English for Specific Purposes**

As indicated beforehand, most second language students are conscious that the acquisition of vocabulary is a principal and significant part over the span of their learning. A decent dominance of vocabulary is basic for ESL/EFL learners, particularly for the individuals who are advanced students of English for specific purposes. Nation depicts how students should handle and manage with specific vocabulary by asserting, "*It is wise to direct vocabulary learning to more specialized areas when learners have mastered the 2000---3000 words of general usefulness in English*" (Nation, 2001:187). So as to defeat the challenges of particular use of vocabulary, students should be taught and/or find out about the various sorts of vocabulary, its utilization, and specific strategies that will enable them to acquire vocabulary. Simultaneously, teachers also should know about which words are worth dealing with.

To what extent is it necessary for an ESP teacher to include technical vocabulary in a syllabus or an exercise ? As stated above, a specialized word is one that is recognizably related to a specific theme, subject or field and can be learned by studying the field. For instance, in computing science words like: browser, program, log, hypertext and Web, are quite familiar to students. It should be known that it is not the role of the ESP teacher to teach the technical words of a particular field or discipline since learners who are studying in a particular scientific discipline will not have any kind of problems with such type of vocabulary. (Stevens, 1973).

There may be several situations, however, in which ESP instructors should provide timely assistance. First, when learners are reading speacilized texts with a large number of unknown technical terms that those learners can not ignore due to their close association to the topic being discussed. ESP practitioners need to assisst the learners decide on the words

that require more emphasis. Second, using certain technical vocabulary is efficient when doing ESP exercises. Indeed, Dudley-Evans and St.John state that, “[it] is important that both the teacher and the learners appreciate that this vocabulary is acting as a carrier of content for an exercise and it is not the real content of the exercise” (Dudley-Evans and St John, 1998:81). This can assist students concentrate more on the subject matter rather than the technical vocabulary. Third, ESP instructors can provide help when learners face difficulty in understanding general words used as technical terms.

Fourth, if a specialized word is not utilized in a similar way as in the student's native language, the ESP practitioner should provide some clarifications to the vocabulary to be learned. Fifth, generally there is a one-to-one connection between the terms in English and the students' L1, but sometimes when there is no one to one explanation; the teacher should check that the terms are fully grasped by the learners. Besides, The ESP teachers should provide guidance in the utilization of specialized dictionaries or sources. Finally, it is possible that difficulty in pronouncing some technical phrases can lead to poor word memorization. In such cases, the ESP practitioner can be of great help in improving and enhancing their students' overall pronunciation.

### 1.6.6.3. Selection of the Appropriate Vocabulary

In preparing the vocabulary component of a language course, it is vital that teachers should have the basic words to refer to and they should evaluate whether a specific word is worth attention. The use of word lists as the main source of vocabulary learning is favorable in the teaching and learning of the English vocabulary (Nation, 2001).

#### \* Word Lists at an Early Stage

Pre-compiled word lists are of great help because they are derived from different corpora developed from millions of words, for example GSL (West, 1953), UWL (University Word List) (Xue and Nation, 1984) and AWL (Academic Word List) (Coxhead, 1998). They contain general academic words useful to ESP students. The benefits of utilizing word lists are that they do not only help teachers to select words worth focusing on and teaching but also enable learners to have a systematic study of academic words they need for academic or specific purposes.

#### \*Awareness of Criteria in Selection

Experts recommend that teachers refer to word lists when teachers prepare a vocabulary teaching program. However, mechanically making use of word lists in class may be demotivating to some learners. Some criteria should be taken in account to select words that are appropriate for the context and students. The word lists must contain words that are representative of the varieties of terms they are intended to reflect. For example, if we are to teach vocabulary of speech, we must first make sure that the word list we select for teaching is based on a corpora of spoken data which represent the words to be learned.

The words selected should occur across a range of different text types. The occurrence of a word in a wide range of text types will be beneficial to learners who major in different subject areas for academic or specific purposes. In addition, special attention should be paid to some vocabulary items with multi-units whose meaning are not deducible from the meaning of individual words, for example, *so far*, *all right*, etc. They should be regarded as a whole and included in the teaching list.

#### \*The Use of Concordance

Concordance is one method of promoting vocabulary learning that has some specific advantages for learners. Learners can encounter the vocabulary in real contexts with a variety of aspects of, familiarizing themselves with a word including collocates, grammatical patterns, word family members, related meanings and homonyms presented. Nation (2001) maintains that learners have the opportunity to formulate generalizations, not-patterns, and exceptions arise when the use of concordances are employed in the learning process.

#### 1.6.6.4. Teaching and Learning Vocabulary

Considering the complexity of the task of vocabulary learning, it is an unreasonable expectation for the teacher to explicitly teach all facets of vocabulary and an entire set of words of a list to learners. Instead, learners can be encouraged to learn how to continue to acquire vocabulary on their own after developing a fundamental level of vocabulary. Gairns and Redman (1993:76) assert that “*individual learning of vocabulary not only gives more responsibility toward a student’s own learning, but can also help focus on individual learner needs*”. Since individual learning of vocabulary can be beneficial to learners, it is

recommended that teachers encourage learners to develop their own vocabulary learning strategies which consist of guessing, dictionary, and memory strategies (Gu and Johnson, 1996). Learners can be directed and trained to develop these strategies in their independent study time. The following are some vocabulary learning and teaching strategies that can be applied:

#### \* Contextual Guessing

Contextual guesswork means inferring meaning from the clues in the context. There are three ways of achieving this. Firstly, learners should have strategies behind 'guessing', in other words, methods through which they can guess through incidental and intentional reading presented and explained to them. Secondly, the proportion of unknown words to be guessed in a text should not exceed 10%. Teachers should if possible present materials that are comprehensible and/or help guide learners towards texts that are over 90% comprehensible to the individual. Finally, learners should be taught and practise skills to help identify what can be learned from the context, develop the ability to identify parts of speech, become aware of collocations, and the various forms that a word can take.

#### \* Memorizing

Memory strategies involve relating the word to be retained with some previously learned knowledge that is facilitating the storage and retrieval of words. Visualization is one particularly powerful memorization strategy. As Nattinger (1988) observes, "*words in our mental lexicon are tied to each other not only by meaning form and sound but also by sight.*"

#### \* Learning of Affixes

Another popular strategy that learners can work to develop is the knowledge of affixes (Nation 1990; Bauer & Nation 1993). Within English vocabulary, a relatively small group of affixes that are useful and accessible can be introduced to learners when learners are at appropriate levels of their language development. For example, low intermediate learners may start with affixes like, able, er, un, tion, etc. An important aspect in helping the learner become independent is for the latter to recognize his/ her own style of learning and to find his own ways of expanding and organizing their word stores.



Whatever vocabulary strategies are in use, learners must find the right ones for them. In the meantime, teachers may help the student develop a personal plan that best suits his/ her vocabulary learning. Independent vocabulary learning strategies are both necessary and useful and should be incorporated in teaching. Nonetheless, we should be aware that individual learners have different styles of acquiring unfamiliar vocabulary or they are not all at the same level of proficiency in English. Therefore, it is sensible for teachers to teach vocabulary explicitly considering these factors. Explicit teaching can be carried out through teacher instruction or classroom activities. A teacher should pay attention to both proficiencies and learning styles when preparing their teaching and classroom activities.

#### \* Repetition and Recycling Words

Due to the fact that there are many aspects to learn about a word, a single encounter with it is highly improbable to be learned or retained. Following Richard's 'knowing a word statement' (1976), and Nation's (2001) concept of receptive and productive knowledge of words as a continuum, knowing a word covers the recognition of occurrence, spelling, derivation, appropriateness in different situations and word associations. Only through multiple encounters with the word, can a learner develop a full understanding of its use and meaning.

#### \* Relating the Word to Reality

The use of visual images in the classroom is highly recommended in vocabulary teaching because it helps create concrete items in a person's mind, rather than thinking about an abstract word (Gairns and Redman, 1993). Using teaching tools such as wall charts, flashcards, and pictures can help learners to imagine the words visually. According to Jordan (1997:162), "*the most effective way for students to increase their active vocabulary store is for them to be centrally involved in the learning process*". This may be under the direction of a teacher, doing group work with other students, or during independent study, as previously discussed.

### \* Brainstorming Activities

Doing brainstorming activities is another way to help increase vocabulary. This process generally refers to brainstorming associations that a word has with other words and then diagramming the results. For example, when asked to give words learners thought of when they hear the word 'bank', most learners would generate a number of words and phrases: money, invest, loan, deposit, debit, account, etc. Subsequently, learners can cluster these words together in ways they think are linked and receive feedback from peers or the teacher.

## 1.7. The Roles and Constraints of the ESP Teacher

Teaching ESP includes a range of tasks, such as investigating learner needs and specialist discourse, developing courses and materials in addition to classroom teaching. Therefore, teachers face a range of tasks which often require additional knowledge and skills.

### 1.7.1. The role of the ESP teacher

Madhavantha (2014: 73) has stated that:

Language Teachers for Specific Purposes have a lot in common with teachers of general foreign language. For both it is necessary to consider linguistic development and teaching theories, to have insights in contemporary ideas regarding their own position and role as well as the position and role of foreign language learners in education and to face new technologies offered as an aid to improve their methodology.

Sifakis (2003) has claimed that the role of ESP teachers has become challenging due to the learners' different learning styles. Within this context, Dudley-Evans and St. John (1998:13) have argued that "*we regard ESP teaching as extremely varied, and for this reason we use the term "practitioner" rather than teacher to emphasize that ESP work involves much more than teaching*". The following five main roles have been identified for ESP practitioners who need to carry out their work as a:

- 1.teacher
- 2.course designer and materials provider
- 3.collaborator
- 4.researcher
- 5.evaluator

First, the role of an ESP practitioner as a teacher "*becomes more pronounced as the teaching becomes more specific*" (ibid., p. 13) because s/he should bear the additional strain of the learners' content area. This makes his task more challenging due to the fact that "*the teacher is not in the position of being the 'primary knower' of the carrier content, the students may in many cases, know more about the content than the teacher*" (ibid., p. 13). Goonetilleke (1989: 45) has stated that it is not that easy to find the teachers who "*know English as well as the subject of the students*". ESP teaching requires well-trained instructors but research has indicated that the number of such ESP practitioners is much below what is required in most countries and this is regarded as the main cause behind ineffective ESP teaching.

Besides, ESP teacher education programs seem nonexistent (Chen, 2006). Research has indicated that action research is helpful in teacher development (Chen, 2000 cf. Stringer, 1996) and many research studies have provided insights into its main objective: to promote teachers' ability to reflect, enhance their teaching and develop personal professionalism (Nunan, 1997; Richards and Lockhart, 1994; Dudley-Evans, 1997). Moreover, it has been noted that it is important to identify the perception of adult learners about the characteristics of an optimal teacher as "*Teachers play a pivotal role in facilitating the learning process and their success mainly depends on those behaviours that help them achieve the aspired learning outcomes such as high grades, positive attitudes towards learning and enhanced learning skills*" (Javid, 2014c : 42).

Within this context, Dudley-Evans (1997 : 10) has claimed that ESP teaching goes beyond teaching just language and it also involves teaching skills related to "macroskills" of four language skills such as "*importance of listening or reading for meaning, the importance of writing for an audience*". Other research studies have also highlighted this "heavy demand" of not only having "*a knowledge of the language of scientific discourse but also an awareness*

*of the technical subject*” (Gunawardena and Knight, 1989 : 111). Hull, (2004 : 1) has identified the role of an ESP practitioner as “*a facilitator rather than presenter of content*”.

Furthermore, it has been argued that ESP teachers are not “*specialists in the field, but in teaching English,*” since their subject is English for the profession but not the profession in English (Milavic, 2006). A competent ESP teacher should be able to teach the students of different fields without having to spend months in doing so. An experienced ESP practitioner is required only to carry the necessary “tools, frameworks, and principles of course design” and put them into application to the new content subjects.

One of the significant elements of ESP teaching is course designing and supplying suitable materials. The needs of ESP learners are specific. Thus, ready-made teaching materials may not fully cater their learning objectives. Dudley-Evans (1997 : 10) has selected the term “material provider” to emphasize that “*the ESP teacher should survey what is available, select units from a number of course books adapting these if necessary, and write a number of extra units*”. This job is challenging because usually “*ESP teachers find themselves in a situation where they are expected to produce a course that exactly matches the needs of a group of learners, but are expected to do so with no, or very limited, preparation time*” ( Jones, 1990 : 91) . Besides, an ESP practitioner is primarily responsible for identifying and analysing the present and target situation.

Furthermore, ESP learners have specific needs to be identified because “*every ESP practitioner has had similar experience showing that teachers’ perception of relevance do not necessarily match those of their students*” (Adams-Smith, 1989 cf. Dudley-Evans, 1983 : 66). Moreover, it has been stated that these are not the needs of the students that ESP practitioners should consider but they have to be aware of “*the ESP ecosystem*” as a whole. In addition, the ESP practitioner should not make decisions about (syllabus specification, language or target situation analysis, appropriate learning material, classroom methodology, and so on) without having considerable insight into, the ecosystem. (Adams-Smith, 1989 c.f. Holliday and Cooke, 1983). Gunawardena and Knight (1989) have argued that ESP programs should be developed by taking into account the institutions’ demands as well as the students’ needs.

The design of ESP course should take into account all the various above stated factors. ESP practitioners should select suitable teaching material that meet the students' and institutional requirements. Therefore, the role of ESP teachers as *'providers of material'* involves selecting appropriate published material, adjusting material when published material is inappropriate, or even writing material when there is no suitable material. (Dudley-Evans and St. John, 1998 : 15). This makes ESP teaching very demanding, particularly for someone who is fresh to this sort of teaching, but "*such demands*" provide them with a room for maneuver and innovation. They have pointed out that ESP teachers need to "*assess the effectiveness of the teaching material used on the course, whether that material is published or self produced*" (ibid., p.15).

The challenging nature of ESP teaching requires an exceptionally professional conduct on the part of ESP practitioners who should update their knowledge by keeping research in the different fields of ESP. "*Those carrying out Needs Analysis (NA), designing a course, or writing teaching materials need to be able to incorporate the findings of the research*" (Dudley-Evans and St. John, 1998 : 15). They have proposed that an ESP practitioner should go beyond the first phase of NA and should "*be able to carry out research to understand the discourse of the texts that students use*" (ibid., p. 15). This obviously indicates that action research is highly essential for ESP practitioners as well as keeping oneself abreast with the ongoing research in the field of ESP (Nunan, 1990).

Dudley-Evans and St. John (1998) have claimed that the specific work of ESP teaching should be dealt with by the cooperation of content subject specialists. This collaboration requires simple cooperation in order to find out about the subject syllabus or it may include particular collaboration by including "*the actual content of a subject course by exploiting texts in English that present additional relevant material*" and this collaboration may extend to the level that "*a specialist checks and comments on the content of teaching materials that the ESP teacher has prepared*" (ibid., p. 15). They have rather gone to the extent of expecting the "fullest collaboration" where subject specialists and ESP teachers collaborate in "team-teach classes".

ESP teachers' role as counselors and motivators seems to be compulsory since they deal with adult learners. According to the *Encyclopedia Britannica*, motivation is defined as "*the process of helping an individual discover and develop his educational, vocational, and psychological potentialities and thereby to achieve an optimal level of personal happiness and social usefulness*". Counseling includes both appreciating and assisting the learners in their learning and study needs (Sifakis, 2003 cf. Underhill, 1998). A good counselor has been described as "*a good person, intelligent, creative, sincere, energetic, warm towards others, responsible and of sound judgment*" (Sifakis, 2003 cf. Wheeler, 2000, p. 66). In this respect, Javid (2010 : 503) has argued that "*The role of a language teacher is not merely limited to teach and impart knowledge and skills but it also involves the task of motivating them by exploiting certain behavioral and social factors*". It has been noted that consistent motivation plays a significant role in academic development of ESP learners by offering an energy source and improving their interest and willingness to learn. This consistent motivation "*helps the learner to focus his efforts and activities in a given direction and thus towards specific objectives*" (Harvey, 1989 cf. Crombach, 1963, p. 28).

Another very significant role of an ESP practitioner is that he should take part in various types of evaluation involving "*the testing of students and the evaluation of courses and teaching material*" (Dudley-Evans and St. John, 1998 : 16). In addition to the pre-program placement tests, and the final achievement test, several course quizzes should be performed during an ESP program to evaluate the students' progress. Moreover, evaluation of "*course design and teaching materials should be done while the course is being taught, at the end of the course and after the course has finished*". They suggested that some time after the course the students should be assessed using some non-conventional methods to "*be able to make use of what they learned and to find out what they were not prepared for*" (ibid., p. 17). Along with summative assessment, formative assessment is an essential component of an ESP course as "*Formative assessment is included in the assessment regime of a curriculum to help learners diagnose and improve their learning weaknesses*". (Umer and Javid, 2013, p. 109).

Thus, it seems important for ESP practitioners to emphasize knowledge acquisition through formative assessment so that ESP students should not consider this type of evaluation as a mere source of obtaining high grades.

### 1.7.2. Constraints of the ESP Teacher

As mentioned above, most of the ESP teachers are initially general English teachers who have had no experience in teaching ESP. They graduate from ELT to ESP courses. Indeed, Strevens (1988) states that an ESP teacher is basically a teacher of general English who suddenly find himself teaching students with ESP needs. The assumption is that the lack of experience, training and qualification in ESP teaching is challenging since the ESP teaching process is completely distinct from that of general English. Hence, the ESP practitioners need to adopt materials that match the needs of these learners. Given below are some constraints that usually hinder the teaching process in ESP.

The teachers have not been trained in the ESP field. Most of the ESP teachers teach courses in this discipline without adequate qualification and experience. Robinson (1991) underlines:

ESP practitioners need training in ways of describing language, training in teaching language and training in designing language courses. In addition, teachers teaching ESP need some training / knowledge or at least access to the subject of specialization such as economics, physics, nursing, catering, etc.

The issue of trained ESP teachers is acute. Providing adequate number of trained and qualified ESP teachers is a serious problem in different parts of the world. The teachers in charge of teaching ESP, in most cases, did not receive any kind of training in ESP. The report on an ESP seminar held in Manila in 1978 indicates that most of the participants are university instructors who found themselves compelled “willy-nilly” into ESP and service English programmes in their institutions (Khan, 1986: 99; and Coffey, 1978).

The learners themselves can define their own needs; it is not that easy for the teachers to find the appropriate materials that suit their students’ needs. Roe (1981) writes about the problems and difficulties faced by many ESP teachers in meeting the diagnosed needs of ESP learners. Teaching English for Science and Technology teaching process is regarded as a challenging task. Thus, some of the EST teachers teach topics, which are irrelevant to the students’ area of study so as to avoid the complicated language and technical vocabulary of

science and technology. In this regard, Swales (1975) argued: “*When asked to teach EST the teachers experience a crisis of confidence and tend to treat a scientific text as they would a literary one, ignoring many relevant and useful types of explorations*”.

Moreover, Kennedy and Bolitho (1991) provide some insights into the ESP teacher and the challenges s/he may face. They are summarized as follows:

- S/he (the ESP instructor) may conduct and interrupt, with or without assistance, a needs analysis for a group or for individuals.
- S/he may be expected to design a syllabus for a class based on such analysis, which he may not have conducted by himself.
- S/he might be expected to choose and adjust learning materials for a class. He must be fully acquainted with a broad spectrum of the ESP course materials and supplementary ones.
- S/he may not find appropriate or adaptable materials to the demands of a specific group or class and must, therefore, pick and explore suitable texts, and write suitable materials.
- S/he may need to develop a working knowledge of his student's subject.

Furthermore, Mackay (1983) argues that the ESP teacher does not only teach, but he or she takes part in the design, establishment and administration of the ESP course as well. Harmer (1983) supports this view. He states that: “*the ESP teacher has to be adaptable and flexible. Adaptability refers to the teacher's ability to choose and adapt his programme on the basis of the different groups he finds himself teaching*”.

To sum up, the ESP teacher plays the role of the mediator between the input and the effective achieved outcomes. Thus, s/he needs to be equipped with knowledge of both linguistics and methodology (Tickoo, 1988).

### **1.8. Teacher Education and ESP**

Teacher education is a programme that aims at the development of teacher skills and competence that would allow and empower him to fulfill the profession's demands and difficulties. Teacher education involves teaching skills, pedagogical theory and professional abilities.



### 1.8.1. Defining Teacher Education

Teacher education or teacher training relates to both pre-service and in-service programmes which consider both formal and non-formal approaches. It is an ongoing process that aims at teacher career development. A combination of teaching skills, pedagogical theory and professional skills would generate to provide teachers with the right knowledge, attitude and skills. Teacher education is therefore viewed as an ongoing process, starting with the initial training phase and continuing throughout the teacher's professional career through periodic and sustained phases of in-service training. In addition, teacher education usually involves four aspects: enhancing the general educational background of the trainee teachers; improving their knowledge and understanding of the subjects to be taught; providing insights into pedagogy and learning; and developing the practical skills and competences.

### 1.8.2. The Need for Teacher Education

Teacher education is about aspects like, who (Teacher Educator), whom (Student teacher), what (Content) and how (Teaching Strategy). It provides the student teachers with the abilities and skills that would assist them to perform the tasks as efficiently and effectively as possible. According to UNESCO (2005), teacher education “*addresses environmental, social, and economic contexts to create locally relevant and culturally appropriate teacher education programmes for both pre-service and in-service teachers.*” Teacher education has therefore become crucial for the effective process of teaching and learning. The following are some of the aspects that explain Madhavi's need for teacher education:

#### \* Complexity of the Profession

Teaching is regarded as a complex and demanding intellectual work that cannot be performed effectively without the adequate preparation. The teacher needs to be armed by adequate knowledge, skills, interests and attitudes. The teacher's job is regarded as complicated and challenging in the view of the new theories of psychology, philosophy, sociology, modern media and materials.

**\*To Improve the Quality**

Teacher education is essential due to its impact on teacher's performance. The focus on quality stems from an intention to enhance education.

**\* Improves Efficiency**

Teacher training does not only guarantee that teachers are and stay competent, but it also enables them to ensure that they remain motivated over time.

**\* Makes Innovative**

Teachers play an important role in enhancing the quality of education. Great dependence was put on innovation in the curriculum as a tool to improve the quality of performance.

**\* Brings Changes and Up-Dates**

Changes have tremendous consequences for instructional development. This also implies change via in-service training as well as self-education to update knowledge and abilities.

**\* To Meet the Changing Needs**

It is acknowledged that, in order to help teachers adapt to their evolving occupational positions in schools and society, a great deal of innovation and reform is needed in teachers' professional training, the professional support facilities available, and the use of non-formal and informal teacher education techniques and distance education. The career-long professional development of teachers is only feasible through such innovation and reform.

**\* To Address the Theory-Practice Gap**

The disconnection between theory and practice is a constant problem that has plagued teacher education. All Alliance members agreed that the theory-practice gap as a serious issue (Cho, 2008; Farrington, 2008; Gambhir et al., 2008; Rasmussen, 2008).

#### \* Preparing Teachers for Diverse Learners

Another important issue that arises in the effectiveness is the learners' diversity of needs. We should pay attention to how teachers establish pedagogical relationships with students and how these relationships are employed to involve students in learning because there is a lack of research in this area. Such an understanding would also be important and helpful in preparing teachers to function efficiently.

#### \* Developing ICT Literacy

Developing ICT literacy has the potential to free students from time and space constraints. It includes the ability to quickly search, manage and get information and work with others. With well planned, creative pre-service and in-service training programmes, the teacher can become easily proficient. Teacher education has become essential and inevitable with the emergence and development of computer technology and changes in the teaching methodologies.

### **1.8.3. Benefits of Teacher Education**

Teacher education programs provide teachers with techniques that keep them fresh, exciting, and highly instructional in classrooms and curriculum. Besides, in-service training aimed at updating the professional knowledge of the teacher throughout his or her career.

These programs have shown a great deal of advantages, such as obtaining teacher education certification, improving teachers' overall abilities, organization, time management, educational technology knowledge, and learning techniques to better motivate learners. It has been indicated that all these aspects result in better grades for students, and a higher level of classroom interest. Establishing an environment that interests students, makes them feel comfortable, and encourages them to take part in classroom activities and ask questions, leads to a more effective lesson, and greater overall learning. Teacher education programs enable teachers to pursue their own educations, obtain vital skills that they may not have acquired them while taking university courses, and stay up to date with new techniques.

These programs assist educating teachers to teach and motivate learners to achieve the best results possible.

To conclude, the lack of uniformity in teaching ESP materials and absence of ESP teacher training programs, and misconceptions about ESP courses are the reasons behind ESP teacher's failure in ESP courses effective implementation. Thus, continuing education is crucial for teachers and teacher education, as it allows them to keep up-to-date with the latest developments in their subject areas and skills.

### 1.9. ESP Learners

Javid (2014a:180) has stated that English language teaching “*pedagogy has undergone tremendous changes during the last few decades and individual learners and their differences have become major areas of interest in ELT research*”. ESP is a learner-centered approach, thus the learners and their specific needs are the core of all ESP operations. ESP learners are non-native speakers of English; they are the speakers of English either as a second or a foreign language. Besides the ESP learners are not specialized in the English literature. They are specialized in fields like computer science, medicine, architecture, and so on, where English is a significant medium of instruction of the specialization. Moreover, for the purposes of the study, they need English either as EAP or EOP. Furthermore, what distinguishes the ESP learners from other English learners is the awareness of the needs since they are mature enough to identify them.

Analysing the required proficiency level of ESP learners, Adams-Smith (1989 : 65) has claimed that an ESP course prepares a “*good ESP learner*” who “*is not necessarily the one who comes top in the English class, but rather the one who performs successfully in concurrent and subsequent English-medium subjects*”. These subject-oriented demands of those specific learners should be the primary focus of ESP and the requirements enforced by the institutions should not be permitted to take the stance of the only decisive factor in the preparation of ESP syllabuses (Robinson, 1980). Hutchinson and Waters (1987) and Dudley-Evans and St. John (1998) have stated that this flexible strategy is appropriate for “*all age groups*” and “*arguably all target situations*” because ESP has the flexibility to adapt itself to the needs of the target learners and situations.

The age, attitudes, learning strategies and motivation of the learners have been the main areas of interest for many research studies carried out in the Arab world and elsewhere (Hutchinson and Waters, 1987; Javid, 2014b; Dudley-Evans and St. John, 1998).

An ESP learner has been identified by Sifakis (2003 :6, c.f. Kerr :1977 as “*a person who is an expert in his own field and who can perform his various duties adequately in his mother tongue*”. ESP learners are, according to him, adults with a strong educational background in his field of specialization but weak in English. Dudley- Evans and St. John (1998) have also pointed out that ESP courses are generally intended for adult learners at “*tertiary level*” or for work place situations. These courses can also be designed for secondary school students. Unlike the other authors who regarded adulthood as a key characteristic of an ESP learner, Sifakis (2003 : 2) has argued “*that all ESP learners (even non-adults) share adulthood-oriented characteristics*”.

These features of adulthood have been interpreted as : adults’ personal growth and complete development, also considered as maturity “*an ideal and a goal; a greater sense of perspective and an ability to make judgments (about themselves and others) based on accumulated experience*” ;in general, adults are serious in what they intend to do and want to be taken seriously. They have shown an intrinsic autonomy that makes them responsible decision makers and whose motivation is a key prerequisite for learning. (Sifakis, 2003 cf. Habermas, 1978, p. 3).

Unlike adults learning, pre-adults or adolescents are strictly monitored by teachers. However, they are accustomed to these restricted and directed atmosphere of schools and universities. They pursue their studies without an obvious objective in their minds. Abbot (1981) named this phenomenon of learning without clear learning objectives as “*teaching of English for no obvious reasons (TENOR)*”. These TENOR learners are not highly motivated to learn due to the lack of obviously-defined learning needs. The adults have been recognized as “*primarily workers and secondarily learners*” (Sifakis, 2003 : 3). Robinson (1991) identified “adults” as goal-oriented learners who do not want to learn English for social or cultural reasons but they usually pursue a utilitarian goal to learn it either for occupational or academic purposes.

Hull (2004 : 1) has indicated that the “science and art” of adult teaching is primarily based on the notion that “*the adult learner is self-directed and autonomous*”. This goal-orientated behavior of ESP learners enhances interest and motivation. Their motivation is therefore based on practical needs. In other words, occupational or academic. The distinction between TENOR learners and ESP learners is characterized by the specific learning objectives, learning independence and elevated motivation of the later group (Dudley-Evans and St. John, 1998). Harvey (1989 : 28) has defined motivation, both intrinsic and extrinsic, and stated that internal/external need “*is a broad motive which makes certain goal attractive and important for the individual, and motivation is the impulse which generates the learning activity*”.

Besides, an ESP learner is the one who has already passed the “*total dependence on teacher*” phase and reached the “*level of maturity where he can not only evaluate information for himself but also make decisions about alternative procedures for learning*” (Adams-Smith, 1989, p. 73). Robinson (1991) has indicated that learning adulthood requires that ESP teaching should not be limited only to educational environment but other methods, such as self-access study, project work, cooperative learning etc., should be included in the syllabus or program. Research seems to indicate that ESP students should be actively engaged in the process of selecting content materials, developing curriculum and teaching methodology to guarantee the program participants’ highest dedication and motivation. Adams-Smith (1989) has recommended that the content of the ESP course should remain flexible in order to meet the learners’ requirements and recommendations. He has pointed out that “*it is the kiss of death to ask a class what they would like to study and then ignore every one of their recommendations*” (pp. 65-66).

Moreover, motivation is the main part in the learning process. Therefore, motivation can both generate and inhibit studying (Hutchinson p. 74). It plays a crucial role in any sort of learning. It is also a key factor that influences language learning and enhancement in all skills. Although there are different types of motivation, there are two fundamental categorizations extrinsic and intrinsic and integrative versus instrumental (e.g. Brown 1941). Extrinsic motivation is aimed at obtaining an external reward, usually money or grades (Brown 1941, p. 76), while intrinsic motivation implies engaging in an activity for its own sake (Pintrich and Schunk 2002). Extrinsic driven behaviors dominate the primary school environment,

according to Brown (1941: 80), because students are motivated by exams and grades, or positive feedback. In second language classrooms specific tasks that “*capitalize on the intrinsic by appealing to learners’ self-determination and autonomy*” can be included in ESL teaching. For example teaching writing as a thinking process, or creating students’ own materials.

Integratively motivated learners learn a language because they want to understand the language’s culture, people, and heritage associated with the language (Foreign Language Teaching Methods). On the other hand, instrumental motivation refers to “*learners (...) studying a language in order to further a career or academic goal*” (Brown 1941:75). This applies to ESP learning situations. ESP course is a good option for students with specific learning needs as it’s more motivating.

Dudley-Evans and St John (1998:10) state that learners who are studying English just because it is on their schedule or their company sends them to and who do not have defined needs, are likely to be demotivated when given a specific assignment. However, students with obviously defined objectives can lose concentration and become impatient if the course fails to satisfy their specific needs. Therefore, when teaching any ESP course, it is essential to aim for as homogeneous groups as possible because such a design will guarantee that the course can be sufficiently specific to the learners’ job requirements (Dudley-Evans and St John 1998).

### **1.10. Teaching Methodologies in ESP**

Another essential element of the ESP teaching process is the selection of suitable methodology or methodologies. Many research studies have provided in-depth insights into the fact that no single teaching methodology or technique can meet the varied and specific needs of the ESP learners (Hutchinson, 1998; Rao, 2001; Widdowson, 1983; Javid, 2010) and ESP practitioners have to select from the wide range of teaching methodologies to run an effective ESP course. The specific needs of contemporary challenges in the field of ESP have compelled ESP practitioners to “*move away from following one specific methodology*” and select “*techniques and activities from a range of language teaching approaches and methodologies*” and this trend is named as eclectic approach (wikipedia encyclopedia). This approach requires

that the teacher “*decides what methodology or approach to use depending on the aims of the lesson and the learners in the group*” (ibid., p. 1).

In this regard, Widdowson (1983 : 130) pointed out that suitable teaching methodology should be put “*at the very heart of the operation with course design at servicing its requirements*” and to identify their specific needs. Dudley-Evans and St John (1991 : 305) have noted that ESP courses are usually conducted in collaboration with language teachers as well as subject teachers and “*ESP requires methodologies that are specialized or unique*”. Scientific analyses of the different linguistic and non-linguistic needs of specific learners form the fundamental basis of a successful ESP course because it specifies “*what*’ and ‘*how*’ of such courses.

Meeting these specific needs requires a selection of methods and approaches. Xiaoyun (2007 : 1) has indicated that “*eclecticism in language teaching holds that although no single language teaching method manages to meet all the teaching and learning needs, many methods have valuable insights that should be drawn on*”. It has become an additional burden for ESP practitioners to understand and exhaust different language teaching methodologies and approaches to sort out appropriate components of these by using eclectic approach because one single method or approach suit diverse and specific learners and teaching contexts (Kumaravivelu, 2006). John and Price-Machado (2003 : 43) have suggested that ESP learners are required to use English language in a well-defined diverse socio-cultural setting which requires that “*all language teaching should be tailored to the specific learning and language use needs of identified groups of students*”.

Hutchinson (1998) has emphasized the importance of considering the methodological aspects of ESP teaching to cater for the individual needs of ESP learners. Information transfer, information gap, jigsaw, task dependency and correction for content have been identified as five principles to justify the problem-solving and task-oriented nature of communicative exercises (Johnson, 1982). Research has offered valuable insights into the fact that ESP teaching requires diverse approaches and tasks to address diverse needs of specific learners. These tasks and techniques include gaps, prediction, integrated methodology (Hutchinson and Waters, 1987), role play and case studies (Huckins, 1988).



Xiao-yun(2007) described the pedagogical history of ELT in China to seek best method. He detailed that various ELT methods and approaches were tried out during the second half of the twentieth century. The Direct Method was practiced after the Second World War and it was found unsatisfactory. During the 1960s, the Situational Approach gained popularity but met the same fate and the next decade witnessed the proliferation of the Audio-lingual Method and it was found that the needs of ESL learners were not effectively met. It was the dawn of 1980s that the Communicative Approach was experienced to satisfy ESP/EAP needs of ELT learners but it was also not found sufficient to meet the needs of diverse learners and varied learning situations. Research provided sufficient insights that it was the same story of trial and error that was repeated throughout the world to single out the best ELT method in order to realize the needs of the diverse learners.

A lot of researchers reported that the eclectic approach was adopted worldwide to solve this daunting obstacle and it gained popularity. It was declared that maturity of ELT depended on utilizing an “*eclectic blend of tasks each tailored for a particular group of learners*” (Brown, 1995, p. 74). Xiao-yun (2007 cf. Fan, 1999) provided a long list of proponents of eclecticism among ESP practitioners, ESL scholars and applied linguists from the Western World (Long, 1980; Brumfit, 1984; Yalden, 1987 etc.) and he reported rather a longer list from China (Yang, 1997; Wang and Huang, 2003; Zhang and Chen, 2003, etc.). Research provided sufficient insights into the fact that it was not only the linguistic needs that needed an eclectic approach to be followed but non-linguistic needs should also be taken care of through this dynamic approach.

Javid (2011b: 43) has claimed that ESP “*learners have diverse language needs as well as they bear differences in their learning styles (LS) due to their diverse educational, social, ethnic and cultural background.*” Roa (2001) reported that ESP practitioners’ teaching should match the learning styles of the learners because any conflict in this regard would adversely affect their teaching performance. He suggested that the teachers should use a variety of activities that would satisfy students’ diverse learning styles. It has also been recommended that ESP practitioners “*also need to accommodate individual differences of their students by using diverse classroom activities and teaching techniques to ensure efficient and effective teaching*” (Javid, 2011b : 59).

It has been identified that local culture and learning setting atmosphere should also be considered for effective learning and the one of the major responsibilities of teachers is that they should select activities according to the above-mentioned factors (Canagarajah, 2002). Muriel (2006) has reported that language teachers have to explore different teaching methodologies and approaches to adopt them according to the peculiarities of learners as well as the learning contexts. As the learners' personalities as well as the learning contexts are diverse and peculiar, there is an unavoidable need to choose matching pedagogical methodologies.

### 1.11. Types of Content in ESP

Types of content in ESP. An important distinction is made between different types of content, more specifically Carrier content and Real content.

\* Carrier content, as defined in the book of Dudley Evans and St John (1998 :11) '*refers to the subject matter of an exercise; it is contrasted with real content, which is the language or skill content of an exercise*'.

\* Real content is the linguistic content, progressive tense usage pattern, for example, which is present in the text. Dudley-Evans and St. John (1998:11) differentiate between real content and carrier content: '*In ESP, any teaching activity, whether its aim is to teach language or skills, is presented in a context*'. So, an authentic topic is chosen to function as the context, as a vehicle to '*carry*' the real content, which may be certain language forms.

### 1.12. Materials in ESP teaching

In some situations, where English is a foreign not a second language, the ESP classroom may be almost the only source of English. Materials then play a crucial role in exposing learners to the language, which implies that the materials need to present real language, as it is used, and the full range that learners require. The initial questions to ask when selecting materials include:

1. Will the materials stimulate and motivate?
2. To what extent does the material match the stated learning objectives and learning objectives?

3. To what extent will the materials support that learning?
4. The carrier content must be appropriate and the real content must match the course objectives

Besides, materials are used in all teaching. Four reasons for using materials seem significant in the ESP context:

- as a source of language;
- as a learning support;
- for motivation and stimulation;
- for reference.

First, as a learning support, materials need to be reliable, that is, to work, to be consistent and to have some recognizable pattern. This does not mean a rigid unit structure; there wouldn't be a fixed format. To enhance learning, materials must involve learners in thinking about and using the language. The activities need to stimulate cognitive not mechanical processes. The learners also need a sense of progression.

Second, to stimulate and motivate, materials need to be challenging yet achievable; to offer new ideas and information; to encourage fun and creativity. The input must contain concepts and/or knowledge that are familiar but it must also offer something new, a reason to communicate, to get involved. The exploitation needs to match how the input would be used outside the learning situation and take account of language learning needs. The purpose and the connection to the learners' reality need to be clear.

Third, for self-study or reference purposes, materials need to be complete, well laid out and self-explanatory. The learner will want explanations, examples and practice activities that have answer and discussion keys. Material requires hours of preparation. Each stage of finding suitable carrier content matching real content, real world activities, composing clear rubrics, planning an effective layout, is time-consuming. Preparing new materials from scratch for every course taught is clearly impractical. One of the myths of ESP has been that you have to write your own materials. This then leads to the myth that every ESP teacher is also a good designer of course materials. Only a small proportion of good teachers are also good designers of course materials. A good provider of materials will be able to:

- select appropriately from what is available;

- be creative with what is available;
- modify activities to suit learners' needs;
- supplement by providing extra activities.

To sum up, the balance between these will vary from course to course, situation to situation. Selecting materials, like selecting a partner, involves making choices and decisions. To make good choices we need to have good criteria on which to base our decision. Numerous criteria, such as factors about the learners, the role of the materials, the topics, the language, the presentation, have been put forward for the analysis of materials and each of them has validity.

### **1.12.1. Matching Carrier Content to Real Content**

When the starting point is a good carrier content, the next stage is to analyze it to determine what real content it could be exploited for. Then, it is a question of whether, where and how that real content fits into the course. The other starting point is where there is a gap in the course material; that is, there is a course objective, some real content for which there is no suitable material available. In this case, the first stage is to search for some suitable carrier content. When the real content and carrier content are matched, the next stage is to draft activities. Besides, the resources, group sizes, approaches to learning and target activities must be considered when selecting activities so that they are appropriate for the learning environment. The ESP learners are not primarily language learners; they are or have been learners of other disciplines and this has to be a major consideration in the devising and delivering of a course.

Any course design is based on the authentic real needs of students. Thus, the designer's or the teacher's task is to specify the needs. With the identification of those needs designers or/and teachers will determine the content, the time, class size, motivations, likes, etc. Needs analysis must be the starting point for devising syllabuses, courses, materials, and the kind of teaching and learning that takes place (Cariaga, 2008:25; Jordan, 1997:22). However, the design of a course that can best serve learners' interests and needs is an obstacle in itself for many instructors. It is not easy for new and/or untrained teachers to know how and where they start and what can be done about students' poor motivation in the

current ESP courses and how teaching materials should be selected. Thus, more about needs analysis process, ESP course design and its steps will be discussed in the next chapter.

### Conclusion

In summary, since the end of World War II, ESP has received much attention among educationalist and applied linguists. This attention is justified due to the dominance of English in the fields of economics, politics, media, technology and medicine. Each of these fields, as well as others, requires its unique way of teaching based on the needs of their learners. Teaching language in general, and English, in particular, is no longer just a matter of application that serves all needs through any kind of syllabus and methodology. Rather, it is a regulated application that deals with each situation or given discipline independent of the other. And unless language teachers are trained enough to handle such situations and realize the idiosyncrasies of ESP, fruitful outcomes would never be reached.

All researchers interested in assessing the progress of ESP as a component of ELT agree that one of the most constraining factors to this progress is the lack of "*specialized teacher-training*" (Swales, 1985: 214). This situation applies even more emphatically in Algeria where, to this date, very little attention has been given to the training (pre or in-service) needs of teachers, quite a number of whom have ended up teaching in contexts where they are required to demonstrate skills which are normally available only to practitioners trained to teach ESP. Thus, a large number of researchers are seeking to find the best solutions for the ESP controversies about the strong ESP movement which has imposed its influence all over the world. However, there are many things to do for its future development of better or suitable programs and courses, of effective teaching, of serious analysis and of more consistent theoretical work in varied disciplines such as business, science and technology and human sciences.

# Chapter Two

## *Needs Analysis and Course Design*

## Introduction

This chapter analyses the needs analysis concept based on its significant contribution and interrelationship with the ESP course development. It provides some of the definitions of needs analysis, signals the notion of needs analysis in the ESP context, and discusses the relationship between ESP course development and needs analysis. Then, it critically takes different models and components of needs analysis. Finally, it stresses the importance of conducting such a process. The overall purpose of this chapter is to emphasise the significance of needs analysis as a course design approach that reinforces the notion of learner-centredness.

### 2.1. Overview of Needs Analysis

The foundation of a sound course design approach begins with a profile of the learner's need in order to match what is taught to what is required. However, as mentioned in Chapter One, ESP has an advantage over EGP in that it put the notion of 'needs analysis' into focus. As Escorcía (1985 :53) points out: "*In the context of ESP, needs analysis has become the dynamic impulse underlying course design, the justification for the S and the P, the driving force that has motivated teachers and course designers throughout the world ever since the magic acronym ESP came in*".

### 2.2. Definition of Needs Analysis

Needs analysis has been defined in several ways. According to Nunan (1988 : 75), needs analysis is "*a family of procedures for gathering information about learners and about communication tasks*". Expanding on Nunan, Brown (1995) described needs analysis as the analysis of both subjective and objective data to set the course objectives in order to cater the students' and the institute's demands or needs. He later simplified the definition by adopting a more holistic perspective. His revised definition of needs analysis was "*the systematic collection and analysis of all information necessary for defining a defensible curriculum*" (Brown, 2009 : 269).

Besides, according to Brown (1995), “needs analysis” is also called “needs assessment.” In Huang (2010), the notion of “needs analysis” was used interchangeably with “needs assessment” to assess the language learning needs of undergraduate and graduate students. Besides, both terms “needs analysis” and “needs assessment” are used to identify the needs of foreign language teachers for teaching the language skills and strategies that the learners need. The present study uses the term “needs analysis” because it is widely understood by many ESP scholars and makes no distinction between the two terms.

Moreover, according to Holec (1980):*“Needs assessment is a classical procedure by which a close link can be established between the learners and the curricula. In the same context, Brown (1995 :35) attempts to define needs analysis as “a process of gathering information that will serve as the basis for developing a curriculum that will meet the learning needs of a particular group of students”.*

Besides, Richterich and Trim (1980) defined needs analysis as follows:

Needs analysis comes to mean the whole cluster of techniques which lead to an understanding of the parameters of the learning situation: ego, learners, teachers, administrators, course-writers, producers, career-expectation and job satisfaction, social dynamics, learner-type and resource analysis, etc, are relevant factors in addition to the original predicted communication behaviour.

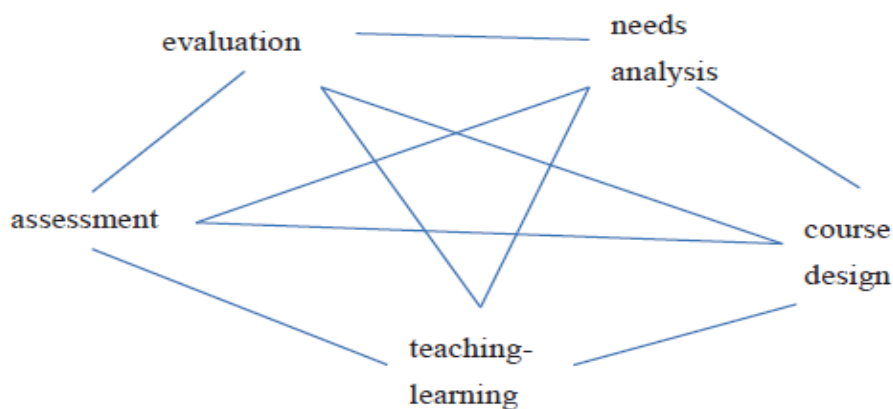
To sum up, needs analysis (NA) is generally regarded as a criterion of ESP, although, ESP is by no means the only educational enterprise, which makes use of it (Berwick, 1989 Brindley, 1989). Nagarajan (1988) defines a learner’s needs in terms of the reasons for which the learner wishes to learn English and the kind of English he will have to use in future. These aspects are very important in an ESP course design and the researcher takes them into account in the process of elaborating the new course , so needs analysis can determine the type of English which would be needed to be taught, based on the requirements of the subject-specialization of the learner.



### 2. 3. Needs analysis in ESP Course Development

The notion of “needs analysis” first appeared in the 1920s but became central to ESP in the 1960s, as needs analysis became a significant part of ESP course development (West, 1994). Although Hutchinson and Waters (1987) highlighted that an awareness of needs distinguishes ESP from general English, their assumption was rejected by Seedhouse (1995), who believed that needs analysis theory and application can be applied in general English courses. Similarly, Long (2005) affirmed that any language course without a needs analysis does not provide detailed and selective goals or academic support to meet the learners’ needs in the course time frame.

However, using a needs analysis is still more common in developing ESP courses. Needs analysis is seen to be related to other specific phases of ESP course development: course design, materials selection, pedagogical approaches, assessment, and evaluation. In addition, needs analysis is commonly considered as the initial phase in the linear process in course development, although Dudley-Evans and St. John (1998) viewed this as more cyclical (Figure 2). In other words, once overall needs for a course are established, decisions can be made in developing or redeveloping the course in terms of learning objectives, material selection or production, the teaching and learning approach, and evaluation (Jin 2014). Thus, many ESP practitioners have acknowledged that a needs analysis is fundamental to developing any language course successfully (Hutchinson & Waters, 1987; Kavaliauskienė & Užpalienė, 2003).



**Figure 2.1 : Stages in the ESP process (Dudley-Evans & St. John, 1998, p. 121)**

### 2.3.1. On-going needs analysis

Needs analysis has been traditionally conducted during the initial stage of course development as the first step taken before a course begins (Hutchinson & Waters, 1987; Jin et al., 2014; Mazdayasna & Tahririan, 2008). However, Dudley-Evans and St. John's diagram of the stages in the ESP process indicates that needs analysis can be conducted at different stages of the course according to each situation. In many cases where the course is in place or an existing one is being revised, an on-going needs analysis may be carried out and justified (Dudley-Evans & St. John, 1998; Mohammadi & Mousavi, 2013). An on-going needs analysis later in a course may lead to a successful revision of an ESP programme (Ahour & Mohseni, 2015; Prachanant, 2012).

The outcomes of an on-going needs analysis can then feed into the course re-alignment, which can be done by revising its objectives and modifying the teaching and materials (Dudley-Evans & St. John, 1998; Jocaite & Petruševičius, 2006; Kavaliauskienė & Užpalienė, 2003). In this sense, an on-going needs analysis can be conducted at various points in a course because the perceptions of learners, teachers and other stakeholders may change as they learn more about their expectations of the course and the students' immediate needs (Lowe, 2009; Robinson, 1991). Therefore, it is essential to investigate potential changes in the perceptions of the stakeholders in different situations in order to assess whether the objectives of an ESP programme need to be revised and the changing needs of the students in the area.

### 2.4. Types of Needs Analysis

Various scholars identify a wide range of need within needs analysis comprising objective and subjective needs (Brindley, 1989; Richterich, 1980), target needs and learning needs (Hutchinson & Waters, 1987), situational and communicative needs (Richards, 2001), situation and language needs (Brown, 1995), and felt and perceived needs (Berwick, 1989). Brindley (1989) and Richterich (1980), however, differentiate between objective and subjective needs.

They state that objective needs are derivable from distinct types of factual learners data, their use of language in real life situations in addition to their actual language

proficiency and difficulty. Subjective needs are the cognitive and affective needs of the learner in a given language situation. Brindley (1989 :70) state that, the subjective needs include “...*affective and cognitive factors such as personality, confidence, attitudes, learners’ wants and expectations with regard to the learning of English*”. In assessing subjective needs, researchers can include information about students’ attitudes toward the target language and culture, and toward learning. Objective needs, on the other hand include information about the students’, which may include country of origin, culture, age, and other personal information.

Hutchinson and Waters (1987) make a distinction between target needs and learning needs. Target needs are what the learner needs to do in the target situation and learning needs are what the learners need to do in order to learn. Needs assessment is clearly a sensible task when students have target needs such as needs to work abroad or to study at a foreign university, so teachers can assess and define their goals which can be translated into realistic goals. To analyze learning needs researchers use a checklist of why the learners are taking the course; how the learners learn, and what resources are available.

Situational and communicative needs were defined by Richards (1990). Situational needs focus on the general parameters of a language program and involve the goals, learning styles and proficiency levels of learners. Situational needs involve the teachers’ expectations, teaching styles and techniques. Communicative needs refer to learners’ requirements in the target situation, such as the ability to communicate while working at a hotel reception, or to present papers in a conference.

Berwick (as cited in Johnson, 1989) distinguishes between felt needs and perceived needs. Felt needs are related to the feelings and thoughts of the learners. They can be defined as wants and desires. Perceived needs are thoughts of experts about the educational gaps in other people’s experience. Perceived needs are real and objective because they reflect teachers’ outsider perception of learners’ needs.

Brown (1995 :40) distinguishes between situation and language needs. Some situational needs are based on the programs’ human aspects, such as physical, social, and psychological context in which learning takes place. Brownpoints out that “*such needs are related to administrative, financial, logistical, manpower, pedagogic, religious, cultural, personal, or other factors that might have an impact on the program*”.

Language needs are about the target linguistic behaviors that the learners will acquire. The information about the language needs are the learners' reasons to learn the target language and details about the situation in which the language will be used.

### **2.5. Needs Analysis Models.**

Different models under the ESP umbrella have approached this field in different ways. Jordan (1997) indicates that the main two approaches in needs analysis are the Target-Situation Analysis and the Present-Situation Analysis. The Target-Situation Analysis model started with Munby's (1978) model of the Communication Needs Process. This model contains a detailed set of procedures for discovering target situation needs. It is based on analyzing language communication in the target situation in order to provide a communicative needs profile for a specified group of learners. The Communication Needs Process profile seeks to present a valid specification of the skills and linguistic forms that a group of learners needs in the intended target situation. The Communication Needs Process model contained nine components (e.g. participant, purposive domain, setting, interaction, instrumentality, dialect, target level, communicative event, and communicative key). Each component asks questions about the use of the target language in order to identify learners' real world communicative requirements. The outcome is used as an input to prepare the intended group of learners for their intended use of the target language through converting the needs profile into a communicative competence specification that is presented in a form of a syllabus (Jordan, 1997).

Tarone and Yule (1989) continued research within the same framework of the Target Situation Analysis approach. However, they added four components to Munby's model. Their addition consisted of the global level (e.g. situations, participants, communicative purpose, and target activities), the rhetorical level (e.g. organisational structure of the communicative activities), the grammatical-rhetorical level (e.g. linguistic forms required to realise the forms in the rhetorical level) and the grammatical level (the frequency of grammatical and lexical constructions in the target situation). These additional levels were adopted from Canale and Swain's (1980) model of communicative competence (e.g. discourse competence). The purpose of adding these levels are to show how needs analysis incorporates linguistic form (e.g. register analysis) and functional form (e.g. discourse analysis). Both forms are layers in the target and present situations that provide input data for syllabus design (West 1994).

The Target-Situation Analysis model has remained highly influential in the field of ESL/ESP needs analysis. It was the first needs analysis model based on the concept of communicative competence. Munby's categories of communicative activities and their relation to the communicative events of the target situation reflect categories of real world language use (West, 1994). In other words, they reflect the shift in the ESL field from language system to language use. As a result of this shift, most studies continue to follow this model in relating communicative needs to analysis of communication in the target situation. Consequently, needs analysis has become an integral element of the field of ESP as the basis for designing ESP courses (Dudley-Evans, 1991).

However, this approach has received major criticism for being inflexible. The initial Target-Situation Analysis model by Munby was comprehensive and complex because his aim was to provide a wide range of needs profiles. However, he did not specify any priorities for his model of activities. This creates difficulties when applying the profile to different language situations (West, 1994). Practitioners overcome this difficulty by using different profiles based on their own circumstances.

It is important here to note that this model analyzes the four skills (listening, speaking, reading, and writing) in various job-related activities in terms of receptive and productive skills leading to generate a general profile of the language situation to be used as an input in course design (Jordan, 1997). In language teaching, the provided information guides the teaching process in the classroom to set the priorities in scaling the communicative modes where the interpersonal mode links the receptive and productive skills, the interpretive mode relies on receptive skills, and the presentational mode relies on productive skills (Brecht and Walton 1995).

The second major model in needs analysis is the Present-Situation Analysis proposed by Richterich and Chancerel (1980). In this approach the information to define needs is drawn from a wide range of sources: the students, the teaching establishment, and the place of work (Jordan 1997). Since the sources of data collection are multiple, this model provides detailed guidelines and techniques about the kind of information to be included. The aim is to seek information about levels of ability, available curricula, teaching methods, and resources, views on language teaching and learning, surrounding society, and cultural elements.

Based on Munby's work, Chambers (1980) introduced the term Target Situation Analysis however, Richterich and Chancerel proposed the term Present Situation Analysis as complement to target situation analysis. From that time several other terms have also been introduced: Pedagogic Needs Analysis (West 1994), Deficiency Analysis, Strategy Analysis or Learning Needs Analysis (Allwright 1982), Means Analysis (Dudley Evans and St John 1998), Register analysis (Peter Strevens, Jack Ewer and John Swales) Discourse analysis (Lackstorm, Selinker, Trimble) and Genre Analysis (Swales 1981).

### **2.5.1. Pedagogic Needs Analysis.**

The term "pedagogic needs analysis" was proposed by West (1994) as an umbrella term to describe the following three elements of needs analysis. He states the fact that shortcomings of target needs analysis should be compensated for by collecting data about the learner and the learning environment. The term "pedagogic needs analysis" covers deficiency analysis, strategy analysis or learning needs analysis, and means analysis.

### **2.5.2. Deficiency Analysis**

What Hutchinson and Waters (1987) define as *lacks* can be matched with deficiency analysis. Also, according to Allwright (1982, quoted in West, 1994), the approaches to needs analysis that have been developed to consider learners' present needs or wants may be called analysis of learners' deficiencies or lacks. From what has already been said, it is obvious that deficiency analysis is the route to cover from point A (present situation) to point B (target situation), always keeping the learning needs in mind. Therefore, deficiency analysis can form the basis of the language syllabus (Jordan, 1997) because it should provide data about both the gap between present and target extra linguistic knowledge, mastery of general English, language skills, and learning strategies.

### **2.5.3. Strategy Analysis or Learning Needs Analysis**

As the name indicates, this sort of needs analysis has to do with the strategies that students make use of in order to learn a different language. This attempts to determine how learners want to learn instead of what they need to learn (West, 1994). All the stated approaches to needs analysis, TSA, PSA, and to some extent deficiency analysis, did not

address the learners' views of learning. Allwright, a pioneer in the field of strategy analysis began with the learners' perceptions of their needs (Jordan, 1997). Allwright distinguishes between needs (the skills and abilities that a student considers as appropriate to himself or herself), wants (the needs on which learners place a high priority in the available, limited time), and lacks (the distinction between the student's present competence and the required one).

Allwright's ideas were later embraced by Hutchinson and Waters (1987), who advocate a learning-centred approach that stresses the role of learners' needs. If the analyst attempts to figure out what students do with language (Hutchinson and Waters, 1987 :54) learning needs analysis will inform us "*what the learner needs to do in order to learn*". They are, of course, in favor of a process-oriented approach, not a product-oriented one. According to them ESP is not "*a product but an approach to language teaching which is directed by specific and apparent reasons for learning*" (Hutchinson and Waters, 1987: 16). What learners should be taught are skills that enable them to reach the target, the process of learning and motivation should be considered as well as the fact that different learners learn in different ways (Dudley-Evans and St. John, 1998).

Jordan (1997: 26) quotes Bower (1980) who has noted the importance of learning needs:

If we accept...that a student will learn best if what he wants to learn, less well what he only needs to learn, less well still what he either wants or needs to learn, it is clearly important to leave room in a learning programme for the learner's own wishes regarding both goals and processes.

Besides, Hutchinson and Waters' (1987) definition of *wants* (perceived or subjective needs of learners) corresponds to learning needs. Similar to the process used for target needs analysis, they suggest a framework for analyzing learning needs which consists of several questions, each divided into more detailed questions. The framework proposed by Hutchinson and Waters (1987) for analysis of learning needs is the following:

**1. Why are the learners taking the course?**

- Compulsory or optional;
- Apparent need or not;
- Are status, money, promotion involved?
- What do learners think they will achieve?
- What is their attitude towards the ESP course? Do they want to improve their English or do they resent the time they have to spend on it?

**2. How do the learners learn?**

- What is their learning background?
- What is their concept of teaching and learning?
- What methodology will appeal to them?
- What sort of techniques bore/alienate them?

**3. What sources are available?**

- Number and professional competence of teachers;
- Attitude of teachers to ESP;
- Teachers' knowledge of and attitude to subject content;
- Materials;
- Aids;
- Opportunities for out-of-class activities.

**4. Who are the learners?**

- Age/sex/nationality;
- What do they know already about English?
- What subject knowledge do they have?
- What are their interests?
- What is their socio-cultural background?
- What teaching styles are they used to?
- What is their attitude to English or to the cultures of the English speaking world ?



Finally, as Allwright (1982, quoted in West, 1994) says the investigation of learners' preferred learning styles and strategies gives us a picture of the learners' conception of learning.

#### 2.5.4. Means Analysis

Means analysis attempts to explore the factors that Munby excludes (West, 1998), i.e. logistics and pedagogy issues that led to debate about practicalities and limitations in the implementation of needs-based language courses (West, 1994). Dudley-Evans and St. John (1998: 125) state that means analysis serves us by providing us with "*information about the environment in which the course will be run*" and thus attempts to adapt the ESP course to the cultural environment in which it will be run. One of the main issues means analysis is concerned with is "*an acknowledgement that what works well in one situation may not work in another*" (Dudley-Evans and St. John, 1998: 124), and that, as noted above, ESP syllabi should be sensitive to the particular cultural environment in which the course will be imposed. Or as Jordan (1997) says, it should provide us with a tool for designing an environmentally sensitive course.

Besides, Swales (1989, quoted in West, 1994) list five factors which relate to the learning environment and should be considered by curriculum specialists if the course is to be successful.

These considerations are:

- Classroom culture;
- EAP staff;
- Pilot target situation analysis;
- Status of service operations;
- Study of change agents.

#### 2.5.5. Register analysis

Changing approaches to linguistic analysis for ESP entails not only changing in methods but also altering ideas about what to include in language and its description (Robinson, 1991). One of the earliest research in this field concentrated on vocabulary and

grammar (the sentence elements). This phase took place primarily in the 1960s and early 1970s and linked with Peter Strevens, Jack Ewer, and John Swales's work. The main reason behind register analysis was the pedagogical one to make the ESP course more appropriate and relevant to the students' needs (Hutchinson and Waters, 1987). Register analysis, also called "lexicostatistics" by Swales (1988:13, quoted in Dudley-Evans and St. John, 1998) and "frequency analysis" by Robinson (1991: 23) focused on the grammar and "structural and nonstructural" vocabulary (Ewer and Latorre, 1967: 223, quoted in West, 1994).

The assumption behind register analysis was that, while the grammar of scientific and technical writing does not differ from that of general English, certain grammatical and lexical forms are used much more frequently (Dudley-Evans and St. John, 1998). As noted, register analysis operates only at word and sentence level and does not go beyond these levels. The criticism on register analysis can be summarized in the following:

- it restricts the analysis of texts to the word and sentence level (West, 1994);
- it is only descriptive, not explanatory (Robinson, 1991);
- most materials produced under the banner of register analysis follow a similar pattern, beginning with a long specialist reading passage which lacks authenticity (Dudley-Evans and St. John, 1998).

### **2.5.6. Discourse Analysis**

Since register analysis operated almost entirely at word and sentence level, the second phase of development shifted attention to the level above the sentence and tried to find out how sentences were combined into discourse (Hutchinson and Waters, 1987). Also, West (1998) says that the reaction against register analysis in the early 1970s concentrated on the communicative values of discourse rather than the lexical and grammatical properties of register. The pioneers in the field of discourse analysis (also called rhetorical or textual analysis) were Lackstorm, Selinker, and Trimble whose focus was on the text rather than on the sentence, and on the writer's purpose rather than on form (Robinson, 1991). In practice, according to West (1994), this approach tended to focus on the use of sentences in the performance of communication acts and the generation of function-based materials.

One of the constraints of discourse analysis is the fragmentation of its treatment, it identifies the functional units but provides limited guidance on how functions and sentences fit together to create text (West, 1994). There is also the risk that the findings of discourse analysis, which concern texts and how they function as discourse pieces, do not take enough consideration of the academic or business context in which communication takes place (Dudley-Evans and St. John, 1998).

### 2.5.7. Genre Analysis

Dudley-Evans and St. John (1998: 87) provide a clear distinction between discourse analysis and genre analysis:

"Any study of language or, more specifically, text at a level above that of sentence is a discourse study. This may involve the study of cohesive links between sentences, of paragraphs, or, the structure of the whole text. The results of this type of analysis make statements about how texts -any text work is applied discourse analysis. Where, however, the focus of text analysis is on the regularities of structures that distinguish one type of text from another, this is genre analysis and the results focus on the differences between text types, or genres. "

The term "genre" was first used by Swales (1981, quoted in Robinson, 1991). His definition of genre is: "*a more or less standardized communicative event with a goal or set of goals mutually understood by the participants in that event and occurring within a functional rather than a personal or social setting.*" (Swales, 1981: 10-11, quoted in Robinson, 1991). Bhatia who is one of the researchers in the field of genre analysis defines 'genre analysis' as the study of linguistic behavior in institutionalized academic or professional setting (Bhatia, undated). Moreover, he distinguishes four, though systematically related, areas of competence that an ESP learner needs to develop so as to get over his/her lack of confidence in dealing with specialist discourse. These four areas are:

1. **Knowledge of the Code** which is the pre-requisite for developing communicative expertise in specialist or even everyday discourse.
  
2. **Acquisition of Genre Knowledge** which is the familiarity with and awareness of appropriate rhetorical procedures and conventions typically associated with the specialist discourse community.
  
3. **Sensitivity to Cognitive Structures**, that is, since certain lexical items have specialist meanings in specific professional genres, a number of syntactic forms may also carry genre specific restricted values in addition to their general meanings codified in grammar books. Thus, it is imperative that the specialist learner becomes aware of restricted aspects of linguistic code in addition to the general competence he or she requires in the language.
  
4. **Exploitation of Generic Knowledge**, that is, it is only after learners have developed some acquaintance or, better yet, expertise at levels discussed above, that they can confidently interpret, use or even take liberties with specialist discourse. Genre-analysis approach goes two steps beyond register analysis and one step beyond discourse analysis (though it draws on the findings of both).

As Bhatia (undated) states the main benefit of a genre-based approach to the teaching and learning of specialist English is that the learner does not learn language in isolation from specialist contexts, but is encouraged to make the relevant connection between the use of language on the one hand and the purpose of communication on the other, always aware of the question, why do members of the specialist discourse community use the language in this way? Different approaches to needs analysis attempt to meet the needs of the learners in the process of learning a second language. Not a single approach to needs analysis can be a reliable indicator of what is needed to enhance learning. A modern and comprehensive concept of needs analysis is proposed by Dudley-Evans and St. John (1998: 125) which encompasses all the above-mentioned approaches. Their current concept of needs analysis includes the following:

- environmental situation - information about the situation in which the course will be run (means analysis);
- personal information about learners - factors which may affect the way they learn (wants, means, subjective needs);
- language information about learners - what their current skills and language use are (present situation analysis);
- learner's lacks (the gap between the present situation and professional information about learners);
- learner's needs from course - what is wanted from the course (short-term needs);
- language learning needs - effective ways of learning the skills and language determined by lacks;
- professional information about learners - the tasks and activities English learners are/will be using English for (Target Situation Analysis and objective needs);
- how to communicate in the target situation –knowledge of how language and skills are used in the target situation (register analysis, discourse analysis, genre analysis).

Today, there is an awareness of the fact that different types of needs analyses are not exclusive but complementary. All the works done in ESP have sought to promote the communicative nature of language teaching, because starting with register analysis, ESP teachers have been very concerned with the needs of students as they used the language. For this reason, today needs analysis should not be (and is not) of concern only within the field of ESP, but also that of General English because the needs of the learners is of paramount importance in any language process. In short, Needs analysis may be seen as a combination of TSA and PSA. One cannot rely either on TSA or PSA as a reliable indicator of what is needed to enhance learning and reaching the desired goals. Thus, The Target-Situation Analysis and the Present-Situation Analysis are the two landmarks in needs analysis studies. Researchers continue to use these models as their theoretical base depending on the circumstances of the conducted research. In the present research work, the researcher attempt to adopt a comprehensive model which integrates all the previously described approaches.

## 2.6. Steps in Needs Analysis

According to Brown (1995) there are three steps in needs analysis: first, making the basic decisions about the needs analysis; second, gathering information; and third using this information. Before any needs analysis study takes place, researchers must make certain decisions about the people involved in the needs analysis, and the types of information to be gathered. What will be asked in the needs analysis and how the points of view and program philosophy might interact is important in needs analysis.

Four categories of people may be involved in a needs analysis. These are the target group, the audience, the analysts and the resource group (Brown, 1995). The target group refers to the people about whom information will be collected. The audience refers to all people who will apply the results of analysis, such as teachers and program administrators. The needs analysts are those who are responsible for conducting the needs analysis, in this case an EFL teacher. The last group is the resource group, which consists of any people who may serve as sources of information about the target group. Students, EFL and content teachers may be in the resource group (Brown, 1995).

Gathering information is the next step. There are various techniques that can be used for collecting data for a needs analysis. Information may be gathered through existing information, tests, observations, meetings, interviews, and questionnaires. Brown (1995) claims that the first three instruments may leave the needs analysts in the position of being an outsider, but the other three force the needs analysts back into the process of actively gathering information from the participants.

First, Tests can provide information about general ability levels and specific language problems of students. Next, Observations involve watching individual or group of students and recording their behaviors. Moreover, Interviews are used to gather personal information and views privately or in small groups with questions that allow more completed response than with questionnaires. Furthermore, Meetings can be useful to reach a consensus among people who have different ideas. Finally, the last tool is the Questionnaire which is more efficient for gathering information on a large scale, requires less effort by the researcher (Brown, 1995; Hutchinson & Waters, 1987). Questionnaires are also easy to prepare and permit open-ended questions to be included.

The last step is using collected data, which will be analyzed with statistical techniques and interpreted by the researcher. Reliability, validity, and usability compose the sound information gathering procedure. Brown (1995:51) defines reliability “*as the consistency with which a procedure obtains information*”. Reliability must be considered when selecting or creating a procedure for analyzing needs. Reliability can be checked statistically or by commonsense examination of what happens when the procedure is used. If results are the same when it is used repeatedly or by a different analyst, such consistency is an indication that the procedure is fairly reliable.

There are two types of reliability one is internal reliability and the other is external reliability. If someone else collects the same data and gets the same results, it means that its internal reliability is high. To check the internal reliability researchers can get someone and have two interpretations, member check, and make sure researchers have all tools accessible. However, external reliability can be checked by having the procedure replicated by another researcher. If someone applies the procedure in another place and obtains the same result, it means that its external reliability is high.

Brown (1995 :51) defined validity as “*a degree to which the instrument is measuring what it claims to measure*”. Each procedure involved in a needs analysis should be carefully examined question by question to determine to what degree it appears to measure what it claims to be measuring and to what degree that measurement is appropriate for the particular needs analysis being conducted. If the instrument is consistent with each of these, its internal validity is high. External validity concerns issues of the degree to which the sample studied represents the larger group that the study wishes to generalize to. Usability is defined by Brown (1995:51) as “*...the degree to which a procedure is practical to use, administer, score, and interpret*”. In other words, usability refers to the efficiency in terms of the necessary equipment, the time needed for setting, administering or making the test, that is how easy and quick it is to set or score the test, how much it costs, how simple it is, how much equipment is required to administer it.

The procedure used in the study should be practical, easy to practice and evaluate. Reliability, validity, and usability are interrelated and they are equally important. A procedure should be reliable, valid, and usable before it is used in any needs analysis. Collected data should be analyzed to obtain the results of the investigation. The next step is the interpretation

of the results and the discussion. The analysis and interpretation of the results need to be reported in order to be used in curriculum design.

### 2.7. Importance of Needs Analysis

Needs analysis is considered as a starting point for course design, syllabus design, materials selection, assessment or even classroom activities. Berwick (1989) points out that needs assessment is essential for decision makers to design the course. Given the information about learner needs a course designer will be able to produce a specification of language skills, functions, and forms as required in the learner needs profile. McDonough (1984 :29) states that the language needs of the learner should be the bases for course development. He asserts that, "*information on his or her language needs will help in drawing up a profile to establish coherent objectives, and take subsequent decisions on course content*".

Riddell (1991 :75) points to the crucial role that needs analysis plays in syllabus and course design. He states, "*...through it [needs analysis] the course designer becomes equipped to match up the content of the program with the requirements of the student body [what learners need]*". With reference to the third world context, he considers teaching materials as an important factor. Teachers can use published materials, adapt or write in house materials. Whatever option is taken, the assessment of student needs has to be taken into consideration. Bowers (1980) notes the importance of needs as a guide in syllabus development, materials and examination.

The importance of needs is quoted in Clark (1978), who asserts that, "*The first step in any language teaching project must surely be to design a syllabus that will reflect the language needs and wishes of the learner concerned, and that will accord with a responsible theory of language learning*" (p.67 in Bowers). According to Jordan (1997 :22), "*needs analysis should be the starting point for devising syllabus, course materials and classroom activities*". In Shutz and Derwing (1981: 30), needs analysis is regarded as the first step that any course planner should take. They asserted:

"Many well-intentioned language programs ... have foundered because either no consideration was given to the actual use the learner intended to make of the language or because the list of uses drawn up by the course designer was based on imagination rather than an objective assessment of the



learner's situation, and proved to be inaccurate and in many cases entirely inappropriate to his real needs."

Recognizing that language problems can also be traced through sociological context, Schutz and Derwing agree that, "...a detailed analysis of the situations of language use is a pre-requisite even to the selection of the particular linguistic forms or structures that ought to be taught." (p.31). Brindley (1980 :64) argues that objective needs should be used as a starting point in course design. He states, "*If instruction is to be centered on the learners and relevant to their purposes, then information about their current and desired interaction patterns and their perceived difficulties is clearly helpful in establishing program goals which in turn can be translated into learning objectives.* He further claims that needs analysis is crucial in two distinct ways; (1) as a guide in setting broad goals, and (2) as a guide in the learning process.

We can infer that needs assessment plays a very important role in ESP, it occupies a great measure on the ESP scale. The ESP learners cannot learn ESP courses well and cope well with what they have learnt if they are not aware of their 'needs'. Therefore, 'needs' is an essential element in the learning process. Further, the ESP practitioners cannot teach the ESP courses correctly and handle the teaching process properly unless they fully understand their learner's 'needs'. Hence, 'needs' becomes the core of the teaching process.

Farhat (2001) states that:

The basic rationale for needs analysis, is the generally accepted fact about the impossibility of learning the language in its entirety. Only part of it can be learned and perhaps mastered. That is why it is important to know why one needs to learn a language and the context within which he learns it, and the situation in which he will use it later.

Furthermore, the ESP designers cannot elaborate appropriate and successful ESP courses unless such courses are based on analyzing the learners' 'needs' for the courses. Needs analysis can then be considered the core and successful guide in course designing. However, the ESP graduates working in the vocational field cannot practise what they have learnt and function effectively, if they do not realize the 'needs' of the situation, therefore,

needs analysis is regarded as an important event in the field of application. Above all, one of the main principles of ESP says: “*tell me what you ‘need’ English for and I will tell you the English that you ‘need’*”(Hutchinson and Waters, 1987). In reality, ESP places great emphasis on ‘needs analysis’ at every stage, i.e. course designing, learning / teaching process and application. Thus, Needs analysis should be carried out throughout the course in order to adjust the learning objectives as the need arises. In other words, feedback from the learner can be used as basis for modifying learning objectives. Savage and Storer (1992) discuss the role that learners can have in the process of needs assessment. Learners can contribute substantially to the course if they are actively involved at all stages of the course design; at the initial, during, and final stages of course evaluation.

## **2.8. Course design**

Once we have analyzed the needs of the learners, we can design a syllabus for our course. By conducting a thorough needs analysis, we can answer WHY learners need to learn, WHO is going to be involved in the process, WHERE the course will take place, and WHEN it will be taught (Hutchinson and Waters, 1987, p.21-22).

The next phase would to tackle the WHAT and HOW of the course. By WHAT we mean the language elements and what topics and areas learners need to learn and what level of proficiency is to be fulfilled (Hutchinson and Waters, 1987: 21-22). By HOW we mean “*how to transform subject matter knowledge into something that can be taught*” (Graves 2000:4). The diagram below (2.2) encompasses all the elements that the above mentioned questions made reference to.

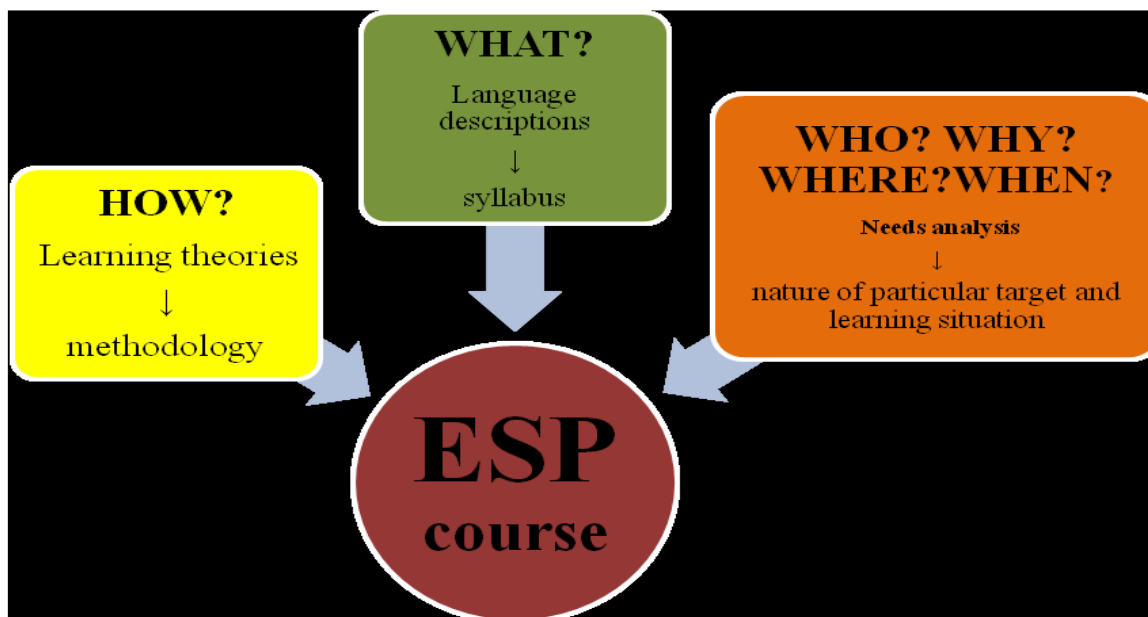


Figure 2.2: Factors affecting ESP course design.

Initially, the data should be interpreted so as to produce a design, select materials, and develop a suitable methodology for teaching them. Hutchinson and Waters (1987:65) points out that there might be a conflict between the learners' needs and wants. They state that "*there is no one-to-one transfer from needs analysis to course design*". While there are many different approaches to course design, Hutchinson and Waters (1987:65) identify three main branches: language-centered, skillscentered, and learning-centered approach.

In language-centered approach the practitioner designs a syllabus as closely to target situation findings as possible. Therefore only a very small part of English is taught to the learners. The learner is used only to identify the restricted area of English that will be taught, thus making this approach the opposite of learner-oriented (Hutchinson and Waters, 1987:67).

On the other hand, skills-centered approach looks at "*the competence that underlines the performance*" (Hutchinson and Waters, 1987: 69). This approach is thus not goal-oriented but rather focuses on developing learners' skills and strategies, which can be used after the ESP course is finished. Skills-centered approach does not look at the surface performance, or the general objectives of the course, but rather focuses on more specific competence, or specific objectives of the course. Holmes (1982) claims that skills-centered approach is realistic in taking students' abilities into consideration, enabling them to achieve what they can, given their language skills, and motivating them to continue, after the course is over.

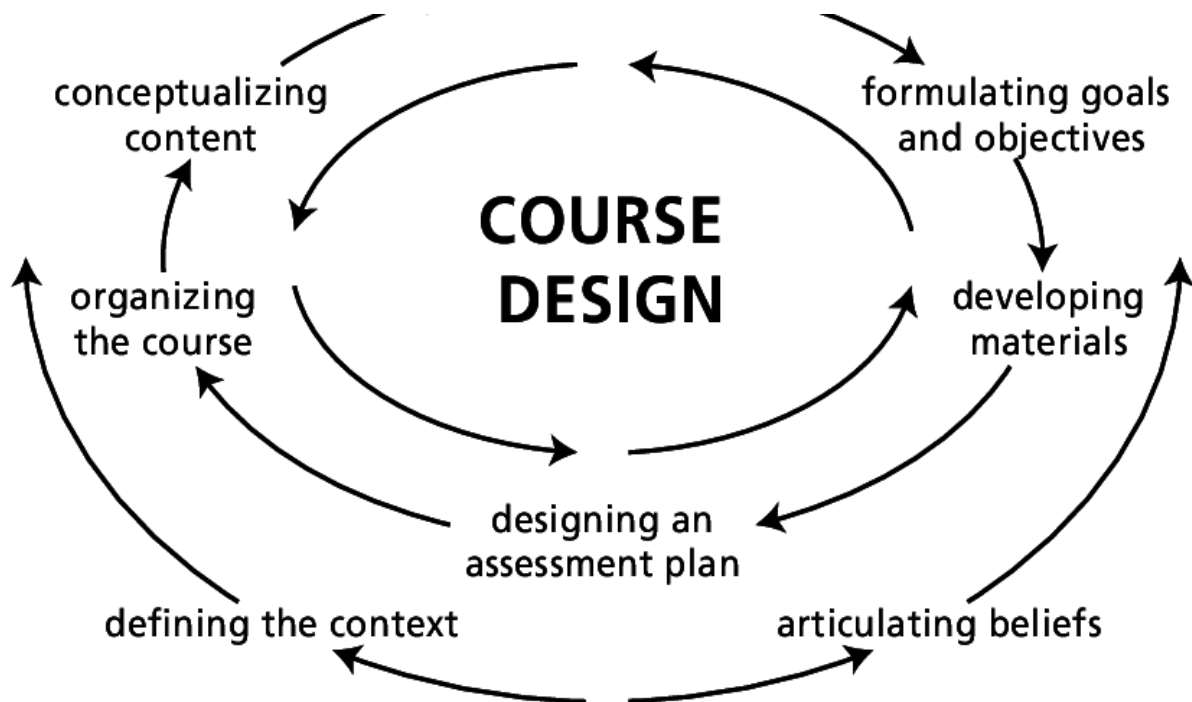
Lastly, learning-centered approach emphasizes that “*learning is totally determined by the learner*” (Hutchinson and Waters, 1987:72). This approach is not only concerned with learners’ competence, but also with how the learners acquire it. Unlike the other two, learning-centered approach “*takes account of the learner at every stage of the design process*” (p.74). It means that a syllabus based on this approach must be flexible and dynamic, incorporating feedback tools as well in order to respond to the developments in the learners’ needs throughout the whole course.

The choice of course design is crucial as it will influence the production of the syllabus, selection and adaptation of the content of the course, developing the methodology for teaching the materials, and defining the evaluation process in order to see if the established needs were met. Looking back at the course designs described above, a conclusion can be made that learning-centered approach would be the most suitable in the case ESP courses. This particular course design would be efficient as the students of this course are well aware of what kind of skills they need to possess in order to be more effective. Since the course will be designed according to the students’ needs, a feedback along the way will represent a crucial element in responding to the students’ demands. Moreover, the pace of the course and amount of materials might be adapted as well so that they correspond with the students’ needs.

### **2.9. Steps and Procedures in Designing the ESP Course**

Within the same context, Graves suggested a framework of ESP course-development which has been followed by the researcher in the process of ESP course design. Graves (1996 and 2000) proposed a systematic syllabus design consisting of six steps. Those steps are:

1. Conducting students’ needs assessment, followed by needs analysis
2. Determining the goals and objectives of the course.
3. Conceptualizing the content.
4. Selecting and developing materials and activities.
5. Organizing the content and activities.
6. Evaluating.



**Figure 2.3: Graves' (2000) model of curriculum design.**

Graves (2000 :15) has noted that ESP course developers are not required to give priority to one step over the other, stating that “*there is no hierarchy in the processes and no sequences in their accomplishment. As a course designer, you can begin anywhere in the framework, so long as it makes sense to you to begin where you do*”.

### **2.9.1. Step 1 : Conducting Needs Analysis**

Regarding needs analysis in ESP, Basturkman (2010:19) observes:

Needs analysis in ESP refers to a course development process. In this process the language and skills that the learners will use in their target professional or vocational workplace or in their study areas are identified and considered in relation to the present state of knowledge of the learners, their perceptions of their needs and the practical possibilities and constraints of the teaching context. The information obtained from this process is used in determining and refining the content and method of the ESP course.

Hyland (2006 : 73) asserts that *“needs analysis refers to the techniques for collecting and assessing information that is relevant to course design. It is the means of establishing the how and what of a course. It is a continuous process, since we modify our teaching as we come to learn more about our students, and in this way it actually shades into evaluation – the means of establishing the effectiveness of a course.”*

Needs analysis is neither unique to language teaching nor within language training but it is often seen as being the cornerstone of ESP and leads to a very focused course.(Dudley – Evans and St. John, 1998). According to Munby (1978), the work done in the field of ESP has generally followed the assumption that if a group of learners’ English language needs can be accurately identified and specified, this can be used to determine the content of a language programme that will meet these needs. Basturkman (2010 :138) has also observed in this regard that *“needs analysis has long been argued to be the cornerstone of ESP”*. Therefore, it is obvious that a thorough organizational and instructional needs assessment lies at the heart of a well-designed, effective ESP course.

By conducting an organizational and instructional needs assessment, the ESP practitioner tries to discover information about the needs of his/her learners and other stakeholders. The term ‘stake holder’ refers to all the people who have an interest in the specific ESP course that is being developed. According to Friedenberget al. (2003), stake holders are the people, who for different reasons want the training program to succeed and stake holders include the client or sponsor who requests that the course should be offered (a university department, company/organizational or individual) learners, the teachers, and potentially others.

### **2.9.1.1. Gathering Information for the TSA and PSA**

How ESP practitioners gather information for the Target Situation Analysis (TSA) and Present Situation Analysis (PSA) will depend on their specific situation. The effective ESP practitioners will gather information from a variety of sources to build a complete view of the learners' current skills and training needs and gain crucial support for the training program from key stake holders. This can help the training provider negotiate more realistic outcomes within a given time frame or gain additional resources to achieve the desired goals.

### 2.9.2. Step2 : Determination of Goals and Objectives of the Course

A goal is something that one wants to achieve and in the case of language learning, goals are, general statements of the overall, long term purpose of the course but they are not vague. In Graves' words, '*goals are a way of putting into words the main purposes and intended outcomes of your course and if we use an analogy of a journey, the destination is the goal; the journey is the course*' (2000 :75). Goals are related to the acquisition of a job in the future or communication of the target language community (Harmer, 1991). They should not aim only at the acquisition of certain knowledge and skills but also at the development of a positive attitude towards language and culture. Goals should be realistic; otherwise the students would be de-motivated (Richards, 1990).

Objectives, on the other hand, are the specific ways in which the goals will be achieved and objectives serve as a bridge between goals and needs and generally several objectives make up a goal (Graves, 2000). They may refer to '*activities, skills, language type or a combination of them all*' (Harmer, 1991:269). Objectives should be congruent to the goals and relevant to how the teacher conceptualize the content of the course (Nunan, 1988). Formulating goals and objectives for a particular course is very important in ESP course design as it allows the ESP practitioners to create a clear picture of what the course is going to be about. Clear understanding of goals and objectives will help teachers to be sure about what material to teach, and when and how it should be taught.

### 2.9.3. Step 3 : Conceptualizing the ESP Course Content

ESP practitioners mostly use exactly the same textbooks and syllabuses while teaching different students with the same or similar major. But students with different majors and their needs are different and with the rapid development of the ESP world, changes in students' needs and interests are inevitable. Therefore, in establishing a learner-centered approach there should be a shift in ESP pedagogy in the selection of the content of the course and this shift should be aimed at serving the learners' interests and needs. Conceptualizing the ESP course content in a proper way could serve those interests and needs. According to Graves (1996 and 2000), conceptualizing the content means figuring out what aspects of language and language learning are included, emphasized and integrated in a course. Therefore, when taking into account information about the students, goals, and objectives, ESP teachers need to determine

which aspects of ESP learning will be included, emphasized, integrated, and used as a core of the course to address students' needs and expectations.

There are different ways of conceptualizing the content. The traditional way of conceptualizing content in an ESP course involves teaching grammatical structures, sentence patterns and vocabulary. It is known as the syntactic approach to syllabus design, but it has lost much of its appeal after the advent of what is known as communicative approach in ESP. Conceptualizing the content is not a context-free process ; therefore, the communicative approach should be followed in conceptualizing ESP content. According to Van Ek as cited in Graves (1996), the communicative approach is based on ideas about language, and about purposes of language learning, and it has added several dimensions to conceptualizing content. It introduced the dimension of language functions such as greeting, apologizing and persuading and conveying information and the dimension of notions such as time, space and relationship to specific topic related such as home, weather and personal identification.

Moreover, communicative language teaching is seen as being used for communicative purposes in situations with other people, which calls on the learner to pay attention to both the content of the language and its appropriateness with respect to formality, non-verbal behavior, tone and so on. For example, a communicative situation includes such an action as ordering food in restaurant and requesting information at a bank and so on. And as the proficiency movement in language teaching gained popularity, and the development of proficiency guidelines have emphasized the four skills based approach to syllabus design (Omaggio Hadley 1993). Yalden (1983 : 124) has also suggested that different elements (linguistic forms; functional, discourse, and rhetorical components; specialized content and surface features of language) should be emphasized in different proportions at various phases of language learning and incorporated into the syllabus. Consequently, syllabus grid made on the basis of the above approach would look as follows:

		Content
Culture	Tasks and activities	Competencies



Listening skills	Speaking skills	Reading skills	Writing Skills
Functions	Notions and topics		Communicative situations
Grammar	Pronunciation		Vocabulary

**Table 2.1 : Syllabus Grid taken from (Graves, 1996, p.34).**

Thus, while conceptualizing the ESP course content, ESP teachers can aim at focusing on developing not only grammatical competence of ESP learners but also communicative competence, which encompasses grammatical competence, sociolinguistic competence, strategic competence and discourse competence, (Canale, 1983). It should also become clear that all these skills and aspects of the language are interwoven in the real- life communication. Therefore, they should be treated, taught, and tested as one inseparable unit as suggested above.

#### **2.9.4. Step 4 : Selecting and Developing ESP Materials and Activities**

The selection of materials may require the development of new material. It may also require collecting different materials or adapting current material to suit their requirements and interests of the students. In other words, if an ESP teacher is pushed for time and dependent on a textbook, he/she can adjust it to the needs and interests of his/her learners and use it over and over again. Within this context, Nation and Macalister (2010) have also proposed that language textbooks should be adopted and adapted according to the learners' context and needs. Moreover, ESP materials should be authentic and genuine. (Nunan, 1985). With regard to the use of materials in the ESP classroom, Harding (2007 :10-11) states:

- Use contexts, texts and situations from the students' subject area. Whether they are real or simulated, they will naturally involve the language the students need.
- Exploit authentic materials that students use in their specialism or vocation –and don't be put off by the fact that it may not look like 'normal English'.
- Make the tasks authentic as well as the texts. Get the students doing things with the material that they actually need to do in their work.

Basturkmen (2010:63) also notes that authentic materials are very essential in an ESP course “*Authentic texts play an important role in demonstrating 'real' language use. If we aim to demonstrate to our class of nursing students the forms and features of nursing care*

*plans, we would generally wish to show the class samples of authentic care plans.*” However, finding suitable authentic texts is not always easy. According to McDonough (1984), the source of teaching materials can be published materials (textbooks, journals, and magazines), real speech (lecturers, hotel communication, and seminars), specialized texts and materials that are adapted and adjusted from real- world materials. Furthermore, learners’ tasks and activities should assist them to cope with situations related to their future job or study.

Besides, in order to motivate ESP learners, these activities should be interesting (Xenodohidis, 2006). Simulation games and problem solving techniques should be suitable for them. Moreover, communication situations need to engage students since they add a distinct dimension to language learning. In this respect, Graves (1996:37) states, “*such an approach may facilitate the search for materials in that emphasis is not the materials themselves but on what the students do with them.*”

### **2.9.5. Step 5 : Organization of Course Content and Activities**

Course content organization content has to do with sequencing or grading. It is essential because it provides the teachers and learners with a clear idea of the items that will be taught (Xenodohidis, 2006). Grading or sequencing is the organization and arrangement of the content of a language course or textbook so that it is displayed in a useful manner. Gradation would influence the order of the presentation of words, word meanings, tenses, structures, topics, functions, and skills. Gradation can be based on the difficulty of an item, its frequency, or its significance for the learner (Richards, 2006).

According to Richards (2001) and Richards and Schmidt (2010), principles on which sequencing of content in language teaching courses should be based include a number of important parameters: simple to complex (easier items occur before more difficult ones), chronology (items occur according to the order in which events naturally occur, e.g. listening before speaking), need (items occur according to when learners are most likely to need them outside of the classroom). In addition, we can cite prerequisite learning (an item is taught because it provides a foundation for the next step in the learning process), whole to part or part to whole (the overall structure of an item, such as a paragraph, may be taught before its components part, or vice versa), spiral sequencing (items are recycled but with new aspects of the item appearing with subsequent appearances).

According to Graves (2000 :38) the idea of sequencing material is based on two principles; building and recycling. Building can go from the simple to more complicated, from concrete to more open, while recycling implies learners dealing with materials previously taught in a distinct manner “*in a new skill area, in a different type of activity or with a new focus*”. There are two other ways to consider course organization as a cycle or as a matrix. In a cyclical approach, the teacher introduces a cycle of activities following a consistent sequence. In a matrix approach, the teacher works with some activities and as time passes, decides with which ones to continue depending on the interests of the students and availability of the materials (Graves, 1996).

All or some of the above activities may be done following a content based instruction (CBI) approach, also known as Content and Language Integrated Learning (CLIL), in this regard, Richards et al. (1992 :125) point out : “*a method that integrates language instruction with subject matter instruction in the target language, for example, studying science, social studies or mathematics through the medium of English in a content-based ESL program*”. Within the same context , Hyland (2006 : 86) has also commented:

Content-based syllabuses are thematic, sheltered or adjunct types, differing in their orientations towards language and content. Theme-based models emphasize language competence while sheltered models attempt to help students master content material and so are more discipline-specific (Brinton et al., 1989:18). In the adjunct model the language course is linked with a content course which shares the same content base, the rationale being that students will develop strategies and skills which will transfer from one course to the other. In this type of syllabus, language is also seen as functional and is integrated with the teaching of content.

Brinton (2003) has also noted in this account that principles for CBI include basing instructional decisions on content rather than on language criteria, integrating the four skills of writing, reading, listening and speaking into the course. Besides, they involve students in all phases of the learning process, choosing content for its relevance to students’ lives,

interests and/or academic goals, selecting authentic texts and tasks and drawing students' overt attention to language features of [specialized discourse], which is in fact discourse analysis meaning descriptions of the language use in a particular domain.

Specialized discourse analysis is considered to be an important step in ESP course design since an ESP course would aim at offering realistic descriptions of discourse derived from empirical investigations of communication and language use in the community or specialist field. Admitting that specialized discourse analysis in ESP course design is invaluable, Basturkmen (2010 : 36) too, has equally observed:

ESP endeavours to teach the language the learners need to communicate effectively in their work or study areas. Given this central premise, it goes without saying that the language content of the course needs to be based on detailed, accurate and realistic descriptions of how language is actually used in these areas.

Dudley-Evans (2001 :134) has proposed that, given the significance to text analysis, the next step after needs analysis in ESP course development is '*when the ESP teacher considers the (written or spoken) texts that the learner has to produce and/or understand, tries to identify the texts' key features and devises teaching materials that will enable learners to use the texts effectively*'. As for sequencing, the syllabus' content and tasks can also be sequenced based on the standard operational procedure of the related job. It is necessary to identify the tasks to be conducted in each stage. Those identified tasks will then be sequenced depending on the operational procedure. The sequenced tasks will be analyzed to disclose the language functions and language expressions required for each of these tasks.

It is possible to analyze and evaluate certain information related to the cultural understanding and standard performance needed for those tasks. This approach is called Task-Based language Teaching (TBALT). The Task-based approach to language teaching is a relatively new approach found on the linguists and psychologists results and findings.

This approach runs against the principle of traditional learning methods such as PPP (presentation, practice, production) model of teaching (Foster, 1999). Richards et.al. (2010 :585) defined the task-based syllabus, which is the backbone of TBA as "*a syllabus which is organised around TASKs, rather than in terms of grammar or vocabulary. For*

*example, syllabus may suggest a variety of different kinds of task which the learner are expected to carry out in the language, such as using the telephone to obtain information; drawing maps based on oral instruction; giving orders and instruction to others, etc.*". TBLT takes into account the need for authentic materials. It is a more effective way of learning a language since it provides a purpose for the use and learning of a language other than simply learning language items for their own sake. It emphasizes the need for designing relevant activities for the real world language needs of the students. It suggests that the activities in which the language is used to complete meaningful tasks enhance learning. TBLT proposes the teaching of the real tasks that are necessitated in the future job or study (Nunan, 1988). Breen (2001 :153) noted:

Two main tasks types are identified in task-based syllabus design: a syllabus may be constituted of (1) communicative or target-like tasks or (2) metacommunicative or learning tasks. The former are those involving learners in sharing meaning in the target language about everyday tasks....The second task type is facilitative of the learner's involvement in communicative or target like tasks. It involves learners in sharing meaning about how the language works or used in target situations and/or sharing meaning about students' learning processes. Furthermore, ESP teachers sometimes find it difficult to motivate their professionally oriented students for language learning when they find themselves troubled by lack of sufficient content knowledge and when they find the textbooks to be boring. In this case TBLT with real-life tasks may raise motivation among the students.

### **2.9.6. Step 6 : Evaluation**

Evaluation is the last, but not the least important stage in ESP course design. Hutchinson et al. (1987) have noted that evaluation consists of two forms: learner assessment and course evaluation. They added that learner assessment should be done in order to decide whether the desired proficiency level of students to perform the communicative tasks have been achieved and that results of this kind of evaluation helps all stake holders to '*decide whether and how much language instruction is required*' (p.114). Hughes (2003) has discussed four purposes for language testing: to measure proficiency, to diagnose specific strengths and weaknesses, to place students in a course or program and to assess their achievement in a course or program.

On the other hand, Hyland (2006 :99) thinks that :

Assessment refers to the ways used to evaluate information about a learner's language ability or achievement. It is an integral aspect of the teaching–learning process and central to students' progress towards increasing control of their skills and understandings. It is also an everyday classroom practice, as teachers continually make judgments about the progress, strengths and weaknesses of their learners and communicate these to students. Assessment therefore has both a teaching and testing function, and a distinction is often made between formative and summative assessment. As a formative process, assessment is closely linked with teaching and with issues of teacher response, or feedbacks, allowing the teacher to advise students, monitor learning and fine-tune instruction. Summative assessment, in turn, is concerned with 'summing up' how much a student has learned at the end of a course.

However, both formative and summative assessment should be followed by ESP practitioners while assessing students and as such they should structure their classroom activities so that they can assess their students while the students are participating in a course. And the summative assessment form should be used to assess students' achievement at the end of the course.

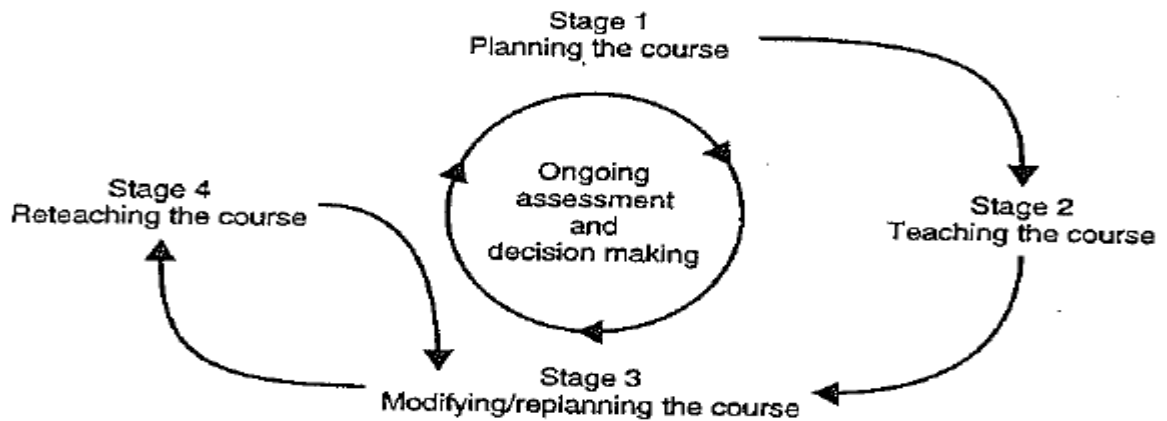
ESP practitioners should evaluate their courses to improve and promote their effectiveness by filling the needs of the stake holders and as such, course evaluation should be conducted to find out whether the course objectives and goals are being achieved or have been achieved. Hutchinson et al. (1987 :152) have observed in this respect:

Since the ESP course exists to satisfy a particular educational need, evaluation helps to show how well the course is actually fulfilling the need. A sponsor may also wish to be supplied with clear information about the suitability of the course and may well base decisions as to further investment and support on the results.

Thus, all the stake holders should be involved in the evaluation process and through the use of questionnaires, surveys, talks, etc., ESP instructors can ask learners to convey their opinions on the topics, teaching techniques, tasks, and the role and performance of teachers, etc. Evaluation of the course is an essential phase, the ESP practitioner should take into account all his learners' comments, suggestions and criticism planning and teaching future ESP courses.

### 2.10. Development of an ESP Course

The development of a course is an on-going process. This process of development is indicated in the figure below:



**Figure 2.4 :Development Process of an ESP course :(Graves,1996)**

According to Graves (1996), the design of the course involves the planning, teaching and modification of the teaching plan, during and after the end of the course. Graves (2000) has pointed out in this context that *“teaching is an organic, unpredictable, challenging, satisfying and frustrating process and it is not an imperfect craft but a dynamic one”*. In the classroom, events often take place in an unpredictable or unplanned manner. Hence, the next course objectives of the teacher will alter according to what occurred in an unexpected way in the classroom. Besides, the practitioner will have to set new goals and objectives of the course as the needs of the new students will change. In other words, as time goes by, we may have learners with different needs and backgrounds, and this will automatically lead course developers to modify every course and adapt it to the needs and requirements of a specific group. In short, ESP teachers should be innovative and flexible in order to cope with these challenges.

**Conclusion**

To conclude, Needs Assessment or Needs Analysis in ESP plays a crucial role in both the learning and teaching processes. In the former, it is crucial for the learners to present their views regarding their needs in order to enable the finding out of materials which would match their accurate needs as they are in the awareness stage where they can easily perceive their accurate needs. In the latter, pedagogically, it is very worthwhile for ESP practitioners to juxtapose their perception to the students' perception in order to extract suitable materials.



# Chapter Three

## *Methodology and Research Design*

## Introduction

This chapter presents the methodology and design followed in order to fulfill the objectives of the study. It is divided into five main sections. The first section discusses the research paradigm which was employed; the second section describes the study sample while the third explains the research design process, the methods utilized for the collection of data and the procedures followed in data analysis. The fourth section discusses the reliability of this study and the fifth clarifies the ethical issues that have been raised. Lastly, the chapter concludes with a brief summary of the entire work.

### 3.1. Research Paradigm

Each research paradigm is suitable for particular aims and research questions (Cohen and Macaro, 2007: 3). A paradigm is a set of basic beliefs through which researchers view and understand the world (Guba and Lincoln, 1994; Lynch, 2003; Richards, 2003; Creswell, 2009; Croker, 2009). The next step is to decide which research paradigm is the most suitable. This decision would help in choosing the methods of data collection, the procedures for analyzing and interpreting the collected data and procedures for selecting research participants, because each paradigm has its own ways of carrying out these processes. Two research paradigms are commonly discussed in the literature: the interpretive and scientific paradigms (Scott and Usher, 1999; Esterberg, 2002; Henn and Weinstein, 2006). These came into existence as a result of competing views concerning social reality (Cohen et al., 2007). Burrell and Morgan (1979: 1-2) identify four sets of assumptions conceptually underpinning social realities: ontological, epistemological, human nature and methodological assumptions.

The ontological assumptions concern the nature of reality and consider the question: Is it subjective and created by the individuals being studied, or is it objective and 'given out there' in the world? (Sikes, 2004; Cohen et al., 2007). If reality is viewed as subjective and constructed by the individuals who participate in the research, then researchers have to use qualitative approaches of inquiry which enable them to listen to the participants and to rely on their 'voices and interpretations' of this reality, whereas if it is viewed as objective, then it can

be measured objectively and a quantitative kind of inquiry may be used to capture it (Creswell, 2009).

The implication for the current study is that ‘needs’ do not of themselves have an objective reality but are arrived at by judgment, discussion and agreement (Brindley, 1989; Robinson, 1991; Richards, 2001). Richards (2001) observes that what is established as a ‘need’ depends on judgment and reflects the values and interests of those making such a judgment. Hyland (2006) affirms that needs are identified differently by different stakeholders (people involved in the course) such as teachers, students and administrators.

The epistemological assumptions concern the researcher’s view of the nature of knowledge (Cohen et al., 2007: 7) and address questions such as: What is knowledge? How is it acquired? How do we know what we know? (Heigham and Croker, 2009: 312). Cohen et al. (2007: 7) explain that if the researcher views knowledge as being soft, subjective, personal and unique, s/he needs to be involved with the participants in order to enter into their particular feelings, perspectives, interpretations and meanings regarding the phenomenon in question. In contrast, if s/he views knowledge as being hard, real and objective, s/he must act as a distant observer and remain independent from those researched.

The human nature assumptions concern the relationship between human beings and their environment and consider the question: Are these separate entities, such that people mechanically respond to their environment and that knowledge external to them, or are these entities inseparable but interacting with each other? (ibid., 2007). Taking the former view, the researcher should focus on the phenomenon being investigated, ignoring the human impact on it, whereas if s/he views people as interacting and controlling their environment, s/he needs to consider them as individuals in order to understand that phenomenon (ibid., 2007).

The authors argue that the three sets of assumptions identified above have great influence on the methodological assumptions, which concern the methods used to investigate and understand the phenomenon in question. They explain that those researchers who adopt an objectivist (positivist) approach to the social world and view it as being hard, real and external to the individual will select from different methods such as surveys and experiments, whereas those who adopt a more subjectivist (antipositivist) approach and view the social

world as being soft, personal and humanly created will choose from a different range of techniques such as participant observation.

The difference between quantitative and qualitative research emerges from these four sets of assumptions (Cohen et al., 2007: 8). Creswell (2009) maintains that the types of assumptions held by researchers will often lead them to adopt qualitative, quantitative or mixed approaches. While “*researchers are not all of the same mind in defining qualitative and quantitative method.*” (Thomas, 2003: 2), it is broadly the case that ‘*quantitative research involves collecting primarily numerical data and analyzing it using statistical methods, whereas qualitative research entails collecting primarily textual data and examining it using interpretive analysis*’ (Croker, 2009: 4-5). Qualitative and quantitative types of research methods differ mainly in their analytical objectives: the types of questions they pose, the types of data collection tools they employ, the forms of data they produce and the degree of flexibility built into research design (Mack et al., 2005).

However, the quantitative-qualitative distinction is not always clear-cut. Richards (2005: 36) points out that ‘*The qualitative and quantitative data do not inhabit different worlds. They are different ways of recording observations of the same world*’. Thus, quantitative and qualitative methods form a continuum and are not necessarily mutually exclusive (Dornyei, 2007: 25). This suggests that a combination of these types can be used in a given study. Such a mix of methods is often known as triangulation of data collection (Denzin, 1978; Mackey and Gass, 2005; Cohen et al., 2007; Davies, 2007; Creswell, 2009; Vanderstoep and Johnston, 2009).

The choice of an appropriate research methodology is not determined solely by the researcher’s alignment to one specific research paradigm, due to the nature of the topic under investigation and the research questions also influence this choice (Seliger and Shohamy, 1989; Silverman, 2000; Dornyei, 2007; Vanderstoep and Johnston, 2009). As Dornyei (2007: 307) puts it ‘*research is not a philosophical exercise but an attempt to find answers to questions*’. Accordingly, as Bryman (1992: 69) asserts, ‘*the research problem should guide the decision about whether to employ quantitative or qualitative research (and indeed which specific method of data collection should be used)*.’ This perspective in social research is called pragmatism (Creswell, 2009; Croker, 2009). It puts emphasis on the research

problem and “*opens the door to multiple methods, different worldviews, and different assumptions, as well as different types of data collection and analysis*” (Creswell, 2009: 10-11).

The pragmatic approach is advocated by Dornyei (2007: 307), who advises researchers to ‘*adopt a pragmatic approach and feel free to choose the research method that you think will work best in your inquiry*’. Accordingly, it was assumed that the nature of the current study called for the application of both quantitative and qualitative methods, given that the adoption of such methodological triangulation in Needs Analysis and evaluation studies is strongly recommended by a number of researchers (e.g. Robson, 1993; West, 1994; Brown, 1995; Witkin and Asltschuld, 1995; Richards, 2001; Gilbert, 2005; Jasso-Aguilar, 2005; Long, 2005c; Kim, 2006, Kinzley, 2006).

Triangulation refers to the process of ‘*using more than one methodology to address the same question to establish the validity and reliability of the data: for example, a quantitative survey combined with qualitative interviews*’ (Vanderstoep and Johnston, 2009: 179). For instance, Jasso-Aguilar (2005: 127) adopted a triangulated approach to data collection in her study to identify the language needs of hotel housekeepers and concluded that it could produce reliable and valid information about language needs. The present study utilizes semi-structured interviews and document analysis (qualitative methods) and a questionnaire (a quantitative method) in order to improve the reliability and validity of its findings. This section has examined the considerations relative to the adoption of a research paradigm. The next section considers the sample which was studied within this framework.

### **3.2. The Study Sample**

The target population of this study is composed of two groups: the students, and English language teachers of the Computer Science Department at Médéa University. The idea behind selecting this twofold target population was drawn from a number of scholars (e.g. Dudley-Evans and St John, 1998; Long, 2005c; Kim 2006), who emphasizes the significance of using multiple sources of information in identifying needs for ESP courses, ‘*because triangulation of sources offers an important means of validating findings*’ (Long, 2005c: 63).

Samples were selected from each group by random sampling, a basic mixed methods sampling technique which “*involves taking a random sample of a small number of units from a much larger target population.*” (Teddlie and Yu, 2007: 90).

### 3.3. Research Design

The present study adopted a combined research methods design. “*Mixed methods research is a procedure for collecting, analyzing, and “mixing” quantitative and qualitative data at some stage of the research process within a single study in order to understand a research problem more completely.*” (Ivankova and Creswell, 2009:156). The assumption is that the findings of a blended methods research can generate a more complete picture of the issue being investigated. (Dornyei, 2007: 164). Richards (2001: 297) supports this strategy in investigating ESP courses, stating that ‘*both quantitative and qualitative approaches to collecting information are needed because they serve different purposes and can be used to complement each other*’. Therefore, it was assumed that employing mixed methods would strengthen the study design.

In this research investigation, the aim of using qualitative component was to identify the English language needs of ESP learners and the appropriateness and effectiveness of the ESP course from the perspective of its stakeholders, through document analysis and semi-structured interviews with teachers and students. While the objective of the quantitative component was to explore these needs and obtain a general picture of them, through a questionnaire survey administered to the same targeted population.

#### 3.3.1. Qualitative Research

Although most researchers have agreed on the main features, characteristics and principles of qualitative research, it is still difficult to provide a clear definition to qualitative research (Dornyei, 2007: 35). However, Dornyei (2007: 24) attempts to provide a working definition, he states that: “*qualitative research involves data collection procedures that result primarily in open-ended, non-numerical data which is then analysed primarily by non-statistical method.*”. Based on this definition we can deduce that qualitative research tends to be interpretive rather than statistical (Mackey and Gass, 2005: 2) and descriptive rather than predictive (Vanderstoep and Johnston, 2009: 167). Douglas (2000: 256) adds that qualitative

research study is more individual than group focused. It means that '*qualitative research mostly focuses on understanding the particular and the distinctive, and does not necessarily seek or claim to generalize findings to other contexts*' (Croker, 2009: 9).

The aim of the qualitative research is to provide a profound understanding of the perspectives, experiences and feelings of the participants (Strauss and Corbin, 1990; Dornyei, 2007; Croker, 2009). The main focus of qualitative research lays on understanding processes going on in natural situations such as classrooms or workplaces (Croker, 2009: 5). For instance, natural interaction with students at a given university would provide a deeper clarification from their standpoints of their English learning process, their attitudes and motivations, what challenges they faced in learning English, what they need to ameliorate their English and how the pedagogical setting affected their learning.

Dornyei (2007: 39-40) lists some of the key features and characteristics of qualitative research approach: naturalistic (in natural settings), exploratory (exploring fresh thoughts, ideas and perspectives) and helpful for understanding extremely complicated conditions; it provides depth, profundity and meticulousness. Lynch (2003: 26) states that the qualitative research is "*very thorough in terms of the amount of information that it gathers about programme process and the experiences of the programme participants*". The qualitative research strategy adopted in this study aimed at investigating and understanding the practices, attitudes, experiences and perceptions of the English for computing science course and its students' needs.

In order to get closer to the respondents and elicit their feelings, justifications, viewpoints and interpretations regarding the research problem these qualitative research methods were employed. These methods were also implemented for the purposes of triangulation and validation. Ivankova and Creswell (2009: 143) state that triangulation can provide validated findings since '*it offsets the weaknesses of one method with the strengths of another*'. That is, the data obtained from the qualitative methods were employed in the interpretation of those obtained from the quantitative ones.

The previously mentioned characteristics of qualitative research do not imply that it is without restrictions. For instance, one of the common criticisms is subjectivity that can affect the researcher in his/her conducted research (Peshkin, 1988: 17). Dornyei (2007: 54) argues that qualitative research is purely subjective. Patton (2002: 50) states that “critics of qualitative inquiry have charged that the approach is too subjective, in large part because the researcher is the instrument of both data collection and data interpretation and because a qualitative strategy includes having personal contact with and getting close to the people and situation under study”. This may result in the researcher to bias the data. While ‘this is a major concern in qualitative research’, it can be handled by triangulation (Croker, 2009: 11).

Indeed, some scholars regard subjectivity as righteous and state that it can be of great contribution to the efficiency of the research (Peshkin, 1988: 18). That is, the personality and interests of the researcher can shape the research and enrich it, rather than biasing its outcomes. One other criticism of the qualitative research lays in the fact that it lacks generalizability in addition to its small samples and the time consumed to process the data (Richards, 2001; Dornyei, 2007). In spite of these criticisms, qualitative research issued in this study due to the belief that it could embellish curriculum development by providing a profound analysis of the different perspectives and experiences of those involved in teaching and students learning ESP for Computer Science purposes. It would also help the researcher obtain information about the aspects of the ESP course of which s/he was not aware of and which required to be included in the research design (Lynch, 2003: 26). Different research techniques can be employed to collect qualitative data, including observation, interviews and document analysis (Thomas, 2003; Davies, 2007; Dornyei, 2007; Croker, 2009; Vanderstoep and Johnston, 2009).

#### 3.3.1.1. Interviews

One of the primary techniques used in collecting qualitative data for the current study was to interview the research participants which is regarded as ‘*the gold standard of qualitative research*’ (Silverman, 2000: 51), the interview is defined as a ‘*conversation with a purpose*’ (Burgess, 1984: 102) that “*offers different ways of exploring people’s experience and views*’ and allows the researcher to probe beneath the surface of issues in order to see them from each participant’s perspective” (Richards, 2009: 183).



The interview can serve several functions, such as that of a key instrument for data collection to tackle the research objectives, validate tools, verify and confirm collected data gathered from other research methods or techniques (Cohen et al., 2007: 351). In this study interviews were conducted for three main purposes: (1) to answer the research questions, (2) to interpret, explain and consolidate data collected by other research tools employed such as (document analysis and questionnaires) and (3) to assist in shaping and designing the questionnaire. In this research interviews were mainly used as a supplementary tool to investigate in more details some associated aspects and topics which could not be investigated through the questionnaire survey. These comprise language needs, the problems and challenges students faced in learning ESP in addition to their motivations and attitudes towards learning ESP.

Because interviews are often helpful in figuring out which topics and questions should be worth focusing on in questionnaires (Brown, 2001; Richards, 2001; Brown and Rodgers, 2002), as stated above, one of the main reasons for using interviews in this research was to collect data on the ESP course and students' language needs in their academic studies so as to help design the questionnaires. In other words, interviews were employed to assist the researcher in formulating certain items to be incorporated, precisising what questions to ask and understanding the main issues. The assumption was that the investigator risked being restricted by his preconceptions or neglecting certain types of target needs that were unlikely to be found or categorized unless the involved participants are questioned.

Interviews are regarded as a needs analysis and evaluation instrument (Hutchinson and Waters, 1987; Robinson, 1991; West, 1994; Jordan, 1997; Dudley-Evans and St John, 1998; Graves, 2000; Brown, 2001; Flowerdew and Peacock, 2001b; Richards, 2001; Basturkmen, 2010). According to Long (2005c: 37), the 'use of interviews is widely reported in NAs in ESP' (e.g. Mackay, 1978; Brindley, 1984; Boshier and Smalkoski, 2002; Miyake and Tremarco, 2005; Cowling, 2007; Oanh, 2007; Kaewpet, 2009; Lambert, 2010). They can provide in-depth information about learners' needs (Lepetit and Cichocki, 2002; Kim, 2006). Interviews have also been used in recent and earlier evaluative studies (e.g. Celani et al., 1988; Lynch, 1992; Williams and Burden, 1994; Ridley, 2006; Pilcher, 2006; Dooley, 2010).

The choice to use interviews in some areas of this research was made after thorough consideration of their benefits, particularly in comparison with other techniques of data collection, although, as noted by Richards (2009: 195, “*all data collection methods have their drawbacks and interviews are no exception*”). For instance, in the present research investigation, the interview was utilized instead of observation, i.e. ‘*the conscious noticing and detailed examination of participants’ behavior in a naturalistic setting*’ (Richards, 2009: 166), since ‘*we cannot observe everything*’. ‘*We cannot observe feelings, thoughts, and intentions. We cannot observe behaviors that took place at some previous points in time*’ and ‘*we have to ask people questions about these things*’ (Patton, 2002: 341). This indicates that a more suitable research method such as interviews is required to enable the researcher to ask the respondents involved about their perceptions, emotions, attitudes and needs.

The current research regarded individual face-to-face semi-structured interviews more appropriate than either the unstructured or structured options. Cohen et al. (2007: 354) state that the main difference between these three types lies in the degree of structure that represents its objective in the interview process. O’Leary (2005: 164) clarifies that semi-structured interviews ‘*start with some defined question plan, but pursue a [relatively] conversational style of interview*’. The interviewer follows a guide or schedule in which a main list of issues, topics and sub-topics are identified to assist keep a systematic coverage of the topic and guide the interview itself (Drever, 2003; Dornyei, 2007; Richards, 2009).

The interview schedule can serve the interviewer in several ways: (1) by making sure that the topic is covered and nothing significant is forgotten; (2) by offering an opening statement template; (3) by providing appropriate wording of questions; (4) by listing some questions to be asked if necessary; and (5) by providing a list of comments (Dornyei, 2007: 137). The current research used the interview schedule to serve as a researcher’s guide and to allow the respondents to provide lucrative and fruitful responses.

The semi-structured interview was selected to be used in the present research investigation due to its benefits over the other two types, and because it is widely used in NAs in ESP (Long, 2005c; Kim, 2006). It was gathered to collect information about the participants’ perceptions, needs, attitudes, likes and dislikes regarding the ESP course. It was also used to collect some data about the computer science faced challenges in learning,

teaching and using the English language. Finally, it was helpful in assisting the investigator to gain a sense of what types of needs, skills and activities that should be incorporated in the designed questionnaires.

#### **3.3.1.1.1. The Interview Sample**

Long (2005c) points out that interview with several distinct stakeholders always provide credible and precise outcomes. Therefore, multiple sources of data were sought for the semi-structured interviews in this research. The participants were divided into two groups as follows: twenty ESP students and six ESP teachers.

##### **\* Students**

The student sample was composed of 20 Master one computer science students of mixed gender, ranging in age from 20 to 25 years.

##### **\* ESP Teachers**

The sample of ESP teachers comprised six (9) female language teachers, ranging in age from 25 to 30 years. They have from two to five years of teaching experience.

#### **3.3.1.1.2. Interview Preparation and Schedule Design**

*'It is important to prepare thoroughly for interviews. This involves piloting, preparing a realistic schedule, and paying attention to practical details such as timing and location'* (Richards, 2009: 169). Thus, in the interviews, we began to decide on the general objective and think about the main questions and topics that required to be addressed. Then, while designing the interview schedules, we attempted to group the questions into the appropriate topics and organize them so as to create a natural research line (Richards, 2009: 187). We followed some significant guidelines when formulating the questions proposed by a number of scholars (Drever, 2003; Cohen et al., 2007; Dornyei, 2007).

### 3.3.1.1.3. Conducting the Interviews

The main objective of the interview was to provide the interviewees with a clear understanding of the purpose of the interviews and the nature of the questions in order to reflect on them and consequently, the interviews would yield more profitable information. A brief introduction was provided to each interview schedule explaining to the participant the purpose of this research study in general and the purpose, scope and nature of the interview in particular. A brief summary of what would happen to the interview data and a confidentiality and anonymity statement were also supplied. The participants were assured that the information s/he would provide would be used only for research purposes and that s/he could withdraw at any time, explained the purpose of taking notes or using a tape recorder and sought the interviewee's permission to do so.

Prior to commencing the interviews themselves, we had to try to find an appropriate and comfortable place to conduct them, because as Richards (2009: 189) observes, '*some places are likely to influence the sort of responses*'. All the interviews were performed individually, which '*involves a meeting between the researcher and one informant*' (Denscombe, 2005: 166). All were conducted by the investigator over a period of approximately three weeks. Each took between fifteen and twenty minutes, depending on how much detail each interviewee was willing to provide.

As noted above, a tape recorder was used where possible, which helped the researcher to listen carefully to the interviewee and provide a reference for future analysis. We also observed that many interviewees were quite happy to be audio-recorded because they felt that their voices were important and worthwhile and that there was someone who was interested in hearing them and sharing their personal thoughts, feelings and experiences.

The researcher clarified the reason for the interview and the purpose of the study to the interviewee before each interview session and reassured him/her that what s/he would say would be confidential and that s/he would remain anonymous, then sought to create a relaxed and friendly atmosphere in which the interviewee would be sufficiently comfortable to talk freely and be able to offer fruitful responses. The researcher also tried to establish a high degree of rapport with each interviewee, rather than launching directly into the first question.

The researcher asked each interviewee who had agreed to be audio recorded whether s/he is comfortable and ready to be recorded. If so, then the interview started and s/he was thanked. All of the interviewees agreed to be audio recorded, with the exception of two, who allowed me to take notes.

The researcher avoided expressing any kind of personal opinions or showing by facial expressions, gestures, intonation or any other subtle indications the researcher's perception of view point in order not to influence the answers. Also, when formulating the interview questions, the researcher avoided leading questions, i.e. those that indicate particular answers to the interviewees (Brown, 2009: 207), in order to make it less likely that they would give answers that they thought the researcher wanted to hear and not those which they thought to be right. The researcher also avoided prestige questions, i.e. those that the interviewees would be likely to answer in a certain way to make them look better (Brown, 2009: 207). In short, the researcher tried to be an independent and neutral academic researcher whose aim was to allow the collected data to determine the outcome and to ensure that the researcher's own views did not influence those expressed by the interviewees.

As Richards (2009: 188) indicates that the sequencing of questions and topics shifted from the general to the more specific. The main questions and topics were often put in the middle of the interviews because the interviewees could be nervous at the beginning and bored or tired by the end (Mackey and Gass, 2005: 175). The investigator also used both clarifying and exploring the questions (Davies, 2007: 110) so as '*to go further and to increase the richness and depth of the responses*' ( Dornyei, 2007: 138). The researcher closed each interview by offering the opportunity to comment or add something. We also permitted the interviewee to express her/his impression of the process and the content of the interview at the end of each interview session.

This methodological feedback was crucial because, before proceeding with other interviewees, it could assist uncover any problems to solve them and enhance the interviewing process. The researcher expressed gratitude and appreciation to each interviewee for their valuable involvement and effort, before repeating the assurances of confidentiality and anonymity and informing the interviewee that s/he had the full right to request a copy of the transcript and recording of the interview in case s/he wanted to review and amend the

transcript. The researcher instantly writes down notes of any emerging points or questions after leaving the end of each interview session. This could have helped to collect extra data and information (Richards, 2009).

#### 3.3.1.1.4. Analysis of Interview Data

“The overriding objective of analysis is to produce an intelligible, coherent and valid account” (Dey, 1993: 52). To accomplish this, the interview data analysis consisted of three major phases: preparation, analysis and summary (Drever, 2003: 60). The preparation phase aimed to ‘make the material manageable, while at the sametime retaining as much of the original information as possible and avoiding any distortion’ (Drever, 2003: 60). The first task was therefore to convert the recordings of the interviews into textual form (Dornyei, 2007: 246). However, we acknowledge that this crucial transcription process was time-consuming (Cohen et al., 2007; Davies, 2007; Dornyei, 2007; Richards, 2009), but it had the benefit of enabling us to grasp the data thoroughly (Dornyei, 2007: 246). The audio-recorded interviews have been transcribed and made accessible in tangible forms to facilitate the task.

There were two steps in the analysis of the next phase: pre-coding and coding (Dornyei, 2007). While pre-coding includes reading and reflecting on the transcripts to search for main ideas and research related problems, ‘coding involves highlighting extracts of the transcribed data and labelling these in a way that they can be easily identified, retrieved, or grouped’ (Dornyei, 2007: 250). Thus, in this stage, the task was to read and break down each transcript into small chunks so as to categorize them.

These chunks have been thoroughly read to assign them important themes or categories. It was ‘a process of funneling the data into relevant categories’ in order ‘to make comparisons between cases much more effectively’ (Dey, 1993: 42). The classification of the information into distinct topics or categories was driven by the aims of this study and the research issues as well as the framework of evaluation. The final phase of the analysis process was to summarize, synthesize the outcomes of the preceding stages and draw conclusions to answer the research questions. Results of questionnaires and document analyses were brought in at this phase in order to validate and triangulate the results.

### 3.3.1.2. Documentation

When designing this research, we found it very helpful to obtain some of the required data from the range of documents available at the Computer Science Department and those provided by the teachers. This is because documents ‘*may sometimes speak louder than a response to an interview question, or tell us about something we were not in a position to observe*’ (Robson, 1993: 187). Documents also often form part of a broader research design and they can be triangulated with other forms of data such as those of semi-structured interviews for the purpose of cross-checking validity (Pole and Lampard, 2002: 152).

The term ‘document’ can be broadly defined as ‘*any object which has been shaped or manufactured by human activity*’ (Pole and Lampard, 2002: 151). This object can take the form of written language such as books, letters and web pages, or it can be spoken, such as audio or video recordings (Robson, 1993; Pole and Lampard, 2002). In schools and universities, documents might include written curricula, course outlines and other such literature (Robson, 1993: 274). Pole and Lampard (2002: 152) point out that documents can provide researchers, at an early stage of their research process, with insight into a topic or a setting, can stimulate theorizing and can contribute to helpful aspects of the research.

This implies that documents can play a role in broadening researchers’ horizons in terms of the topic being investigated. In this study, before designing the interview schedules and questionnaires, we first collected and examined a number of relevant documents in order to identify and understand some of the key issues to be addressed in the interview questions and the questionnaire items. Relevant documents were also collected throughout the research process.

Document analysis was employed in the present study as an ancillary data collection method. As Patton (1987: 90) and Lynch (1996: 139) suggest, it enabled the researcher to acquire basic information concerning the current ESP course, thus facilitating the identification of some issues that would be pursued in the interviews and questionnaires. The documents analyzed included the current delivered ESP course and tests. These documents are a ‘natural’ form of evaluation data (Weiss, 1972: 54). There may seem to be more than necessary, but as Richards (2001: 297) suggests, ‘*the more documentation that is available about a course, the easier is to arrive at decisions about it*’.

While they are seen as a valuable source of data, documents are nonetheless likely to be unrepresentative and biased because they are shaped by the setting in which they are produced (Robson, 1993; Pole and Lampard, 2002). Pole and Lampard (2002:157) also observe that *'documents lack authenticity if they are not what they implicitly or explicitly claim to be'*. All the documents were collected with respect to the ESP course, and they were selected for the authenticity and honesty of the information which they provided.

### 3.3.2. Quantitative Research

The quantitative research involves *'data collection procedures that result primarily in numerical data which is then analyzed primarily by statistical methods'* (Dornyei, 2007: 24). These processes are developed to increase the probability of unbiased, reliable and relevant data (Davies, 2007:10). This indicates that quantitative research aims at answering questions objectively. Indeed, McDonough and McDonough (1997: 49) have suggested that that *'traditional numerical designs are good on objectivity, reliability, feasibility and applicability'*.

Dornyei (2007: 34) lists the main characteristics of quantitative research, which tends to be *'systematic, rigorous, focused, and tightly controlled, involving precise measurement and producing reliable and replicable data that is generalizable to other contexts'*. According to McDonough and McDonough (1997: 49) quantitative research aims *'to make generalizations, and find evidence from the particular sample studied to the population of people at large'*. This means that generalizability is a significant factor that researchers often assume to be one of the required purposes of their quantitative research. Unlike qualitative researchers, who focus on the *'meaning in the particular'*, quantitative researchers follow a *'meaning in the general'* approach (Dornyei, 2007: 27).

Quantitative research has been criticized in social studies as *'overly simplistic, decontextualised, reductionist in terms of its generalisations, and failing to capture the meanings that actors attach to their lives and circumstances'* (Brannen, 2005: 7). However, if such deficiencies apply this does not necessarily imply that quantitative research is the completely abandoned. Instead, such issues should be overcome by strengthening and complementing them with a qualitative component. McDonough and McDonough (1997: 71)



argue that *'there is no necessity for research to use only one method. In fact, there are good reasons to incorporate several techniques in data-gathering'*, in this way, the credibility and plausibility of interpretation are improved.

The survey is a typical research strategy associated with quantitative research (Brown, 2001; Dornyei, 2007; Creswell, 2009). *'Survey research provides a quantitative or numeric description of trends, attitudes, or opinions of a population by studying a sample of that population'* (Creswell, 2009: 12). While survey data can be collected using other techniques such as structured interviews, the questionnaire is regarded as the main technique of data collection in surveys (Dornyei, 2007: 101). To collect both quantitative and qualitative data, the current research made use of questionnaires.

### 3.3.2.1. Questionnaires

Although an accurate and precise definition is difficult to provide (Dornyei, 2007), the questionnaires were attempted to be defined as *'any written instruments 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'* (Brown, 2001: 6). Questionnaires on the one side, enable second language researchers to collect a range of data about learners' beliefs, motivation, attitudes and reactions about learning in addition to classroom activities and instruction (Mackey and Gass, 2005: 93), and on the other, they are the main source of data on language use and communication challenges (Richards, 2001: 60).

Unlike interviews, questionnaires are characterized by their flexibility and time brevity as participants can *'fill out a questionnaire in their own time, at their own pace, and fit it into their schedule'* (Brown, 2001: 77). The questionnaire is usually free from the pressure and anxiety frequently connected with face-to-face interviews. Cohen et al. (2007: 333) point out that *'lack of face-to-face contact between the researcher and the respondents in a questionnaire might facilitate responses to sensitive materials'*. However, the use of questionnaire as a research tool is associated with some pitfalls. One major problem is that questionnaire items should be clear enough for the respondents to understand (Dornyei, 2007: 115). Unwell designed questionnaires can, therefore, result in superficial, inaccurate and unreliable information. Another issue is that while researchers often presumed to be able to

control bias through the use of questionnaires (Mackey and Gass, 2005), bias may creep into them as to what questions are being asked and how they are being formulated.

This consolidates the need to conduct interviews as a primary phase in designing the questionnaire, in order to identify the questions to be asked in the questionnaire (Richards, 2001; Brown and Rodgers, 2002). Vandermeeren (2005) argues that questionnaires provide access to the real understanding of the respondents' language needs. They can also be used to measure the attitudes and interests of participants (Dornyei, 2007). In this research, therefore, questionnaires were primarily used to explore the English language needs of learners in their academic studies and their attitudes towards the suitability and efficiency of the present ESP course. The questionnaires were mainly used to evaluate the students' satisfaction of current ESP course in terms of language needs and to highlight areas where learners felt that their needs were not being met. Furthermore, another questionnaire was administered to language instructors at the Department of Computing so as to know their perception and application of the ESP course.

Questionnaires are among the most widely used instruments in NA and evaluation studies (McKillip, 1998; Flowerdew and Peacock, 2001b; Brown, 2001; Brown and Rodgers, 2002; Dornyei, 2003; Lynch, 2003; Hadley, 2006). As Long (2005c: 64) points out, *'questionnaire surveys undoubtedly constitute the most over-used and over-rated approach to NA at present'*. A number of NA studies in ESP have utilized questionnaires to collect data (e.g. Jones, 1991; Taillefer, 2007; Lehtonen and Karjalainen, 2008; Mazdayasna and Tahririan, 2008; Elisha-Primo et al., 2010). They have also been used in evaluative studies (e.g. Celaniet al., 1988; Alderson and Scott, 1992; Williams and Burden, 1994; Atherton, 2006; Martala, 2006; Ridley, 2006).

Two types of questionnaire item are usually identified: open and closed ended (Dornyei, 2007; Brown, 2009). A closed ended item requires participants to select an answer from a researcher predetermined choices, whereas open-ended questions enable respondents to answer in their own words by writing in a blank space (Dornyei, 2007; Brown, 2009). While both types have drawbacks, Brown (2009: 201) states that *'many questionnaires contain both types, and they are usually seen as being complementary'*. However, the questionnaire of this study is dominantly based on close ended-questions.

### 3.3.2.2. The Questionnaire Sample

The questionnaire data were obtained from two main sources: current ESP students, and ESP teachers. The first group was composed of 120 first-year Master students of computing. Their ages ranged from 20 to 25 years. They have been studying the ESP course for 3 years. The decision of selecting this population as a case study was based on the premise that they had some experience with the ESP course and therefore the data they provided was '*grounded in experience*' (Graves, 2000: 114). Besides, they are mature enough to determine their language needs. Thus, it seemed to be helpful and justifiable to include the information provided by them. The second group included nine (09) ESP instructors within the questionnaire sample ranging in age from 25 to 30 years.

### 3.3.2.3. Developing the Questionnaire

Before writing the first versions for this study, the researcher drew ideas and inspiration from two sources. The first was the qualitative data gathered from the semi-structured interviews and the document analysis. The purpose of this logically prior endeavor was to obtain a better idea of the ESP learners' needs in order to classify and list them in the questionnaires instead of designing them according to a preconceived classification of those needs. The second source was published NA and course evaluation questionnaires (e.g. Hutchinson and Waters, 1987; Nunan, 1992; Weir and Roberts, 1994; Ferris and Tagg, 1996; Jordan, 1997; Basturkmen, 1998; Richards, 2001; Boshier and Smalkoski, 2002; Lepetit and Cichocki, 2002; Kavaliauskiene and Uzpaliene, 2003; Brecht and Rivers, 2005; Gilabert, 2005; Jasso-Aguilar, 2005; Miyake and Tremarco, 2005; Atherton, 2006; Taillefer, 2007). Guidelines on how to design a questionnaire suggested by some scholars were also consulted (e.g. Robson, 1993; Dornyei, 2003; Cohen et al., 2007).

Moreover, the questionnaires comprised brief introductions seeking consent for participation. This appealed to the participants to take part in the study by explaining that their participation was highly important and useful, and requesting them to give honest answers. The introduction also described the purpose of the study, stated that there were no right or wrong answers, assured confidentiality and anonymity, and expressed gratitude and respect.

#### 3.3.2.4. Administering the Questionnaires

A total of 120 copies of the questionnaire were anonymously distributed to the ESP students at the beginning of the semester to analyze their needs and design a suitable course accordingly. The research excluded all incomplete and unreliable responses. All of the students' questionnaires were completed by the students themselves in the presence of the researcher, so that they can enquire about anything vague or ambiguous.

The respondents were first greeted and briefed about the general background, the aim of the study and the potential importance of its results. This was followed by an explanation of the content of the questionnaire, how to answer the different items and the expected time to complete it (15-20 minutes). The researcher reassured the respondents of confidentiality and anonymity, explained that there were no right or wrong answers and that their views were important, stressed that they could withdraw from answering the questionnaires at any time and expressed her deepest thanks for their patience and cooperation. They were gently encouraged to provide as much data as possible. They were also reminded to answer all of the questionnaire items.

At the end of the course, another questionnaire was administered to the same population to collect their opinions about the newly elaborated course for evaluation purposes. The course was evaluated in terms of objectives, content and materials, course conduct and assessment. The students were informed that it is absolutely essential to express their views realistically and that the data to be collected through their responses will be of great value.

The teacher's questionnaire was next administered anonymously to nine (9) respondents. The researcher spent some time with each ESP teacher asking him/her to take part in the study, explaining the purpose of the research and highlighting the potential significance of ESP teaching and learning outcomes. The researcher then assured them of confidentiality and anonymity and that their opinions were valued and their participation totally voluntary. They were requested kindly to render back their questionnaires within one week. Collecting all 9 completed questionnaires (100% response rate) took the researcher few days.

### 3.3.2.5. Analysis of the questionnaire Data

The responses to the closed questionnaire items were analyzed statistically using descriptive and inferential statistics. The descriptive statistics included the means, percentages and frequencies of the closed responses. Such statistics can assist to sum up quantitative results by '*describing the general tendencies in the data and the overall spread of the scores*' (Dornyei, 2007: 213). They have also formed the basis of the inferential statistics used in this study.

### 3.4. Trustworthiness of the Study

In this study, trustworthiness was ensured by a number of factors, one of which was the researcher's prolonged engagement with the researched context (Dornyei, 2007; Rallis and Rossman, 2009), as the researcher has been teaching at the department for more than two years. In addition of having a good relationship with the participants enabled her to collect accurate in-depth data which ensured the trustworthiness of the study.

The most important procedure for establishing and ensuring trustworthiness was triangulation, i.e. using different data collection and analysis methods or multiple participant samples (Brown and Rodgers, 2002; Dornyei, 2007; Rallis and Rossman, 2009). The value of triangulation lies in its capacity to maximize the possibility of obtaining rich, in-depth information, to limit bias in the findings and to cross-validate them (Brown, 2001; 228). Three key forms of triangulation were applied here. The researcher collected the required data from a range of sources that provided different viewpoints from which to observe the phenomena in question. As Norris (2008) notes, it is through the inclusion of the perspectives of these people that objectivity can be sought in course evaluation.

Furthermore, a range of methods (interviews, document analysis and questionnaires) were also utilized in order to gather in-depth information about the phenomena. For instance, students' standpoints of their English language needs were elicited and studied quantitatively through questionnaires and qualitatively through semi-structured interviews with students. This allowed the questionnaire findings to be checked against those resulting from the interviews.

### 3.4.1. Ethical issues

Important ethical issues are involved in any social research, including that into education, which deals with the beliefs, values and lives of people (Dornyei, 2007:63). These issues may arise at any phase of the research process, including data collection, analysis, interpretation and publication of the research findings (McDonough and McDonough, 1997: 67). Therefore, the researcher was meticulous about following certain codes of ethics. Considerable care was taken in relation to the following ethical issues noted by a number of scholars (Pole and Lampard, 2002; Cohen et al., 2007; Rallis and Rossman, 2009).

- It was important to obtain informed consent from the participants prior to the beginning of the study. The aim of the research and the nature of the study were clearly explained to the participants. As mentioned earlier, they were assured that their participation in the interviews and questionnaires would be completely voluntary and that the information they provided would be used only to fulfill the aims of the study, and were informed of their full right to withdraw from the interviews or the questionnaires at any time without giving any reason.
- The questions chosen for the interviews were semi-structured because the researcher wanted to hear how participants felt from their own points of view, and to ensure that the answers were not influenced in any particular way.
- All of the data gathered from the participants was kept confidential and anonymous as indicated, and the participants were informed that the data were their property.

### Conclusion

This chapter has addressed the theoretical and methodological procedures that shaped the design of this study. It has also outlined and clarified the research techniques employed. A mixed methods research design was implemented, using a triangulated strategy to data collection based on these techniques (interviews, documents analysis and questionnaires), sources (ESP students and teachers) enabling a thorough analysis of the research questions. Finally, efforts have been made to ensure the integration of ethical considerations into the research process.

# Chapter Four

## *Field Work and Interpretation of the Data*

## 4. Field Work and Interpretation of the Data

### Introduction

In this chapter, we are going to provide a general overview of the situation of ESP at Médéa University then analyze the current delivered ESP courses. Next, we will proceed with the analysis of interviews and questionnaires of both respondents (teachers and students). The analysis of these research tools will help in elaborating a new ESP course which takes into account all the parameters of ESP course design. Finally, we will put the course into application then evaluate the extent of its feasibility and efficiency.

### 4.1. The ESP Course at the Computing Science Department : Overview

When I have been charged to teach the ESP course at the Computer Science Department I observed the following :

#### \* The Qualifications of ESP Teachers.

In this department teachers are recruited in order to give courses to computing students. Unlike the majority of other 'computing courses' a 'BA' in English is enough to be accepted to teach there. They are not under supervision and cannot be required to use specific teaching methods.

#### \* Teacher's Training

In the absence of specialized institutions devoted to the training of teachers of foreign languages at university level, each teacher relies on his own experience in deciding about the strategies, method and techniques and, accordingly, any kind of improvement in the instruction process is solely based upon individual initiatives. Thus, we can deduce that they are not properly qualified to teach ESP.

#### \* The Students

The concentration on grades as a measurement of success or failure makes the learner concerned with exams and marks rather than the value of what s/he is learning. This situation decreases his/her curiosity and thirst to learn things apart from the syllabus. Because of



highlighting the importance of marks, the low proficiency students may cheat in exams. Lastly, this attitude transforms the acquisition of knowledge from a precious thing to be sought into numbers and scores.

\* The Programme

The researcher asked the head of department and some colleagues if there was an existing program that should be followed ; they said that each teacher should design his/her own lectures and follow his own methodology. Moreover, the researcher has noticed that in this department the administration considers ESP as a secondary course, because there is a tendency to spend the budget on books and facilities necessary for other subjects but not for English.

We have observed that subject matter teachers rather than ESP teachers monopolize the available pedagogical means (like the projector) because there is a tacit agreement that priority should be given to those teachers instead of FL instructors. Besides, the time devoted to English in the Computer Science Department is one session per week.

#### **4.1.1. Documents Analysis**

In this part the researcher presents an evaluation of the documents or materials employed in terms of pedagogical effectiveness and fulfilment of the ESP teaching requirements. Eventually, we will compare our interpretation to the opinions that will be provided in the questionnaire and interviews by both teachers and learners.

After a close analysis of the data in hands we observed the following:

- More focus is given to the teaching of technical vocabulary mostly in isolation.
- The grammar taught is very general and not purposeful.
- The courses are grammar centered.
- Examples and activities are taken from the everyday life.

- Carrier content and real content are taught separately.
- Students are given only some reading activities.
- Total absence of teaching the other skills (Listening, Speaking, and Writing).

#### **4.1.2. Comments on the Analyzed Data**

Document analysis is often used because of the many different ways it can support and strengthen research. Documents can provide supplementary research data. It can also contain data that can not be observed, provide details that informants may forget. Document analysis can also point to questions that need to be asked or to situations that need to be observed, the use of document analysis help the researcher to get better insights about the overall situation.

##### **4.1.2.1. Vocabulary**

What we can notice in the teaching of vocabulary at computing department is that more emphasis placed on the teaching of technical or specialized vocabulary. As mentioned in the theoretical part, it is not the job of the ESP teacher to teach professional or technical vocabulary. However, ESP teachers should be aware that dictionaries for specialized fields are readily available and play an important role in the description of the specific language usage. Thus, we can deduce that the English language teacher ought to concentrate on "frame words" which although not technical terms or specific vocabulary are frequently used in technical/specialized writing e.g. contain, increase, combine, approximate etc.

##### **4.1.2.2. Grammar**

The difference between ESP and EGP teaching is that the former is taught in context (example and activities are given from the discipline) while the latter in isolation (the grammatical structures are taught separately and examples are taken from everyday life). Actually, it is the case of ESP teachers at the department of computing who teach grammar by presenting the structures separately, and then giving activities for practice. However, with the growing weight of evidence showing that language is best learned in context there is a strong

case to be made for students learning grammar from texts i.e. the text is the starting point and the source of the language to be taught. The advantage of focusing on a structure or structures in an authentic text enables the students to see these structures functioning in a genuine context.

The important first stage is to work through the text so that learners become familiar with the meaning: the students should understand the message, the vocabulary, and the general meaning implied by the constructions before they start to work on grammar analysis. The point of focus will depend partly on the text itself (what features of the grammar are particularly well exemplified in this text).

The authentic text is likely to employ a wide range of structures of varying complexity and may refer to past, present, future time and make use of both active and passive voices. Hence, ESP teachers should focus on teaching the grammar of science that will help learners to understand and write scientific articles which are characterized by the following grammatical forms: verb, tense, the passive voice, use of prepositions, modals, nominalization etc...

#### **4.1.2.3. Content**

Dudley-Evans and St John (1998) say that the job of the ESP teacher is to teach the "the real content" and leave the carrier content to the specialists, but the latter is used as a vehicle to teach the language.

Through the analysis of data obtained from this department, we noticed that ESP teachers teach the carrier content and real content separately which does not fulfill the requirements of teaching content in ESP. As a matter of fact, one can summarize the appropriate parameters as follows:

- the real content should be taught through the carrier content;
- the texts should not be taught separately; and
- exercises, activities should be taken from the text "Carrier content".

#### 4.1.2.4. Skills

Regarding the teaching of skills we can observe that more focus is devoted to the teaching of the reading skill totally ignoring the productive skills that the students mainly need. In fact, how the four skills should be taught is explained in details in the theoretical part.

After the analysis of the situation and the documents, we can conclude that the ESP courses at the Computing Science Department do not comply with the parameters of ESP course design. The importance of these outcomes is that they will serve in the elaboration of the questionnaire and interview.

### 4.2. Interview Data Analysis

This section presents the results obtained from the analysis of the interviews conducted with the ESP teachers and students. The data establish a considerable source of evidence to triangulate with the questionnaire and the data obtained from document analysis. It attempts to illustrate the range of views on important key topics. Furthermore, it covers two different groups of participants. Part one deals with the results gathered from the interviews and discussions conducted with students. Part two discusses the interviews conducted with ESP teachers. The last part is a summary of the findings and the conclusions made.

#### 4.2.1. ESP Teachers' Interview Analysis

The study urges the researcher to conduct a semi-structured interview with ESP teachers to study the ways they try to survive as "*reluctant dwellers in a strange and uncharted land*" (Hutchinson & Waters, 1987 : 158), or simply put, the ways they learn to teach ESP. In this research investigation, the researcher does not intend to cover all ESP realms but focuses on case studies of six ESP teachers who teach ESP at the Computing Science Department. The scope of the study allows the researcher to look deep inside the cases to see what is really happening.

##### Theme 1: Training in ESP

The teachers were all asked to explain how they became ESP teachers and whether they had any training for this purpose. The majority of them said that they had experience in

teaching General English (GE) and could adapt themselves to undertake teaching the ESP courses. One teacher said: "*I have had no training to teach the ESP courses.*"

Another teacher said: "*because no training has been offered for this purpose, everybody uses his own way of teaching based on his experience*". Within this context, Chen (2000 : 389) claimed that "*the ESP profession faces twin problems, namely lack of teacher training programs in many areas of the world and the dissatisfaction with conventional theory-into-practice training models*".

However, some of them mentioned that they had had some courses dealing with ESP in their graduate studies: "*... I haven't had any training in teaching the ESP courses except the courses I have had in my graduate studies*". Due to the lack of training, as they mentioned, each teacher followed his own way of teaching. One teacher said : "*Mostly, the ESP teachers, as far as I know, inherit teaching methods from their own teachers*".

The majority of the teachers believed that training was necessary for the teachers who intended to undertake teaching the ESP courses and that in-service training should be provided for the teachers who are involved in teaching such courses. "*I believe that it is definitely necessary for novice teachers to be trained, as it would obviously be helpful for us*" a teacher said.

Another teacher stated:

*"We do need training for ESP, to put ESP teachers under training even before they start teaching ESP. If not, since they have been involved, at least in-service training is necessary."*

Nevertheless, there were a few teachers who believed that ESP teachers did not need to be specially trained for this purpose. They were of the opinion that a general knowledge of teaching or an experience in teaching GE courses would be sufficient for teaching the ESP courses. One of them stated: *... I haven't had any training in teaching the ESP courses except the courses I have had in my graduate studies. And I think it is not necessary for teachers to be particularly trained for this purpose.*

#### Theme 2 : Self-Evaluation of Needed Competencies and Roles of ESP Teachers

In the interview, the teachers were asked to express their thoughts about the competencies needed to teach ESP. With some hesitation, they gave quite similar answers that

they firstly needed to have qualities and competencies of a teacher of GE, and then they also had to equip themselves with as much knowledge of the subject matter as possible. However, neither of them could define the competencies in detail.

In evaluating their own competencies to teach the ESP course at university, they all reported the low proficiency in the lack of computer science knowledge, which was their major concern. For example, one of the teachers said: *I think I can teach the course at basic requirement but to be honest, I am not satisfied with myself, yes, my knowledge of the specific discipline is not enough.*

After that, the participant teachers were asked to state their agreement or disagreement on the roles proposed by Dudley-Evans and St. John (1998) as well as to evaluate their roles. However, the teachers did not seem to agree on all the roles mentioned. The results are shown in the table below.

Roles of ESP practitioners	Teachers' responses
<b>Teacher</b>	<p>"I am confident to be a teacher of English."</p> <p>"I think I can do a good job as a teacher."</p>
<b>Course designer and materials provider</b>	<p>"No program is provided in the department, each one prepares his/her own course."</p> <p>"I prepare my own materials for my course."</p>
<b>Researcher</b>	<p>"Honestly, I don't think I do research on the subject frequently."</p> <p>"I think any ESP teacher should study more and deeply into the subject matter, I am a novice teacher so my research skill is still limited."</p>

<b>Collaborator</b>	<p>"I still haven't had many chances to connect with teachers from other departments."</p> <p>"During my teaching, I often collaborate with students."</p>
<b>Evaluator</b>	<p>"I do not evaluate the course on regular basis, we only base on the results of the final written exam. It's not really an evaluation, I think."</p> <p>"I am not sure that I do this role well because of our poor testing system."</p>

**Table 4.1 : Teachers' Self-Evaluation of ESP Teachers' Roles**

### Theme 3: Ways of Learning to Teach ESP

#### \* Self-Studying :

Most teachers had quite similar educational backgrounds: They achieved either a BA or Master degree in learning English as a foreign language. However, some of them claimed that they only learnt from the MA course a few basic theories about ESP, which seemed to be vague and unhelpful. Therefore, when they were assigned to teach ESP, the first thing they did was self-studying because according to them the terminology is very difficult, so they had to study it first. A part from self-study, the teachers have the opportunity neither to meet and learn from their colleagues nor collaborate with subject matter teachers because of their weak connection between them. *'When I found any difficult concept in computing, I first look it up in the internet or ask my students'*, one of the interviewees said. By and large, the communication between ESP teachers and the subject teachers is not very close, as most teachers confessed.

\* Learning from Students :

From the interviews all teachers stated that they had to ask students to help them explain some technical knowledge which was not very clear. *'Well, I think they [the students] are eager to help me and when being asked about their speciality knowledge, they seem to be more engaged in the lesson. So it is very useful and very interesting to consult with students the things that you do not know'*.

However, things did not always go smoothly. Sometimes the teachers had to cope with the problem that the students gave different answers and they argued with one another. In such situations, the teachers noted that: *I ask students to check the issue later and give me the correct answer in the next class. At the same time, I note down the issue and find the explanation later.* I was really confused in such situation. I myself do not know who is correct or not because my knowledge in computing is limited. It was quite obvious that in learning to teach ESP, the teachers had to struggle with a lot of difficulties which were both objective and subjective.

Theme 4: Objectives of the ESP Course

With regard to the objectives of ESP courses, the teachers almost unanimously believed that the main objective was to develop the students ability to read and understand English texts in their own discipline. One teacher said : *"the objective, is to provide the students with some grammatical elements in English"* Another teacher said, *"the purpose of teaching English in universities is to make the students familiar with the technical vocabulary related to their fields of study"*. A minority of teachers considered the objective of the ESP courses being both the development of reading skills and translation. They stated that :*"The main objective is to enable the students to use scientific sources in their own fields, and somehow translate them into the native language"*.

Theme 5: Classroom Procedures

When the teachers were asked to explain what classroom procedures they identified with the ESP teaching, they expressed their perceptions in different ways. Some teachers described the step-by-step activities they performed in the classroom:



- a. *I read a paragraph first*
- b. *I ask them to read the paragraph, and I correct their mistakes*
- c. *I read the paragraph again*
- d. *I explain it in Arabic*
- e. *I explain it in English*
- f. *I ask them if they have understood*
- g. *Then we do the exercises: I ask them to read an exercise and give the answers. Meanwhile, I ask them some questions to make sure that they have understood.*

Another teacher said:

*I usually read and explain the technical words first. Then I start the passage. I do it paragraph by paragraph. I read the paragraph once. Then, I go over it sentence by sentence. I ask a student to read it again and paraphrase it. If he can't do it in English I'll ask him to do in Arabic. If he couldn't, I would do it myself. I use synonyms. I paraphrase the sentence in English. In case the sentence is complicated I do it in Arabic too. I go over the sentences phrase by phrase, explaining pronoun references, functions of the phrases and the sentences, parts of speech of the words, non-restrictive clauses, and other contextual clues and parenthetical information, the function of connectives and the way they determine the meaning of the sentences, and how they can help us get meaning from the context. Also, I work on the main idea, the organisation of paragraphs, and the way a general statement is exemplified by other sentences; how they are connected to each other, and in fact, the unity of the paragraph is illustrated in this way.*

The type of information given to the students by the above teachers appears to be different. The explanation provided by the first teacher seems to be more content-oriented and deals with the meaning of the passage. The teacher tries to make sure that the students understand what they read. However, the other teacher seems to provide the students with more structure-based type of information dealing with the forms and functions of language constituents and accomplishes it through the analysis of the structure of the sentences.

In tackling the question of classroom procedures, some teachers simply indicated their general perception of teaching and stated more theoretically oriented views of language teaching:

*... I think ESP courses are exactly like all other courses if one is going to teach one. But what is done as a routine in the university is that... we try to adopt a method which will develop the reading skill as much as possible.*

In expressing their views regarding classroom procedures in an ESP setting, some teachers compared the ESP methodology with that of the GE and identified no particular procedural difference between the two, one teacher said :

*A typical ESP class is not really very much different from an ordinary English language class, in the sense that you can apply the same procedures, the same techniques and methods.*

And another teacher said: '*No particular procedures are identified with the ESP teaching*'.

As one teacher put it : '*I don't use any particular procedures in teaching the ESP courses simply because there is not enough time to do so*'.

#### Theme 6 : Challenges in Teaching ESP

##### \* Objective Challenges :

In reflecting on the objective challenges they had in teaching ESP, the main challenge was concerned with the students' demotivation and their level of English competence. As one of the teachers stated :

*One of my difficulties in teaching ESP is the mixed English levels of students of the same class. There are some students who are quite good at English, they show great interest to the lessons. However, there still remain a large number of students who do not show positive attitudes towards learning ESP because of their limited ability in acquiring difficult terminologies and grammar. . . . I feel that they just study for passing the final exam.*

In addition to the two main challenges mentioned, some other difficulties, such as large-sized classes, limited time frame for the course, limited access to practice were also complained about by the teachers.

\* Subjective Challenges :

The main subjective challenges were found in the teachers themselves. They all confessed that they had limited knowledge of the subject matter, which caused them a lot of embarrassment in some cases. Moreover, in order to prepare for a course in computing English, the teachers had to spend a lot of time and effort in searching the Internet, looking up terminologies in specific dictionaries. Consequently, it made them much more tired that they prefer focusing on teaching grammar. As one teacher put it :

*For the first time when I was delegated to teach the course, I was very eager to study new things, and then I found that it was really time-consuming and tiring. Then, I find that I have lost my patience to study deeply into the subject matter, the fact is that I only focus on grammatical items and deliver the lessons as normal routine.*

\* Recapitulation of the Answers :

- Almost all the ESP teachers interviewed indicated that they had no training for teaching the ESP courses.
- The ESP teachers tended not to see much procedural difference between the GE and the ESP teaching, although, theoretically speaking, the majority did not appear to reveal much awareness of the nuances of the issue.
- The ESP teachers tended to use their 'own' methods derived from and driven more by intuition and experience than by theory and principle.

#### **4.2.2. Findings and comments**

Based on the findings of the interview, three main points are discussed and some implications and recommendations are drawn for the work of professional development of ESP teachers accordingly.

Firstly, the confusing identification of ESP teachers' roles and needed competencies seen in the participant teachers reflects the understandable fact that they are not fully trained in knowledge of ESP-related issues. Obviously, if teachers cannot clearly articulate and understand what roles they have to do with their jobs and the skills required, they cannot be successful. It is recommended that in-service ESP training courses should be held nationwide

so as to equip teachers with the necessary knowledge of ESP, as well as to give them chances to raise their awareness of their own roles and for them to not only survive but to thrive in their career. Furthermore, in the long run, a framework of ESP teachers' required competencies for different disciplines should be established in order to provide systematic guidelines for ESP teachers.

Secondly, it can be seen that there are still some problems in the ways the teachers learn to teach ESP. Although self-study is one of the good options of learning, the teachers still lack self-reflection on their own practice, which is also very important. This explains why no clear strategies or stronger actions in response to the arising challenges were recorded in their reported statements. Hence, self-reflection should be included in the contents of ESP teacher training courses. Also, networking and forums are good ways for teachers of the same disciplines to exchange and reflect on their own instructional practice of ESP. Via such channels, teachers will find more opportunities to engage more in ESP professional development activities.

Another problem is the lack of collaboration between the ESP teachers and subject matter teachers. Therefore, it requires facilities from the institutional level to strengthen the relationship by offering strategic plans for both ESP teachers and content teachers to work for the improvement of the ESP courses. Additionally, in the ESP training courses, teachers should be instructed in how to benefit from such cooperation.

In short, during the journey of learning to teach ESP, the teachers encountered a lot of challenges which brought them to the situation of sink or swim. If the situation continues, that is to say, there are no training courses, or no proposed activities for their professional development to make them engaged in the courses and in the tasks of an ESP practitioner, it is likely that the teachers will find themselves becoming passive and demotivated, then gradually falling into boring routines.

### 4.3. Analysis of Teachers' Questionnaire

This questionnaire has been elaborated to evaluate the current ESP course focusing on teachers' perceptions and application of the course. The results gathered from this questionnaire are descriptively analysed.

#### 4.3.1. Description

Analysis is a very exciting part of the research process, because it gives the opportunity to pick out the gems that the data undoubtedly contain. In fact, a questionnaire was administered to a sample of nine (9) English language teachers. Indeed, we do believe that eliciting information about this sample population (teachers) would be of great importance in the conducted research.

**Question 1:** Which degree do you hold?

- a. Licence of English (BA).
- b. Master (MA).
- c. Doctorate (PhD).

Degreeheld	N	%
Licence of English	6	66.66%
Master	3	33.34%
Doctorate	0	0

**Table 4.2 :Teachers' Degree**

The first table indicates that 66.66% of the teachers hold a BA in English, while 33.34% have a master degree and none of them is a doctor in English language studies.

**Question 2:** What is your status as a teacher?

- a. Permanent.
- b. Part-time.

Status of the teachers	N	%
Permanent	0	0
Part- time	9	100%

**Table 4.3 : Teachers' Professional Status**

According to table 4.3 all the respondents are part-time teachers (100%).

**Question 3:** How long have you been teaching ESP?

Number of Years	N	%
1-5 years	8	88.88
6-10 years	1	22.22%
More than 10 years	0	0%

**Table 4.4: Teachers' Experience**

The table above shows that the distribution of the sample by the 1-5 years (%88.88), 6-10 years (%22.22) and more than 10 years (%0). Observably, the findings indicate that the majority of the teachers who have participated in this study have a maximum of five(5) years experience.

**Question 4:** Have you taught in some other departments?

- Yes

- No

Options	N	%
Yes	5	55.56%
No	4	44.44%

**Table 4.5 : Teaching in other Departments**

Table 4.5 indicates that 55.56% of the language teachers have taught in other departments while 44.44% have not.

**Question 5:** Have you had any kind of formal training to teach ESP ?

Yes

No

Options	N	%
Yes	0	0
No	9	100

**Table 4.6 : Training in Teaching ESP**

The table indicates that all teachers in the sample did not have any kind of training in teaching ESP.

**Question 6:** When the ESP sessions were scheduled?

Morning

Afternoon

Options	N	%
Morning	1	22.22
Afternoon	8	88.88

**Table 4.7 : Teachers' Schedule**

The highest numbers that have been recorded represent the less favourable positions devoted to English teaching in terms of periods of time and days of the week.

**Question 7:** Is students' attendance to the English classes compulsory?

- Yes

- No

Options	N	%
Yes	7	77.78
No	2	22.22

**Table 4.8: Students' Attendance**

In table 4.8, the Yes-option by contrast with the No-option has been largely selected to a certain extent (77.78%). Most teachers think that the students' attendance to the English language sessions is compulsory.

**Question 8:** Do English classes take place under the form of:

- a. Lecture?
- b. Workshop (TD)?

English Classes Forms	N	%
Lecture	3	33.34
Workshop	6	66.66

**Table 4.9: English Classes Forms**

Options have been proposed in relation to the forms that the English classes can take. So, according to 66.66% of the respondents the English classes could be 'workshop' while for 33.34% they could be just a 'lecture'.

**Question 9:** In the course of your present teaching, do you teach more often:

- a. General English?
- b. English related to science and technology in general?
- c. English more specifically related to computer science?

Options	N	%
a	6	66.66
b	0	0
c	3	33.34

**Table 4.10: Kind of English Taught**

The ninth question proposes four possible options of the kind of English actually taught and table 4.9 summarises the results that have been recorded. The options " b " was not chosen (0%) while the highest percentage was for options " a " 66.66%. This question aims at identifying the kinds of English taught, that is, general and/or specific English related to common-core and/or subject-specific content.



**Question 10:** In the course of your present teaching, do you tend to concentrate more specifically on:

- a. General grammatical notions?
- b. Grammatical structures related to science?
- c. Lexical items related to computer science?

Frequency of use	N	%
A	6	66.66%
B	0	0
C	3	33.34%

**Table 4.11: Frequency of Languageuse**

According to the results recorded in table 4.11 the option "a" has received the highest percentage (66.66%) while the option "c" has received (33.34%) and option "b" was not selected by any of the respondents 0%. This leads us to deduce that in their teaching the language teachers have focused on general grammatical notions and some of them have insisted on lexical items related related to computer science.

**Question 11:** In the ESP course of your present teaching, do you use:

- a. Textbooks related to general English?
- b. Textbooks related to scientific English?
- c. Textbooks specifically related to computer science?
- d. Documentation used by the students in their own field of study?
- e. Materials you prepare yourself (texts, exercises, etc.)?

Options	N	%
a	2	22.22
b	0	0
c	0	0
d	0	0
e	7	77.78

**Table 4.12: ESP Teaching Material**

In table 4.12, the option "e" has recorded the highest percentage 77.78%, followed by the options "a" with 22.22%; the rest of options "b" and "c" and "d" were not selected by the teachers. Consequently, 77.78% of the teachers prepare their own material, while 22.22% use text books related to general English.

**Question 12:** Do you conduct needs assessment before designing your course?

a)- Yes

b)- No

If yes, which of the following techniques do you employ?

a. questionnaires

b. interviews

c. others (please specify).....

Options	N	%
Yes	0	0
No	9	100

**Table 4.13 : Use of NeedsAssessment**

In table 4.13, we can notice that none of the teachers make use of Needs Assessment before designing the ESP course though it is an intital step in any genuine ESP course.

**Question 14:** In the ESP course of your present teaching, which of the following skills do you tend to lay more emphasis on?

- a. listening
- b. speaking
- c. reading
- d. writing

options	N	%
A	0	0
B	2	22.22
C	7	77.78
D	0	0

**Table 4.14: Emphasis on Teaching Skills.**

Considering table 4.14, it can be noticed that option "c" has received the highest percentage (77.78%); whereas options "b" has obtained only a limited percentage (22.22%) and options "a" and "d" were dismissed. It seems that more emphasis is laid on the reading skill.

**Question 14:**

a. In the ESP course of your present teaching, do you sometimes use translation from one language to another?

- Yes
- No

If yes, specify in order of frequency of use the other language(s) besides English.

Options	N	%
Yes	9	100
No	0	0

**Table 4.15: Frequency of Use of Translation**

Table 4.15 summarises the frequency of the use of translation in English teaching. Then, we notice that the translation method is practised all the time by all teachers.

Options	N	%
Only French	2	22.22
French/Arabic	6	66.67
Not specified	1	11.11

**Table 4.15.1: Frequency of Translation into Other Languages**

According to the answers expressed, table 4.15.1 an illustration of the results. So, it indicates that there is much more frequency of using both French and Arabic in translation from English (66.67%) while option "not specified" is the least favoured (11.11%). Hence, in the English classes, much more translation is achieved in Arabic and in French. Note that one teacher out of the nine did not specify the language used in translation.

**Question 15:** Are you given any programme that you use to implement your courses?

- Yes
- No

Options	N	%
Yes	0	00
No	9	100

**Table 4.16: Existence of Programmes**

In table 4.16, all of the respondents have ticked the No-answer and none of them 100% have ticked the Yes-answer. Thus, all the teachers do not use any programmes that are proposed or imposed by the institution.

**Question 16:** Does the administration contribute and collaborate with you?

- Yes
- No

If yes, how.....

Options	N	%
Yes	0	0
No	9	100

**Table 4.17: Co-operation between Language Teachers and Administration**

The results indicate that there is absolutely no kind of collaboration between the language teachers and the administration. The programmes are not provided and there are no facilities to make the teaching/learning process easier and more interesting.

**Question 17:** Do you meet/collaborate with teachers of the computer science department to discuss and comment your courses and their content according to the whole programme of speciality?

- Yes

- No

Options	N	%
Yes	0	0
No	9	100

**Table 4.18: Co-operation between Language and Science Subject Teachers**

In this table, all the respondents have answered "no". Consequently, there is no co-operation at all between the language teachers and the subject science teachers either to discuss or to comment the language courses in agreement with the whole programme of speciality.

**Question 18:** Which of the following problems do you face when teaching ESP? You can select more than one option.

a- Lack of specialist knowledge

b- Lack of suitable materials

c- Difficulty in understanding the materials

d- Time constraints

e- Others, please specify

Option	N	%
A	8	88.88
B	7	77.77
C	5	55.55
D	5	55.55

**Table 4.19: Problems faced by teachers**

Results of table 4.19 indicate that the majority of the respondents consider the lack of specialist knowledge and suitable material to be the most challenging factors. However, 55.55% of the teachers regard time constraints and difficulty in understanding materials as the main faced problems.

**Question 19:** What are the reasons that make your work as an English language teacher does/does not correspond to the level of the expected achievement? You can select more than one option:

- a. You are not a permanent teacher at the department of computer science.
- b. You do not have any particular experience in teaching English related to computer science.
- c. You find it difficult to determine the needs of the students imposed by the specific field (i.e. computer science).
- d. You face some problems to collaborate with teachers of the specific field.

Options	N	%
a	5	55.56
b	6	66.66
c	9	100
d	8	88.88

**Table 4.20: ESP Teaching Issues**

Table 4.20, summarizes in terms of percentages the main causes of lack of achievement by the teachers. Thus, according to table 4.20, option "c" which is about the problem of finding difficulty to determine the needs of the students imposed by the specific field is the first reason which causes the work of the English language teacher not to

correspond to the level of achievement expected. Then, option "d" or "no collaboration between the language teachers and the subject-specific specialists" is the second main reason of this situation. Next, option "b" or "no particular experience in ESP" is put in the third position. Finally, option "a" or "no permanency of the language teacher in the computer science department" is the least selected option.

**Question 20:** Which of the following areas would you like to receive training in? You can choose more than one option.

- a- ESP theory
- b- Needs Analysis
- c- Procedures of course design
- d- Specialized terminology
- e- Materials, course and learner evaluation
- f- All of them

Option	N	%
a	5	55.56
b	8	88.88
c	6	66.66
d	3	33.33
e	7	77.77
f	9	100

**Table 4.21: Areas that require training**

The table indicates that all the teachers have agreed that they need training in all the above stated options since they constitute crucial factors in determining the success of any ESP course.

### 4.3.2. Findings and Comments

In the investigation of the learner's needs, it is important to take into consideration all the related behaviours. These include the qualifications, teaching experience and training of the teachers. Therefore, the first aspect can be described as a preliminary phase, as it elicited some personal information about their degrees and training in the field of ESP.

The majority of the English language teachers at the computing science department (66.66%) are holders of B.A. Although, some teachers have good experience of teaching general English courses, this is not sufficient to qualify them to teach ESP courses. It is improper and somewhat deficient for a teacher holding a B.A. Degree to teach ESP programmes, because teaching ESP requires higher qualifications and greater experience and specialization. Untrained teachers may not have the sensitivity needed for conducting such programmes.

A small minority of the English course teachers (33.34%) has an M.A. Degree. Besides, no provisions have been made for ESP teacher training, and the local teachers have not received any in-service training either. Hence, General English teachers have undertaken a job for which they do not seem to be well-prepared for. As a result, teaching/learning activities in the classroom were very restricted. As a matter of fact, teacher training for ESP is problematic. It can be considered as the most acute problem in different parts of the world in general, and in the Third World countries in particular. Thus, the profile of the ESP teacher encountered has been one of the main causes of dissatisfaction among the computer science students.

Given such a situation, it seems appropriate to reconsider the definition provided by Dudley-Evans (1988) concerning the true kind of ESP practitioner being capable of achieving five different but important roles. As mentioned in Chapter one, the true ESP teacher or ESP practitioner is supposed to perform different roles. These are (1) Teacher, (2) Collaborator, (3) Course designer and materials provider, (4) Researcher and (5) Evaluator. To a certain extent, the language teachers met at the computer science department have been simultaneously teachers, course designers and probably materials providers, but neither collaborators, researchers, nor evaluators. These three last roles have not been assumed because of some



other factors such as the lack in ESP training and an insufficient experience in ELT. In other words, they have been assigned roles for which they are not prepared.

Besides, we have observed that there is not any kind of collaboration between language teachers and teachers of the subject matter. Furthermore, in designing the courses, the fundamental procedure of 'needs assessment' has been neglected and the development of materials has not been based on a thorough analysis of the needs of the students. As a result, both sources, namely the language teachers and the computer science students do not share the same opinion about the priority of the skills. This situation may produce deficiencies and perhaps a feeling of frustration among the students, especially if they are convinced of the utility of English for academic or for occupational purposes. Besides, the focus on teaching technical vocabulary and the explanation of grammar dominated the ESP classes. Indeed, language skills, based on realistic objectives and authentic needs, were not introduced to learners or practised.

In addition, it has been noticed that the computer science department itself has not been able on the one hand to specify to the language teacher the kind and content of programme to be taught, and the final objectives for which the English language learning operation is put. Consequently, most language teachers have been left acting in the way they thought appropriate even if in some cases they were mistaken. On the other hand, this institution has not been successful in providing the minimum of acceptable conditions in order to help the language teachers in their tasks. This attitude is reflected in the way the language sessions are planned and included in the timetable.

On the whole, the analysis of the English language teachers' questionnaire has permitted to highlight their perception, application and the difficulties they have encountered in the ESP course design process. Undoubtedly, the results of the language teachers' questionnaire pinpoint some areas that call for urgent solutions, principally the necessity of designing ESP courses on the basis of learners' needs.

#### 4.4. Student's Interview Analysis

##### Theme 1: Students' Perception of their Language Needs

The students were asked to describe what their needs were regarding the use of English. The majority of the students stated that they needed English in order to read and understand English texts in their discipline. They perceived English as a means of getting access to the scientific sources in their subject specialism. Therefore, they considered familiarity with the technical terms in their disciplines to be of primary importance in providing them with the ability to comprehend the specialised texts they deal with. As such they regarded reading comprehension as one of the important skills they needed to develop. As one student pointed out : *"Reading comprehension is what we need to develop. In other words, we need English language in order to be able to understand the English texts in our own field of study."*

Some students based their opinion on a general view of language and considered the feasibility of learning a foreign language as a means of communication and, in particular, English as an international language. As one student stated: *"As a means of communication, we need to know English."*

Few students mentioned the importance of English as essential in pursuing studies abroad as well as inside the country. According to one such student:

*It is necessary for us to know English as an international language. It is also necessary for continuing studies abroad and even at university, we see that those who are good at English are more successful.*

In general, students tended to be aware of their needs regarding the use of English. They recognised the instrumental role of English as a vital means of getting access to scientific sources in order to acquire the knowledge they wanted. Similarly, they knew what language skill they needed to develop to achieve this end - i.e. reading comprehension. However, they couldn't help expressing their wish to develop speaking skill for oral communication, without which, it seemed, they felt very ignorant of the English language.

## Theme 2: Students' View of Meeting their Needs

In order to find out to what extent the ESP courses had been able to fulfil the students' needs in English language, they were asked to describe their achievement in English courses. Firstly, there was an overwhelming expression of dissatisfaction with the existing ESP courses. The majority stated that they achieved "very little", "not much", "nothing", and the like. They believed that the courses had been "of no use" to them. One student even mentioned that, *"I think I have forgotten much of what I had learned before I entered the university."* Another student said, *"What I can remember from those courses is just some few words."*

Students' lack of satisfaction with the ESP courses was attributed to different factors. Some students attributed it to the irrelevancy of the courses to their particular subject specialism: *"The delivered courses were of no use to us."*

Some others indicated the inefficiency of teaching techniques in developing the desired skills as one of the students stated:

*"Our teachers emphasise grammar and the structure of the language rather than teaching reading and speaking. I have been at this university for three years. I have never seen a teacher ask a student to say just a sentence in English, let alone a dialogue or a conversation. We even couldn't develop the skill of reading as we were supposed to".*

The overall impression of the majority of the students was that the English courses neither met their needs nor satisfied their interests. The courses, organised around the abstract study of grammar were inappropriate to their needs and they consequently felt bored and demotivated. In other words, they favoured the communicative aspect of the English language (speaking) more than its structure.

## Theme 3: Students' Perception of the Objectives of the Course

There was one student who said, *"I don't know exactly"*; and another one who stated, *"it is simply a course to pass."* On the whole, students had similar perception of the objectives of the current ESP courses. The majority considered the mastery of grammar and vocabulary as the principal aim of the courses.

## Theme 4: Teaching Method

Next the students were asked to talk about the teaching method and classroom management. The students interpreted and responded to the questions in this area in markedly similar ways. One student said : *“What actually happens in the classroom is that the teacher explains certain grammatical points, and the students sit passively and just listen to the teacher, and sometimes take notes”*.

Another student pointed out:

*... “[the teacher] usually assigned a text to be studied and translated. Then, he asked quite a few students, who were usually active in the classroom, to read and translate it. The other students just listened and took notes.”*

The next student's description of teaching methodology was in fact *another* version of the two previous ones:

*“First, the teacher taught the words by giving synonyms. Then, he read the passage. After that, he went over the previous passage, asking some students to read and translate it. Then, the exercises were done by the students, and the teacher gave grammatical explanation”*.

The common teaching method practised in these classes, as perceived by the students, seems to have been more in line with the traditional way of language teaching Instruction which was mainly teacher centred and the teacher tended to give information rather than elicit it from the students. Students were rarely engaged in class activities except for a few called upon to do the exercises. All classroom activities seem to have been centred on accomplishing the designed tasks. The teacher's role appears to have been more that of an active performer and the student's that of passive listener.

## Theme 5: Students' Perception of Course Accomplishments

The students were then asked to explain whether the course had done well or badly, and whether they thought anything should be added to or omitted from the courses. Without referring to any specific points, one student stated his opinion regarding language learning in general as follows:

*I think spending so much time and energy on teaching grammar makes language classes boring, dull and nonsense. More time should be devoted to developing the speaking skill instead, and grammar should be limited to only the essential points that help comprehension.*

This view was in fact confirmed by the majority of the students although they expressed it in different words: *"I believe that even if grammar is taught for the purpose of learning the language, we have never had the chance of using it in communication"*

Some students indicated that since there was no opportunity for them to use the language outside the classroom, teachers had better provide them with the chance of practising it in the classroom; otherwise, they would forget whatever grammar they learned.

From what they have expressed, it is clear that the students' dissatisfaction with the courses is mainly centered on their lack of interest in grammar. Courses organised around the abstract study of grammar seem to them inappropriate and dull, which tends to make them bored and demotivated. It seems that they feel more satisfied if they can express themselves in the target language: *"The teacher has never provided us with the opportunity to say even a single sentence in English,"* said one student.

#### Theme 6 : Students' Opinions about the Materials

When the students were asked to state their opinion about the materials they used, the majority complained that the materials were not much related to their particular discipline. Indeed, some students believed that the materials are too grammar-centred.

#### Theme 7: Students' Problems

After discussing different aspects of the programme, the students were asked to mention what problems they faced while taking the ESP courses. Apparently, having stated everything in reply to the previous questions, they felt that they had nothing more to say. With this point in mind, one student said, *"as far as I can remember, in the English courses we had nothing but problems."*

## Theme 8: Students' Suggestions

The suggestion made most by the students was a demand for an increase in the amount of instruction:

*"Hours of instruction are not at all enough. They must be increased. It is not enough to have an English course for just one hour and a half,"* said some students. The amount of increase in language instruction proposed by the students is at least 3 hours per week. *"I want the authorities to take this problem seriously. At least increase the number of teaching hours to 3 per week"*. One student said, *"I suggest that the level of the courses be adjusted to the knowledge and needs of the students"*.

Some students gave primary importance to the teachers and suggested that they should take a more active role in the development of the students' instruction. They stated :*"both teachers and students do not take the course seriously"* Therefore, they suggested that teachers take the courses more seriously, *"make the most use of the teaching time"*, and, *at the same time "... be more serious with the students"* because as one of them said, *"we students are accustomed to being pushed by the teacher. That is what the system of education has always been like"*.

Other suggestions made by the students were related to classroom management and teachers' way of dealing with classroom activities. Some students believed that teachers' general view regarding language teaching should change, and they ought to assume new approaches for developing reading and speaking skills. In the approach they suggested, there was no place for grammar and grammatical terms. Instead, there was more concentration on oral presentation of the material, and the teacher tended to correct students' errors less frequently ; otherwise the students might be discouraged. All these suggestions indicate that the students dislike the abstract study of grammar and express a wish for the development of speaking skills.

-Summary of the Findings :

\* Achievements :

- The majority of the students did not appear to be satisfied with their achievement in English and did not think the courses fulfil their needs of the English language.

\* Teaching Procedures :

- Students viewed teaching to be mainly teacher-centred, with the students rarely called upon to take a role in the teaching/learning process.
- Students saw classroom activities as primarily centred on accomplishing some exercises and tasks.
- Students perceived the role of the teacher as an active performer providing information, and that of the students as passive listeners consuming information.

\* Materials :

- The students did not reveal much satisfaction with the materials in use. They believed that many of the texts they studied were irrelevant to their subject specialism.

\* Use of English

- The students attached practical value to English and regarded it as a beneficial factor in their current studies and target careers.

#### **4.4.1. Findings and Comments**

\* Findings Relating to the Needs of the Students :

Students' dissatisfaction of the current ESP course is mainly due to the fact that no systematic and in-depth needs assessment has been carried out during the process of course design. Indeed, Nunan considers the identification of learning goals as an important step in the development of a language programme as it tends to provide a rationale for the course. (Nunan, 1988 : 24).

"Learning goals," according to him, "*may be derived from a number of sources, including task analysis and learner data*" (Ibid ). "*Needs analysis is generally regarded as criterial to ESP, although ESP is by no means the only educational enterprise which makes use of it*" (Robinson, 1991: 7). This is particularly so because ESP is goal-oriented. That is to say, students study English not because they want to fulfil their own interests but because they want to use it as a means of achieving something else i.e. for study or work purposes.

An effective management of ESP teaching requires a proper understanding of students' language needs. That is, one needs to know what and how they require to communicate at what level and with which skill. It is also necessary to know the students' educational background in English, their aspirations, and the place English occupies in their long-term plans. In addition, a knowledge of their attitude to English language learning and teaching as well as their expectations of an English class and syllabus is also necessary.

\* Appropriateness of Materials :

ESP material has been regarded as a characteristic feature of ESP work (Hutchinson and Waters, 1987). ESP is typically based on the assumption that its courses are designed to meet the specific needs of learners. It follows that the materials designed for this purpose should appropriately meet the learners' requirement for the language. In the learning process, materials and methods play a key role in determining classroom events. However, the results obtained through the interview show that the students were not particularly satisfied with the material used. The reasons indicated by the respondents included the lack of relevance of many texts to their subject specialism.

What these results clearly signify is that the materials did not motivate the students. Nor did they prove to be appealing. It could well be argued that any learner studying English for specific purposes will be instrumentally motivated due to finding the connection between the study of English and his subject specialty. These findings indicate that key 'design factors' have been neglected in the development of the materials.

\* Teaching Procedure :

The ESP teachers in this study did not follow any particular method. In other words, there was no dominant method of teaching that could be labelled as the ESP methodology. Each teacher practised his 'own' method. In practice, however, the dominant teaching procedure, as revealed through the interview, appeared to be in line with traditional ways of teaching -teacher-centredness, teachers being active performers providing information and students passive listeners consuming information.



Besides, The study show that the traditional language teaching approaches of the current ESP course have focused mainly on teaching reading and grammar as separate skills. However, an integrated skills approach, where reading, listening and speaking, and writing are integrated together (Oxford, 2001), is needed. Research has also shown that English teaching that focuses on integrated tasks and activities used in authentic situations can improve students' English proficiency and language acquisition (Su, 2007). Indeed the interviewed students of this study persistently expressed their wish to learn other skills mainly speaking.

On the whole, the results of the document analysis, interview and questionnaire suggest that the ESP course was not effective and helpful in improving students' language ability. The majority agreed that the course neither satisfy their academic studies needs nor prepare them for target carreers.

#### **4.5. Identifying Learners' Needs with Reference to EAP: Case Study**

In identifying students' learning needs, the student becomes a kind of partner in the teaching process. They can feel a sense of personal and active engagement with the material. This active engagement leads to a more adaptive learning mentality that can better prepare students for future learning and careers.

##### **4.5.1. Students' Needs Analysis Questionnaire**

###### **Introduction**

As mentiond in chapter two, Needs Analysis is a cornerstone element that should proceed prior to, during, and after designing any ESP course (Dudley-Evans, 1998). It refers to the data collection method used to serve as a rationale for developing a syllabus or a curriculum to meet the particular needs of students studying or working in a specific field. Being a type of English for Specific Purposes approach (ESP), EAP provides specific instructions that are oriented by the students' needs to accomplish communicative practices or tasks according to the demands of a certain academic discipline context. As those demands vary from one discipline to the other or through time, it is proposed that, any EAP course should be designed based on needs analysis which investigates the students' needs and discipline's requirements.

Hence, the main purpose of the study is to explore how adult language learners envisaged their needs and, thus, recognize how far they could act as useful informants regarding the content of the language course and the teaching/learning methodology. Moreover, collecting information about the needs of the learners in their academic situation seemed a necessary initial step. Furthermore, the research work was motivated by our belief that when adult learners define their needs, they do so according to the forces that act upon them as social agents (eg. society, profession, academic discipline, sponsoring company, etc.) and the forces that act within themselves as individuals. These forces direct the learning behaviour towards specific goals and urge the learners to look for means to satisfy them.

Besides, the research investigation was also based on the conviction that any attempt made at identifying learner needs should necessarily involve examining students' learning variables: the learners' established learning modes and habits, preferred learning techniques and activities, attitudes towards the different language skills, expectations of teacher/learner role, etc. Such factors would need to be examined in advance and taken into consideration if learning is to be optimized and motivation to be sustained. It is really important to undertake an investigation on the needs of the participants of various fields before conducting any language program because needs analysis minimizes the risk of the failure as the objectives and goals are clear to the teachers as well as the learners. Thus, the main aim is to investigate the language learning attitudes and break down the needs of the Computer Science students to outline a new ESP course that would better fulfill and cater their needs.

#### **4.5.1.1. Sample of the Needs Analysis Questionnaire**

As it has been mentioned in Chapter Three, the study was conducted at Médéa University. The sample used in this study consists of 120 students of computing. The motive behind selecting this population is that they are mature enough to talk about their English language needs. Those participants were selected for this work for a variety of reasons. Firstly, as Long (2005 :19) believes that students are a valuable source of information to the extent of being “*primary, sometimes the only, respondents*”. Secondly, the students' wants should be of primary importance in any NA study, and many studies revealed this (e.g. Dudley-Evans & John, 1998; Hutchinson & Waters, 1987; Long 2005). Thirdly, any learner-

centred approach to course or syllabus design should consider the learner's perceptions as a first step (Nunan, 1988), which goes in line with the latest trend or stage in the development of ESP.

#### **4.5.1.2. Data Collection Method**

The questionnaire was utilized as a significant strategy for inquiry to examine the English language needs of computer science students as it is easier to analyze, require less time and do not require much from the researcher as it is the situation of other techniques, especially interviews and tests. Regarding the frame, the questionnaire contains various questions intended to collect particular answers from the respondents. Questionnaire comprises the questions to investigate the language learning attitude, language proficiency and language needs of these students.

Before circulating the questionnaire, the participants were informed about the goals and importance of this research. They were likewise asked to answer genuine and legitimate responses. Additionally, they were permitted to request any help they may require.

#### **4.5.1.3. Data Analysis**

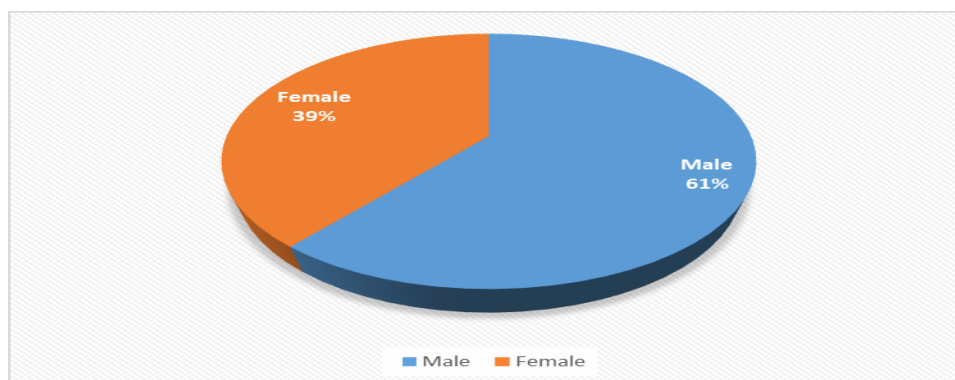
The Questionnaires were distributed to 120 students, and only 90 questionnaires were completely filled by the students. The return rate was 75 percent. The items of the needs analysis questionnaire were analyzed quantitatively by making use of descriptive statistics. Each item of questionnaire is presented by frequency, percentage and mean.

The obtained data from the students' questionnaire starts by providing a profile of the respondents: gender, age, medium of instruction at the Computer Science Department, their current level in English before and after the entrance to the university.

The analysis of the first question is presented in Table 4.22. As shown in the table, 61% of the first-year Master's students were male and 39% were female aged between 20 and 25, their first language is Arabic and the medium of instruction is French.

Gender of informants		
Group	N	percentage
male	55	61%
Female	35	39%

Table 4.22 : Gender of informants

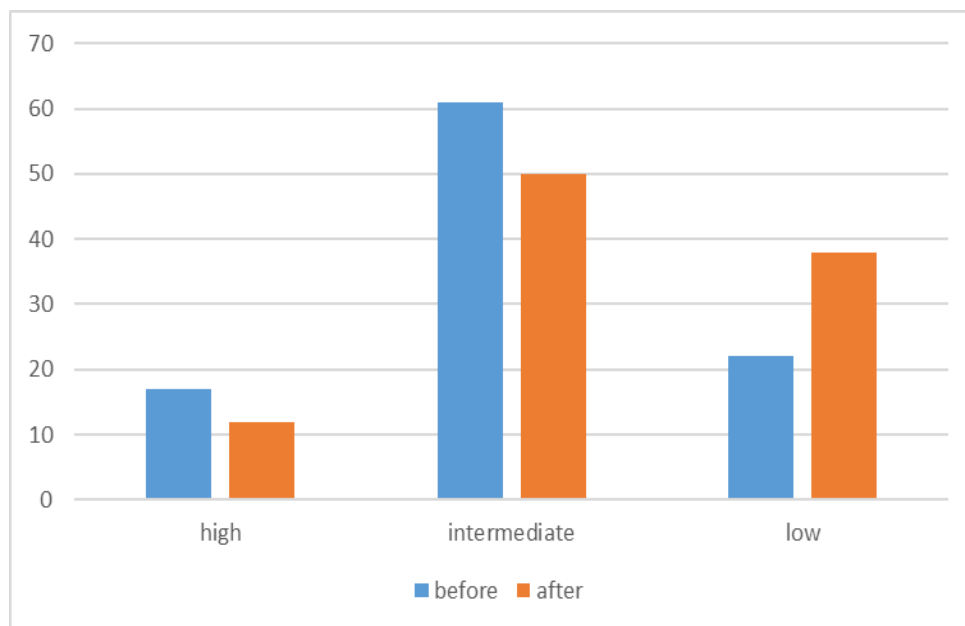


Pie chart 4.1 : Gender of informants

Level of English	High		Intermediate		Low	
	n	%	n	%	n	%
Before the entrance to university	n:15	17%	n: 55	61%	n : 20	22%
After the entrance to university	n : 10	12%	n : 45	50%	n : 35	38%

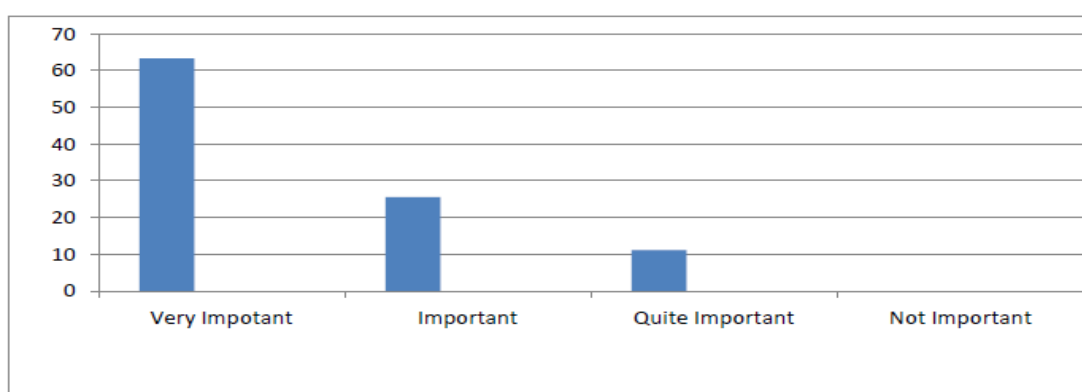
Table 4.23: Students' English Level at University

As shown in Table 4.23, the majority of the informants, according to them, had an intermediate level in English before and after the entrance to the university with 61% and 50% respectively. However, the results show that the number of the students with less significant command of English considerably increased after the entrance to the university from 22% to 38%. These results may be related to the lack of students' motivation due to inadequacy of English courses in the department of computing as well as the lack of trained ESP teachers.



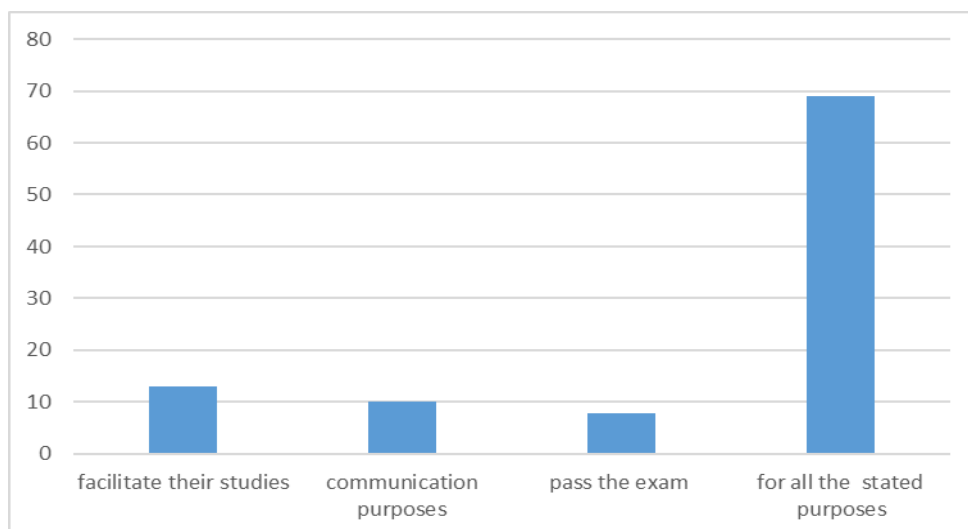
**Bar Graph 4.1: Students' English Level at University**

The third question was based on the attitude of the participants towards the English language learning 'ELL'. It includes two questions asking about their perception towards the importance of ELL and the purposes they want to learn English for. Regarding the first question most of the students 63.3% (n=57) believed that learning English language is “*very important*”. Meanwhile no participant denied the importance of ELL.



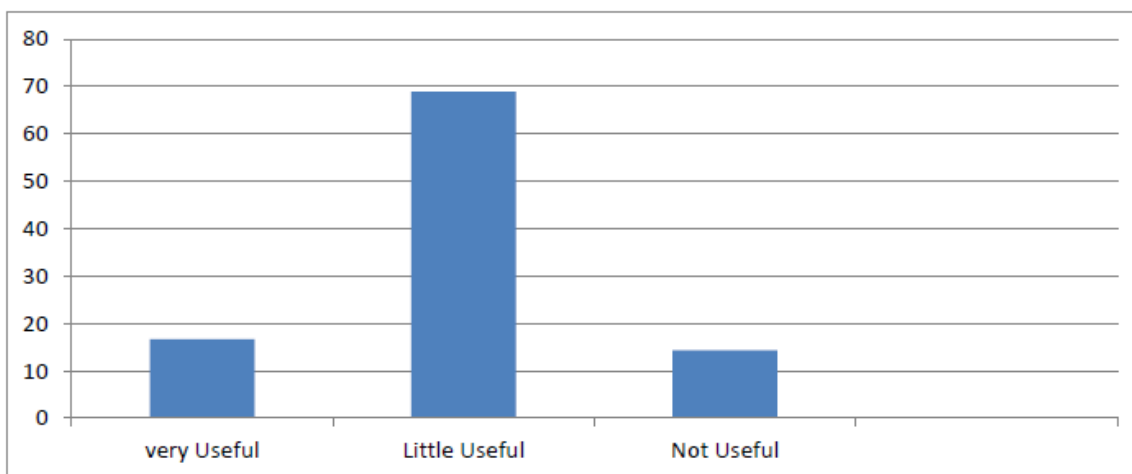
**Bar Graph 4.2: Attitude towards the Importance of ELL**

In reply to the third question 13.3% (n=12) participants came up with the answer that they want to learn English to facilitate their studies. 7.77% (n=7) said that they want it to pass the exam while 10% (n=9) replied that they want to learn English for communication purposes. 68.9% (n=62) wanted to learn English for all the above stated purposes.



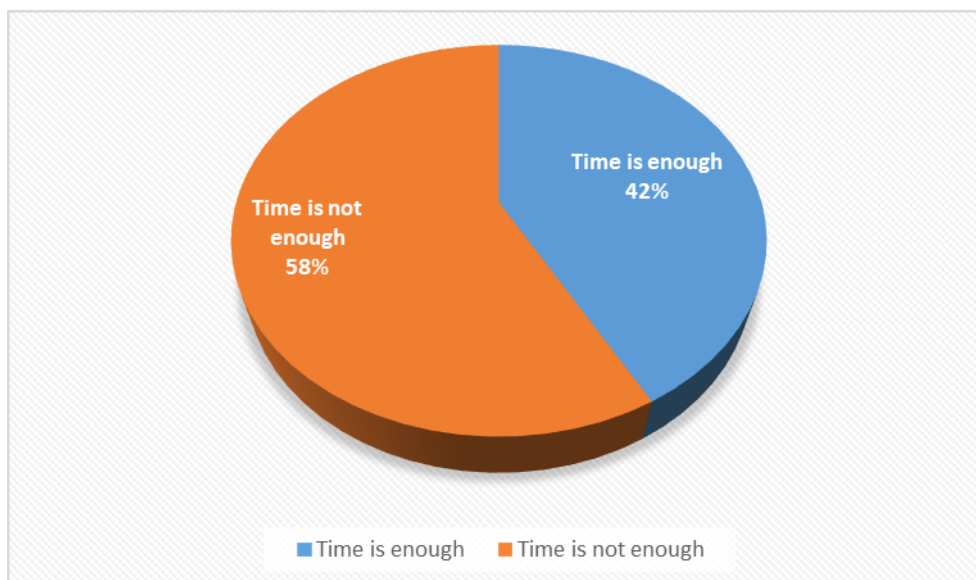
**Bar Graph 4.3 : The Purpose of ELL.**

The fourth section of the questionnaire included two questions which inquired the effectiveness of current English language material in use and time allocated for the English course. Concerning the effectiveness of the material, the majority of participants came up with negative remarks about their perception of the effectiveness of the ELT material in use. More precisely 83.3% (68.9%+14.4%) participants said that the teaching materials are either “little useful” or “not useful”. Only a small number of the participants, 16.7% (n=15) to be precise came up with the response that it is very useful. Responses of the participants are presented in chart 4.



**Bar Graph 4.4: Effectiveness of Current ELT Material in Use**

Regarding the time allocated for the course, as illustrated in the pie chart, more than half of the respondents, (58%) believed that the time allocated for the English language program is not enough; meanwhile, (42%) considered the allocated time to be enough to use the language effectively.



**Pie Chart 4.2 : The time allocated for the English course is enough for them to use the language effectively.**

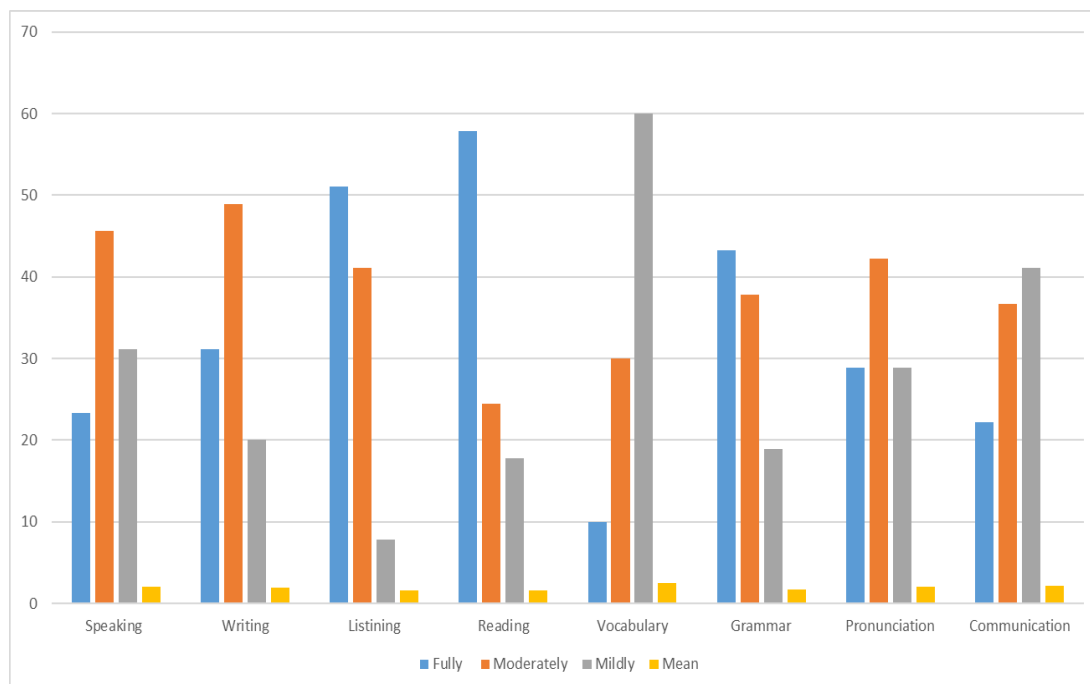
The fifth question was based on the learners' English language proficiency in various language skills. The participants responded by selecting an option out of given three as how much they are proficient in various language skills. Table 4.24 indicates the results as they are given in frequency, percentage and mean of the related language skill.

Skill	Fully	Moderately	Mildly	Mean
Speaking	23.3% (21)	45.6% (41)	31.1 (28)	2.07
Writing	31.1% (28)	48.9% (44)	20% (18)	1.88
Listening	51.1% (46)	41.1% (37)	7.8% (7)	1.58
Reading	57.8% (52)	24.4% (22)	17.8% (16)	1.60
Vocabulary	10% (9)	30% (27)	60% (54)	2.50
Grammar	43.3% (39)	37.8 (34)	18.9% (17)	1.75
Pronunciation	28.9% (26)	42.2% (38)	28.9% (26)	2.0
Communication	22.2% (20)	36.7% (33)	41.1% (37)	2.18

**Table 4.24: Competency in English Language Skills**

According to table 4.24 the majority of participants viewed that they were moderately competent in speaking and writing skills, 45.6% and 48.9% respectively. A maximum number of participants found themselves fully competent 51.1% in listening skill and 57.8% in reading skill. 60% of the participants were of the view that they are just mildly competent in English vocabulary while 41.1% suggested that they are mildly competent in communication skills. 43.3% participants have a full command on English grammar while 42.2% participants were moderately competent in English language pronunciation. Mean for the majority of the language skills was on the higher side as most of the participants opted for the second and third options. Only less productive skills such as listening, reading and English grammar has the lower mean as compared to the other English language skills.





**Bar Graph 4.5: Competency in English Language Skills**

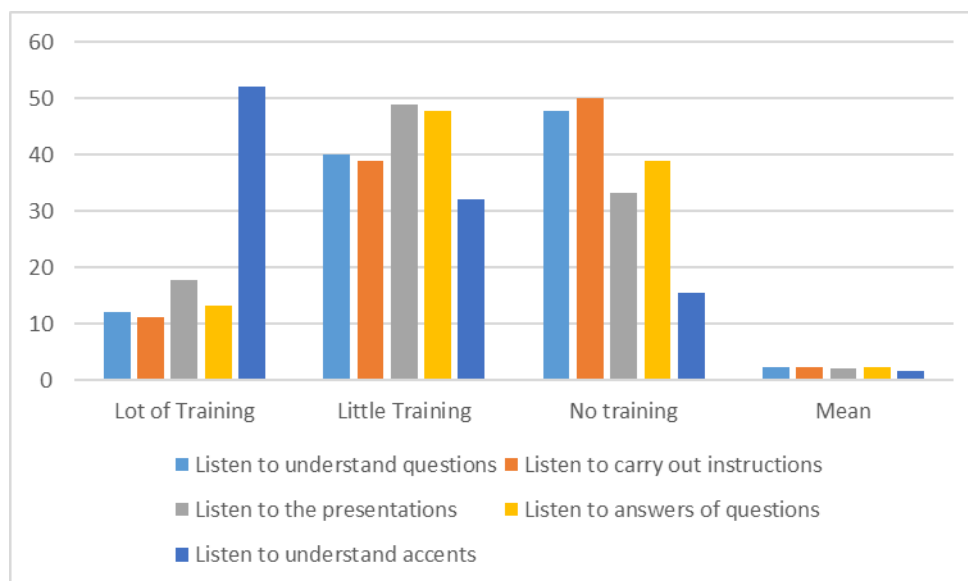
The sixth question was aimed to inquire about the English language needs of the computer science students. Four basic skills were divided into 20 sub-skills and language components. Participants chose from three different options for every sub-skill. Answer from each question of this section is presented in terms of percentage and mean.

\*Listening Sub-Skills :

LanguageSub-skill	Lot of Training	Little Training	No training	Mean
Listen to understand questions	12.2%	40%	47.8%	2.35
Listen to carry out instructions	11.1%	38.9	50%	2.38
Listen to the presentations	17.8%	48.9%	33.3%	2.15
Listen to answers questions	13.3%	47.8%	38.9%	2.27
Listen to understand accents	52.2%	32.2%	15.6%	1.63

**Table 4.25 : Students' Need of Listening Sub-Skills.**

In table 4.25, the responses to the items related to the sub-skills of listening are portrayed. The students perceived the listening to understand accents as the most needed listening sub-skill which stood at about 52%. In addition, about 17.8% of the participants consider listening presentations as the second important listening sub-skill, while about 13.3%, 12.2%, 11.1% respectively indicated that listening to answer questions, listening to ask questions and listening to carry out instructions are of low importance in comparison to the two previous stated sub-skills.



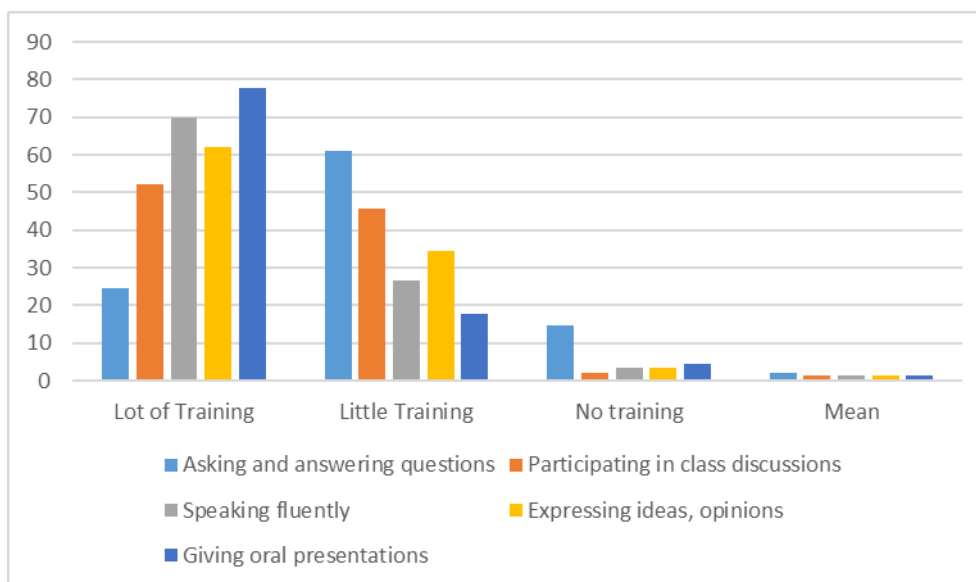
**Bar Graph 4.6 :Students' Need of Listening Sub-Skills.**

\* Speaking Sub-Skills :

Language Sub-skill	Lot of Training	Little Training	No training	Mean
Participating in class discussions	52.2%	45.6%	2.2%	1.50
Speaking fluently	70%	26.7%	3.3%	1.33
Expressing ideas, opinions	62.2%	34.5%	3.3%	1.41
Giving oral presentations	77.8%	17.8%	4.4%	1.26

**Table 4.26 : Students' Need of Speaking Sub-Skills.**

Regarding the speaking sub-skills, the table indicates that 77.8% of the students consider giving oral presentations and participating in class discussion 70% as the sub-skills which require a lot of training and more focus .



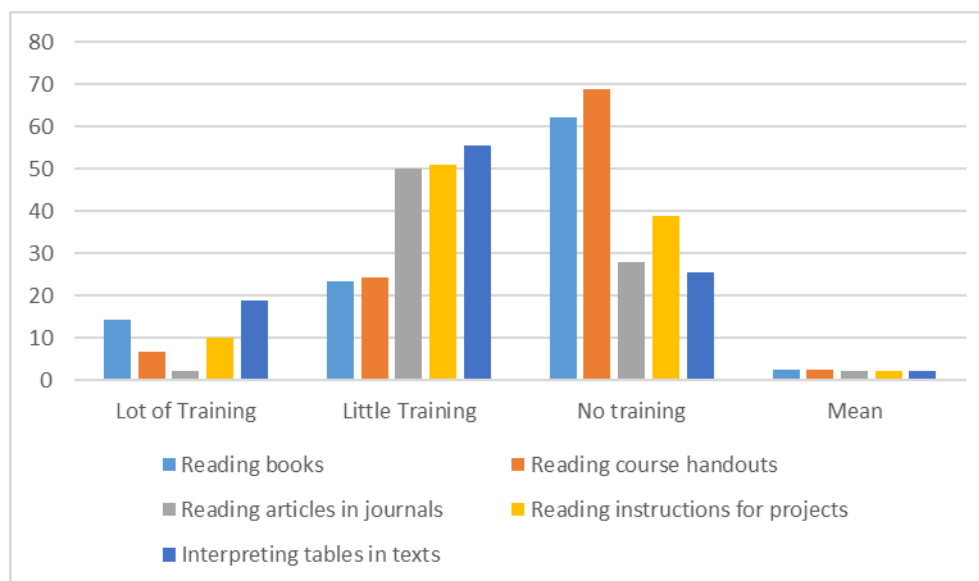
**Bar Graph 4.7 : Students' Need of Speaking Sub-Skills.**

\* Reading Sub-Skill :

LanguageSub-skill	Lot of Training	Little Training	No training	Mean
Reading books	14.4%	23.3%	62.3%	2.47
Reading course handouts	6.7%	24.4%	68.9%	2.62
Reading articles in journals	2.2%	50%	27.8%	2.05
Reading instructions for projects	10%	51.1%	38.9%	2.28
Interpreting tables in texts	18.9%	55.6%	25.5%	2.06

**Table 4.27 : Students' Needs in Reading Sub-Skills.**

The table 4.27 shows that among the sub-skills of reading, the majority of participants considers that interpreting tables in texts to be the most needed sub-skill, which rates at (18.9%), followed by reading books (14.4%) and reading instructions for projects (10%). Reading articles in journals and course handouts are reading sub-skill which the students do not mostly need.



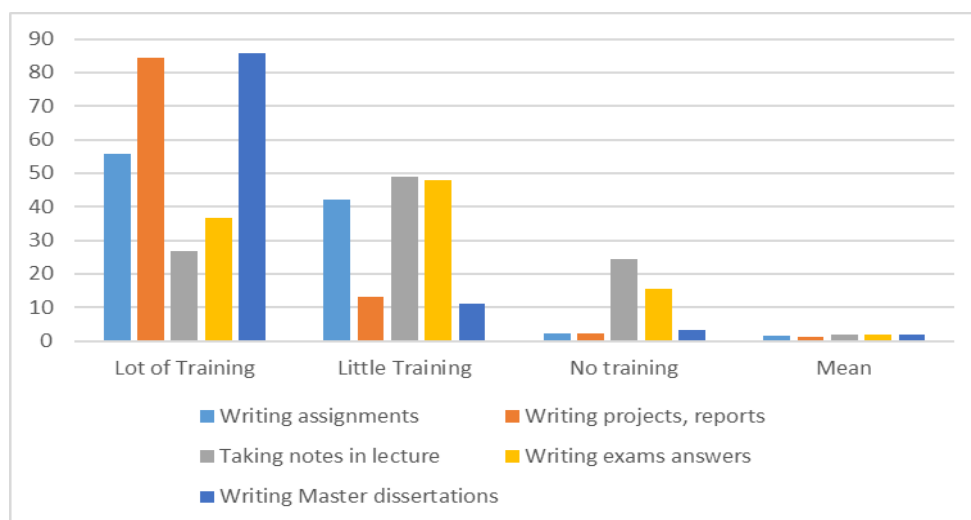
**Bar Graph 4.8 : Students' Needs in Reading Sub-Skills**

\* WritingSub-Skill :

LanguageSub-skill	Lot of Training	Little Training	No training	Mean
Writing assignments	55.6%	42.2%	2.2%	1.46
Writing projects, reports	84.5%	13.3%	2.2%	1.17
Taking notes in lecture	26.7%	48.9%	24.4%	1.97
Writing exams answers	36.7%	47.8%	15.5%	1.78
Writing Master dissertations	85.6%	11.1%	3.3%	1.77

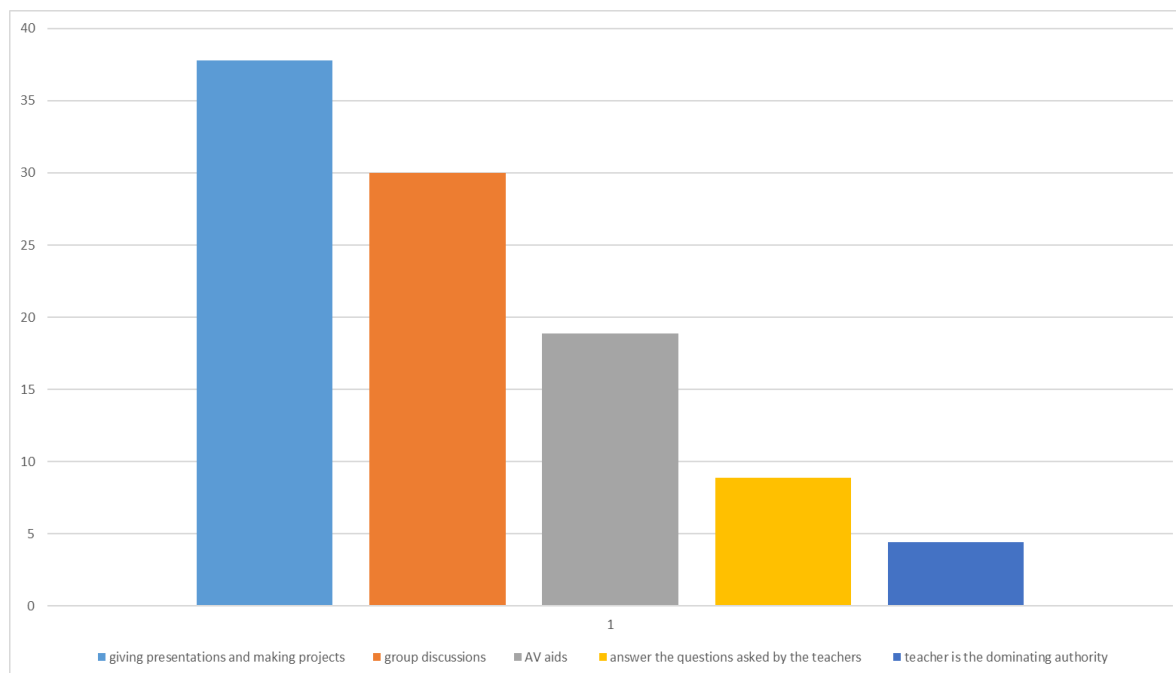
**Table 4.28 : Students' Needs in Writing Sub-Skills**

For the writing sub-skills, as it is indicated, the students need English to write Master dissertations, (85.6%). Besides, Writing projects and assignments have crossed the same proportion as that of writing master dissertations, with a minimal difference of less than (1%). Thus, the writing sub-skills of projects and assignments as well as writing exam answers are considered as equally in regards of need. Taking notes in lectures rate lesser in terms of need of training.



**Bar Graph 4.9 : Students' Needs in the Writing Sub-Skills**

The last question of the questionnaire inquired into the favourable teaching style of the participants by which method they feel more comfortable when it comes to language learning. Participants chose their preferred teaching method out of five given options. 37.8% (n=34) feel more comfort in giving presentations and making projects while 30% (n=27) preferred group discussions where the teacher is just a facilitator followed by learning through AV aids where 18.9% (n=17) participants were in support of this method. Only 8.9% (n=8) said that they like the method where they have to answer the questions asked by teachers and only 4.4% (n=4) were in favor of lecturing where teacher is the dominating authority. Most of the students were of the view that they preferred those teaching styles that are considered learner-centred and where the teacher is mostly a facilitator. These preferences can be seen in bar graph 4.11.



**Bar Graph 4.10: Favourable Teaching Style**

#### 4.5.2. Findings and Comments

The results of this needs analysis questionnaire indicate that learning the English language is of vital significance for Computer Science Students to adapt to their studies as well as for their upcoming careers. They show that students are not very competent in the productive language skills. The students' self-reports of their speaking and writing skills being lower than the required abilities. The majority of the students believed that the English language is of paramount importance and it is necessary to acquire the command over this international language. Subsequently, it can be inferred that the larger part of computing students had uplifting attitudes and high inspiration in learning English as a foreign language.

Besides, our analysis also demonstrates that the students are not certain with their productive skills and the sub-skills related to them i.e. writing and speaking. Indeed, they reported that they might want to perform a great deal of training in these aptitudes to enhance their capability in English language. In particular terms, certain sub-skills have been distinguished to require exceptional attention in the new outlined ESP materials. The sub skills are: participating in class/ group discussions/, speaking fluently, expressing ideas/ opinions/, giving oral presentations, writing master dissertations, and projects/ reports. The

investigation reveals that students are well aware of the important aspects of English language which can serve them in present and in their future careers.

In the light of the findings, it is revealed that the English language course does not meet their language needs, majority of participants reacted adversely to the usefulness of the ELT materials as far as addressing their needs. Most importantly the studies indicate that the allocated time to the course is not sufficient enough to allow them to utilize the language productively, and this can point out the requirement for designing a viable and proficient ESP course in light of requirements and interests of learners.

Reactions from the majority of the students revealed that they want to learn the English language through learner-centered teaching methodologies, which can give them additional learning chances to hone their English language and, in this way build up their capability. They were strictly against the teacher-centred approaches of learning the English language and the majority accepted the role of the teacher as a facilitator. They also shed a light on instructional elements that English language learning is not only based on the provision of pedagogical means but also the adoption of the adequate approaches, methods and techniques.

## **Conclusion**

The needs analysis in this study was conducted to study the Computer Science students' needs and to learn whether current English language material fulfils their needs. The targeted population has various reasons to learn English language. They need English for their studies as well as professional careers. The current syllabus does not fulfill their academic and professional needs. Thus, it becomes necessary to develop a new language course according to their needs that should be learner-centred and based on tasks and activities. Lastly, it must target their language skills and communication performance with proper time allocation.

## **4.6. Course Design and Course Evaluation**

The course design operation consists of an elaboration of a series of lectures that would eventually constitute the ESP course of Master One computing students on the one

hand. On the other hand, course evaluation is a process of measuring the degree of conformity and efficiency of the elaborated courses after their application at university level.

#### **4.6.1. Course Design**

##### **4.6.1.1. Description**

Analysing the specific needs of a particular learner group serves as the prelude to an ESP course design, because it determines the ‘what-to teach’ and ‘how-to teach’ of the course. The needs analysis conducted in this research takes into consideration different aspects in order to design a course that suits the needs of the students at the Department of Computing at Médéa University.

When designing an ESP course, some issues ought to be given importance : grammatical functions, acquisition skills, terminology, specific functions of discipline content, and the constraint of time. They are all crucial parameters of an ESP course. In addition, to all what has been discussed in Chapter Two , the course developments process should also include the aims and the determination of goals and objectives in order to avoid de-motivation. The goals should be realistic and the objectives should be appropriate to the goals (Nunan, 1988).

Assessment and evaluation are also two important issues that should be included in the course design process. Assessment is a process of measuring what learners know and what they can do, whereas evaluation reveals how well the ESP course works with emphasis not only on successful factors but also on modifying less successful aspects (Dudley-Evans & St John, 1998).

Hence, the data obtained from the needs analysis operation through the research instruments are analysed and used to develop a set of goals and objectives and a syllabus for the course, as well as to decide on methodology, teaching materials, and assessment instruments. All of these were put together and an ESP course for First year Master students of Computing was put into practice from October 2018 to January 2019.



The development and the organization of the courses will be discussed in detail in this part, together with the aims of the course, the goals and objectives which were well set at the beginning of the course for the four skills. The last step will deal with the organization of the course itself.

**\*Aims of the Course :**

Master One students in the Computing Science Department need English for different purposes:

- To practise and master the English language in order to be able to participate in class discussions ;
- To give oral presentations ;
- To express ideas and opinions ;
- To write projects or reports ;
- To write their master dissertations in English.

**\* Goals and Objectives :**

By the end of the course, learners should be able to :

- develop their writing skills by writing projects/ reports competently in English and perform written activities during the lectures and exams, apply a tentative plan for writing their dissertations in English.
- develop their speaking skills by performing oral presentations, expressing ideas and opinions and speaking more fluently.

The objectives for each skill are as follows:

**\* Reading :**

- To understand a variety of texts, such as reports, documents and articles in English.

**\* Listening :**

- To understand lectures in English related to their field of study
- To understand oral presentations
- To understand accents.

The results of needs analysis called for a focus on speaking and writing skills. Hence, a suggested outline for these skills objectives could be:

<b>Speaking Skills objectives</b>	<b>Writing skills objectives</b>	<b>Oral communication skill objective</b>
<ul style="list-style-type: none"> <li>-Give Oral presentation:</li> <li>-Identify the structure of a speech</li> <li>-Introduce a topic</li> <li>-Sequence a speech</li> <li>-Summarize and conclude a speech</li> <li>-Outline a process</li> <li>-Give a talk on a problem-solution topic.</li> <li>-Ask for clarification</li> <li>-Illustrate and explain a point</li> <li>-Give examples by referring to research</li> <li>-Give a talk describing graphs and illustrations</li> </ul>	<ul style="list-style-type: none"> <li>-Write an academic text in English:</li> <li>-Identify the parts of an academic essay</li> <li>-Use other's words in an essay (paraphrasing)</li> <li>-Write definition</li> <li>-Classify/ categorize</li> <li>-Give reasons</li> <li>-Make explanations</li> <li>-Present arguments, ideas and opinions</li> <li>-Express certainty and doubt</li> <li>-Describe a sequence of events</li> <li>-Write a report</li> <li>- Write abstracts/ Research Proposals.</li> </ul>	<ul style="list-style-type: none"> <li>-State an opinion and give support</li> <li>-To Comment on a given opinion</li> <li>-Ask questions</li> <li>-Illustrate and explain a point</li> </ul>

**Table 4.29 : Outline of the needed skills**

\* Course Organisation :

The course takes place over one academic semester, a duration of ten weeks and the length of 1 hour and a half per week. The 'target learners' are Master level in the computing Science Department.

\* Course Content and Type of Activities :

The structure of the course was based on topics found useful for Computer Science students. When selecting the proper topics, existing ESP textbooks for the given context and the outcome of the students' needs were consulted. Moreover, several communication functions which were considered beneficial for the students, were added as well. In addition, relevant grammatical structures, which might be necessary for the learners, were included. This course was designed to medium-level students into the syllabus.

The above mentioned outline was used as a framework for the actual lesson plans which were created gradually as the course progressed. In learning-centered approach the syllabus evolves with the learners throughout the whole course and should be thus flexible and open to potential changes based on a feedback, in order to respond to current developments in the learners' needs. Regarding the types of activities, we worked on the assumption that learning is more effective when focused on communicative competence rather than formal correctness (Krashen, 1981). In Communicative Language Teaching, *"fluency and acceptable language is the primary goal"* (Finocchiaro and Brumfit, 1983: 92). On the other hand, a certain balance should exist and both fluency and accuracy must be considered *"with fluency being possibly more important than accuracy at all costs"* (Day and Krzanowski, 2011 : 23).

However, fluency over accuracy is more easily achieved with an advanced group of learners. Therefore, this syllabus combines both, yet putting more emphasis on the communicative skills. The actual process of teaching the course was based on several steps. Naturally, each lesson was initiated with a lead-in activity, such as a discussion, picture description, or reading a quote, which introduced the topic. Next, the communicative function was introduced by playing videos, or demonstrating functional language by the teacher. In addition, the illustrated function was practiced. Besides, appropriate grammatical forms were demonstrated and exercised in context and never in isolation. Finally, various types of activities were performed with their main aims and subsequent benefits.

\* Speaking Comprehension :

The main focus throughout the whole course was on speaking activities that were based on communicative functions. A great emphasis was put on student-centered communication. The students were provided with a lot of communication tasks to assure a semi-controlled and free oral practice. Most of the speaking activities were not liable to any specific correct answers thus the students were encouraged to check their solutions with a partner or the whole group.

\* Brainstorming :

Brainstorming activities are those types of tasks where no correct answer exists. They are rather designed to “*pool students’ knowledge*” (Knight, O’Neil, Hayden, 2004 : 4). It is generally believed that brainstorming can build confidence and create a pleasant environment for team work and cooperation because “*it is often very productive as a wholeclass activity*” (“Brainstorming”, 2006). Brainstorming is especially useful when introducing new topics since it tests students’ knowledge in a natural way, thus representing a beneficial diagnostic tool. In ESP context, brainstorming helps students build self-confidence in order to execute tasks in an English-speaking business world. In the actual lesson plans, brainstorming was present not only at the beginning of the lesson but when presenting different segments as well.

\* Oral Presentations of projects :

Oral presentation is one of the best platforms. It allows individuals to present their thoughts and views confidently in front of an audience. This type of practice was intended to prepare students for Master two Viva presentations, especially for those who are interested in conducting their dissertations in English.

\* Discussions :

Discussion is one of the most useful skills. As there are endless types and forms a discussion can take, let us focus on those types that were actually used in the course.

Overall, discussions played an important role in the syllabus. They were typically incorporated at the beginning of a lesson to make the students focused and have them think

about a particular topic, and also later in the lesson to make sure there was a balance between listening, reading, and speaking comprehension. Not only did they differ about who should participate (a pair or a group), the discussions were initiated by using different types of materials as well. For example, in one lesson students, discussed given questions, whereas in another the talk was initiated by describing given pictures. In other cases, a discussion was used in a form of a free oral practice where the students were asked to speak about their field.

\* Listening Comprehension:

Throughout the course, both listening for gist and specific information were practiced. Before every listening, a pre-listening task, that helped set the scene, was introduced. This “*gives the listening a context and hence makes it a more realistic exercise*” (Knight, O’Neil, Hayden, 2004 : 4). First, Listening for gist helped the students grasp the main idea of a recording. This task was especially used with longer recordings for the first listening, before any specific information was elicited. Next, listening for information was widely used in all the topics in the course. Besides, listening for specific vocabulary offered an opportunity to either teach new words and expressions or revise the already taught vocabulary. Finally, listening for functional language was incorporated into the syllabus and was connected with the communication functions where the students had to match items with corresponding pictures. Additionally, listening for a sequence was used when having the students listen for a correct order of a given process.

\* Reading Comprehension:

According to the findings of the needs analysis, reading was not our primary concern. However, to ensure balance between all the skills, reading activities were incorporated into the syllabus. Namely two types of activities were included. Firstly, in close reading activities the learners were required to read for a detail while paying attention to the actual meanings of particular words. Moreover, the students were not expected to only read to be able to understand, but rather to think about the significance and relevance of a given text to a presented topic. Secondly, scanning or in other words quick reading made the students quickly find a specific piece of information. For example, in one lessons the students were asked to read a short paragraph and answer some questions.

\* Types of Materials Used in the Course :

In the course, the materials are selected on the following bases:

- To provide a stimulus for learning.
- Relevant to the students' level, containing topics and vocabulary related to their field of study.
- To help them develop comprehension and lexis of more general technical terminology.
- Whose content can be coped with both learners and the teacher.
- Give the students opportunities both to use their existing knowledge and enrich it.

The main textbook that has been used in the course:

- Infotech : English for computer users by Remacha Esters (2003). Cambridge University.

\* Assignments:

Students are asked to write abstracts at home and to complete gap filling activities. They are also asked to present an 'exposé' related to their specific topics for their projects and dissertations and to present it orally before the end of the semester by using audio-visual materials (slide show).

\* Testing and assessment:

A proficiency test before the beginning of the courses was done to evaluate the students' level of proficiency in English. An oral assessment was organized through power point presentation before the end of the semester and a final examination at the end of the semester.

4.6.1.2. The Newly Designed ESP Course

Lecture 1 :


Listening :

1. Before you Listen :

Name eight different items you can buy in a computer shop



2. Listening :


 you are going to hear two people making enquiries in a computer shop. The shop assistant is telling them about the two models below. Listen and fill in the missing information.



**iMac**  
 Processor speed 1 GHz  
 RAM standard .....  
 Hard disk capacity .....  
 Price .....  
 DVD and Mac OS included? .....

**iBook**  
 Processor speed .....  
 RAM standard .....  
 Hard disk capacity .....  
 Price £1,207  
 DVD and Mac OS included? .....



 Now listen again and fill in the gaps below.

Assistant: Do you need any help ?

Paul: Um yes, we are looking for a personal computer. Have you got any fairly basic ones ?

Assistant: yes, sure. If you'd like to come over here .....

Paul: what different..... are there ?

Assistant : At the moment we' ve got these two models : the iMAC, which is a desktop computer with a .....operating at 1 gigahertz, and the portable iBook, which has a processor .....at 700 megahertz.

Sue : so the iMac is the ..... one. And which one has the most memory ? I

mean- which has the most RAM ?

Assistant : Well, the iMAC has 256 megabytes of....., which can be ..... up to 1gigabyte and the ibook has 128 megabytes which can be expanded up to..... It all depends on your needs. The iMac is suitable for home users and small offices. The iBook is ideal for students and for people who travel.

### **Role play :**

Work with a partner. One of you wants to buy a computer, the other is the sales assistant.

Ask and answer questions, using the information and instructions below to help you.

Products Available	Processor Speed	Minimum/ Maximum RAM	Hard disk	Disk drives	Monitor	Price
Toshiba	Pentium 4 1.5 Ghz	256 MB expandable to 512	40 GB	3.5 drive DVD/CD- RW	Colour LCD	2,309



**Shop assistant**

- Greet the customer and offer help.
- Show the customer some models.  
etc.
- Describe the speed in megahertz and the main  
Memory.
- Give explanations (GB storage capacity, etc)  
features
- Give the required Information.
- Give the price and explain different ways of paying.

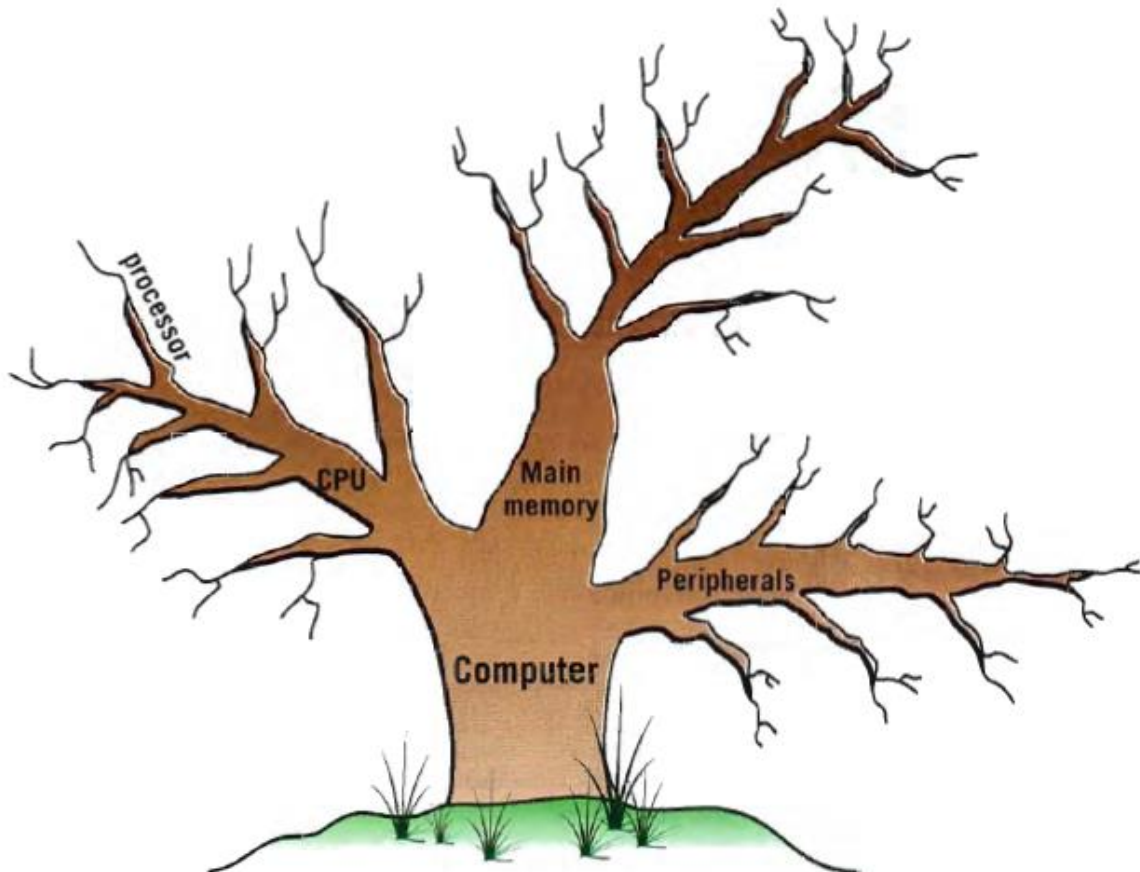
**Customer**

- Ask to see some computers
- Ask for details : processor, RAM,  
etc.
- Ask about the hard disk
- Ask about the monitor and other  
features
- Ask the price
- Decide to buy one/ to think about  
it.
- Thank the shop assistant and leave

**Lecture 2 :****Vocabulary Tree :**

Designing vocabulary trees or networks can help you build up your own mental ‘maps’ of vocabulary areas. Look at the list of terms in the box and put each one in an appropriate place on the vocabulary tree below. The first one has been done for you.

processor	kilobyte	expandable memory
megabertz	SIMMs	hard disk
RAM	computer brain	byte
DVD	clock speed	keyboard
Mouse	gigabertz	CD-ROM
Megabyte	floppy disk	registers

**Writing :**

A friend has written to you to recommend a computer that suits their needs. Write a letter in reply, describing its technical features and saying why you recommend it.

**Lecture 3 :****Reading :****1\*Warming up :**

Look at the home page of Yahoo and try to answer these questions

1\* Why do people create and publish web pages ?

2\* What does a website consist of ?

3\* What is a homepage ?

4\* What is an Internet Portal ?

*You can use a search engine like yahoo to find Information. It also acts as a web portal offering services such as email, forums, online shopping and links to other sites.*

*Specialist portals are related to particular subjects such as Music, sports or news.*

The image shows a screenshot of the Yahoo! homepage. At the top, there are several icons for services like Yahoo! Travel, free email@ yahoo.com, and Yahoo! Personal. Below these is a search bar with the text "Search advanced search". A banner for "hotjobs" is visible, along with a navigation menu including "Home", "Search", "Jobs", "Finance", "Sports", etc. The main content area features a large advertisement for the "Official Site of The 2002 FIFA World Cup" with a soccer ball and text about matches between Nigeria vs. England and Sweden vs. Argentina. To the right, there are sections for "In the News", "Marketplace", and "Broadcast Events". At the bottom, there are several category links such as "Arts & Humanities", "Business & Economy", "Computers & Internet", "Education", "Entertainment", "News & Media", "Recreation & Sports", "Reference", "Regional", and "Science". The URL "www.yahoo.com" is displayed at the bottom right.

a)\* Look at the text and illustrations and find the answers to these questions.

1\* What are HTML codes called ?

2\* What is the function of HTML codes ?

3\* What type of program allows you to design a web page without writing HTML ?

4\* How can you view the source code of any web page ?

5\* How do you connect your homepage with the other pages that you have created ?

b)\* Can you recognize these basic HTML tags ? Match them with the correct function.

- |                                      |   |
|--------------------------------------|---|
| 1 <HTML> </HTML>                     | a) This creates a window with a black background.   |
| 2 <BODY> </BODY>                     | b) These tell your web browser that the file contains information coded with HyperText Markup Language. |
| 3 <H1> </H1>                         | c) This is used to include an inline image.   |
| 4 <HR>                               | d) This tag indicates a new paragraph.  |
| 5 <IMG SRC="Image filename">         | e) This part contains the content of your document.   |
| 6 <I> </I>                           | f) This tag inserts a horizontal line or rule.  |
| 7 <A HREF="filename">active text</A> | g) This is the most prominent level of headings.  |
| 8 <BODY BGCOLOR="#000000">           | h) This indicates a numbered list (also called an ordered list).  |
| 9 <OL>                               | i) These enclose italic text.   |
| 10 <P>                               | j) This adds a link to another web page.  |

### Creating web pages

You can create a basic web page using a text editor or a word processor, but you need to know a code called HTML, or Hypertext Mark-up Language. This consists of HTML commands, called tags, which are placed around pieces of text to tell the web browser how to display text or graphics. You can enter different commands to define text size and font, format paragraphs, add colour, etc. (See below "studentweb.htm")

All HTML files:

- start with `<HTML>`
- have heading text that begins with `<HEAD>`, which has a title enclosed between tags, and ends with `</HEAD>`
- have body text that starts with `<BODY>`, where you place the contents of the actual document (i.e. text, images, links, etc.), and ends with `</BODY>`
- end with `</HTML>`

You can also create links to other web pages by using the tag `<A HREF="filename">active text</A>`

If you are not familiar with HTML, you can use a Web editor like Microsoft FrontPage or Macromedia Dreamweaver to simplify the process. Web editors are user-friendly and WYSIWYG (What you see is what you get). Different buttons and menu items enable you to design a page without writing HTML, i.e. they automatically produce the tags for text, tables, image maps, frames, etc. You can view the source code for any page you like by clicking the option "Page source" in the browser's menu.

Websites with an effective use of graphics are more inviting and communicative than plain text. So you may like to insert different types of pictures: scanned photos, bars, icons, backgrounds, and moving images.

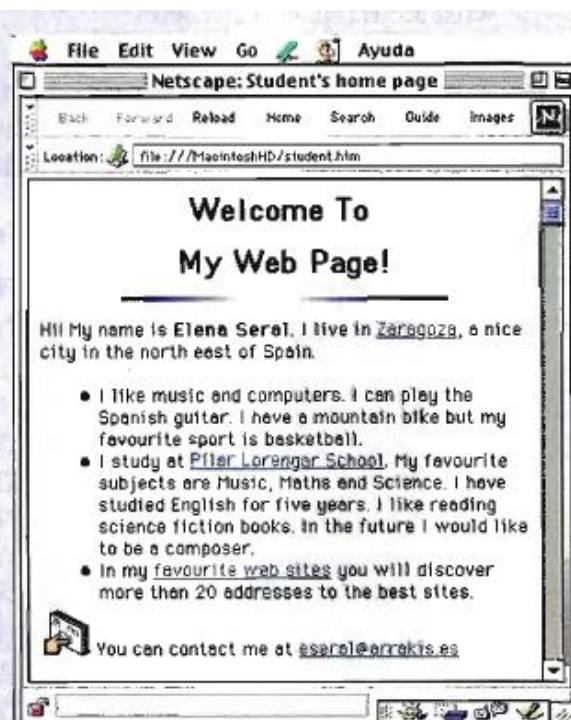
Once you have created a few pages, you should join them together with hyperlinks. A hyperlink is a piece of highlighted text or a picture that acts as a link to another page. You can place local links to help readers navigate through your pages. You may also like to insert external links to other people's websites.



```

File Edit Font Size Style Sound Help
studentweb.htm
<HTML>
<HEAD><TITLE>Student's home page</TITLE></HEAD>
<BODY>
<H4><CENTER><FONT SIZE="+3">Welcome To </CENTER>
<CENTER>My Web Page! </FONT></CENTER></H4>
<P><CENTER><IMG SRC="linea.gif" WIDTH=226 HEIGHT=3
ALIGN=bottom</CENTER></P>
<P>Hi! My name is <B>Elena Seral</B>. I live in
<A HREF="city.htm">Zaragoza</A>, a nice city in the
north east of Spain.</P>
<UL> <LI>I like music and computers. I can play the
Spanish guitar. I have a mountain bike but my
favourite sport is basketbal.
<LI>I study at <A HREF="school.htm">Pilar Lorenger
School</A>. My favourite subjects are Music, Maths
and Science. I have studied English for five years. I
like reading science fiction books. In the future I
would like to be a composer.
<LI>In my <A HREF="best.htm">favourite web sites</A>
you will discover more than 20 addresses to the best
sites. </UL>
<P><IMG SRC="mail.GIF" WIDTH=32 HEIGHT=31
ALIGN=bottom>You can contact me at
<A HREF="mailto:eseral@arrakis.es">
eseral@arrakis.es</A></P>
</BODY> </HTML>
  
```

HTML source code



HTML file displayed as a Web page

**Lecture 4 :**

**Speaking :**

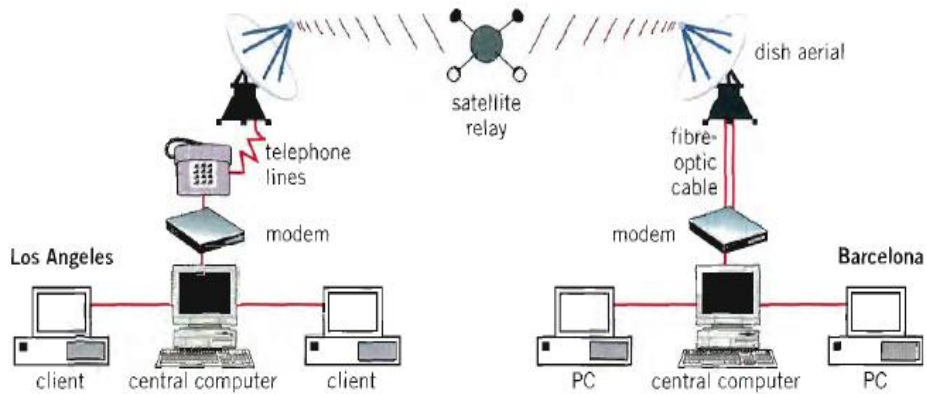
In small groups, study and discuss the illustration below. Then prepare a description and give an oral report to the class.

\* This diagram represents a wide area network or WAN. Two networks are linked via satellite. One network is in ..... and consists of .....the other LAN is in.....and contains.....

\* In Los Angeles, the computers are connected to the telephone lines by.....However, in Barcelona.....

\* The satellite receives signals from..... then the signals are retransmitted to.....

\* The purpose of this integrated network may be..... It allows large companies and institutions to.....



**Vocabulary :** Mouse Actions

Read this passage about a computer mouse. Fill in the gaps with verbs from the list.

Click- double click- drag- grab- select- move- control

A mouse allows you to (1)..... The cursor and move around the screen very quickly. Making the same movements with the arrow keys on the keyboard would take much longer. As you (2).....the mouse on your desk, the pointer on the screen moves in the same direction. The pointer usually looks like an I-bar, an arrow or a pointing hand, depending on what you are doing.

A mouse has one or more buttons to communicate with the computer. For example, if you want to place the insertion point or choose a menu option, you just (3)..... (press or release) on the mouse button, and the option is chosen.

The mouse is used to (4)..... text and items on the screen. You can highlight text to be selected, or you can select an item from a check-box or questionnaire.

The mouse is widely used in graphics and design. When you want to move an image, you position the pointer on the object you want to move, press the mouse button, and (5)..... The image to a new location on the screen. Similarly, the mouse is used to change the shape of a graphic object. For example, if you to convert a square into a rectangle, you (6)..... one corner of the square and stretch it into a rectangle. The mouse is also used to start a program or open a document : you put the pointer on the file name and (7)..... on the name-that is, you rapidly press and release the mouse button twice.



**Lecture 5: Listening**

Two friends are talking about how to move text by using the ‘cut’ and ‘paste’ technique. Read the conversation and complete it with words from the box.

Finally	command	First	Edit
Now	mistake	Next	insertion

A : Do you know how can I move this paragraph ? I want to put it at the end of this page ?

B : Er...I think so. (1)..... you use the mouse to select the text that you want to move and then you choose the cut (2) ..... from the Edit menu.

A : Like this ?

B : Yes. The selected text disappears and goes to the clipboard. And.....(3) you find where you want the text to appear and click to position the (4)..... point in this place

A. Mm... is that Ok.

B. Yes, if that’s where you want it. (5)..... choose paste from the .....(6) menu, or hold down command and press V.

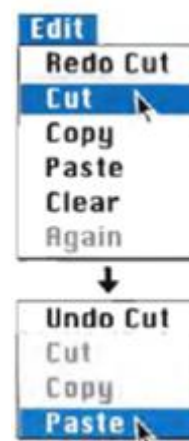
(7).....check that the text has appeared in the right place.

A : What do I do if I make a (8)..... ?


B : You can choose undo from Edit menu which will reverse your last editing command.

A : Brilliant ! Thanks a lot.

B : That’s Ok.

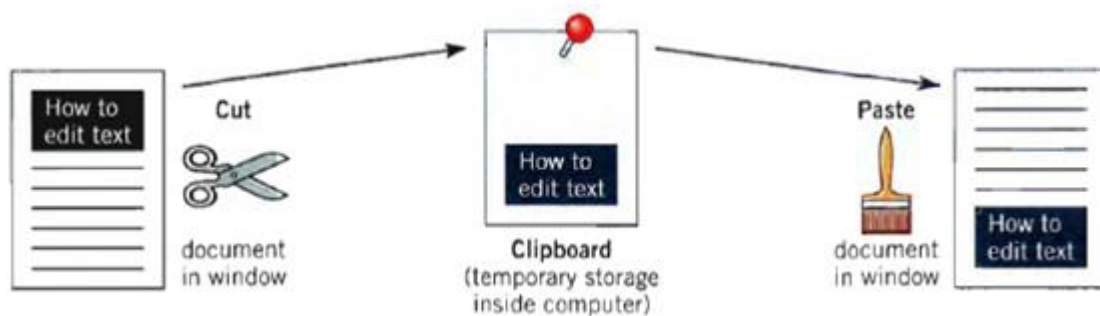




 Now listen to check your answers.

### **Writing :**

Moving text is a process of cutting and pasting, as if you were using scissors and glue. The picture below represents this process. Write a short description of it.



### **Lecture 6 :**

#### **Scan reading : Quiz**

Read the advertisements for printers below, and then, with your partner, answer the questions. The one who finishes first will be rewarded.

- 1\* How many laser printers are advertised here ?
- 2\* Is there a printer that operates by spraying ink droplets onto paper ?
- 3\* Which laser printer offers the highest resolution, or output quality ?
- 4\* Which printer is the most expensive ?
- 5\* Which one would you recommend to a friend who does not have much money ?
- 6\* Which one has more internal fonts ?
- 7\* A printer language is software that tells printers how to print a document. Can you find two types of laser printer languages ?
- 8\* What connectivity features are offered by the Turbo Laser writer QR ?

<p><b>Turbo Laser Writer QR</b></p> <p>Workgroup laser printer. 15 pages per minute. 1,200 dpi for graphics. 36 MB of RAM. Includes Adobe PostScript and Hewlett Packard PCL printer languages. 75 resident fonts. Connectivity: one bi-directional parallel port, one LocalTalk port, and one Ethernet port for networks. 12 month warranty.</p> <p><b>£1,150</b></p>	<p><b>Stylus Dot-matrix Printer</b></p> <p>Dot-matrix printer with 24 pins. Prints text and graphics. 450 cps. Compatible special interface. Free unlimited hotline support for our customers. One year on-site maintenance.</p> <p><b>£179</b></p>
<p><b>COLOUR POSTSCRIPT PRINTER</b></p> <p>Colour printer, 40 Adobe Postscript fonts. 36 MB RAM with a SCSI Interface for an optional 20 MB hard disk. Parallel, serial and AppleTalk interfaces. HP plotter emulation. Thermal printing system. 30-day money-back guarantee and 1 year's on-site parts and labour.</p> <p><b>£2,249</b></p>	<p><b>Crystal Laser Printer II</b></p> <p>14 pages per minute. <b>20 MB RAM</b> Two 200 sheet selectable input trays. <b>LCD display.</b> <b>80 internal scalable fonts.</b> A resolution of 2,400 dpi. Comes with PostScript language and PCL (printer control language). <b>Telephone hotline support.</b></p> <p><b>£999</b></p>
<p><b>COLOUR INK-JET</b></p> <p>Stunning Plug &amp; Play colour printer. Brilliant photo quality (up to 720 dpi) and fast-drying ink. Produces 8 pages per minute in plain text and 4 ppm in colour. 150 page paper tray. Fast, friendly service.</p> <p><b>£210</b></p>	<p><b>Micro Laser XT</b></p> <p>Personal laser printer. 5 pages per minute. 4 MB RAM expandable to 64 MB. Parallel interface. 200 sheet input tray. 35 resident fonts. One-year on-site maintenance. Prints on a wide range of materials and sizes.</p> <p><b>£649</b></p>

### Language Work : Revision of comparison

A)\* Study the sentences below and do the following :

- Draw a circle around comparatives and a rectangle around superlatives.
- Identify two special cases.

1\* Dot-matrix printers are cheaper than laser printers.

2\* A photocopier is the fastest output device

3\* A thermal wax printer is more expensive than a monochrome laser printer.

4\* The Micro Laser XT is the most reliable of all.

5\* Personal laser printers cost less than ordinary laser printers. They also weigh less and require less space.

6\* My printer has more resident fonts than your.

7\* Dot-matrix printers are too slow.

B)\* Look at the advertisements and compare the printers. Talk about their : speed, memory, fonts, emulations, resolution, service, price, noise. Use adjectives from the box below.

Fast    slow    expensive    high/lowquality    noisy    quiet    cheap    easy    difficult  
 simple    powerful    reliable    adaptable    expandable    compatible with

### **Lecture 7 :**

#### **Language Work : The Present Simple Passive**

Look at the HELP box and then read the sentences.

Fill in the blanks with the correct form of the verbs in brackets.

Example

Houses (design)..... with the help of computers

Houses are designed with the help of computers

1\* Various terminals (connect)..... To this workstation.

2\* Microcomputers (know) ..... as 'PCs'.

3\* Magazines (typeset)..... by computers.

4\* When a particular program is run, the data (process)..... by computers.

5\* The web (use)..... to search for information and buy products online.

The drug detecting test in the Tour de France (support)..... By computers.

6)\* All the activitiesof the computer system (coordinate)..... by the central processing unit.

7)\* In some modern systems information (hold).....in optical disks.

**Help box :****The present simple passive**

You form the present simple passive with :

Am/is/are + past participial.

e.g : The program is written in a special computer language

The data is ready for processing.

**Discussion :**

Look at the picture below and read the text. Then discuss these questions in small groups, and prepare a short report for the class. (Make use of the passive voice).

1\* What are the most important differences between handheld computers (e.g. palmtops, PDAs, etc.) and traditional computers ?

2\* What are the advantages and limitations of handheld computers ?

3\* Should students be allowed to use handheld computers in class ?

4\* Do you agree with this statement : “soon, handheld PCs will combine the functions of traditional PCs, cellular phones and pocket-size organizers” ?



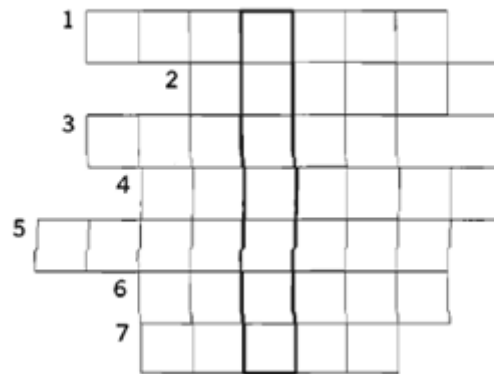
*Psion Series 5mX handheld computers have a keyboard and a touch-sensitive screen. Although very light weight, they have one month battery capacity, 16 MB of RAM, a windowing OS, a microphone for sound recording, and a full range of applications including an application which lets you send e-mail and browse the web.*


### Puzzle

Complete the sentences by using a term from the list. Then write the words in crossword to find the hidden message.


Database	field	layout	merging	record	sorted	updated
----------	-------	--------	---------	--------	--------	---------

- 1\* In order to personalize a standard letter you can use mail ..... (a technique which consists of combining a database with a document made with a word processor.
- 2\* Records can be automatically.....into any order
- 3\* You can decide how many fields you want to have on a .....
- 4\* Files can easily be..... by adding new information or deleting the old one.
- 5\* A..... program can be used to store, organize and retrieve information of any kind.
- 6\* The..... of the records can be designed by the user
- 7\* Each piece of information is given in a separate .....

**Lecture 08 :****Listening :**

 Listen to an interview with Ann, an expert in voice-input technologies. Tick ( ) the features that she mentions.

- need a good sound card and a microphone.
- take dictation with accuracy.
- create and compile a computer program.
- surf the web by speaking.
- execute programs and navigate around menus by voice commands.
- design graphics.

 Listen again and fill in the gaps in these sentences. Use the correct modal verb from the list :

Can (ability)	must (obligation)	have to (necessity)
Could (possibility)	will (prediction)	should (advice)

\* If you intend to do a lot of dictation, you.....get a high-quality headset microphone.

\* You.....dictate text directly onto your word processor or e-mail program.

\* with many voice recognition programs, the user.....first train the software to recognize individual pronunciations.

\* Speech-recognition software.....help children with special educational needs.

\* In a few years' time, a lot of people..... use their voices to interact with computers.

**Lecture 9:**

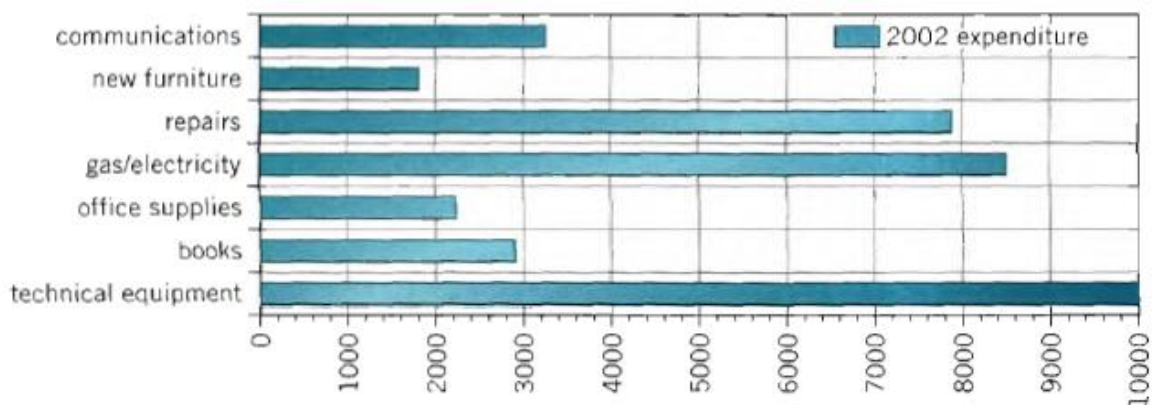
**Speaking :**

Look at the graph below and describe it to your partner. Then answer your partner's questions.

*Useful Constructions :*

This is a two/three-dimensional representation of.....

In 2002, they paid ..... for.....



*Graph 1 The 2002 expenditure of Lancashire College expressed in pounds*

They spent .....on .....

As for.....that cost them.....

**Task 2 :**

Complete the table by asking for information, like this :

\* What does ‘COBOL’ mean ?

\* COBOL stands for.....

\* When was it developed ?

\* In.....

\* What’s it used for ?

\* It is used for.....

\*What features has it got ?

\* It’s easy to use and it’s written in English. It can handle very large data files

<i>Computer language</i>	<i>Date</i>	<i>characteristics</i>	<i>Uses</i>
COBOL( <b>Common Business Oriented Language</b> )	1958-59	-Easy to read -Able to handle very large files -Written in English	Mainly used for business applications
BASIC	..... .	..... ...	-General Purpose language. -Used to teach programming
Pascal (named after..... )	1970-1973	- structured language with algorithmic features designed for fast execution of the object program. -A fast compiler called TurboPascal was created in 1982 ‘ very popular’.	.....
LOGO	1969	.....	-Designed for use in schools to encourage children to experiment with programming
SQL (.....) introduced by Oracle Corp.	1979	-support distributed databases, which run on several computer systems. -Allows various users on a LAN to access the same database at the same time.	..... .



**Lecture 10 :****Writing :****Writing an Abstract/ Research Proposal****a)\* Abstract :**

An abstract is like a movie trailer. It offers a preview, highlights key points, and helps the audience decide whether to view the entire work. Abstracts are the pivot of a research paper because many journal editorial boards screen manuscripts only on the basis of the abstract.

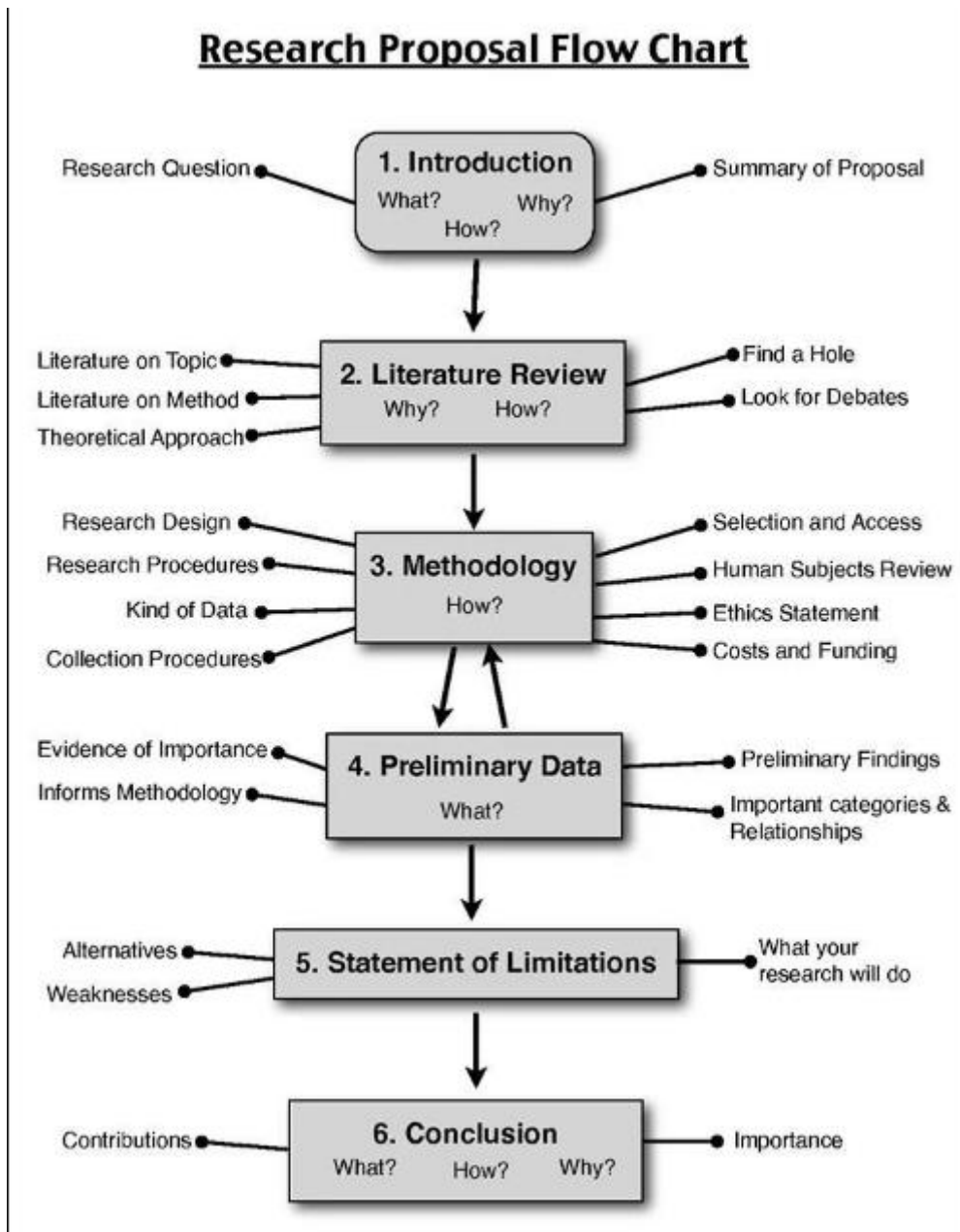
If your abstract doesn't grab their attention and make a good first impression, there's a good chance your research paper will be rejected at the outset. Moreover, even after your research paper is published, your abstract will be the first, and possibly only, thing readers will access through electronic searches. They will only consider reading the rest of the manuscript if they find your abstract interesting.

For studies in the humanities and social sciences, the abstract is typically descriptive. That is, it describes the topic of research and its findings but usually doesn't give specific information about methods and results. These abstracts may also be seen in review articles or conference proceedings. In scientific writing, on the other hand, abstracts are usually structured to describe the background, methods, results, and conclusions, with or without subheadings.

Now how do you go about fitting the essential points from your entire paper— why the research was conducted, what the aims were, how these were met, and what the main findings were—into a paragraph of just 200-300 words? It's not an easy task, but here's a 10-step guide that should make it easier:

1. Begin writing the abstract after you have finished writing your paper.
2. Pick out the major objectives/hypotheses and conclusions from your *Introduction* and *Conclusion* sections.
3. Select key sentences and phrases from your *Methods* section.
4. Identify the major results from your *Results* section.

5. Now, arrange the sentences and phrases selected in steps 2, 3, and 4 into a single paragraph in the following sequence: Introduction, Methods, Results, and Conclusions.
6. Make sure that this paragraph does not contain
  - new information that is not present in the paper
  - undefined abbreviations or group names
  - a discussion of previous literature or reference citations
  - unnecessary details about the methods used
7. Remove all extra information and then link your sentences to ensure that the information flows well, preferably in the following order: purpose; basic study design, methodology and techniques used; major findings; summary of your interpretations, conclusions, and implications.
8. Confirm that there is consistency between the information presented in the abstract and in the paper.
9. Ask a colleague to review your abstract and check if the purpose, aim, methods, and conclusions of the study are clearly stated.
10. Check to see if the final abstract meets the guidelines of the target journal (word limit, type of abstract, recommended subheadings, etc.).





University of DR: Yahia Fares

Faculty of Sciences and Technology

Department of Mathematics and Computer Science

**Module: *English for Computing. Master One.*****Time allowed: *1h30.*****Full name:.....****First Term Exam****Part I: Reading****What is Java?**

Java is a programming language developed by sun Microsystems which is specially designed to run on web. When you see a web page that uses Java, a small program called ‘applets’ is executed automatically. Java applets let you watch animated characters and moving text, play music and interact with information on the screen.

**Characteristics of the Java language**

Java is an object-oriented language similar to C++, but it’s more dynamic and simplified to eliminate possible programming errors. A Java program is both compiled and interpreted. First the source code (file with Java extension) is compiled and converted into a format called byte code (file with a class extension), which can then be executed by a Java interpreter. Compiled Java code can run on most computers because there are Java interpreters, known as Java virtual Machines, for most operating systems, including MacOS, Windows, or UNIX.

Java is multi-threaded. A Java program can have multiple threads (parts), i.e. many different things processing independently and continuously.

**Why is Java Cool?**

People are excited about Java because it lets you create moving images and animated drawings. You can also create graphical objects (e.g. bar charts, graphs, diagrams) and new ‘controls’ (e.g. buttons, check boxes, pushbuttons with special properties). A web page that uses Java can have inline sounds that play in real –time, music that plays in the background, cartoon style animations, real-time video and interactive games.

**Alternatives to Java**

One alternative technology is Active X, the Microsoft product for including multimedia effects on web pages. Another competitor is Macromedia’s Shockwave, a plug – in that lets you animate pictures, add sound and even make interactive pages so that people can play games on websites.

**1)\*Reading Comprehension:**

These statements about Java are all false. Read the text and correct them.

1\* Java was invented by Microsoft.

.....

2\*Small applications written in Java are called ‘animations’.

.....

3\* With the interpreter, a program is first converted into Java byte codes.

.....

4\*Java isn’t compatible with most computing platforms.

.....

5\* The Java language is single threaded, one part executing at a time.

.....

6\*Java doesn’t let you watch animated characters on your web pages.

.....

7\*Active X and Shockwave are not real competitors for Java.

.....

2)\* **Grammar:** Put the following verbs in the right passive form.

- 1- COBOL (use)..... for business applications.
- 2- Original programs (write)..... in a high level language.
- 3- The ADA language (develop).....in 1979.
- 4- In the 1970's, new languages such as LISP and PROLOG (design) ..... for research into Artificial intelligence.
- 5- In the next century, computers (program)..... in natural languages like English or French.

3)\* **Vocabulary:** Which verbs on the left are frequently found with nouns on the right.

- |               |                     |
|---------------|---------------------|
| 1-to download | a- the web          |
| 2-to play     | b- a source program |
| 3-to run      | c- files            |
| 4-to browse   | d- an application   |
| 5-to compile  | e- data             |
| 6-to process  | f- music            |

4-**Writing:** Write a short composition in which about the different uses of the computer.

.....

.....

.....

.....

.....

.....

.....

### 4.6.2. Course Evaluation Questionnaire

At the end of the semester, a course evaluation questionnaire was administered to the students who took the course. The aim of this course evaluation questionnaires was to identify the students' perceptions on different aspects of the course they had taken as well as their suggestions for the improvement of the course. The students were asked to express their opinions on fundamental aspects of the course such as course aims and objectives, course content and materials, course conduct/teaching approaches and student assessment. They were also asked to give suggestions for the betterment of the course.

#### 4.6.2.1. Course Content and Materials

The presented evaluative data were obtained from course evaluation questionnaires. The course evaluation questionnaire reveal students' attitudes toward most of the issues in the newly designed course concerning course content and materials. The tables below represent the results obtained.

\* Oral Communication Skills

	<b>Strongly Agree &amp; Agree</b>	<b>Not Sure</b>	<b>Disagree &amp; Strongly Disagree</b>
1. The course materials provided me with what I needed to know.	67 74.44%	10 11.11%	13 14.44%
2. The course materials were appropriate to my interests.	71 78.88%	11 12.22%	8 8.88%
3. The course materials helped me to improve my speaking skills.	75 83.33%	10 11.11%	5 5.56%
4. The course materials helped me to improve my listening skills.	50 55.55%	33 36.66%	7 7.79%
5. The topics were presented sequentially,	56 62.22%	19 21.11%	15 16.67%

i.e. building upon prior learning.			
6. The materials were in line with the course objectives.	60 66.66%	13 14.47%	17 18.87%
7. Exercises/tasks were effective in improving my listening skills	56 62.22%	20 22.22%	14 15.56%
8. Exercises/tasks were effective in improving my speaking skills.	69 76.66%	6 6.66%	16 17.78%
9. The course materials were appropriate to my proficiency level	69 76.66%	10 11.11%	11 12.23%

**Table 4.30 : Students' Opinions about Course Content and Materials in Oral Communication Skills**

The students expressed positive attitudes towards the issues about course content and materials in the new elaborated course. The average of agreement (SA and A) with different aspects about the effectiveness of course content and materials was 74.44%. 78.88% of the students found that the materials appropriate to their interests, 83.33% found the course materials more useful for improving their speaking than for improving their listening skills 55.55%. Besides, 62.22% reported that the topics were presented sequentially. Moreover, 66.66% stated that the materials were in line with the course objective. Furthermore, 76.66% of the students agreed that the exercises and tasks were effective in improving their speaking skills, and asserted that the materials were appropriate to their proficiency level.



\* Reading Skills :

	SA&A	NS	D&SD
1. The course materials provided me with what I needed to know.	70 77.78%	10 11.11%	10 11.11%
2. The course materials were appropriate to my interests.	68 75.55%	15 16.68%	7 7.77%
3. The reading skills and strategies taught were useful for improving my level in reading in English	60 66.66%	14 15.57%	16 17.77%
4. The strategies used were useful to guess the meaning of unknown words	55 61.11%	25 27.78%	10 11.11%
5. Course materials were useful in improving my vocabulary knowledge	75 83.33%	12 13.33%	13 14.44%
6. The reading skills were taught sequentially.i.e. building upon prior learning.	65 72.22%	11 12.22%	24 26.66%
7. The materials were in line with the course objectives	80 88.88%	12 13.34%	8 8.88%
8. It was easy to use the course materials	70 77.77%	15 16.67%	5 5.56%
9. Exercises/tasks were effective in improving my reading skills	68 75.56%	11 12.22%	11 12.22%
10. The course materials had variety	69 76.67%	10 11.11%	11 12.22%
11. The course materials were visually attractive	59 65.56%	21 23.33%	10 11.11%
12. The course materials were appropriate to my proficiency level	67 74.44%	23 25.56%	00 0%

**Table 4.31 : Students' Opinions about Course Content and Materials in the Reading skills**

The average of agreement (SA and A) with different aspects about the effectiveness of course content and materials was obtained to be 77.78%. For instance, 75.56% of the students agreed (SA and A) that the exercises and tasks were effective in improving their reading skills. , 88.88% supported (SA and A with) the idea that the materials were in line with the course objectives, 72.22% said that the reading skills were presented sequentially, 74.44% considered the materials to be appropriate to their proficiency level, and 77.78% stated that the course materials provided them with what they needed to know or do and that they were appropriate to their interests. Overall, the students evaluated the course materials as more effective in improving their reading skills, vocabulary knowledge and guessing strategies.

\* WritingSkills :

	SA&A	NS	D&SD
1. The course materials provided me with what I needed to know	55 61.11%	25 27.78%	10 11.11%
2. The course materials were appropriate to my interest	60 66.66%	30 33.34%	00 0%
3. The course materials fit my long term goals in terms of writing skills	56 62.22%	24 26.67%	10 11.11%
4. The topics and themes in the materials were interesting	80 88.88%	3 3.33%	7 7.79%
5. The writing skills were useful for improving what was needed from the course	82 91.11%	2 2.23%	6 6.66%
6. The writing skills were taught sequentially.i.e. building upon prior learning.	70 77.77%	13 14.44%	7 7.79%
7. The materials were in line with my needs	66 73.33%	22 24.44%	12 13.33%
8. It was easy to use the course materials	74 82.22%	11 12.22%	5 5.56%
9. Exercises/tasks were effective in improving my writing skills	88 97.76%	10 11.11%	2 2.23%

10. The course materials had variety	78 86.66%	9 10%	3 3.34%
11. The course materials were visually attractive	64 71.11%	11 12.22%	15 16.67%
12. The course materials were appropriate to my proficiency level	68 75.55%	14 15.57%	8 8.88%

**Table 4.32 : Students' Opinions about Course Content and Materials in Writing Skills**

The average of agreement (SA and A) with various aspects about the course content and materials was obtained to be 61.11%. However, they expressed highly positive attitudes towards all the issues listed, they were supported strongly as can be seen in the Table.

#### 4.6.2.2. Feed Back and Assessment

	SA&A	NS	D&SD
1. Homework/ assignments were relevant to the course aim	78 86.66%	9 10%	3 3.34%
2. Information about the assessment was communicated clearly	60 66.66%	16 17.77%	14 15.57%
3. Feedback showed how to improve my work (e .g. corrections including comments).	66 73.34%	11 12.22%	13 14.44%
We were assessed on the things (skills) we practiced	70 77.77%	5 5.56%	15 16.67%
The materials we used and the test materials were similar in terms of difficulty level	76 84.44%	9 10%	5 5.56%
4. The test questions were difficult	59 65.53%	18 20%	14 15.57%
The grading was fair.	70 77.77%	15 16.67%	5 5.56%

**Table 4.33 : Students' opinions about assessment**

The results related to the evaluation of assessment are summarized in the above Table. Generally, the results reveal that the students expressed positive attitudes toward issues related to assessment in the course. The results in the table show that students agreed with the issues concerning the relevancy of homework or assignments with the course aims 86.66%. On the other hand, the majority of students 84.44% believes that the materials they used and the test materials were similar in terms of difficulty. They also agreed on the fact that they were assessed on things they had practiced and that the grading was fair 77.77%.

#### 4.6.2.3. Course Conduct and Teaching Approaches

	SA&A	NS	D&SD
1. There was an efficient use of time in class	78 86.66%	10 11.11%	2 2.23%
2. There was a good student-teacher interaction	73 81.12%	13 14.44%	4 4.44%
3. The students had cooperative relationships with each other	67 74.44%	11 12.22%	12 13.34%
4. A variety of activities was used in the course	74 82.23%	6 6.66%	10 11.11%
5. The instructor stimulated my interest in the subject	82 91.11	5 5.56%	3 3.33%
6. The teacher was teaching in an interesting way	84 93.33%	5 5.56%	1 1.11%
7. The teacher's instructions were clear	76 84.45%	11 12.22%	3 3.33%
8. The teaching methodology of the teacher was effective in our learning	81 90%	5 5.56%	4 4.44%
9. The teacher was encouraging us to participate and take part in the course	77 85.56%	3 3.33%	10 11.11%
10. The teacher used a variety of instructional methods to reach the course objectives (e.g. group discussions, student presentations, etc.)	78 86.68%	8 8.88%	4 4.44%
11. The teacher was giving equal attention to all the students in the class	57 63.33%	23 25.56%	10 11.11%

12. The instructor appeared enthusiastic and interested	86 95.56%	1 1.11%	3 3.33%
13. The lessons were taught in an interesting way	77 85.56%	4 4.44%	9 10%
14. The teacher provided sufficient feedback on our performance	61 67.77%	19 21.12%	10 11.11%

**Table 4.34 : Students' Opinions about Teaching Learning Process**

The results displayed in the table reveal that, in general, the students expressed positive attitudes toward the teaching-learning process in the course. Specifically, they agreed with the issues related to the 'teacher' with high percentages (e.g. items 2, 5,6,7,8,9,10,12 etc).

#### 4.6.2.4. Comments on Strengths and Ways of Improvement

\*Some students briefly stated in the comments that all the activities and tasks were interesting and useful.

\* Some of them described the relationship between the teacher and the students as very good, friendly, and student-centered. As to the role of the teacher, one of the students stated, "She was one of us".

The other comments of the students were as follows :

\* Activities were useful. We had difficulties only in catching up with the listening exercises. In general, the conduct of the lessons and activities was good.

\* They were very enjoyable. Teacher's attitude is very important in the success of the course.

\* They were useful; I think we didn't waste time in this course, I enjoyed every minute of the course.

Regarding teacher-student relationship in the course, majority of the students expressed positive ideas :

\* We were all together; there was equality in the classroom.

\* We had a very good relationship with our teacher and I think this was effective in our learning. Students were active all the time. The role of the teacher is just to guide the students into doing things. She provides guidance as to how to carry out the tasks. More than that, we

are the presenters, the directors of some activities in the classroom, they are the participators and they are the initiators in some aspects as well.

\* ‘She is an engine of motivation!’

#### **4.6.2.5. Findings and Comments**

##### **4.6.2.5.1. Applicability of the Course**

ESP course design in an integrated, systematic and flexible process, in which consistent review ought to be made on individual sub-processes in terms of the core elements of the language use, language learning and learners’ specific needs in a target context, it is not a one-off production but an on-going of planning, implementation, negotiation, reflection and refinement. This course was designed for First year Master students of computing, it was beneficial, although not ideal. The designed course could be used as a sample for ESP course design, and supplemented by other topics required by the students on the basis of a proper needs analysis.

##### **4.6.5.2. Course evaluation**

Regarding goals and objectives, they were appropriate since they emanated of the detailed needs analysis. They were specific enough because they were focused on particular tasks. Moreover, they were also level-appropriate to be achievable, since they corresponded with the intermediate level. Regarding students’ point of view, they all stated in the comments that the course was useful and the goals were achievable. Moreover, the objectives were actually reached. Student mentioned a great vocabulary growth, and they appreciated having done practical tasks related to their field of specialism. They also mentioned: ‘The learned language corresponded with our needs’.

As far as the course content goes, the topics were what the students needed. Lastly, regarding the level of the content, there were differences in the individual skills, therefore, activities had to be adapted to a lower level.

Pertaining the needs assessment, this played a very important part in designing the course. Additionally, the needs analysis helped to specify the content areas as well as typical

settings where the language would be used. Another important factor was the way the course was organized. It was designed so that it would flow from one topic to another. Some students claimed to have become more confident when speaking English, and similarly other students noted that they were gradually losing their fear to speak. The majority of students also enjoyed attending this course and said: “*We started to wait impatiently for Saturday to attend the ESP course.*”

The materials and the methods were crucial for the course. Even though the course was aimed at only ten sessions, it was of a great benefit for the students since they could really deepen their knowledge and foremost sufficiently practice given tasks.

Most students in this study were totally satisfied with overall ESP course. The use of specialized vocabulary activities, course materials and topics were relevant to students' area of specialization.

The total number of students stated that the new ESP course was interesting and found it relevant to their needs in spite of the fact that few students were lost during the lectures. They all appreciated the organization of the course and assessment tasks. The students were also enthusiastic and motivated by the teacher's methods to enhance their levels in language skills mainly in speaking by giving them the opportunity to train themselves in oral presentations.

The role of the teacher in ESP classes is of a great importance, she is considered as a facilitator since the students expressed their agreement on teacher's method to help them access easily to difficult concepts and as an evaluator by proposing adequate tasks to assign students during the sessions and assess their progress through testing.

To sum up, it seems clear that the great majority of the informants showed a high degree of confidence at the end of this ESP course. This gave the researcher a great deal of self-satisfaction after having completed the course successfully.

**Conclusion**

In this chapter, the researcher tried to carefully plan and write as clearly as possible comprehensive courses which will serve as a useful resource for students. Developing a new course is difficult, but a very rewarding process. The investigator needs to formulate the goals and objectives first, conceptualise the content, then select and adapt teaching materials, plan the course, and be ready to evaluate it.

Course development should be considered as an ‘on-going’ process, one in which the teacher makes necessary changes to suit students interest and needs, even when the course is in progress. Every year, teachers have different students with different needs and background. That will inevitably make it necessary and important to bring in changes and adjustments.

The purpose of this chapter is to propose a framework for developing a new ESP course based on different processes that start with a comprehensive needs analysis, and ending with course evaluation.



# General Conclusion

### General Conclusion

The researcher has observed that there is a gap between theory and practice in teaching ESP. Thus, the primary objective of this study was to evaluate the feasibility of the current ESP course at the Computer Science Department. Besides, the study was conducted because a needs analysis had never been carried out for designing such a course. Therefore, this research investigation aimed at exploring the English language needs of First Year Master Students of Computing at Médea University since the principal aim of ESP teaching is exploring learners' views and hearing their voices. To do so, a detailed needs analysis was undertaken and it resulted with the elaboration of a ten-lesson syllabus. The course focused mainly on developing the productive skills. Additionally, appropriate materials were selected, adapted, and developed. Then, the newly designed ESP course was analysed in order to evaluate the extent of its appropriateness and effectiveness. Moreover, regarding applicability, it was suggested to use this course as a template for designing ESP courses.

Lastly, to provide answers to the research questions, qualitative and quantitative research instruments were developed: documents analysis, interviews and questionnaires. The research methodology was based on the statement of the problem and the research questions, as well as the theoretical discussion of needs analysis and course evaluation. Triangulation was applied in this study in terms of data collection tools. The data collected was analyzed qualitatively and quantitatively and interpreted through descriptive statistics. The statistical analysis of the obtained data, confirmed the three hypotheses of the study. The study has reached a number of findings that served to provide some suggestions and recommendations. In fact, the association of such factors may help in improving the teaching of the ESP course.

Besides, during the process of our research investigation we reached the following conclusions :

First, adopting needs analysis can provide the necessary platform required for the delineations of the desired course. Second, needs analysis offers information on both the content and form that the course is expected to exhibit. Third, teaching and learning ESP courses that are matching with the students' needs will certainly produce reasonable outcomes. Fourth, accurately prepared ESP courses encourage students to learn and search in their field of specialization. Finally, ESP courses will be more effective if they are taught by well-trained instructors.

### General Recommendations

In the light of the aforementioned findings, the researcher recommends that:

1. ESP teachers should adopt learners' needs analysis as the essential basis for designing ESP courses to avoid having any problems or drawbacks that affect students' English learning.
2. Selection of ESP course contents should be strictly decided after investigating learners' needs in order to prepare more motivating and effective lessons.
3. Teachers have to work and collaborate with other colleagues at the department to compile a more practical syllabus. The ESP instructors have to co-operate with the content department in order to increase their knowledge about the students' needs regarding their major subjects.
4. As English plays a crucial role, the criteria to define English language courses for computing science students should be based on both the target and present communicative situations representing the communicative use of language rather than formal linguistics representing the grammatical rules of language.
5. English language courses should contain materials for teaching students different study skills to motivate and help them search for further knowledge in their field of specialization using different several resources.
6. English Language Teachers should evaluate their courses to improve and promote their effectiveness.
7. In-service training should be regarded both as an urgent need for the teachers and as a necessity to improve the course. Implementation of suitable and relevant teacher-training leads to the success of the accomplishment of an ESP course program. Teachers will be interested in teaching ESP courses, If they are carefully trained on the purpose and most effective procedures for teaching the course.

### **Suggestions for Further Studies and Future Research**

The line of research of the present study needs to continue and expand in order to achieve a better knowledge of this paradigm in the field of ESP needs analysis for the design of appropriate ESP courses. Hence, the current research could have implications for future educational research. ESP teaching/learning is still in its infancy in Algeria, therefore there is a need to promote this type of research in order to develop it. It is also needed in order to recognize factors that influence curriculum and course design and implementations. Perceiving educational problems and phenomena from multiple perspectives helps in delivering a lucid picture of the reality, which could contribute to finding more accurate and pertinent solutions.

### **Limitations of the Study**

Our initial assumption was that conducting a needs analysis and evaluation research would not require much time. Later, when we went through the research process, we had to admit that the time needed was one of the limitations of such studies. However, this research has enabled us to learn how to manage and plan our time effectively. It has also enabled us to recognize the role of both needs analysis and evaluation not only in theory, but also as practical aspects of language course design and development. The experience of doing this research has also taught us some valuable lessons and provided us with research skills that we lacked.

### **Reflections' of the Researcher**

In doing this research, we took care not to impose our personal views on any aspect of it, including its participants and outcomes. We detached ourselves from the study, continuously reflecting and taking a critical look at the research in order to improve its validity and recognize its limitations. The central role as a researcher was to investigate the questions addressed with the purpose of elaborating a more effective ESP course. In short, we had no desire to make things look either good or bad.

Surely, the experience of doing this research has taught us many things which cannot be covered in this limited space. we will draw on this experience, when serving on designing and/or developing ESP courses and syllabi.

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# Appendices

## APPENDIX 1

### Evaluted Courses

## PART ONE : Terms

### CSMA/CD

the acronym CSMA/CD signifies carrier -sense multiple access with collision detection and describe how a network protocol called ethernet protocol regulates communication among nodes.while the term may intimidating .ifwe break it apart into its components concepts we will see that it describes rules very well simi to those that people use in polite conversation .to help illustrate the operation of ethernet .we will see an analogy of dinner table conversation.let s represent our ethernet segment as a dinner table and let a several people engages in polite conversation at the table represent the nodes.the term muktiple access covers what we already disscussed above.when one ethernet station transmit all yhe stations on the midium hear the transmit just as when one person.....

### Kernel

The central component of most computer operating system /OS/. It is functions include managing the system s resourse /the communication between hardware and software

### Linux kernel

unix-like operating system kernel

### Ufs

A computer operating system composed entirely of free software.initiated in 1984 by Richard stallman.

### GPP

A widely used free software licence.originaly written Richard stallman in GNU project.

## Minux

free/ open source unix- like operating system /OS/ based on microkernel architecture.

## Operating system

the software that manages the sharing of the resources of a computer and provides programs with an interface used to access those resources.

## buffer

A region of memory used to temporarily hold data while it is being moved from one place to another.

## computer generated imagery/CGI/

An application of the field of computer graphics/or more specifically .... 3D computer graphics/ to special effects in films.. Television programs.. commercials and simulation.

## Discrete

not supporting or requiring the notion of continuity ..discrete objects and countable sets such as integers.

## Stochastic process

A process with an infinite or random element as opposed to a deterministic process that has no random element.

## Monte carlo method

A computational algorithm which relies on repeated random sampling to compute its results.

## Les cours English

### Premier cour CSMA/CD

-the acronym CSMA/CD signifies carrier -sense multiple access with collision detection and describe how a network protocol called Ethernet protocol regulates communication among nodes. while the term may intimidating .If we break it apart into its components concepts we will see that it describes rules very well similar to those that people use in polite conversation .to help illustrate the operation of Ethernet .we will see an analogy of dinner table conversation. let s represent our Ethernet segment as a dinner table and let a several people engages in polite conversation at the table represent the nodes . the term multiple access covers what we already discussed above. when one Ethernet station transmit all the stations on the medium hear the transmit just as when one person.

-----

### 2nd course: present perfect/present simple

#### Present perfect

Rule: -present perfect is:  
to have+past participles of the verb.

#### examples:

1/i have been there in ceremony.

2/i have watched the car

3/she has broken the vase

4/It has gone to the garden

-----

#### Present perfect

\*what is present perfect?: present perfect is:  
- a verb that happen in the past and it be in the past.

#### exercice n 1 :

where are present perfect:

1/Leila went to Algiers.

2/the computer has walked quickly

3/Ahmed speak Spanish

4/teacher has learn English

exercise 2:

true or false

mention if the verb of the phrase is present perfect or not:

1/ direction of informatics is being active.

2/the family have been in the holidays.

3/computer has walking truly.

4/mustapha has been the **délégué** of group B5.

-----  
Present simple

rule :?

ex ample:

1-i swim

2-you swim

3-she/he/it swim

4-we swim

5-they swim

6-you swim

Example:

1-I buy

2-you buy

3-they buy

4-she/he/it buy

5-we buy

exercise n 1

where is present simple ?:

1/i had gone

2/we spoke arabic

3/they cry all the time

4/ we pass to another programmatic

exercise n 2:

true or false

1/ahmed uses the another board

2/the unit central is enter the computer

3/leila speaks chinese

4/ computer do all the operations.

---

3 rd course:  
adj/noun/verb

1/adj ... It is describe the noun.

Examples:

1/she is a funny girl.

2/leila is a better girl in the classroom.

3/ahmed is the bad people.

Exercice:

where are the adjective in these sentences...

1/mohamed work by computer very well.

2/leila speak arabic fluently .

3/ahmed is a strong man.

4/réda is a weak man.

---

2////noun. .... i ts the proper word.

Examples:

1/the table is green.

2/the computer is walking.

3/the university is big.4/

khaled is a champion in the box.

Exercice:

true or false: where is the noun :

1/the keybourd is situated into the computer.

2/the computer receives the infomations.

3/mustapha spans multiple switshes.

---

3)verb:it is the action that happen in the phrase or sentence.

Examples:

1/ i have created multiple vlan

2/you must use a process

3switsh do this by itself.

Exercice:

is the verb conjugate

1/ahmed can speak computer language.

2/réda had gone to london.

3/network can groth

4/part of network can receives packet.

-----  
4<sup>th</sup> course:

## **GRAMMAR**

writing tesk.....write about the following topic. .. children today spend more time with computer and TV than they did in the past.Describe some advantages and disadvantages of TV and computer for children.

-----  
INFORMATIC:

## **TERMS**

**Kernel:**the central component of most computer operating system /OS/. It is functions include managing the system s resourse /the communication between hardware and software components/.

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**Operating system:**the software that manages the sharing of the resources of a computer and provides programs with an interface used to access those resources.

**buffer:**A region of memory used to temporarily hold data while it is being moved from one place to another.

---

5<sup>th</sup> course:  
**informatic**

**terms**

**computer generated imagery/CGI/:**

An application of the field of computer graphics/or more specifically. ... 3D computer graphics/ to special effects in films..Television programmes..commercials and simulation.

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not supporting or requiring the notion of continuity ..discrete objects and countable sets such as integers.

**Stochastic process:**

A process with interminate or random element as opposed to a deterministic process that has no random element.

**Monte carlo method:**

A computational algorithm which relies on repeated random sampling to compute its results.

---

**GRAMMAR**

**Writing task:**

you are going to spend your vacation in a city in a foreign country..you have never been there before.your cousin has friend who lives there. Write A letter

to the friend.In your letter.....

1-Introduce your self

2-say you are making this trip.

3-Ask some questions about the city/places...to see....things to do .... things to bring/

\*Write 150 words at least

\*You do not need any addresses

begin your letter as follows .... Dear John

---

## TERMS

### CSMA/CD

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Monte carlo method

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2/2

## APPENDIX 2

### ESP Teachers' Interview

#### **Theme 1: Training in ESP**

A. Have you had any training in teaching the ESP courses?

B. How did you become an ESP teacher?

#### **Theme 2 : Evaluation of Needed Competencies and Roles of ESP Teachers**

A. What are the competencies needed to teach ESP ?

B. State your agreements or disagreement regarding the roles of the ESP teacher proposed by Dudley Evans and St.John :

<b>Roles of ESP practitioners</b>	<b>Teachers' responses</b>
<b>Teacher</b>	
<b>Course designer and materials provider</b>	
<b>Researcher</b>	
<b>Collaborator</b>	
<b>Evaluator</b>	

#### **Theme 3: Teachers' strategies in an ESP course**

What do you think are the teachers' strategies in an ESP course ?

#### **Theme 4: Objectives of the ESP Course**

What are the objectives of your ESP course?

### **Theme 5: Classroom Procedures**

What classroom procedures would you identify with ESP teaching?

### **Theme 6 : Challenges in Teaching ESP**

What are the challenges that you face when you teach the ESP Course.

**Thank you for your collaboration**

## APPENDIX 3

### Teachers' Questionnaire

This questionnaire has been elaborated to evaluate the current ESP course focusing on teachers' perceptions and application of the course. The researchers will appreciate your contribution and help. The data collected from this survey will be treated confidentially for the purpose of this study.

#### Section I : Teachers' Profile

Gender : Male  Female

Age :

25-30

30-35

More than 35 years

Teaching Experience :

1 to 5 years

5 to 10

More than 10 Years

Q1. Which degree do you hold:

a. a Licence in English (BA)?

b. Master in English? (MA)

c. Doctorate (PhD)

Q2. What is your status as a teacher:

a. fully-fledged? (Permanent)

b. part-time?

Q3. How long have you been teaching ESP ?

Options	Number of Years
1-5 years	
6-10 years	
More than 10 years	

Q 4. 1. Have you taught in some other departments?

- Yes

- No

Q5. Have you had any kind of formal training to teach ESP ?

- Yes

- No

## Section II : ESP Course Organization

Q6. When are your ESP sessions scheduled ?

Morning

Afternoon

Q 7. Is students' attendance to the English classes compulsory?

- Yes

- No

Q 8 . Do the English classes take place under the form of:

a. Lecture?

b. Workshop?

Q9. In the ESP course of your present teaching, do you teach more often:

a. General English?

b. English related to science and technology in general?

c. English more specifically related to computer science?

(Tick one or more boxes)

*Q10.* In the ESP course of your present teaching, do you tend to concentrate more specifically on:

a. general grammatical notions?

b. grammatical structures related to science?

c. lexical items related to computer science?

(Tick one or more boxes)

*Q11.* In ESP the course of your present teaching, do you use:

a. textbooks related to general English?

b. textbooks related to scientific English?

c. textbooks specifically related to computer science?

d. documentation used by students in their own field of study?

e. materials you prepare yourself (texts, exercises)?

(Tick one or more boxes)

*Q12.* Do you conduct needs assessment before designing your course?

a)- Yes

b)- No

If yes, which of the following techniques do you employ ?

a. questionnaires

b. interviews

c. others (please specify).....



*Q13* : In the ESP course of your present teaching, which of the following skills do you tend to lay more emphasis on:

- a. listening?
- b. speaking?
- c. reading?
- d. writing?

*Q14* .1. In the ESP course of your present teaching, do you sometimes use translation from one language to another?

- Yes
- No

2. If yes, specify the other language(s) that you frequently use besides English:

Options	N	%
Only French		
French/Arabic		
Not specified		

*Q15* . Are you given any programme that you use to implement your courses?

- Yes
- No

*Q16*. Does the administration contribute and collaborate with you?

- Yes
- No

*Q17*. Do you meet/collaborate with teachers of the computer science department to discuss and comment your courses and their content according to the whole programme of speciality?

- Yes
- No

Q18. Which of the following problems do you face when teaching ESP ? you can select more than option

a-lack of specialist knowledge

b- lack of suitable materials

c- difficulty in understanding the materials

d-time constraints

e- others (please specify) .....

Q19. what is the reason/s that make the fact that your work as an English teacher does/ does not correspond to the level of achievement expected. If no, mostly because (you can select more than one option) :

a. you are not permanent at the department of computer science.

b. you do not have any particular experience in teaching English related to computer science.

c. you find it difficult to determine the needs of the students imposed by the specific field (i.e. computer science).

d. you face some problems to collaborate with teachers of the specific field.

Q20. Which of the following areas would you like to receive training on ? you can tick more than one option :

a-ESP theory

b-Needs Analysis

c-procedures of course design

d-specialized terminology

e-materials, course and learner evaluation

f-All of them

**Thank you for your collaboration**

## **APPENDIX 4**

### **Students' Interview**

First, I would like to thank you for the organization of this interview. I would like have some insights into your points of view about the present ESP course. The main objective of this study is to design an ESP course based on the students needs.

#### **Theme 1: Students' Perception of their Language Needs**

What are your needs regarding the use of English?

#### **Theme 2 : Students' View of Meeting their Needs**

To what extent has this course met your needs regarding the use of the English language?

#### **Theme 3: Students' Perception of the Objectives of the Course**

What do you think the objectives of the current course are?

#### **Theme 4: Teaching Method**

Please describe the teaching methods and classroom management. What does a "typical" class look like?

#### **Theme 5: Students' Perception of Course Accomplishments**

A. What are the positive and negative aspects of the course ?

B. Is there anything that you think should be omitted/added?

#### **Theme 6 : Students' Opinions about the Materials**

State your opinion about the materials used on the course. Please give examples of good/ bad materials.

#### **Theme 7: Students' Problems**

What were the problems in your ESP course?

#### **Theme 8: Students' Suggestions**

What suggestions would you make for improvement of the course?

**Thank you for your collaboration**

## APPENDIX 5

### Students' Needs Analysis Questionnaire

Dear Student,

This questionnaire is used to collect data regarding the needs of ESP (English for Specific Purposes) learners, particularly, the needs of first year Master Students of Computing at Médea University. All data will be confidential and used only for statistical analysis. Your cooperation in filling this questionnaire as accurate as possible will be highly appreciated.

*Instruction* : Put a tick (/) mark or fill in what is appropriate.

#### **Section I : Profile of the Respondents**

1. Gender:            Male                       Female

Age:

Medium of instruction:

2. Level of English before the entrance to the university :

High     Intermediate                       Low

3. Current level of English :

High                       Intermediate                       Low

4. Do you consider English as :

Very important

Important

Quite important

Not important

5. What are your motives of Learning English as a Foreign Language :

To facilitate studies

To pass exams

For communication

All the above

## Section II : Requirements of the ESP Course

6. The time allocated for the course is

Sufficient

Not sufficient

7. What do you think about the current used material ?

Very useful

Little useful

Not useful

8. Evaluate your proficiency in each of the following skills :

<i>Skill</i>	<i>Fully</i>	<i>Moderately</i>	<i>Mildly</i>
<i>Speaking</i>			
<i>Writing</i>			
<i>Listening</i>			
<i>Reading</i>			
<i>Vocabulary</i>			
<i>Grammar</i>			
<i>Pronunciation</i>			
<i>Communication</i>			

9. What are your language needs ? Choose from three different options for every sub-skill.

<b>Language Sub-skill</b>	<b>Lot of Training</b>	<b>Little Training</b>	<b>No training</b>
Listen to understand questions			
Listen to carry out instructions			
Listen to the presentations			

Listen to answers of questions			
Listen to understand accents			
Asking and answering questions			
Participating in class discussions			
Speaking fluently			
Expressing ideas, opinions			
Giving oral presentations			
Reading books			
Reading course handouts			
Reading articles in journals			
Reading instructions for projects			
Interpreting tables in texts			
Writing assignments			
Writing projects, reports			
Taking notes in lecture			
Writing exams answers			
Writing Master dissertations			

10. What is your preferred teaching style ?

Lecturing

Question/Answers

Group discussion

AV Aids

Presentatio

**Thank you for your collaboration**

## APPENDIX 6

### Student Course Evaluation Questionnaire

Dear Students,

This questionnaire has been designed to collect your opinions about the newly elaborated course for evaluation purposes. The course will be evaluated in terms of its features such as objectives, content and materials, course conduct and assessment. It is absolutely essential that you express your views realistically. The data to be collected through your responses will be of great value. The results of the questionnaire will be used only for research purposes.

**Please Cross the Response that Represents Your Opinion**

**SA:** Strongly agree / **A:** Agree / **NS:** Not sure / **D:** Disagree / **SD:** Strongly disagree

#### **Section I : Course Content and Materials**

##### **a)\* Oral Communication Skills**

	<b>Strongly Agree&amp;Agree (SA&amp;A)</b>	<b>Not sure (NS)</b>	<b>Disagree&amp;Strongly Disagree (D&amp;SD)</b>
1. The course materials provided me with what I needed to know.			
2. The course materials were appropriate to my interests.			
3. The course materials helped me to improve my speaking skills.			
4. The course materials helped me to improve my listening skills.			
5. The topics were presented sequentially, i.e. building upon prior learning.			
6. The materials were in line with the course objectives.			
7. Exercises/tasks were effective in			

improving my listening skills			
8. Exercises/tasks were effective in improving my speaking skills.			
9. The course materials were appropriate to my proficiency level			

**b)\*Reading Skills**

	<b>SA&amp;A</b>	<b>NS</b>	<b>D&amp;SD</b>
1. The course materials provided me with what I needed to know.			
2. The course materials were appropriate to my interests.			
3. The reading skills and strategies taught were useful for improving my level in reading in English			
4. The strategies used were useful to guess the meaning of unknown words			
5. Course materials were useful in improving my vocabulary knowledge			
6. The reading skills were taught sequentially.i.e. building upon prior learning.			
7. The materials were in line with the course objectives			
8. It was easy to use the course materials			
9. Exercises/tasks were effective in improving my reading skills			
10. The course materials had variety			
11. The course materials were visually attractive			
12. The course materials were appropriate to my proficiency level			

**c)\* Writing Skills**

	<b>SA&amp;A</b>	<b>NS</b>	<b>D&amp;SD</b>
1. The course materials provided me with what I needed to know			
2. The course materials were appropriate to my interest			



3. The course materials fit my long term goals in terms of writing skills			
4. The topics and themes in the materials were interesting			
5. The writing skills were useful for improving what was needed from the course			
6. The writing skills were taught sequentially.i.e. building upon prior learning.			
7. The materials were in line with my needs			
8. It was easy to use the course materials			
9. Exercises/tasks were effective in improving my writing skills			
10. The course materials had variety			
11. The course materials were visually attractive			
12. The course materials were appropriate to my proficiency level			

## Section II : Feed Back and Assessment

	SA&A	NS	D&SD
1. Homework/ assignments were relevant to the course aim			
2. Information about the assessment was communicated clearly			
3. Feedback showed how to improve my work (e .g. corrections including comments).			
We were assessed on the things (skills) we practiced			
The materials we used and the test materials were similar in terms of difficulty level			
4. The test questions were difficult			
The grading was fair.			

**Section III : Course Conduct/Teaching Approaches**

	<b>SA&amp;A</b>	<b>NS</b>	<b>D&amp;SD</b>
1. There was an efficient use of time in class			
2. There was a good student-teacher interaction			
3. The students had cooperative relationships with each other			
4. A variety of activities was used in the course			
5. The instructor stimulated my interest in the subject			
6. The teacher was teaching in an interesting way			
7. The teacher's instructions were clear			
8. The teaching methodology of the teacher was effective in our learning			
9. The teacher was encouraging us to participate and take part in the course			
10. The teacher used a variety of instructional methods to reach the course objectives (e.g. group discussions, student presentations, etc.)			
11. The teacher was giving equal attention to all the students in the class			
12. The instructor appeared enthusiastic and interested			
13. The lessons were taught in an interesting way			
14. The teacher provided sufficient feedback on our performance			

**4. Comments on Strengths and Ways of Improvement**

\* What changes would you recommend to improve this course ?

.....  
 .....  
 .....

\* What did you like best in your instructor's teaching ?

.....  
 .....  
 .....

\* What did you like least in your instructor's teaching ?

.....

.....  
.....  
\* Any further constructive comments ?  
.....  
.....  
.....

**Thank you for your time and for your valuable feedback**

## **Résumé**

L'enseignement de l'Anglais à des fins spécifiques (ESP) est l'une des approches qui prédomine dans l'enseignement au niveau du supérieur du fait qu'elle est destinée à répondre à des besoins particuliers. En outre, l'analyse de ces besoins constitue une étape importante en termes de développement des programmes d'étude de différents cours. Il est donc nécessaire de se familiariser avec les objectifs des étudiants, leurs attitudes, leurs habitudes d'apprentissage ainsi que leurs attentes afin de disposer d'un programme approprié et adapté. Dans le domaine de l'informatique, les compétences spécifiques en langue anglaise sont nécessaires pour faciliter les progrès académiques des étudiants. Cependant, les matériels pédagogiques mais surtout le facteur humain, ne répondent pas aux besoins des apprenants ; cela est dû au manque d'enseignants compétents et dotés d'une formation au niveau du département informatique. La méthodologie de recherche descriptive et analytique a donc été adoptée dans ce travail. Par conséquent, les outils appropriés en matière d'analyse documentaire, les questionnaires et entretiens ont été utilisés comme collecte de données. L'hypothèse principale sur laquelle ce travail est construit stipule que l'analyse et l'élaboration d'une procédure particulière pour ce genre de cours ESP pourrait contribuer dans le processus de son implémentation efficace au niveau universitaire. Le spécimen de notre recherche est représenté par les étudiants de la première année Master des sciences informatiques. Le résultat essentiel de notre travail est la création, l'application et l'évaluation d'un programme d'enseignement spécialement conçu pour les cours appelés ESP. À la fin, nous avons constaté que notre œuvre a été couronnée de succès, d'abord au niveau psychologique à travers une motivation accrue des étudiants, et par conséquent, un meilleur rendement pédagogique dans l'acquisition du savoir.

**Mots clés : Anglais spécifique- analyse des besoins- sciences de l'informatique- élaboration de cours- compétence productive.**

## الملخص

تعتبر الإنجليزية لأهداف أو أغراض خاصة ما يعرف بـ E.S.P من المناهج الأكثر شيوعاً في التعليم العالي كونها موجهة لتلبية احتياجات الطلبة في مختلف التخصصات ، ويعد تحليل هذه الاحتياجات خطوة أساسية نحو تصميم مختلف المناهج والبرامج وحتى يتم وضع مناهج مناسبة وتصميم برامج تعليمية أكثر ملائمة بات من الضروري معرفة كل من الاحتياجات، التوقعات و الأهداف وكذا الأساليب المراد انتهاجها في التدريس ، هذا ويتطلب مجال الإعلام الآلي مهارات لغوية معينة ومخصصة حتى يتسنى للطلّاب التقدّم الأكاديمي في هذا التخصص ، بيد أن الوسائل التعليمية المعتمدة والمتاحة لا ترقى إلى مستوى ما يحتاج الطالب في دراسته وذلك راجع إلى نقص أساتذة مؤهلين ومتكويّنين ، بل أكثر من ذلك مؤطرين تأطيراً خاصاً يلبي الأهداف المنتظرة من طرف الطلبة وهذا ما لمسناه من خلال دراسة حالة على مستوى جامعة المدينة . ويعتبر هذا العمل محاولة للنظر في ما يحتاج إليه الطلبة من لغة معينة في مجال الإعلام الآلي مستوى أولى ماستر بجامعة المدينة قصد وضع أسس من شأنها أن تلبّي احتياجات هؤلاء بشكل أفضل ، وفي هذا الصدد تم اعتماد منهجية البحث الوصفي التحليلي في عملنا وتسخير الوسائل العلمية كافة في عملية التحليل من استبيانات ومقابلات ومن ثمة توظيفها كطريقة لجمع البيانات . هذا وأسفرت نتائج التحليل لعينات الطلبة محل الدراسة عن ضعف قدراتهم في كتابة والتحدث كما أعربوا عن رغبتهم في تطويرها أين تم تصميم برنامج يتماشى مع متطلباتهم وأظهر تطبيقه عليهم مدى نجاح اختيار المواضيع ذات الصلة بالمجموعة المستهدفة وكذا استخدام مختلف أساليب وتقنيات التعلم على عكس ما كان عليه في السابق ، وفي الأخير نأمل أن تسهم نتائج هذه الدراسة في تحسين تعليم وتعلم اللغة الإنجليزية عامة وفي هذا القسم خاصة وأن تساعد المدرسين للنظر في مدى أهمية الاحتياجات الحقيقية للطلّبة وذلك بتصميم مناهج تعليمية تكون أكثر نجاعة .

الكلمات المفتاحية :

الإنجليزية لأغراض خاصة – تحليل احتياجات الطلبة- تصميم مناهج وتقييمها ESP