

University of Oran
Faculty of Letters, Languages and Arts
Department of Anglo-Saxon Languages

***AUTHENTIC MATERIALS IN ESP: AN EVALUATION
PROPOSAL AT THE DEPARTMENT OF COMPUTER SCIENCES
WITHIN THE LMD SYSTEM***

Mrs Cherchab Djaileb Farida

**Thesis submitted in Fulfilment of the Requirements of Doctorat in
Didactics and Science of Language**

Board of Examiners:

Prof. YACINE Rachida	University of Oran	Chairperson
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Faculté des lettres, des langues et des arts

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All my thanks again for your assistance and encouragement. May I continue to learn from you.

Abstract

Teaching English for Specific Purposes was and it is an important issue among EFL teachers. In the current research, an experiment is conducted to find out the teachers' difficulties in teaching ECS, and the learners' difficulties and attitudes towards the process of teaching/ learning. This thesis is an attempt to demonstrate the importance of authentic materials in ESP since authenticity had implications for pedagogical practice. In the design process, didactic criteria should be taken into consideration within Algerian Technical Universities since today English is a linguafranca for the Scientific and the technological developments. Therefore, the authenticity of materials and the relevance of texts and tasks are of paramount importance.

Moreover, the understanding of the linguistic insights help the teacher to design his/her own syllabus since language description is the way in which the language system is broken down and described for the purpose of learning.

On the other hand, an ESP program is therefore built on assessment of purpose and the function for which English is required.

L'enseignement de l'Anglais à des fins spécifiques a été ^{est} et considérée comme un problème important parmi les langues étrangères. Dans la recherche actuelle, une expérience est menée pour déterminer les difficultés des enseignants dans l'enseignement de l'Anglais pour l'informatique et les difficultés des apprenants et leurs attitudes envers le processus de l'apprentissage.

Cette thèse démontre l'importance des matériaux authentiques en Anglais de l'informatique puisque l'authenticité a des implications pour la pratique pédagogique.

Dans le processus de conception, des critères didactiques devraient être prise en considération dans les universités techniques Algériennes.

Aujourd'hui l'Anglais est une lingua franca pour les développements Scientifiques et Technologiques. Par conséquent, l'authenticité des matériaux de la pertinence des textes sont très importante.

Un programme d'Anglais ^{et} à des fins ^{proposé sur la base} spécifiques est donc basé sur l'évaluation des objectives et la fonction pour laquelle l'Anglais est nécessaire.

List of Abbreviations

1. **EAP**: English for Academic Purposes
2. **ECS**: English for Computer Science
3. **EOP**: English for Occupational Purposes
4. **EGP** : English for General Purposes
5. **ELT** : English Language Teaching
6. **EPP**: English for Professional Purposes
7. **ESL**: English as a Second Language
8. **ESP** : English for Specific Purposes
9. **EST** : English for Science and Technology
10. **EVP** : English for Vocational Purposes
11. **FLT** : Foreign Language Teaching
12. **L1** : Mother Tongue
13. **L2** : Target Language
14. **LL** : Language Learning
15. **LT**: Language Teaching
16. **NA** : Needs Analysis
17. **OHP** : Over Head Projector
- 18.**SL**: Second Language
19. **SP-LT**: Special Purpose Language Teaching
20. **TEFL** : Teaching English as a Foreign Language
21. **TESL** : Teaching English as a Second Language

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English for Specific Purposes was referred to Applied English Language Teaching since the contents and aims of the courses are determined by the needs of a specific group of learners. It focuses not only on grammar and vocabulary, but also the skills and genre in line with those activities. ESP testing focuses on measuring specific uses of English Language among identified groups of people, such as General Practitioners, Computer Science students and students in Biology. It may provide the teacher with a wealth of information on the quality of the learning process. Generally speaking, assessment interacts with needs analysis and depends on course planning. The aim of ESP is to develop both linguistic and professional skills/abilities, knowledge and competence. An ESP class should be oriented towards developing language skills. Texts selected should have specific subject orientation and based on authenticity, and task-based exercises should be constructed according to professional interests. The primary goal in ESP teaching is to provide students with a practical use of English revising the previously built knowledge. Moreover, linguistic knowledge includes the correctness of grammatical structures, choice of terms ^{so} so that to achieve a communicative ability in different forms (oral or written). Therefore, communicative competence is a term which "*has come to be used in language teaching contexts to refer to the ability to convey meaning.*" Savignon (1983:123).

In ESP, the authentic world must be brought to the students, and they must learn to interact in the language spoken or written. There are various textbooks for ESP courses; unfortunately, no textbook can fulfil the demands of a specific situation. The teacher must rely on his/her own knowledge when assessing the appropriateness of the material to be used. Materials proposed in ESP should contain authentic texts, interesting tasks and activities. The role of the teacher has changed. He/she is a facilitator of learning, an organizer and a coordinator rather than a director of the learner's activities. He/she may develop the learner's autonomy by providing them with techniques on how to learn by themselves. The first step then is to encourage them to take responsibility for their own learning. In ESP, students were expertise in the field in which the teacher has little knowledge (the teacher is not a specialist in Computer Science). As far as the activities are

concerned, they will focus on Communicative Competence as suggested in Canal and Swain (1980). According to them, Communicative Competence is defined in terms of four components (grammatical competence-sociolinguistic competence-discourse competence and strategic competence), concepts that we will define in this thesis. English for specific purposes should be learner-centered in terms of course materials and teaching methodology.

The contribution of learners in the design of an ESP course as mentioned above is paramount; however, teachers rely more on intuitions than on informed assessment of the learner's needs. Since the majority of textbooks are designed without involving learners in the process of course planning, it is likely that they may not reflect the needs of the learners. Such involvement will enhance their motivation level. It is impossible to use any particular textbook without the need of supplementary material. Furthermore, the analysis of the evaluation questionnaire also revealed the desire of students to have additional course design.

ESP is different from EGP, but it shares with the latter the same principles of language teaching since its main objectives are efficient learning. The main difference lies on the awareness of needs. ESP learners are specialists who need English for their specific area. The motivation and goals of the students in ESP and EGP are slightly different. Many syllabus designers rely on a textbook as the sole syllabus. Such a syllabus is usually inadequate since it ignores the specific learning needs of the target students. This can be examined through a need analysis process (NA). Generally; data may be gathered as the followings:

- 1- The Target Group Ability: ranged from lower intermediate level to an advanced level
- 2- The Target Group Needs: the majority of researchers attend seminars in English. This fact requires different skills.
- 3- The Target Group Experience: the use of English in their working situation.

According to Long (2005), using target student as informers seems to be effective. The success of the results from the source depends on the feedback from the learners. Therefore, the curriculum of the language course needs to be prepared in accordance with the specific language needs in the field of the learners.

It is necessary to understand what the ESP courses are. ESP courses are essentially determined by the analysis of the communication needs of the learners rather than by non-learners-centered criteria. The aims of ESP courses are to prepare learners in accordance with the specific skills and vocabulary needed in their own field; for example, the case of Computer Science students who need to be familiar with the high technical terms, such as "data processing, algorithm, batch...etc, or medical students who need to be knowledgeable with lexical items, such as "coronary heart disease, vena cava, carcinoma, ventricular dysfunction...etc."Therefore, the foundation of all ESP is related to why the learners need to learn a language. Again, the syllabus that results from an NA analysis may be produced with emphasis on authenticity. Moreover, producing a course syllabus based on NA for a specific group of learners will be a success with identifiable language needs. Nevertheless, it is often the case that learners have varying needs, so we may think about different informant sources. Need assessment in ESP courses is of vital importance in order to determine the language skills, the students' needs, and to help them understand their own discipline in the target language. One of the most important phenomena of language learning-teaching process is to make students reach the intended language level in a shorter time and in an adequate way. The language skills needed by ESP students are different from those of English for General Purposes since the ways in which they take the language courses change from one discipline to another.

This proposal will be built upon a review of the literature on authenticity, and the most important proposals for the evaluation of teaching materials (chapter one and two). ESP has some distinctive features which require special attention, as the case may be for authenticity. The main question that arises then, 'is the material authentic?' Therefore, it would be very useful to have an authenticity evaluation proposal which

complements existing proposals. This thesis is divided into two parts: the literature review and the pilot study. In the literature review, we have tried to define some of the important concepts related to this dissertation such as ESP, needs analysis, authenticity and testing and evaluation. However, the second part is devoted to practice (the pilot study, the questionnaire and the findings). Finally, we have suggested a model in teaching English for Computer Science to Master 1 students at the department of Computer Science (USTO) within the LMD system.

The main objective of this research work is to present a proposal for the evaluation of the current courses and to suggest a syllabus based on new approaches and methods for language learning in ESP and how to tailor an ESP course to disciplinary needs at university level. Due to this necessity, the main aim of this study is to present a proposal for the evaluation of authenticity based on a review of the literature on authenticity, and on the most important proposals for the evaluation of teaching materials in ESP, and more particularly English for Computer Science.

We shall start by analyzing the positions and controversies related to authenticity, as well as the evaluation of teaching materials. The next step is to justify the methodology that underlies the elaboration of the proposal under scrutiny. This proposal is conceived for the teaching of English for Computer Science within the LMD system, as this is the widest variety of ESP nowadays. We structure it as what follows:

- 1- The role of authenticity and the evaluation of teaching materials:
 - a. Authentic materials: the material produced by and for non-native speakers with communicative purposes.
 - b. The communicative activity of language use: the engagement of interpretative procedures for the negotiation of meaning (Widdowson: 1990).
- 2-The concept of a sentence to that of a text should be demonstrated clearly.

3-The determination of language: topic, channel, function and audience (Hymes, 1972).

In addition, the emphasis on the distance between the real world and the classroom for the non-native speakers being aware that too much stress on authentic materials may be a failure. Authentic material does not usually produce an authentic response and does not guarantee its relevance. Therefore, it is the task of the teacher to decide whether to use authentic or unauthentic material, with either communicative or linguistic purposes of general or specific contents. The analysis of the target situation may guide us when we decide what to teach, how to teach it and what materials we use in teaching. In this context, we follow models proposed by Hutchinson and Water (1984), Widdowson (1976), Glendenning and Holstrom (2005), Glendenning and Howard (2007).

As authenticity is the interaction between the outside world and the classroom, the student contribution in the adaptation and elaboration of the material is important even if the teaching material has linguistic objectives. Since language varies according to the situation, authenticity fades away in the teaching-learning situation. In this context, we can refer to Morrow (1977), and Breen (1985). Moreover, the teacher should take into consideration the four types of authenticity, i.e., authenticity of texts; authenticity of the interpretation of texts by students; the authenticity of objectives and the authenticity of the class.

Methodology: The evaluation of authenticity in ESP

The followings are the major steps to be taken into consideration:

- 1- The evaluation of the material whether it is authentic or not
- 2- The material may be authentic when it fits the student's needs.
- 3- The degree of authenticity of the courses matches the teacher's preparation.

- 4- Analysis of authenticity in relation to variables such as selection of grammar, lexicon and real stretches of language and the selection of topics must be scrutinized. Texts should be related to Computing Science.

The evaluation of materials:

The materials used in the classroom should be evaluated. We may ask the forthcoming questions:

- 1- ^{Are} ~~Do~~ the lessons and tasks relevant ^{to} ~~with~~ the student professional context? K
- 2- Do they allow students to use their linguistic abilities?
- 3- Are the selections of linguistic aspect adequate for the student's level?
- 4- Do they include stretches of real language?
- 5- Are the topics relevant for the student's level of specialization?

The present study is an attempt to answer some questions that relate to university students' performance on the four skills and to their major difficulties. The objective is to find a syllabus that fits their needs and solve their main problems such as, to understand a reading text; to interact orally and to write coherent and cohesive passages in English. The objective of the investigation can be expressed in the following research questions:

- Are grammar, vocabulary and syntax the main problems for the ESP students?
- Are we concerned only with the teaching of technical terms to ESP students?
- Is translation a successful method in teaching ESP?
- Are learners involved in the selection of course materials?
- Is it the sole responsibility of the ESP teacher to design an ESP course?
- What criteria should be used to evaluate ESP courses?
- To what extent are the materials authentic?
- Is the prior knowledge (the schematic knowledge) important in vocabulary and text comprehension for the students?

- To what extent do ESP teachers require a specialized knowledge of the academic subjects?
- What are the students' needs as far as the time allocated is concerned?
- To what extent are the language skills important?

This research project was conducted by designing a questionnaire as an instrument for data collection. Two questionnaires were proposed: the teacher's questionnaire and the student's questionnaire. A pilot study was conducted among Computer Science students (chapter four). After the participants had completed the questionnaire, we asked them to take an English Placement Test (Appendix). For the sake of reliability; we asked them to take the test in the classroom. The tests were presented to Master 1 students. Finally, we relied on the main findings that would be helpful to make our proposal of the course. After analysis, we then compare and contrast the quantitative and qualitative results of our analysis.

We hope that the findings of this research work will have implications for teaching and will reduce the students' difficulties. They may improve their abilities in English at the four skills with remedial grammar, vocabulary and authentic texts for comprehension.

Moreover, teachers may present the students authentic tasks and activities to improve their writing skill without neglecting the oral skill that can be presented through authentic materials such as video, debates in the classroom and role- plays. In addition testing language required for ESP is an aspect of ESP. In the field of Medical English or Computer Science English, several test developments have been suggested. They aim at assessing appropriate language skills for tasks and activities. The use of authentic tasks, authentic materials, and communicative activities are features that promote learning.

In order to design a syllabus in the field of ESP, the following steps should be followed:

1-To set goals

It is the first step in the development of an instructional program. These goals will show the teachers what students will be able to do at the end of the course.

- Students will be able to read and understand texts in their fields.
- Students will be able to comprehend lectures in English.
- They will be able to write summaries.
- They will be able to do research in their speciality.
- They will be able to communicate orally.

Teachers need to set priorities for the development of language skills. Students cannot speak or write first; therefore, the task of the teacher is to improve their listening comprehension and reading skills since a good speaker must be a good listener first. Thus, listening comprehension is important for a student who wishes to attend seminars and conferences in English. After setting the goals, the teacher may go to the second step which is the selection of materials that may lead to the development of appropriate skills. In what follows, we will shed light on the most important steps in the development of a programme:

2-To design courses

Before the selection of courses, the teacher can rely on a needs analysis to identify the student's needs and their main difficulties. In doing so, he/she may add, delete or modify the lessons. In a course of Computer Science English, the teacher may rely on topics that describe and define the computer, its characteristics and functions. The choice of topics is important in syllabus organization. English is learned best in context and the topics will provide a context for learning. In a unit for Computer Science, themes such as software, data processing, mainframes, input, output devices, and computer capabilities are all appropriate and relevant for the students since they are familiar with these topics in their content courses. The reading texts are the basis from which classroom activities are

developed. Vocabulary may be taught by asking the students to fill in the gaps with suitable terms. They may rely on their previous knowledge to grasp meanings. Grammar can be taught with technical examples. The relatives can be taught as follow: 'An abacus is a bead frame in which the beads are moved left to right.'

However, the speaking skills can be taught through listening materials. The student listens to an extract from a tape; for example, to hear various instructions about how to set up the personal computer.

- Look at the back of the computer.
- Find the aerial lead.
- Connect one end of the aerial lead.
- Take the micro-disk drive.
- Tune in your TV.
- Turn the computer on.
- Press in the button of the computer.
- Use the tuning mechanism.
- Insert the 'welcome' disk.

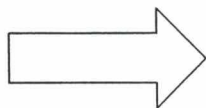
3-Planning the lessons

Teachers will need to schedule tasks for lessons. They can start the lesson by asking the students few questions about a chosen topic to test their general knowledge about their speciality area of Computer Science. The followings are some questions that can be asked:

- What are the main characteristics of a computer?
- What are the main steps that one has to follow in problem solving?
- What are the main types of memory?
- What is the difference between processing and the processor?

In a design of a lesson in the field of ESP, and more particularly English for Computer Science, teachers may rely on needs analysis in order to assess the students' abilities at the four skills; choose different topics related to the students' subject field; to select various texts; to choose authentic tasks for them and finally to evaluate their abilities. Therefore, a plan of a lesson in teaching English for Computing Science may take the following structure:

Step 1

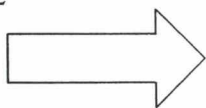


Main

Goals

The ability of the students at the four skills

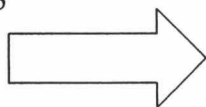
Step 2



Topics

Choice of topics related to Computer Science

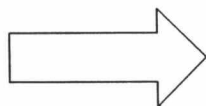
Step 3



Text

The selection of texts based on authenticity

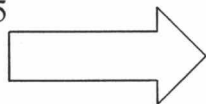
Step 4



Tasks

The choice of authentic tasks for the students

Step 5



Testing

The evaluation of the student's abilities

Design of a Syllabus in English for Computer Science (ECS)

As it is shown in the chart above, the main objective of the suggested syllabus is the ability of the students at the four skills. They should be able to interact orally without fear and hesitation; to understand a written discourse; to be able to detect what the others are uttering and to write coherent paragraphs in English as stated above in the diagram. Moreover, the choice of the topics and the tasks related to Computer Science should be also authentic. The texts selected should be realistic too (authentic). Finally, the students should be evaluated. In this case, we can test their abilities at the four skills.

The design of An ECS programme may be organized as the followings:

Selection of topics: The Main Characteristics of the Computer

Reading and Comprehension: Creating debates and discussions in the classroom.

Vocabulary in Context: Data-processing-storage-centrepiece-hardware-software, etc.

Grammar in Use: Prefixes of size: semiconductor- maxicomputer- megabyte-minicomputer, etc.

Authentic dialogues, oral presentations and role-plays: Sentence Completion, interviews. (The main functions of the computer)

Ask the students the following questions in order to create an authentic discussion:

- 1- What is the main function of the computer?
- 2- What is the unit of frequency which is used to measure speed?
- 3- What does RAM stand for?

These questions may be a Quiz for the ECS students.

Listening Skills: Listening to extracts, interviews on the computer and computing.

Writing: Write a short passage about the features of the computer that you would like to have. You can rely on the following terms: CPU- microprocessor chip- data- arithmetic unit- registers, etc.

Generally speaking, materials control the instruction. Materials appropriate for a specific class need to have an instructional approach, methods and techniques which suit the students' needs. There are components which are important for the process of teaching a language: Students, teachers, materials, teaching methods and evaluation. ESP teachers can modify, delete or add lessons according to the student's expectations. In other words, they can teach without a specific textbook. In fact, what is important is to evaluate the suggested material. Therefore, testing the student's abilities in the four skills is a must in ESP. ESP is not only a teaching approach, but it is also a branch of Applied Linguistics since it is concerned with effective teaching, testing methods, analysis of the learners' needs and analysis of the linguistic and discoursal structures of texts. For Dudley-Evans (2001), the key defining features for ESP is its teaching and materials development on the basis of the results of needs analysis.

In ESP, most materials are prepared by the teachers according to a specific setting. Two approaches are crucial in materials development: Language in use and formal linguistic syllabus based on grammar, pronunciation and vocabulary. One of the main goals of ESP is to develop the reading skills for specialist texts. The course development process, which will be analyzed, consists of the following steps:

- Needs assessment
- Determination of goals and objectives
- Content conceptualization
- Selection and development of materials and activities
- Evaluation

After a care review of English for Specific Purposes, we have prepared a course programme for Computer Science students. We used two guiding questions: What form should effective materials take for the preparation of an ESP course? How effective were these materials?

The materials development process reviews the types (lesson plans and activities) and the purpose of materials developed. During this study, we noticed that lesson plans, time and teaching methodology did not enhance language skills. Therefore, our material went through a refining process.

- To teach an effective ESP course, an expert in the field is required.
- Materials developed for ESP courses must come from a variety of sources.

It is very important to understand the concept of ESP first and how it is different from English for General Purposes. How does one define ESP then, Dudley-Evans and Johns (1991) describe ESP as what follows:

'The careful research and design of pedagogical materials and activities for an identifiable group of adult learners within a specific learning context'.

Dudley Johns (1991:298)

The dominating fields of ESP have been English for Academic Purposes (EAP), English for Science and Technology (EST), English for Occupational Purposes and English for Professional Purposes (EPP). These fields dominate areas of research such as articles in journals. As a rule, ESP is a prominent branch. We should know too that there is a significant difference between ESP and General English. This will be our next discussion. In this research work, we will tackle the case of Computing Science English. We have used (ECS) for short.

I.1 Introduction

English for Specific Purposes became important due to the dominance of English in the field of Economics, Politics, Medicine and Computing Science. Each of these disciplines requires a specific method of teaching based on the learners' expectations. In the evaluation of ESP as part of ELT, we notice that one of the constraining factors is the lack of 'specialized teacher-training' (Swales, 1984:214). Furthermore, knowing a foreign language may be important to one's education and careers. Today, the ability and the need to interact with others are of paramount necessity. In order to meet communicative needs such as the international exchange of ideas, scientific issues, medical topics, the use of the computer and the internet is essential. Therefore, for a more instructional content, ESP is considered as an important option. Nowadays, ESP is an approach to language teaching. Traditional linguists describe the features of language; however, revolutionary applied linguists such as Widdowson (1990) focus on the way language is used in real life. In the following discussion, we will discuss briefly the concept of language.

I.2 Knowing a Language

Knowledge of language is knowledge of the sound system of that language. Everyone who knows a language can understand what is said to him, and can generate strings of words which convey meaning. Therefore, the meaning of a word is specified by semantic properties.

'What's in a name? That which we call a rose by any other name would smell as sweet.' (Shakespeare, Romeo and Juliet, II, ii)

Thus, attributing names to things is an act that implies linguistic creativity. Sentences, as words, have sense. We understand sentences because we know the meaning of words, and the rules for the combination of their meanings. Therefore, the study of a foreign language involves the learning of word meanings and how to combine them into meaningful sentences. The understanding of sentences permits us to state under what conditions they are true or false. Moreover, the ability to comprehend sentences allows us

to make judgments. Knowing a language involves knowing the pragmatic meaning of the sentences since language is a communicative system. According to Searle (1969), speaking a language is 'performing acts', and he says that *'the purpose of language is communication in much the same sense that the purpose of the heart is to pump blood.'* In both cases, it is impossible to study the sentences of language independently of function. From these perspectives, it is crucial to relate usage to use. In fact, knowing a language implies knowing the grammatical norms and how to apply them in context. Thus, the meaning of sentences is drawn by reference to linguistic competences. In fact, the description of language is the way in which the language system is broken and described for the purpose of learning. The study of language (linguistics) and that of teaching are essential to the teachers who aim to teach English as a Foreign Language. An effective course should be based on linguistics and pedagogical information. Moreover, learning a foreign language is not a matter of mastering an object of academic study, but a matter of learning a means of communication. The demand for knowledge of the English language and to use it in different forms of communication is increasing throughout the world. The role of the teacher then is one of the important aspects of the changes within the field of ESP. Today new responsibilities come among these changes for the design and the implementation of the materials.

I.3. The Concept of Language 'Usage' and Language 'Use' in English Language Teaching

The distinction between 'usage' and 'use' was introduced in Widdowson (1989). Accordingly, language is used to perform communicative acts rather than to construct correct sentences. Usage is separated from context and it allows us to judge whether a sentence is correct in English or not. Usage is related to the appropriateness of sentence or utterance. Knowledge of language is prerequisite for a competent use of a given language. However, this fact does not necessarily imply that the ability to produce a foreign language is solely based on knowledge of its usage, i.e. its grammar and vocabulary. Sometimes sentences are grammatically acceptable, but they sound unnatural. In recent days, the focus has been on language use rather than language usage. Nevertheless, usage

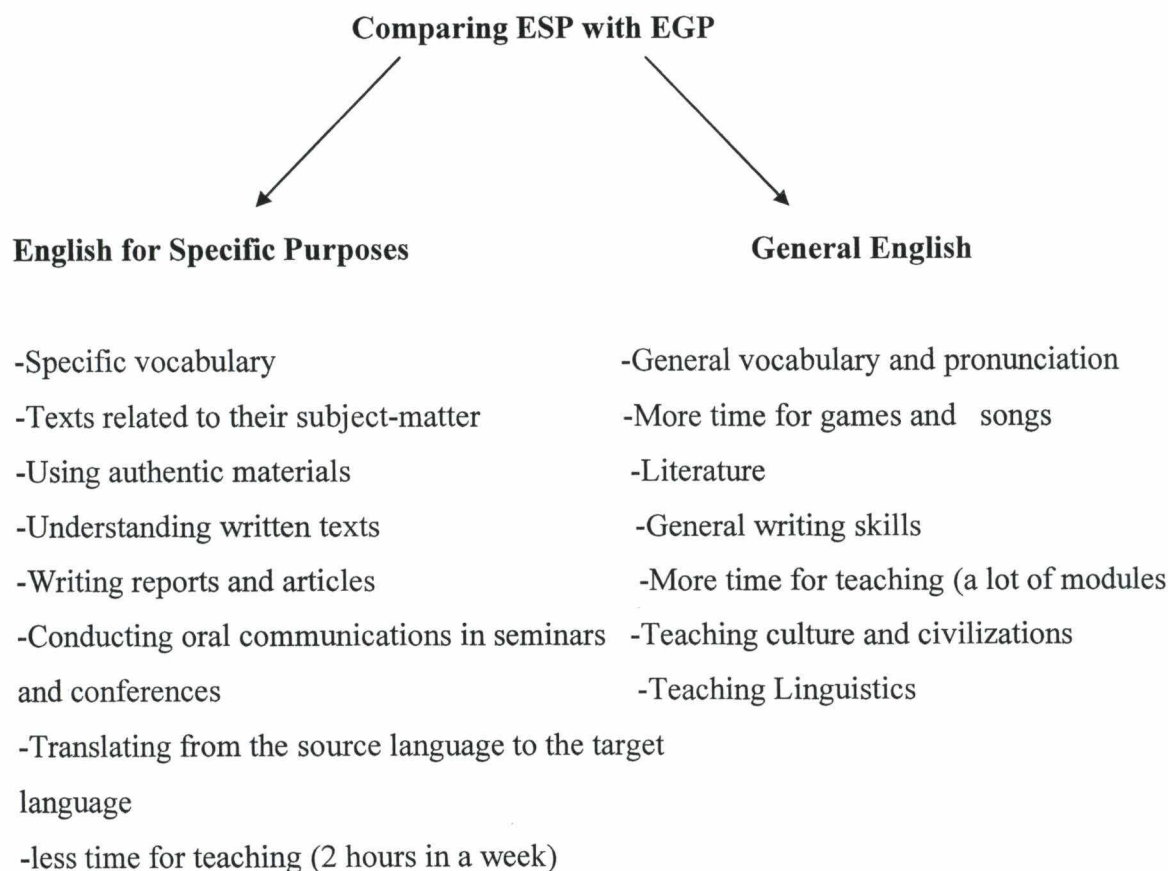
should not be neglected since it is an important factor for the construction of form and function in the system of language. In addition, much importance is given to the actual use of language produced by speakers. We should be aware of the fact that the use of utterances in communication determines the representation of grammar, and can be constituted by appropriate usage, use, grammatical elements, register, genre and situation. In this discussion, we introduce some of the linguistic insights and their relevance to language teaching because they provide us with explanations on language, and seek to identify procedures which are relevant for the formation of pedagogical principles in order to achieve a good production of language. Language is best taught as communication when we focus on notions, functions and tasks. We do not communicate by producing isolated sentences, but by linking them to use. Therefore, it is important that ESP teachers try to develop in their learners the ability to communicate properly. This fact may be possible if we understand what ESP is really and how it is different from EGP even if we know that there is a great distinction between those two enterprises. This is developed in the section (s) below.

I.4 The Difference between ESP and EGP:

Teaching English for Specific Purposes has its own challenges. Is there really a difference between ESP and EGP? Do the goals of the students differ widely? Is there a difference in motivation?

Hutchinson and Waters (1987:34) answer this question in the following terms: *'in theory, nothing, but in practice a great deal'*. ESP differs in goals and content. It differs from EGP in the sense that the words and sentences learned, the subject matter discussed, are all related to a particular discipline. The main concern of EGP is the English language education in schools without any specific objective. Generally, students are introduced to the sound of English, grammar and lexis; whereas, ESP is concerned with language in use. In general EGP courses are also based on general texts such as the weather- pollution- celebrities- personal letters and e-mails. This is the concern of EFL (conducted in a non-English-speaking country). On the other hand, ESP is research and instruction, and it is

designed to prepare students for the English used in specific disciplines. ESP is defined to meet the needs of the learners. The sub-field of English for Specific Purposes has emerged out of English as a Second Language to meet the specific Academic and professional expectations of the learners. Courses in ESP focus on specific vocabulary and the unique language skills. ESP is connected to language for professional purposes where speakers have to learn how to use language in areas where they are going to work. Course design and teaching is usually negotiated. Thus, it is a learner-centered approach since the needs of the students are taken into consideration. ESP is designed for students who have a common professional reason for learning English. The specific purpose or content focus helps the teacher to identify vocabulary and the context in which they are used. The teacher selects materials and activities to move from a text to a task. The following diagram shows a number of the ideas that the teachers have come up with in comparing ESP with EGP. Moreover, course design for EGP focuses on topics related to culture, literature, and civilization; however, ESP focuses on courses related in a specific field such as 'Computer Science'. Needs analysis is of paramount importance in ESP, and the main purpose of the ESP teacher is to encourage students to practice the language for the purpose of mastering their subject-matter. The chart below is suggested by Hutchinson and Waters (1987); however, we have modified it according to the findings of this research work.



The Main Similarities of both ESP and EGP

- Grammar and function (usage and use)
- General vocabulary (Even in ESP, we can teach general vocabulary)
- Everyday English
- Travel vocabulary
- Current events (articles from newspapers in different contexts such as in the field of politics and journalism)
- Authenticity (in both cases, we can teach with authentic texts and authentic materials).

Although the motivation and goals of the students studying English for Specific Purposes and General English are somehow different, various ideas for teaching are in common. English for General Purposes is the teaching of the fundamentals of grammar, of expressions as well as of phonetics and some language studies; whereas, English for Specific Purposes is determined by different-professional skills/occupational needs of the learners. Therefore, English for Specific Purposes includes specific programmes which are designed to develop the communicative use of English in a specialized field. In fact, both can develop the communicative use of English in different situations.

ESP language teaching/learning is purposeful (predetermined by the needs of the students). The language is a means of teaching and is significant in the context of the professional world. However, in order to help the student to communicate in real situations, it is necessary to revise and develop the student's command of General English since he/she is expected to use English in seminars and conferences as well as in everyday situations. They must be able to ask questions and to answer. Therefore, they must be competent. Communicative Competence is the term which:

'Has come to be used in language teaching contexts to refer to the ability to convey the meaning to successfully combine knowledge of linguistic and sociolinguistic rules in communicative interactions'.

Savignon (1983:123)

In fact, the two types of English are important for the students. Both develop the ability to communicate in any form (oral/written). In both cases, linguistic knowledge includes the correctness of grammatical structures, choice of words and their meanings. The goal of ESP is to provide the student with practical use of English revising the knowledge built earlier. Johns (1991) asserts the following:

'Curricula should be based upon the most systematic accurate and empirical measures of students 'needs and of the language required by the tasks they must perform outside the classroom.' Johns (1991: 67)

The teacher must examine the needs of his/her students. As a rule, ESP and General English are interconnected in the sense that ESP rests on the knowledge of General English (grammar structures, general vocabulary, pronunciation and other skills). The primary goal of ESP is to develop both linguistic and professional skills/abilities as well as knowledge and competence. Teachers today are aware of the importance of needs analysis and the goals of the learners during materials production. This shows the difference that lies between ESP/EGP. On the other hand, EGP teachers base their courses on textbooks without conducting a research analysis of the students' expectations.

Furthermore, an ESP course concentrates more on language into real situations than on teaching grammatical structures; however, grammar still plays an important part in an ESP course. Motivation of the ESP students is higher than EGP students. One of the main factors of ESP is a high focus on the learner. In ESP, as opposed to EGP, the use of authentic materials is fundamental. Materials should be authentic, up to date and relevant for the students' specializations. This fact does not imply that in the teaching of EGP, we must neglect authenticity. Authentic materials in ESP can increase the motivation of the students. This will drive us to think about evaluating the materials we are using to see how suitable they are for the students' needs. Anthony (1979:3) states that *'is perhaps the role that ESP practitioners have neglected most to date.'* According to Anthony's view, ESP teachers are often slaves to textbooks they are using. Thus, textbook courses are too broad, or too narrow, too long or too short (Wright 1992: 9). Another area of constant debate has been whether a specialist is well-equipped to teach an ESP course. If a teacher lacks technical knowledge, he/she may fail in the process of teaching. This fact does not imply that teachers should be specialists, but they can at least do some efforts.

In this context, Scrivener (2005:324) asserts the following:

'Use lexis, examples, topics and contexts that are, as far as possible, relevant to the students and practice relevant specific skills'.

I.5 ESP Revisited

The following discussion focuses on some of the definitions and features of ESP. There are a lot of views on ESP. We would like to consider some of the definitions proposed by various scholars. ESP is described simply as the teaching of English used in Academic studies or the teaching of English for Professional Purposes. Dudley-Evans (1998) defines ESP in terms of 'absolute' and 'variables' characteristics. Stevens (1988) defines ESP in terms of absolute and variable characteristics too. He asserts the forthcoming:

ESP is designed to meet the learners' needs, related in content to particular disciplines, occupations and activities, centred on the language appropriate to those activities in syntax, lexis, discourse and semantics, and in contrast with general English'. Stevens (1988:48)

In terms of variable characteristics ESP may be restricted as to language skills to be learned (reading only) not to any methodology. Dudley-Evans and St John (1998) revised Stevens' definition (1988) in terms of absolute and variable characteristics. According to them, ESP is defined to meet the learners 'expectations, makes use of underlying methodology and activities, and is centered on the language (grammar, lexis, register), skills, discourse and genres appropriate to these activities. However, in terms of the variable characteristics, ESP may be related to or for specific disciplines, may use different methodology from that of General English, and it is designed for adult learners, assume basic knowledge of the language system, and can be used for beginners. For Dudley-Evans and St John, ESP is not in contrast with General English, and assert that ESP is not necessary related to a specific discipline.

According to them, ESP is simply '*an approach to teaching, or an attitude of mind*'. A similar definition is proposed by Hutchinson and Waters (1987) argues that:

'ESP is an approach to language teaching in which all decisions as to content and methods are based on the learner's reason for learning'. Hutchinson & Waters (1987:19)

Generally, syllabuses are based on the learners' needs and on specialized knowledge. According to Mackay and Mountford (1978), 'Special Language' is a restricted repertoire of words and expressions. In fact, the word 'special' is the purpose for which the learners of ESP learn. Robinson (1991:2) mentions that '*ESP is for study in a specific discipline or as a school subject*' (p.2). Then what does ESP refer to? Mumby (1978:2) states that '*ESP courses are those where the syllabus and materials are determined in all essentials by the prior analysis of the communication needs of the learners*'. (p.2). Therefore, the concept of ESP courses and communication' needs are emphasized in ESP teaching.

According to the above definitions, ESP belongs to English Language Teaching (ELT), and it may use in specific situations, a different methodology from that of English for General Purposes (EGP). Hutchinson and Waters (1987) gave three reasons for the emergence of ESP: The demands of a brave new world, a revolution in linguistics and a new focus on the learner. Johns and Dudley-Evans (2001: 115) state that '*the demand for English for specific purposes continues to increase and expand throughout the world.*' As Belcher (2006, 134) says '*ESP encompasses an ever-diversifying and expanding range of purposes*'. From the outset, the term ESP was a source of contention with many arguments as to what exactly was ESP? We will consider some definitions of ESP in the literature review.

I.6 ESP Background

In the 1960's, language learning was led by the grammatical domain. The criteria for course design were based on principles of selection and grammar rules. However, in the 1970's, a shift from language code to language use led to a new approach to ELT, based on the communicative needs of the learners. For Wilkins (1976), the first step in the planning of a programme was to establish the objectives first; therefore, in the 1970's, needs analysis became crucial in the design of language courses. English for Specific Purposes is an approach to English Language Teaching. Its aims are to teach English with specific expectations. ESP has grown to become one of the important areas of EFL teaching; moreover, it is very important to understand what ESP represents, and can accept the various roles that Practitioners need to adopt to ensure its success. Moreover, authenticity was the main idea behind ESP, and is a skill-based approach to materials development and design in ESP courses. ESP teachers took the learners' needs into account to create appropriate ESP teaching materials. Reading was important and texts were made more specific to meet these needs. In addition, another conception was 'the register analysis approach'. Several material designers analyzed corpora of specialized texts. We can refer here to Ewer and Latorre (1967:96) who state the following:

'In order to get a working idea of what this basic language consisted of, a frequency analysis of the English actually used by scientific writers was required.'

A reaction against register analysis in the 1970's brought about the concept of texts: 'Discourse Analysis' which focuses on the communicative values of discourse rather than the lexical and grammatical properties of register. We can rely here on the work of Widdowson (1974-1984). Discourse Analysis focused on the way sentences are used in the performance of acts of communication and materials based on functions such as definitions, generalizations and descriptions. In addition to these conceptions, the conception of need analysis is very important in ESP. For Mumby (1978), it is important

to rely on needs analysis in ESP. Moreover, needs analysis came to complement target-situation needs analysis which includes three types of analysis. Deficiency analysis gives us information about what target-situation needs learners lack (Allwright, 1982); strategy analysis which imply what styles and strategies learners preferred (Allwright, 1982); means analysis which investigate the educational environment (Swales, 1989). Finally, the last conception is the conception of learning, the Learning-centered Approach (Hutchinson and Waters, 1982). Since English has acquired the status of an international lingua franca in any field of study, most linguists have moved toward a contextual notion of language.

The first studies on ESP were those of registers. Special registers were identified on the basis of lexical aspects (Halliday, McIntosh and Stevens, 1964). It is very important to think about teaching ESP through the internet and information technologies since the internet is a learning resource which promotes autonomous learning. Recent work on ESP is related to CBI (Content-based instruction) which is a type of a syllabus based on scaffolding techniques. As far as the methodological approaches are concerned, they can vary according to the role of both the teacher and the student. Teacher -centered approach; student-centered approach; task-based learning. Finally, the use of the internet is an important pedagogical trend. For Rosenberg (2001:32), *'the use of the internet delivers great solutions that enhance knowledge'*.

We cannot deny the fact that the field of ESP has been growing. New insights and approaches are adopted. One of the most important techniques in teaching ESP is adopting a method in accordance with objectives, learners and contents. Language learners learn more when they are stimulated specially with applying internet applications. In teaching ESP, teachers should know that the participants need English for a special purpose. Therefore, a course for someone who needs English in order to do his/her job must take into account the environment and authenticity. For example, in the field of ECS, students show more interest when they find the material real, authentic and new. Teachers should choose up to date materials since sciences change rapidly. Today, texts on how to program a computer or the modelling system seem to be very interesting. As a rule, to learn English is a key that opens many doors for any professional.

I.7 Types of ESP

English language studies require careful scrutiny of the needs of the learners. Teaching Language for Specific Purposes is determined by different professional, occupational, social and other needs of the learners. Therefore, ESP includes specialized programmes which are designed to develop the communicative use of English in a specialized field of science or work. Basically, language learning/ teaching in ESP is purposeful. Here, we approach to teaching the two types of English: General and Specific. Both develop an ability to communicate in any form.

David Carter (1983) identifies three types of ESP: English as a restricted language; English for Academic and Occupational Purposes; English for Specific Topics. The language used by the waiters is an example of English as a restricted language. For Mackay and Mountford (1978), the repertoire required by the controller or the waiter is limited and by the way is determined situationally. The tourist, the waiter; the controller cannot communicate effectively in a novel situation outside the vocational environment. The second type of ESP is English for Academic and Occupational Purposes. For Hutchinson and Waters (1987), ESP is broken down into three branches: English for Science and Technology (EST); English for Business and Economics (EBE); and English for Social studies (ESS). Each of these areas is divided into two branches: English for Academic Purposes (EAP) and English for Occupational Purposes (EOP). EOP for the EST branch is English for Technicians; whereas, EAP for the EST branch is English for Medical Studies. The third type is English for Specific Topics which is concerned with English for future need (Carter, 1983). In this research work, we are concerned with Computer Science English (ECS). All these types of ESP are concerned with a series of courses in a special field. Students learn about lexical, syntactical and textual properties of ESP text types and their realization by linguistic and non-linguistic means. In the next discussion, we will shed some light on the register of Science and Technology since this step is crucial after the presentation of any program.

I.8. English for Science and Technology

EST is derived from ESP. It is a variety of discourse. The scientific text is different from a literary text or a text of law. There are characteristics that describe the scientific texts and which make them different from other genres. We call them registers. One shall take the term register to mean varieties of English Language. Registers are a subset of a language for a particular or in a particular social setting. Furthermore, it is the way language is used in particular situations such as news reports or a biology research lab. In this context, Bhatia (1993:17) points out that *'a science research article is an instance of scientific language as is an extract from chemistry lab report.'* According to M.A.K Halliday and R.Hasan (1976), register is:

'The linguistic features which are typically associated with a configuration of situational features-with particular varieties of field, tenor and mode. Field is 'the total event, in which the text is functioning, together with the purposive activity of the speaker or writer; includes subject-matter as one of the elements.'

On the other hand, mode is *'the function of the text in the event.'* while, Reid 1956, Halliday et al 1964) state that *'variety of language has been referred to as registers.'* Therefore from this perspective, language varies according to its function, and may be different according to different situations. In fact, it may differ in terms of lexis and syntax. The focus then, is on discourse rather than text. The term discourse is defined by (Stubbs 1983:1) as *'the language above the sentence.'* While (Widdowson 1983:26) states that *'text is what is said; from linguistic properties to communicative functioning.'* ESP teachers should be aware that the scientific discourse is totally different from the literary one; for example, the scientific discourse is characterized by the use of specific elements such as the use of the passive voice which is used in a technical text to avoid subjectivity; however, there are elements that are not used in high proportions such as the reported

speech. If we consider a sentence in Computing Science English such as 'second generation computers worked faster than their predecessors because of the use of transistors instead of vacuum tubes.' In the construction of this sentence, the words are highly technical; however, the syntactic elements are not different from General English. The only difference lies in the lexical items that are used (transistors, vacuum tubes, generation computers). In addition, the students must be aware of the rhetorical techniques of scientific discourse such as classifications, definitions and comparisons. According to Biber (1999), register refers to linguistic variation according to use in context; for example, to analyze differences in a corpus of a text, we need a model of register variation. Such a model is systemic linguistics (Halliday, 2004). According to this model; the linguistic system is organized in terms of lexico-grammar, semantics and context, and the relationship that exists between the linguistic system and a text. The situated language use results in text types (register). We can refer to high structured discourse such as written Academic texts; for example, in the case of Computer Science we can do a research of the specifics of language used in scientific texts, particularly on scientific registers at the boundaries of Computer Science (computational linguistics or bio informatics)

I.9 The Register of Computer Science English

There are textual patterns that constitute a Computing Science text. These kinds of texts may contain more nouns than verbs, and more particularly compound nouns such as (word processing, index cards, object oriented, bubble memory ...etc.) or words such as (batch, stack, algorithm, data...etc). Another important feature that characterize the Computing Science text is the use of discourse markers in order to clarify ideas, to generalize or to contradict (however, moreover, as a rule), and the use of phrases such as to analyze, to focus on, to be organized in, to compare with, etc. It is very important to bear in mind that Computing Science English is a matter of semantics rather than form since we are concerned with true statement. However, can we assume that these texts are only a matter of semantics? How about the form of the sentences? Therefore, it is crucial to teach the students the structures of language. The majority of the students of computing science English are familiar with some of the technical terms in English, but their major

problem is that they are unable to build correct grammatical sentences. Meanwhile, it is of paramount importance to think about testing the students' knowledge of the mentioned points and evaluate their difficulties in order to come up with courses that may help them to comprehend the way they are supposed to understand and write adequately in their speciality. Furthermore, the typical linguistic features manifested by Computing Science texts are their appropriate stylistic variety characterized by its degree of formality, modality and the density and composition of Computing Science vocabulary. The stylistic variety of English textbooks, technical reports, articles in scientific journals and conferences is the style of Science and Technology. This variety is characterized by abundant use of descriptions. The style of Science and Technology in Computing Science texts shows degrees of formality (formal, informal and colloquial). Modality, in the sense that the texts can meet the objectives for the form of technical report and scientific articles published in scientific journals. Moreover, the majority of the texts contain a high proportion of specific terms. The terms are either general Computing Science expressions such as 'data processing, computer program, databases, semi conductor' or specific terms such as 'hub, reel, block, parity'. In what follows, we will shed light on the need for testing in the process of teaching ESP, being aware that testing is one of the most important steps in the process of the design of an ESP program me.

I.10 The Need for ESP Testing

Testing can be seen as an important process, in which the teacher uses various means to measure the ability of the learner to communicate in any form. Self-assessment, portfolios and tests are different tools that a teacher can rely on. Testing is a frequent assessment tool in the classroom. In testing, the four skills are to be assessed. Tests should be chosen according to different situations. An analysis of the communicative needs of the students is important in ESP. Testing occupies an important place in the ESP process and gives the teacher information on the effectiveness of learning and teaching. For Dudley-Evans and St. John (1998:212), an ESP test is 'an aid to learning'.

Specific purpose testing is concerned with facilitating learners to perform different communicative tasks. Tests can be used with learners who have already acquired basic knowledge of the language system. For Douglas (2000:10), tests are '*contrived language use events*'. Then, what is important in ESP testing is whether learners can communicate in any form. Generally speaking, ESP tests are related in content, and topics related to particular disciplines. Thus, it is a matter of conveying meaning in a particular context. For example, if we were to present a test for General Practitioners (medicine) or students in Computer Science, we would first describe a variety of authentic situations in which they may use the language. Therefore, if we take the learners' needs into consideration in the design of an ESP course, then the analysis of the learner's target language use situations is the first step in the planning of an ESP test. ESP tests are more concerned to present learners with tasks that involve them in reading, listening, speaking or writing the target language. However, what is important is to present learners with tasks that resemble in some way the language used in real-life. Therefore ESP testing is based on the analysis of learner's target language use situations and specialist's knowledge of using English for real communications.

Douglass (2000), Bachman and Palmer (1996) identify authenticity of task, reliability, validity, practicality and economy as the most important factors of a test. For instance, in the case of authenticity which is our main concern in this research, tests takers should be engaged in a variety of authentic (real) tasks and texts in the case of assessing reading. ESP texts should be focused on tests of the skills which enable learners to communicate in specific contexts. They should be as realistic as possible for the learners. Possible testing techniques in testing reading can include multiple choice questions, gap filling, information transfer and summaries.

In ESP, two kinds of tests are used: the Placement Tests which are used to place the learners in the ESP course most suited to their needs (Hutchinson and Waters, 1987:146). The aim of the placement test is to determine the learner's state of knowledge before the ESP course begins. For this purpose, a comprehensive test consisting of two parts written and oral forms is designed to find out the learners existing language

proficiency and the learning needs; however, the second test is called the Achievement Test given separately. This test focuses on one particular skill. The Achievement Test is a part of a program assessment because from the test results, we can find how much progress learners have made. Therefore, it is crucial to think about some pedagogical instructions that can be applied in ESP content. In the following topic, we will explain the way teachers perceive the planning of courses.

I.11 Pedagogical Applications: an Example in an ESP Class

The purpose of this study, as outlined in the introduction, is to provide teachers of ESP insights that can be exploited in the preparation of language teaching materials for ESP students. Therefore, we are more concerned with the description of language in use. Language items presented in the classroom should be contextualized by means of situations. The teacher should simulate a natural use of language. The kind of situation the teachers should have in their minds is the performance of acts. The students may perform the following actions:

- I am writing on the board
- I am opening this door.
- This is a computer.
- This a mouse, a keyboard.

These actions are associated with words (teaching through demonstrations). In addition, teaching can be more realistic if teachers present dialogues based on a situational representation such as what follows:

- A. Somebody is knocking on the door?
- B. Would you like to open it?

In this case of teaching English with scientific uses of language, we may present to the students a reading passage on a topic with which the learner is already familiar and

then ask them questions of comprehension. This is a well-known technique presented by (Ewer and Latorre 1969). These questions test the learners' understanding of the content. The learner's ability to comprehend the passage will come from his/her familiarity with the content (background knowledge), a concept we will define in this thesis. Language Acquisition must be a combination of Academic preparation. Classes in ESP are interactive and promote discovery of language through discussions and exercises based on the focus of the lesson. The program in our case (English for Computer Science) should be based on up to date's topics, and not only on language structures and rules. Exposure to native-speakers who are professionals in the field of Computing Science is good. E-learning also provides an opportunity for self-directed learning and is based on the principles of autonomy.

Now, we want to consider how language is presented, concentrating on usage and use. Knowing a language implies more than knowing how to understand, read or write. It may involve how the sentences produced are used to communicative purposes. Generally, in reading comprehension, we can identify types of questions related to form, and questions related to function.

1-Questions related to form (WH-questions, true assessment, multiple choice questions):

These kinds of questions require the learner's capacity for producing language. For the teacher, these questions are related to produce skills, being aware that these questions are pedagogical devices and not requests for information. The first type of questions doesn't engage the students in discourse. He/she is not called to interpret the sentences as having a discourse value; whereas, the second type of questions helps the learner to pay attention on their signification (how sentences are used in discourse).

2-Questions related to function (use inference), in the words of Widdowson (1978):

It involves the reader to link their significance to discourse. For a better comprehension, consider the following examples:

- What are the main characteristics of the computer? (Use)
- Do you think that the computer has characteristics? (Usage)

The students in the type of questions 'usage' have to understand the signification of the interrogative sentences. In addition, exercise completions, transformations in producing sentences are ways of exploiting aspects of usage and use. Any teaching material should be related to principles such as what we have tried to explain in this discussion. The teacher should explore the possibilities of a Communicative Approach to teaching. His/her practice should be based on theoretical assumptions before setting the scene. Moreover, ESP students must know what variety of foreign language and to what extent they are going to master it. The tasks of teaching ESP must be formulated from the beginning. In this case, ESP is oriented towards the mastery of the four skills to enable students to communicate effectively. In practice, we will demonstrate clearly the main methods of teaching ESP, and more particularly English for Computing Science.

I.12. ESP Characteristics

The main characteristics of ESP are to understand the real meaning of ESP. It is described as the teaching of English for a particular discipline. Moreover, ESP is related to purpose, in the sense that teaching should be based on the reason of learning English.

Moreover, the content should be related to themes and topics to specific disciplines and occupations. Other characteristics of ESP teaching is the integration of the four skills. Dudley-Evans defines ESP in terms of absolute and variable characteristics that we have seen elsewhere in this study. According to Strevens (1988), ESP consists of English Language Teaching which is:

- Designed to meet the learners' needs.
- Related in content to particular disciplines.
- Centered on the language appropriate to those activities in syntax, lexis, discourse, semantics etc., and analysis of this discourse in contrast with General English. Strevens also listed two variable characteristics of ESP:

- Restricted as to language skills to be learned.
- Not taught according to any pre-ordained methodology.

For Carver (1983), there are three characteristics common to ESP courses: Carver's model focuses more on purpose and authenticity.

- Authentic materials: Materials modified by teachers are common in ESP. The students are usually encouraged to conduct research via the internet.
- Purpose-related orientation: The teacher can provide his/her students with different tasks such as to interpret charts and tables, reading, the preparation of papers and writing.
- Self-direction: It is necessary that teachers encourage their students to participate in the planning of the lessons (autonomy-freedom to decide).

On the other hand, Bell (2002) advocates three Cs helping teachers to improve their knowledge and skills in a particular area of ESP.

- Curiosity: The teacher should be interested in the subject area and want to learn more.
- Collaboration: Teachers should seek out subject specialists, show them their work and ask for their feedback.
- Confidence: Confidence will grow as teachers explore the new subject matter, engage with subject specialists and learn from their learners.

In addition, Harding (2007) argues that the general skills that a general English teacher uses e.g. being communicative, using authentic materials and analyzing English in a particular way are also applicable to ESP. According to him, the teacher should make the tasks as authentic as possible; use contexts, texts, situations from their subject area, and take the classroom into the real world and bring the real world into the classroom. In addition, ESP is a restricted repertoire of words and expressions. It uses vocabulary items which don't occur in other fields; however, the syntax is not limited. Therefore, the

content of ESP courses are determined in (1) restriction; (2) themes and topics (3) communicative needs which are required for the learner's purposes.

Furthermore, ESP shows characteristics concerning syntax, lexis, discourse and semantics. Syntactic characteristics such as long sentences (the complex sentences) containing many clauses in the case of definitions and generalizations, and the use of the passive voice; characteristics of texts (usually texts are complex in the sense that they may contain diagrams and charts). Moreover, abbreviations and compound nouns such as 'core memory' are some of the characteristics of ESP. If the ESP community hopes to grow, it is important that it understands really what ESP actually represents, and by the way to understand the main features and characteristics of ESP. One of the most important concepts that have evolved in ESP is that of authenticity; for example, the question of genuineness and naturalness of both texts and materials.

Another concept is that of the main skills and their integration in teaching in order to create appropriate materials. Moreover, reading and the analysis of corpora of specialized texts are taken into consideration within various registers (Latorre 1969) as well as the theory of needs analysis before the generation of ESP materials. In Algeria, in particular, ESP is still in its infancy and so now it is the ideal time to think about teaching effectively in the context of ESP.

I.13 The Situation of ESP in Algeria

Generally speaking, English for Specific Purposes is usually underestimated because the teachers are not aware of what ESP takes to be successful. The situation in Algeria is a little bit complicated since there is not a real difference between ESP and EGP when it comes to syllabus design and methodology; moreover, teachers neglect needs analysis which is crucial in a design of an ESP course. ESP today receives much attention due to the dominance of English in many fields such as Biology, Medicine, Computer Science and Economy, and with the emergence of the LMD system, English is more required. In many Algerian workplaces, academic and professional ones, a certain level of the

understanding of the English Language is required. It is almost impossible to be engaged in any work in Algeria without some competence in the language use (the case of Sonatrach). Many workplaces have placed greater emphasis on effective communication as a requirement in their staff requirement and retention on the job. For instance, the ability to communicate orally in seminars is a skill relevant to the majority of occupations. As the purpose of language education in Algeria have to date never been systematically formulated, it is important that they are defined in an explicit way so that all parties concerned (students, teachers) are aware of the relevance of the language program to the expectations of those who participate in it. This concept of purposes is to be effective if it takes place in a context where all who are concerned to revise their attitudes and reconsider their understanding of the rationale behind teaching and learning ESP. Another way of encouraging the effectiveness of teaching ESP in Algeria is to value the role of ESP practitioners involved in teaching ESP to students whose needs can be specified in advance and in a more systematic way than is the case of General English.

The growing number of the faculties of Applied Sciences and Technology need such teachers rather than part-timers. It is time to think about training teachers in the field of ESP who will be responsive to the needs of the students. Therefore, needs analysis, syllabus design and methodology are all areas in which research is needed. As a rule, English has become vital as the international or global language. Most countries all over the world are trying to raise the ability of their people to use English effectively. Algeria, like many countries where English is not the native language, has been facing problems related to the quality of ESP teaching in the faculties of Science and Technology. Students are not motivated to learn English, and they attend the module for the mark; on the other hand, teachers who are the majority of the time part-timers are not well-trained in teaching. Many English language assessments and evaluations of the average level of Algerian students have yielded very unsatisfactory results. Research investigations have identified the main causes of the low performance in English of Algerian students of Science and Technology as follows:

- Most students do not prefer to learn English because they find the subject matter boring (not familiar).

- Teaching methods are not attractive (based only on grammar or reading comprehension, neglecting the other important skills).
- There are not enough textbooks which can engage the student's interest in self-initiated learning.
- There is not enough technology support, such as ICT's as well as laboratories.

In this research work, we will present a statistical analysis of the low performance of our students at the department of Computing Science at the University of Mohamed Boudiaf USTO in Algeria within the LMD system. As teachers play the most significant role to develop the English language of the students, the qualifications of teachers and effective teaching methods are very important to improve the quality of the learning process; therefore, our concern is to set up strategies to help solve the problems of English teaching.

Moreover, a variety of programme levels and types will better accommodate the teacher by suiting the needs of their ability levels. The international language of research and Academic publication is English and anyone who wishes to have ready access to this tool needs to know the language.

I.14. ESP Drawbacks in Algeria

Most of the students and many teachers are not satisfied with ESP classes. Some students believe that they are not able to gain mastery over the English language within a limited course of study. The procedures don't fulfill these student's needs. They are required to read few lines of a text, offering the meaning of words if they are asked. Most of the teachers are busy translating the texts, while the students are busily writing down the translations. Most of the time is spent on reading or speaking about the topics neglecting the systemic knowledge (grammar) being aware that the students don't master the language. The major problem in ESP programs in the Algerian universities often concerns the teacher, the time and the textbooks. Lack of teachers who are expert in many fields; namely, Science and methodology is the main problem. Good teachers are those

familiar with the form (English language) and the content (scientific knowledge). Some teachers are fluent, but their knowledge of the specific field is weak (Medicine or Computing Science). Teachers must have the expertise in the methodology in a classroom situation; on the other hand, others ask students to memorize a series of words, or ask them to do some grammatical exercises, and don't pay attention to the communicative aspects of the Language. Generally, ESP classes in Algeria resemble the classes of Grammar Translation Method based on memorization of words and grammatical points; in addition, some teachers still use the mother tongue in the classroom, and rely on translation. As far as reading is concerned, it includes texts without charts and pictures. Oral communication is never heard in an ESP class. With regard to these factors, we can say that ESP teachers would be able to relate the new materials to the student's previous knowledge, and they would be able to use more situations in the classroom. In addition, the four skills should be taken into account. We have suggested the following innovations:

- Suggesting a variety of authentic tasks and activities that can be performed in the classroom
- Creating motivation
- Making the students interested in the program
- Encouraging students to speak
- Asking students to realize projects on different topics in their field of study (Types of viruses, programming, the system modelling, using flowcharts, the computer capabilities and limitations...)
- Translating articles from French into English and translating instructions in guides

In addition, activities and tasks should be realistic (comprehension questions; a passage for translation; dialogues and role-plays; writing summaries; definitions of items according to their context; the use of video and overhead projectors; the use of the internet if it is possible and listening to records and podcasts. In general, teaching should be based on authenticity in the classroom. Communication in any form must be regarded as the end goal of ESP courses. Special textbooks have to be designed with regard to discourse and genre. The basic assumption is that professional language development

should be based on both knowledge stored earlier at Secondary school and on the needs of the students at University level. In addition, the aim of teaching is to develop both linguistic and professional skills (abilities) as well as knowledge and competence. Finally, textbooks or texts selected should have special subject orientations. Task-based activities should be constructed according to professional interests. We should not deny the fact that ESP is a matter of education, training and practice. In addition, students must know from the start what variety of English and why they are supposed to master it. They may be demotivated or less interested since they know that it is impossible to master a language in a period of two hours a week and to acquire all the skills. Therefore, the task of teaching should be formulated from the beginning.

Another drawback is that the students have different Language Background and different levels. The best way is to rely on Diagnostic Tests in order to see if the students are able to take a basic course of ESP. Tests may be based on lexical, grammatical sentences in English. It is not necessary to construct complex sentences. We can ask the students the following question 'what is the difference between the simple sentence and the complex sentence? Give examples in each case. Another problem related to the teaching of ESP is the teaching material. A specialized text is recommended for developing the productive skills. Students should be able to analyze it on different levels of linguistics (grammar and lexis).

To sum up, it is necessary to rely on the students' needs and the context in which they study. Moreover, an ESP syllabus must improve the students' skills as we have mentioned before; in other words, students should practice various tasks in the classroom related to production and communication. In this case, learning will stimulate their interest. Students from the beginning must know what variety of English and why they are supposed to master it. In what follows, we will shed light on the major aspects of English for Specific Purposes to reach a better understanding of this 'kind' of English Teaching.

II.1 Introduction

The purpose of this review is to provide a set of views and definitions of ESP. The review begins with a brief presentation of some of the key areas of interest in this field. In spite of occasional claims; ESP continues to be an important area of specialization within the field of English Language Teaching. It is clear that there is a continuing demand for courses described as ESP. In this chapter we will try to shed light on this concept for a better understanding.

II.2 ESP: A Definition

We would expect the ESP community to have a clear idea about what ESP means. This may depend on how people interpret the meaning of ESP. It may be described as simply being the teaching of English for any purpose that could be specified. Others are more precise, describing it as the teaching of English used in Academic studies or the teaching of English for Vocational or Professional Purposes. As we have seen previously in the preliminaries, ESP is defined to absolute and variable characteristics. The definition of Dudley-Evans is influenced by that of Strevens (1988). For Strevens, ESP is in contrast with General English and has included more variable characteristics. According to these views, ESP is not only concerned with a specific discipline, but should be seen as an 'Approach' to teaching or an 'attitude of mind' as stated by Dudley-Evans (1998). Similarly, Hutchinson and Waters (1987), state that:

'ESP is an approach to language teaching in which all decisions as to the content and method are based on the learner's reason for learning.' Hutchinson & Waters (1987:47)

Another concept in ESP is that of variety. The term variety refers to registers of language use, such as English in Banking, in Medicine, in Academic settings, and everyday conversations. The idea that different varieties of English are based on a common set of

grammatical and other linguistic characteristics (Bloor & Bloor, 1986) is crucial in ESP. For Basturkem (2006), all language is specific purpose. Basic language is what is present in all varieties of English. All languages are learned in some context or another. For her, there is no General English or English for Specific Purposes. All English exists as some variety or another. According to Bloor (1986:130), *'teaching a variety of English can start at any level'*. He furthermore notes that:

'All language learning is acquired from one variety or another, even if it is classroom English variety. A language learner is likely to acquire the language from one variety as from another, but the use of language, being geared to situation and participants, is learned in appropriate contexts. This view supports a theory of language use as the basis of language acquisition theory. Bloor & Bloor (1986:28)

Moreover, Perren (1974) points out that the terms 'Special Language' and 'specialized aims' are confused in the sense that they refer to different notions. For Mackay & Mountford (1978), 'Special Language' is a restricted repertoire of words. However, 'Specialized aims' refers to the purpose for which the learners learn a language. According to Robinson (1991:3), the definition of ESP is based on two criteria : (1) ESP is normally 'goal-directed', and (2) ESP courses are constrained by a limited time. We cannot deny this fact. ESP courses are constrained by time. One hour and a half in a week is not enough for learning a language. Lack of time constitutes a problem in the process of teaching/learning. We should clarify to a certain degree what an ESP course constitutes. Belcher (2006:135), states :

'ESP assumes that the problems are unique to specific learners in specific contexts and thus must be carefully delineated and addressed with tailored to fit instruction.'

On the other hand, learner purpose is also stated by Graham & Beardsley (1986) and Carter (1983); Hutchinson & waters (1987) as part of ESP. For Lorenzo (2005: 1), ESP

'concentrates more on language in context than on teaching grammar and language structures'. Another area of debate within ESP is the role of methodology. Widdowson (1983: 87) has argued that 'methodology' has generally been neglected in ESP. In ESP, it is impossible to stick at one methodology. A set of methodologies have to be used according to the course design and its outcomes. (Dudley-Evans & St John, 1988) use the term 'practical outcomes'. Moreover, needs analysis as we have mentioned before is and will be an important part of ESP (Gatehouse, 2001). Needs analysis is 'the corner stone of ESP', in the words of Dudley-Evans (1998:122). Recent work focuses on the use of authentic materials in ESP. Bojovic (2006) thinks that materials should be authentic. Bloor (1998) shares the same view on ESP design. Certain aspects of ESP continue to have debates and discussions on whether to use up to date materials in the design of ESP courses, to rely on need analysis, or to choose one methodology or a set of methodologies. Therefore, what is essential is to understand the real meaning of ESP.

II.3 The Origins of ESP

Since the late 1980, English for Specific Purposes has established itself not only as an important branch of English Language Teaching (ELT), but has also incorporated most of the work on discourse and Genre Analysis, and Corpus linguistics. For Dudley-Evans & St John (1998), teaching ESP has been seen as a separate activity in the sense that it has developed its own methodology. Learning a language before was a matter of education and prestige since it lacked the idea of purpose. Since the origins of ESP in the 1960s, it has interacted closely with applied linguistics. According to Dudley-Evans & St Johns, EST which is a branch of ESP was the dominant movement for many years; however, today it is a much broader activity, in the sense that they pay attention to grammar, vocabulary and Genre Analysis. In general, they focus on how to design an EST course.

After the birth of ESP, this discipline has become well-known since English has required the status of an international lingua franca. The first study on ESP was on register. Here, we can refer to the work of Halliday (1978) who identifies special registers

on the basis of lexical aspects. For example, the presence of lexical items such as tablets, dose, injection, tablespoon are enough to identify the text, and that in this case, the register is that of prescriptions, or items such as structuring, data base, organizing, batch and processing means that the passage is about the functions of the computer (Halliday, McIntosh & Stevens, 1964); (Stevens, 1977). More recently, the differences don't apply to lexis, but to textual and pragmatic organization; that is to say, meaning in context (Swales, 1990). Generally, ESP grew out of a number of converging trends which have been operated in many ways.

II.3.1 Worldwide Demand

We already knew that Technology and Commerce dominated the world, and this required an international language. People wanted to learn English for Technology and not for prestige or education. Today, people are aware of why they are learning the language. They learned for the scrutiny of the world. The second important key reason for the emergence of ESP was a revolution in linguistics. Revolutionary linguists began to focus on the ways in which language is used in real communications; whereas, traditional linguists described features of language. Hutchinson & Waters (1987) points out that a particular context must be provided for the learners on which language is used. Since situations vary, language can be tailored according to the needs of the learners in specific contexts. In the next discussion, we will shed light on linguistic aspects.

II.3.2 A Shift from Knowing to Doing

We are no more concerned with teaching the system of language (code), but we are rather concerned with how language can be used in real communications. This shift from knowing to doing leads us to see how language is conceptualized. We are no more concerned with correctness, but with appropriateness. In this case learning a language implies learning the rules of language, and how to apply them in context. The study of language in professional contexts overlaps an area recognized; namely ESP, a subfield

recognized since the work of Swales (1964). Therefore, the aim of linguistics had been to describe the rules of English usage (grammar); however, recent studies shifted attention from defining the formal features of language usage to discovering ways in which language is used in actual situations. We are referring here to Widdowson (1978). In this view, the teaching of language involves the ability to produce correct grammatical sentences, and how they are used to communicate. Knowing a language implies more than understanding the underlying structures, but how these structures are used in conveying meaning. For Widdowson (1978) usage and use that we have seen previously in this work are aspects of performance. Of course, the learning of a language is not only a matter of acquiring the ability to compose correct sentences, but it also involves acquiring an understanding of which sentences are appropriate in a particular context. Moreover, the language we speak or write varies in different ways, and if language varies from one context to another, it is clear to determine the features of specific situations which will be the basis of any teaching material. We can refer to the work of Ewer & Latorre (1969), Swales (1971); Selinker & Trimble (1976). The language needed by a particular group of learners and in specific contexts could be identified while analyzing the linguistic characteristics of their specialists' discipline. So, one of the main principles of ESP is to identify the learner's needs through needs analysis. Another key reason for the emergence of ESP is a focus on the learner, the theme of our next discussion.

II.3.3 Focus on the Learner

Learners have different needs which may motivate them to learn the language effectively. In psychology, the focus is on the learners and their attitudes; in addition, courses are based on the learner's expectations. In a learner focused context, the learner is the means and end as opposed to the learner-centeredness where the teacher is a kind of a dictatorship in traditional ways of teaching. In other words, the learner should be allowed to choose what he wants to learn and the way in which he wants to learn. The content of learning may be effective when it is based on the learner's needs. For Hutchinson & Waters (1987), the learner is only one factor in the teaching process. The term 'learner-

centered' may refer to the learning strategies and their contribution to teaching. In this sense, teachers can match their teaching techniques with the student's learning style and strategies. Most of the innovative approaches can be considered learner-centered (the natural approach, suggestopedia...etc). They expose the learner to language data so that he can pick what he wants according to his/her needs. Moreover, learners determine their problems through their errors. In other words, teachers should not deprive students to correct themselves. This fact makes the environment more relax and hospitable. By the way, the teacher is not an authority in the classroom. He is a guide and a source of language. We will consider the role of the teacher in the late discussion.

II.4. Progress in ESP

The great demand for English to fit specific needs and the development of linguistics has given rise to the growth of ESP. What is important is to find out the procedures appropriate for ESP learners such as needs analysis, materials and methodology. Years ago, ESP teaching focused on teaching the system of language, and teaching vocabulary in a particular context; whereas, the focus today, is on how to apply the knowledge of the system of the language in real situations for effective communications. The tasks and activities presented in the classroom are based on authentic materials, updated topics, and vocabulary is taught through demonstrations. Therefore, the quality of teaching materials has its impacts on the learning outcomes. We cannot deny the fact that grammar is necessary, but what is important is to teach the grammatical structures in use. In this case, knowing a language implies knowing the rules, and how to apply them in context. Generally, learners learn a set of grammatical structures; a list of vocabulary items, but when it comes to practice, they fail. Therefore, it is very important to master the rules of language, and how to apply them in concrete situations. Another approach in the field of ESP is the analysis of ESP texts. Various approaches were elaborated: text analysis, register analysis and the most grammatical elements of the scientific register. We can refer here to the work of Trimble (1985), Lackstrom, Selinker and Trimble (1972), Allan and Widdowson (1974), Swales, (1990); Bathia, (1993). Text analysis has its implications

with the specific characteristics of a text in a particular register (Medicine, Biology, Computer Science and Economy). For example, rhetorical analysis shows that they are some grammatical elements that are necessary in the scientific text such as the use of the passive voice, the conditional and the models. In addition, Swales (1990) focused on the research article. The Research Space Model which influenced the teaching of Academic writing in ESP. Moreover, the importance of needs analysis and the evaluation of ESP materials are of paramount importance in ESP. Today several parameters should take part in course design (role of the teacher, types of students in the classroom, their age and their educational background, the aids of teaching and time). For Harding (2007), it is very important that a teacher should use general skills such as being communicative, using authentic materials and analyzing English in a practical way are all applicable to ESP. One area has been important in the development of ESP is the field of EST. English for Science and Technology is a branch of ESP that continues to set new trends in the way language is analyzed. It is very important to note that ESP was the outcome of the series of evolutions in language education that focused on the needs of the students. Many studies have been conducted to specify the lexis used in the various fields of Science and Technology (Ewer and Latorre 1967). Another area has been taken into consideration, the syntactic features of the content of the courses such as the use of the passive and the compound nouns. Thus, ESP focuses on the use of discoursal elements and the main communicative features of language (Trimble 1985). According to the claims of Trimble, speech acts are concerned with acts beyond the sentence. This fact enables ESP students to communicate in authentic social situations. Thus, rhetoric becomes the most important concept in ESP. The most important concept too in ESP is the notion of specificity. ESP courses are designed with a focus on the specific needs of the students. Specificity then should be conducted in accordance with the specific expectations of the learners. The main purpose of ESP is to determine what skills are the most important; for example, reading can be seen as an important skill for the students. The ability of the students to use dictionaries, understanding paragraph organizations are the main techniques that may contribute to the development of other skills such as the written skill (from receptive to productive skills).

Today, ESP programs should focus on the specification of purposes in terms of skills. Widdowson (1978) argues that 'use' refers to the communicative values of language in order to use it in everyday communications, and to use it in occupational settings.

Furthermore, since development is seen as a natural process, it may imply a continuous change in mentalities and behaviour in the way of performing things. To achieve development requires some education and training. The possession of power today does not imply to possess economy, but it implies to possess and control information. The most common means of possessing knowledge is language. English is used as a lingua franca since most of the information worldwide is transmitted via English. Therefore; knowledge of English is a necessity. In addition, the role of the teacher is one of the aspects of change within the field of ESP. In recent days, new responsibilities came among these changes for the design and the implementation of courses and the writing of authentic materials. Furthermore, the learning-centered approach suggested by Hutchinson and Waters (1987) is one of the most interesting developments in the process of teaching ESP. This approach focuses on how students learn rather than what they learn. Register Analysis is one of the main developments of ESP. In the next discussion, we will shed light on this concept

II.4.1 Register Analysis

We shall first take the concept of register analysis as the identification of grammatical and lexical features of various scientific registers. This concept is derived from Halliday's systemic functional linguistics. It takes into consideration the context of culture, the context of situation (field, tenor, and mode), and mainly the interpretation of the meanings of the texts. Thus, a register first is a language variety which is based on use. Register is not only a matter of the choice of the words, but also, a matter of linguistic aspects. So register or 'context of situation' is defined as what follows:

'It is a set of meanings the configurations of semantic patterns that are typically drawn upon under the specific conditions, along with the words and structures that are used in the realization of these meanings.' Halliday, (1978:23)

Analysists are more concerned with how language means. The general principle in register analysis is to find out 'what factors determine what linguistic features' in the words of (Halliday, 1978). Today, many researchers are working on genuine texts in order to find out linguistic features that characterize them in various contexts. In ESP design, different genres may be introduced to students such as, at the dentist, inviting someone for dinner, buying vegetables may be a purposeful activity in the classroom. One of the best works that was based on Register Analysis of scientific texts was Ewer and Latorre (1969).

II.4.2 Discourse Analysis

'Discourse analysis is concerned with describing the language and its structure that is used in speech or text that is longer than the sentence, e.g. conversations, paragraphs, complete texts'.

Jordan.R (1997:228)

Discourse Analysis is the study of the relationship between language and contexts. We are more concerned with language in use. We can cite the works of Zellig Harris who published an article 'Discourse Analysis' in 1952. Later on, Hymes studied speech in its social setting. Austin (1962), Searle (1969) and Grice (1975) studied language in social actions. The formalists view discourse as 'sentences'; whereas, the functionalists view it as language 'use'. Moreover, Schiffrin (1994) discusses discourse as structure and as function. Hymes in Schiffrin (1994:58) suggests the following qualities that contrast structural with functional approaches.

e.g.: Structure of language (code) as grammar

Structure of speech (act, event) as ways of speaking

In addition, the formalists see the language as a social phenomenon; on the other hand, the functionists regard it as a social phenomenon in the words of Schiffrin (1994). *'Discourse is described as language above the sentence or the clause'*. Stubbs (1983:1).

At this level, we are no more concerned with language at the level of the sentence. Thus, linguistic forms should not be independent of functions. The negotiation of meaning can be achieved when we relate form and function. If we take the famous example of Chomsky *'colorless green ideas sleep furiously'*, one can understand clearly how meaning can be achieved. Although this sentence is meaningless, grammatically it is a well-formed sentence. In this case, even the identification of the constituents of sentences is not enough. Moreover, the analysis of action and interaction in talks in terms of turn-taking, hesitations and pauses are analyzed. In our case, the analysis of the speech of the programmer and system analyst is a good example. Widdowson (1979:55) states that:

'The fact that English scientific texts had a high proportion of some syntactic structures and a relatively low proportion of others did not reveal anything about scientific discourse as a whole.'

Hutchinson and Waters (1987:10) believe that *'few systematic differences were found between scientific and general English texts.'* Since today the focus is on how sentences combine to create meaning, researchers such as Widdowson (1979) and Trimble (1985) start to apply Discourse Analysis to find out the main characteristics of scientific texts. Trimble (1985:14) identifies the following rhetorical concepts:

- The nature of the EST paragraph
- The rhetorical techniques in EST
- The rhetorical functions in the EST discourse

In the context of ESP, the emphasis is on the communicative aspects of language and its linguistic properties. In the teaching process, the principles of grammar are not enough. Teachers should be involved with the analysis of discourse and its implications to language teaching materials. The aim is to teach learners how to handle discourse in English. The transfer of a set of sentences into discourse is a good example for the development of the knowledge structures to the communicative use of the language. The sentences then are transformed into communicative acts. Thus, rhetorical transformation exercises proposed by Widdowson (1979) develop in learners an ability to handle information in a set of communicative functions.

In the analysis of scientific texts, Lackstrom, Selinker and Trimble (1972) point out that certain areas of grammar are to be used in technical writing. They argue that the choice of tense and aspect depends on the degree of generality rather than on time specification such as the use of the present tense in technical English which refers to generalization. Therefore, the use of time may depend on the notion of generalization, and to what extent we do believe that any scientific phenomenon is related to description rather to time. From this point, it is believed (Lackstrom, Selinker and Trimble, 1972) that grammar of technical English is different from that of other varieties. In this case, what is important in fact is to suggest how linguistic elements are used to give pragmatic meaning to utterances, and here we are no more concerned with language at the level of the sentence, but with language at the level of an utterance, so we shift from text to discourse (aspect of language use). The teaching materials based on discourse approach taught the students to recognize the textual patterns and discourse markers by various means such as text diagramming exercises and transformational exercises. In what follows, we will shed light on Genre Analysis.

II.4.3. Genre Analysis

Genre is the organization of structure that reflects the communicative actions of the community. Each genre is typically different from another. Genre first comes from 'kind'. It is used widely in rhetorics, and literary theory. It is simply a term used to a distinctive

type of a text. *'Every text participates in one or several genres, there is no genreless text.'* (Derrida 1981:61)

For Bathia (1997), Genre Analysis is an examination of the linguistic performance in different settings (Academic and Professional). A text has specific features that provide content to discourse. For example, the production of authentic texts meets generic expectations (Henry and Roseberry, 2001). Genre Analysis helps learners to develop new schema and new rhetorical patterns that may contribute to the production of texts. Swale defines genres as 'a class of communication events' (Swales 1993:58). In fact, there are conventions that determine features of specific genres. For example, the linguistic structures of the research articles possess certain properties that make this type of a text recognized. Here, we can cite again the work of Swales (1993). The structure of a research article consists of an introduction, a method section, results, discussion and conclusion. ESP students should learn how to write this kind of articles, following the (IMRAD form). As far as reading comprehension is concerned, Bhatia points out the following:

'Reader's comprehension of a text can be facilitated or influenced by the text genre, which is identified on the basis of textual characteristics.' (Bhatia 1997:36)

The familiarity with textual structures is a facet of the reading skill. To train students recognize the text structures can help them improve their comprehension. In addition, research in discourse demonstrates that skilled readers use different comprehension strategies that are sensitive to text genre. When the text is indentified, it helps the reader to activate the knowledge stored in his memory. Here we can refer to schema theory (the previous knowledge of the students) one of the psychological mechanisms.

In the case of a scientific text, students may rely on this tactic to solve the problems of the texts. We will consider this in this research work. Genre identification can be used as an assessment of the reading skill, and even as a positive step in reading developments.

These are some strategies of successful learning in ESP. As teachers, we should be aware first that learning a language implies to learn the structures that build the language and how they are used in context. Mastery of language is not enough for learning a language effectively. Competence must be achieved through learning the system of the language and how it is realized in real-life. This issue will be the theme of our next topic.

II.5 Communicative Language Abilities

We should reconsider the following question: 'What does it mean to know a language?' In order to answer to this question, one should know first in what specific situational context we are interested. In fact, knowing a language implies to know its rules first and the ability to apply them in real-life. Can students be able to communicate without fear and hesitation? The problem is that learners of English master the system of the language, but when it comes to practice, they fail. Thus, students should be involved in use rather than usage. Yet ESP teachers need to know that all communication has a structural level, a functional level and a discoursal level for successful interactions in a real context. In this sense, there are aspects that help us to understand the components of language ability such as whether to include strategic competence; the treatment of the four skills and the background knowledge. Are all these components necessary for the negotiation of meaning?

In what follows, we will shed light on these concepts to measure the ability of the learners to communicate in real life.

II.5.1 Communicative Competence

One shall take the term communicative competence as the ability to use the language system appropriately in any context. According to Chomsky (1965), '*Competence is the perfect knowledge of an ideal speaker-listener of the language in a homogeneous speech community*'.

According to Chomsky, this knowledge is competence; as opposed to '*the actual use of language in concrete situations*' which he named performance. Competence is the language system, and performance is the actual behaviour. It seems that even if performance is projected from competence, it does not correspond to it because what we know cannot be equated with what we do. Knowing a language does not imply that we possess language. For Chomsky, performance is 'the residual category of second phenomena.' Therefore, performance is influenced by external factors, so we cannot rely on it; whereas, competence which represents grammar is a valid construct in the words of Widdowson (1996). Thus, it is a useful principle for language study. I am competent means that I know my grammar; that is to say the form of my language, but how about the functions that these forms may take in communication. Here, we are concerned with usage of language, neglecting the other important side which is use. On the other hand, Hymes (1972) points out that Chomsky's competence/performance model does not provide an explicit place for sociocultural features. He also argues that Chomsky's notion of performance seems confused between actual performance and its underlying rules. Hymes suggests the followings:

- Whether something is formally possible.
- Whether something is feasible
- Whether something is appropriate.
- Whether something is actually performed.

While, Halliday (1971: 72) points the followings:

- He rejects the dichotomy of competence and performance.
- 'Meaning Potential' covers both knowing and doing
- He suggests the notion of language function.
- He follows the Firthian view of language. Language is a mode of human behaviour.
- The importance of the context of situation.

Moreover, for Widdowson (1978), usage is knowledge of the system of the language, and use is the realization of the language system as meaningful communicative behaviour. For him, an utterance has a communicative value. An utterance with a well-formed grammatical structure may not have a value for communication in a given context. According to Canale and Swain (1980), Canale (1983), there are four components of communicative competence:

- Grammatical competence (mastery of the language system)
- Discourse competence which concerns the mastery of how to combine form and meanings to achieve communication in both forms.
- Sociolinguistic competence which implies the production and the understanding of utterances in different sociolinguistic contexts.
- Strategic competence which implies the mastery of verbal and non-verbal communication strategies (Breakdowns in communication).

On the other hand, for Savignon (1983), the development of learner's communicative competence is defined as expression, interpretation and negotiation of meaning which involve the interaction between two or more individuals, and the role of context are all essential. Bachman (1990) states that there are models of CC:

- Language competence (the ability to produce correct grammatical sentences that achieve meaning)
- Organizational competence (grammatical competence, textual competence (cohesion and coherence, conversational analysis).

Generally speaking, Communicative Competence has been criticized by many writers because it concerns native speakers, and sets the impossibility for the learners to become like native speakers since the needs are different. Here, we can refer to Saville-Troike (1989) who points the following: *'the needs vary according to a social context'*. We would like to shed some light on the various models proposed. Communicative Competence focuses on how foreign or second language learner uses his/her foreign or

second language command and what he/ she utters in several settings. The opposition of Hymes to Chomsky's linguistic competence adopts new directions; for example, Hymes criticizes Chomsky's linguistics theory. He asserts that the system of language or linguistic competence has distinct characteristics like 'phrase structures'. He further argues that linguistic competence does not include social aspects of language. According to Hymes, linguistic theory must also take into account performance since it is the only way that can be related to the social aspect of language. Within this line, he notes

'The concept of performance will take on great importance, in so far as, the study of communicative competence is seen as an aspect of what from another angle may be called the ethnography of symbolic forms, the study of the variety of genres, narration, dance, drama, song, instrumental music, visual art, that interrelate with speech in the communicative life of a society and in terms of which the relative importance and meaning of speech and language must be assessed.' (Hymes, 1971, p.284)

Moreover, Hymes focuses on the ability of use for pedagogical purposes as opposed to Chomsky who develops linguistic competence for the study of the language system. Such a theory of Communicative Competence has an impact on Foreign Language Teaching, and more particularly within the Communicative Approach, and it is also important in the selection and the grading of the items to be taught. In fact, we cannot say that Chomsky's view is irrelevant since the study of language is essential. Linguistic competence generated by Chomsky is concerned with the description of language; whereas, Communicative Competence is generated for educational purposes. In fact, both are complementary. Even if Hymes opposed Chomsky's view, he believes *'There are rules of use without which the rules of grammar are useless'*. (Hymes, 1971, p.278)

In the context of education, Widdowson (1978) views language learning as the knowledge of the rules of grammar, and the ability to use language to communicate. He asserts the following:

'We do not only learn how to compose and comprehend correct sentences as isolated linguistic units of random occurrence; but also to use sentences appropriately to achieve communicative purposes.'

(Widdowson, 1978:57)

Widdowson (1978) argues that several years of learning English does not guarantee language communication. He shares the views of Hymes. According to them, learners acquire both knowledge of grammar and knowledge of appropriateness. Thus, we need to teach Communicative Competence and linguistic competence. Therefore, he comes up with two notions of performance 'usage' and 'use' that we have defined elsewhere in this thesis. Moreover, Widdowson suggests two other important aspects of meaning 'significance' and 'value'. Significance is the meaning that sentences have in isolation from particular situations; on the other hand, value is the meaning that sentences take on when they are used to communicate (Widdowson, 1978). Teaching in this case focuses on the acquisition of both kinds of competence by providing linguistic and communicative contexts. Linguistic contexts enable students to select which form of sentences is contextually appropriate; whereas, communicative context focuses on use. In this case, grammar must help the learner to acquire the mastery of language for communicative use.

On the other hand, Canale and Swain (1980) assert that the sociolinguistic idea of Hymes is of paramount importance to the development of a Communicative Approach to language teaching. They focus on social context, grammar and meaning. According to Canale and Swain (1980), rules of use are not enough without usage (grammar). A further model is proposed by Rivers (1972): 'skill getting and skill using'

According to her, skill getting implies that teachers isolate elements of skill, and provide the students to practice them in a separate way. Skill using implies that the students should be on their own and not directed by the teacher. The students at this stage can use anything to express themselves (gestures, drawings). These proposed models can be very useful in the design of effective syllabuses. In language teaching the material presented to the students is not motivating since it does not reflect the real world. It is high time to reconsider our view in designing a syllabus, and to see what the main principles of language abilities are. In the next discussion, we will see the abilities of the students at the four skills.

II.5.2 The Integration of the Four Skills

When we refer to English skills, we think about: reading, listening, speaking and writing. Of course other skills such as pronunciation, grammar, vocabulary and spelling all play an important role in effective English communication. Each skill will depend on the level of the students and their needs. The aims of language teaching are defined in terms of the four skills. For Widdowson (1978), speaking and listening are related to the aural medium and reading and writing are related to the visual medium. Speaking and writing are productive skills; however, listening and reading are receptive skills. The main aim in language learning is to acquire communicative competence since the acquisition of the linguistic skills does not mean the acquisition of communicative abilities. The skills should be related to use, and this fact involves an understanding of the communicative value of the system of language in context.

II.5.2.1 Reading:

Finding authentic material may not be difficult, but finding appropriate materials according to the level of the learner is difficult. We should consider what background knowledge is necessary for a full comprehension.

'Reading is the process of constructing meaning through the dynamic interaction among the reader's existing knowledge, the information suggested by the written language, and the context of the reading situation.'

(Anthony, Pearson and Raphael, Tierney 1993:284)

In fact, reading is not passive since it involves the reader in active interactions. The meaning of a text is constructed by the readers. There is a link between a text and the previous knowledge of the readers. This knowledge facilitates comprehension. In addition, reading means to grasp the meaning of any passage. There are objectives for reading, such as reading for extracting information (medical information, computing science information...). This process may depend on a grammatical knowledge, and a previous knowledge of the subject matter of the students.

'If teachers understand the nature of reading comprehension and learning from a text, they will have the basis for evaluating and improving learning environment.'

(Tierney and Pearson, 1994:496)

Moreover, Grabe (1988:56) asserts that *'reading is a dialogue between the reader and the text.'* The task of the teacher is to build both formal and content schemata for his/her readers in order to facilitate the act of comprehension. For example, students should be familiar about the rhetorical organization of the text. In addition, language teachers have to be able to use authentic texts for reading instructions, and point out features which can be incorporated into exercises, and here we refer to the authentic text (genuine text). In ESP, the reading skill is of primary significance since the main objective of ESP students is to extract information for research. Moreover, reading is a process of recognition and interpretation. The main objectives of reading are the followings:

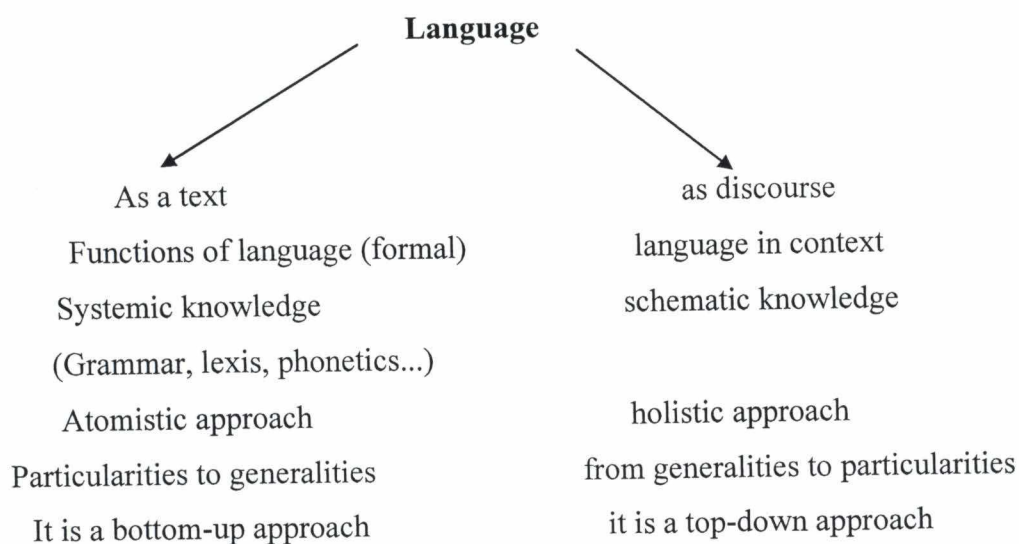
- 1-To develop meaningful communication
- 2-The selection of appropriate reading passages
- 3-Introducing tasks for communication

It is necessary that readers comprehend texts by relying on their prior knowledge. This process requires both bottom-up and top-down processing. According to schema theory, reading comprehension is an interactive process between the text and the prior knowledge of the readers (Rumelhart, 1980). For Anderson et al (1983), every act of comprehension involves one's knowledge of the world.

The focus of Second Language and Foreign Language is on the construction of language; for example, each well-formed sentence and each well-formed text has a meaning. Generally, failures in comprehension are due to the difficult words that exist in the text. Moreover, schema theory has shown the importance of background knowledge in the comprehension of authentic specialized texts. In fact, our understanding of something is a function of our past experiences or what is called schemata (Rumelhart, 1980).

In addition, other terms are used such as frames (Filmore 1976), scripts (Schank and Abelson 1977), Scenarios (Widdowson, 1983). We have schemata for going to the hospital, stadium, etc). Students comprehend texts when they can relate the new experience to an existing knowledge. A high degree of background knowledge can overcome linguistic deficiencies. In our case, students of English for Computing Science can rely on their background knowledge to facilitate the task of comprehension even if they don't master the language. We can help them by asking the following question: 'What is the main idea of the text? On the other hand, Bloomfield and Baruhart (1961) assert that the first task of reading is learning the code or the alphabetic principle by which written marks conventionally represent phonemes. According to Dechant (1991), bottom-up models operate on the principle that the written text is hierarchically organized (grapho phonic, phoneme, syllabic, morphemic, word and sentence levels), and the reader processes the smallest linguistic units to decipher the higher units (sentence syntax);

whereas, top-down reading suggests that the processing of a text begins in the mind of the reader (meaning-driven process). In this context, comprehension is the basis for decoding meaning (Goodman, 1985) and (Smith, 1994). This model focuses on what the reader brings to the text. Its principle is to proceed from whole to part. Readers can comprehend even if they don't recognize each word, and reading for meaning is the objective of reading rather than to identify unknown words. In addition, the amount of information gained through reading is of primary importance in this case. Experienced teachers rely on top-down processing; however, inexperienced teachers rely on the bottom-up processing; for example, the structural approach is bottom-up (from details to generalities, and the communicative approach and the task based approach are top-down. It is crucial to understand that the interpretation of discourse and the negotiation of meaning rely on two kinds of knowledge (language as a text, and language as discourse). Therefore, we can rely on the following chart for a better understanding. The forthcomings are the sum up of G.Cook (1989) in his book 'Discourse'.



In fact, the comprehension of texts in a specific discipline could be achieved with both knowledge of the subject area and knowledge of the language; however, the systemic knowledge could be the better predictor, in the sense that grammar could be an emergency

for the comprehension of texts for General English readers as opposed to ESP readers who need to rely on their background knowledge. Therefore, deficiencies of grammar for ESP students can be solved when they rely on their background knowledge to achieve convergence (at least the negotiation of meaning of the text). In this case, the specificity of a text requires knowledge of the subject. In fact, to know a language (decoding meaning) requires both knowledge of the language and the ability to use it for communication. Furthermore, in order to guess the meaning from discourse, we don't need to focus on form. This does not imply to neglect grammar since knowing the rules of language may help students how to build correct sentences.

Consider the following example: 'When the metallic film is magnetized, it produces bubbles; the presence or absence of these bubbles represents bits.' A Computer Science student can understand this sentence since he is familiar with the subject; whereas, an EGP student may encounter difficulties since he is not familiar with the register of this sentence, but he/she can rely on his systemic knowledge (grammar) to achieve comprehension if he/she can reach the underlying system. At least, he/she can recognize the grammatical elements (subject, verb). It is crucial to understand that the topic of the text has a reference, and when you read, you find a vacuum that you will fill with facts from the real world, and the text is supposed to obey the four maxims of Grice. Therefore, the readers can give sense to the text because of their pragmatic meaning, or their background knowledge.

ESP teachers in Computing Science face an audience (Master1 students particularly) with a practical and conceptual knowledge of their field of speciality; however, these students may encounter difficulties in exploiting authentic texts. It is important to note that bottom-up reading should require word recognition, spelling and phonological processing as well as morphosyntax and lexical recognition. In this case, readers should grasp information from the written texts, and identify the meaning of words, and then go to the meaning of larger units such as phrases and sentences. Grammar is usually ignored in the process of teaching reading to ESP students.

According to Dudley-Evans (1998), the weaknesses of grammar interfere with the comprehension of meaning, and the main problem of the readers is the transfer between L1 and L2, but training students in learning reading strategies can facilitate such transfer. The majority of ESP readers in any questionnaire-based survey cite that reading is not difficult as the other skills; however, the main problem encountered is an ability to read at adequate speed. Another important drawback is the understanding of the meaning of both general and specific terms. Generally, ESP students read for a purpose in order to obtain information. This aspect involves comprehension. The followings are the main strategies of reading according to Jordan (1997:143):

- 1-Prediction
- 2-Skimming
- 3-Scanning
- 4-Drawing inferences and conclusions
- 5-Deducing unknown words
- 6-Understanding graphic information
- 7-Understanding text organization

These strategies are the basis of material development in ESP. In our case, the most important points to take into consideration are the followings:

- 1-Reading for the main idea (the general idea of the text)
- 2-Reading for grasping information (to understand the details)
- 3-Understanding the meaning of words according to their context without the need of using dictionaries
- 4-Understanding graphics, charts, tables, pictures and diagrams, and to be able to convert them into written texts without reproducing the text
- 5-Summarizing using simple and complex sentences

In the case of Computer Science, the selected texts should be authentic and related to the subject matter of the students, and the comprehension of texts requires relevant vocabulary practice, grammar focus and tasks based on the comprehension of the selected passages (articles from Academic Journals). It is necessary to focus on the psychological

approach first (Bloor, 1985). This approach will focus on 'what takes place in the mind of the individual reader'. This may be possible at word recognition. ESP students meet unknown words and phrases in a text. In this case, the role of the teacher is to ask them to scan first headings and sub-headings. This fact allows them to set the scene; moreover, using contextual clues is a good technique for deciphering the meaning of the difficult words in a text.

Moreover, the linguistic approach seems to be very important (Glendinning and Holmstrom, 1992). This focuses on the level of the words and sentences of the text. The ability to read effectively may be achieved when the students can handle the linguistic features of a given text. We can rely on grammatical exercises such as to ask students to summarize a text using their own style or to transfer a chart from the text to a written passage. We will suggest some of these activities in practice.

II.5.2.2. Speaking

We shall take this skill to mean the ability of the students to express themselves without hesitation and fear. They have to be able to organize information into coherent structures, operating with greater fluency and achieving greater phonological, grammatical and lexical accuracy. We are more concerned in this study with speaking for academic purposes. We mean to be able to ask questions and to participate in seminars, making oral presentations and answering questions. Lynch and Anderson (1991) noted some of the difficulties of the students in seminars such as the need to present logically ordered arguments. In the analysis of turn-taking and how a move in discourse is realized, Johns and Johns (1977) that the permission to speak may take a special form such as a worried facial expression. In seminars, students will be asked to give a short talk, so they may start by a general introduction, information in detail and a conclusion. For Hewings (1988), some scheme for speech improvement is needed in ESP courses. He states that there are two main areas of difficulty: Word pronunciation and stress.

In our case, we share this view since the main difficulties of the students are pronunciation, stress, intonation and rhythm apart of their difficulties in constructing correct grammatical sentences. In general, students should be encouraged to communicate orally. Fluency and confidence are important goals, and the main objective for the conversation class. Usually, students know rules of vocabulary items, but they cannot use language to communicate. One of the strategies that help learners activate knowledge is to put them in 'a safe situation' (Scrivener, 2005). The followings are some of the activities that may lead to fluency and confidence:

- Ask the students to speak about their experience in Computer Science
- Prepare for the students dialogues and role-plays
- Use different and up-to date materials
- Read aloud texts so that they can see how the words are pronounced
- Give instructions so that someone can use a machine (computer)
- Prepare a list of items, and ask the students to discuss about a specific topic
- Prepare special cards that contain much information about a specific topic
- Involve students with projects in their field of study

Therefore, the main objective of speaking is to ask questions, to participate in seminars, to make oral presentations and to give oral instructions. It is crucial to take into account how a move in discourse is realized (turn-taking), in the sense that speaking may take a specific form such as facial expressions and a break intake (Johns and Johns, 1977). Moreover, there are different conventions such as interrupting and the use of appropriate utterances. Students should learn how to use language functions (disagreeing, agreeing, expressing opinions, introducing and giving examples). We can rely on the work of Wilkins (1976). He suggests categories of argument like exposition and suasion. In our case, speaking is the ability of the students to express themselves through English without hesitation and fear since their main aim is to participate in conferences and to interact with foreigners. The task of the teacher is to provide them with authentic data (to describe the computer or to discuss a topic related to Computer Science). In this situation, they will concentrate in the meaning and not in form. The teacher then is supposed to correct some of the mistakes at the end of the discussion.

The main objective of the teacher then is to create real debates and motivate the students to learn how to communicate in their subject matter. Dialogues, role-plays, oral discussions are all ways of teaching conversation. The main role of the teacher is to intervene in case of grammatical mistakes at the end. The focus will be on the message rather than form since we will construct our syllabus on the task –based approach that we will discuss in a later discussion. Generally, the dialogues may take the following form:

- The interviewer: Can you tell me what kind of project you're working on at the moment?
- The programmer: We're working with a group of blind workers, and we are studying each person's needs and abilities, and we're going to design and produce equipment for them.
- Interviewer: What is the configuration that you will need to adapt a desk top computer for a blind person?
- The programmer: Both PCs and Macs need processors with a power of 25 MHz to run applications. The amount of RAM is also important.
- The interviewer: What can you install?
- The programmer: You can install an optical scanner, video and speech synthesizer.
- The interviewer: What kind of equipment do blind users need?
- The programmer: A blind person needs to interact with the computer and Braille devices.

The above dialogue is based on a project for the blind computer users. We will see further examples in practice. Moreover, we can ask the students to discuss topics such as mainframes. They may start as follows: 'mainframes are large computers. They are computer systems found in computer installations processing immense amount of data.' Asking questions seems very motivating. We can simply ask the students the followings: 'what is the nerve centre of a microcomputer?' The answer may be as follows: 'The nerve centre of a microcomputer is the central processing unit.' Or, 'what are the main parts of the CPU?' The student may say 'The control unit, the arithmetic logical unit and the registers.' It is up to the teachers to suggest tasks. What is important is to allow them to

Part One

interact in a natural way; in addition, we can rely on the multimedia laboratory. Teachers may use the computer to assist the students and control their activities.

This technique is applied today in some of the universities in Algeria. Moreover, teachers can ask the students to exchange their experiences and ideas online with other Computer Science students. Furthermore, speakers need to self-monitor so that they can identify the main problems of a real conversational exchange; therefore, the success of an interaction depends on the quality of production, thus speaking requires fluency and accuracy.

Within the Communicative and Task-based Approaches to teaching, various methods have been suggested; for example, designed tasks can enhance the development of several aspects of oral production such as debates and problem-solving tasks. We should note that speaking is a productive skill which involves both accuracy and fluency. We shall take the term accuracy to mean the use of correct vocabulary, grammar and pronunciation. Correction is appropriate during accuracy activities. The teacher may help the students to produce appropriate sentences and encourages them to use the language to communicate; on the other hand, fluency is '*the ability to keep going when speaking spontaneously.*' (Rogers Gower, Diane Phillip and Steve Walters, 2005:100). During fluency activities, students are not corrected. It is interesting to ask the students to use incomplete sentences such as 'when did you go?' and the student may answer 'on Monday' and not 'I went on Monday'. It is also important to teach them how to use hesitation devices such as 'well, let's see; anyway, really'.

Students at lower level can have a difficulty to cope with language, so we can present pictures or ask them to perform dialogues and role-plays from the context of a chosen reading text. It is very motivating to prepare cards. The students may rely on the information found in the cards, and try to form sentences in order to perform the role-play. This task is useful, in the sense that the students may have a clear idea since there is much knowledge as well as vocabulary. In practice we will show some of the examples based on cards. Furthermore, professional oral communication tasks seem to be very interesting. Consider the followings:

Example1: Every pair of students is asked to make their presentation on personal experience. Presenters will be asked further questions by the students and the teacher. The time allowed for the presentation is 10 minutes.

Example 2: Case study: divide the class into groups of four students and discuss what you would say to the system analyst (Computer Science). After the discussion, every group should present their ideas to the class. Discuss the suggestions given by every group and decide what suggestions were the best.

In this case, students do their activities in cooperation in pairs and small groups, thus they may learn from each other. Further activities and tasks will be presented in practice since we will design a syllabus for teaching English for Computer Science. The next discussion will be on ways of teaching listening.

II.5.2.3 Listening

Listening is defined as the ability to identify what the others are saying. For example, to understand the utterances produced by speakers of English. Listeners may meet difficulties in listening to native-speakers (authentic speech). Therefore the task of the teacher is to provide his/her learners with various listening materials such as films, English songs, radio news, discussions about different topics in their field of study based on visuals. The ability to understand the pragmatic meaning of utterances is crucial. What do people imply by their speech? Students may predict a little of the content of the lecture since they may have some background knowledge of the subject. Sometimes they cannot decode meaning which means to recognize what has been said, they may be unable to comprehend (the understanding of the main points, and they are unable to take notes (to write quickly the important points).

For Flowerdew in Jordan (1997:179),

'The act of decoding involves not only recognizing unit boundaries phonologically, but also the recognition of irregular pausing, false starts, hesitations, and stress and intonation patterns'.

For Willis (1981:134), the ability to be a good listener involves

- The ability of the listener to predict what will be said with easiness
- His ability to guess the meaning quickly
- His ability of retaining the most important points
- His ability to recognize discourse markers such as (now, finally)
- His ability to understand the pragmatic meaning of their utterances.

In our case, we may provide the students with different kinds of input. The tasks in the classroom will be discussions about topics based on visuals. The teacher may use podcasts (iTunes) since they may represent authenticity. Authentic listening may be connected with the speaking skill. Professional listening skills may depend on special listening tasks such as listening to native-speakers during conferences and seminars. Another important task is listening to podcasts as we have said previously (audio publishing online). This online communication is a new way to inspire and improve learning. We can rely on BBC website and English learning websites. The first step is to listen to online radio materials and download the BBC iplayer. Therefore, a podcast is an audio programme that needs to be subscribed to and is free of charges. You can listen on the computer to MP3 player or iPod. Podcasts are very useful since you can use them outside the class (in your car, at home, in the bus). For further details, you can rely on the following websites: -<http://www.bbc.co.uk/radio> and -<http://www.bbc.co.uk/podcasts>

In fact, podcasts are related to iPods and broadcasting. It means simply the publishing of audio via the internet. They present both students and teachers extra

possibilities inside and outside the classroom. Students may be exposed to new language (authentic language). Podcasts may develop fluency and improve pronunciation and accent, and the students may learn new vocabulary words. It is very motivating to ask the students to download a variety of podcasts and listening to them at anytime. In the classroom, students may be evaluated on the basis of their ability to understand authentic speech. We will define the concept of authenticity in a late discussion. Furthermore, several techniques in the L2 are essential such as listening for the main idea and listening intensively. It is necessary to note that a great number of features make the development of listening abilities more realistic.

As a rule, we can say that the teacher may be a valuable source for listening practice. Through the teacher, the students can learn new words, new expressions and pronunciation. For that reason we should always think about what we say and how we say it. It is crucial to think about texts used for the purpose of developing students' listening skills. The choice of the topic is also important. The kind of the texts we are talking about may be a radio extract or a video. Moreover, teachers should choose texts which will interest the students and will fit their needs and level. Before a listening task, teachers should encourage students to discuss what they are supposed to hear. Therefore, they should rely on realia, visuals and questions. This fact may activate their previous knowledge about the topic, and predict what they are going to hear. In terms of difficulties of listening, the video is easier to understand because of the visual clues (gestures and facial expressions of the speakers).

Conversations to listen are more difficult, in the sense that they are authentic, even for proficient speakers. In our case, we prefer using video rather than listening to tapes, podcasts, and radio since the students can see the person she/he is listening to. Some difficulties can be encountered in the case of unfamiliar regional accents, some idiomatic expressions and the use of unknown utterances (authentic speech). In the case of the video, students may be helped by the gestures and expressions of the speakers.

II.5.2.4. Writing

Writing is defined as instances of written discourse that might exploit the development of the linguistic skills of reading and understanding. It is a productive activity in the sense that when the students are able to compose in the act of writing, it means that they master the other skills (reading, vocabulary, spelling and grammar). Thus; writing is a combination of letters related to sounds. These combination form words which are arranged to make sentences, and sentences are combined in their turn to produce a text. It is a process whereby meaning is generated. It deals with the generation of ideas and their organization in coherent passages.

In ESP, writing is based on the communicative needs of the learners, such as to write lab-reports, summaries and instructions in manuals. Today, the process of writing is no more controlled, but it is creative. It is a natural process that reflects the abilities of the students in listening, speaking and reading. Therefore, writing at this level is a matter of persuasion and not only a matter of an activity in the classroom. Students are no more involved with the creation of sentences, but rather with the creation of discourse. Apart from the grammatical rules, one should be concerned with rhetorical devices, coherence and cohesion, being aware that there are various genres of writing.

Moreover, writing should be purposeful. The focus is on writing as a means of exploring ideas and gathering information. For example, summarizing is an academic skill, useful for note taking, for proposals, reports, for writing abstracts and summarizing the findings. Writing which is a productive skill is often neglected by the students even if it is an important process. It is useful to consider the different types of writing and the reason they may have for this task. This process involves many aspects such as handwriting, spelling, punctuation, sentence construction, organizing texts, cohesion and coherence, register and style. Moreover, it is crucial to consider writing as communicative. Students should develop competency in writing in order to write summaries, abstracts, essays, reports and articles. Thus, professional authentic learning

activities for developing English writing skills should be based on teaching students to compose. Achieving proficiency in writing requires grammar and lexis. Celce-Mulcia (2001) and Martin (1992) have argued that lack of instructions in grammar and lexis reduce the ability of the students in writing. They also need to learn the fundamentals of spelling and word recognition and a focus of the syntax of morphemes, phrases and sentences (Celce-Murlia and Olshtain, 2000). The process of writing is often connected to reading, in the sense that the students study texts, do the activities that may enable them to see the relevant features and then, replicate them in their own writing. Some of the theories proposed are Product, Process and Genre. The Product Approach focuses on the written product rather than on how they approach the process of writing. In this case, writing is concerned with the knowledge about the structures of language.

According to Jordan (1997), students are required to focus on form and on a model (text). The Process Approach focuses on the importance of some procedures such as pre-writing, drafting and evaluating. This technique helps the students to identify the topic. Jordan (1997) argues that process writing enables the students to direct their own writing by various ways such as discussions, tasks and feedback. The Genre Approach relates to the social context in which writing is produced. According to Swales (1990), Genre theory is a class of communicative events. He also focuses on the analysis of the communicative purposes. Flowerdew (2000) states that the Genre Approach is a dynamic approach, in the sense that it varies across various disciplines. Therefore, the main objective of this approach is to help the students to learn the conventions of genre related to their discipline. It is of paramount importance to help the students to produce various genres of Academic writing such as projects, article reviews, summaries and proposals. Students often lack necessary vocabulary when they are engaged in authentic communicative situations such as the case of writing. This fact will enable students to express their ideas freely and accurately because of their limited vocabulary.

In practice, we will demonstrate the problems of the students with the writing skills. Moreover, summary writing is an important aspect of Academic writing and is related to

Academic reading by means of note-taking (Jordan, 1997). Paraphrasing (expressing someone else's ideas in your own words) is a difficult task but essential. According to Campbell (1990), ESP writings need to focus on background knowledge. The schematic knowledge of the students is necessary for developing the writing skill, in the sense that the students may rely on the previous information stored in their memory in the act of producing any piece of writing. In addition, in writing the student must not direct his/her attention only on usage, but he/she must take other devices into consideration that we have mentioned earlier such as coherence, cohesion and rhetorical conventions (definitions, classifications, clarifications and generalizations). We can rely on the model of Widdowson (1979) which is based on the students' comprehension of a set of sentences before the reading stage. This can be done through the use of exercise completion. The student is required to complete sentences by using tenses. This model is the first stage of writing. The students are supposed to move from production to the final stage in learning which is writing. Thus, they will be responsible for actual communication.

Writing definitions by combining statements is a good task for the students. Their task is to connect statements by grammatical items in short definitions. According to Widdowson (1979), this task seeks to demonstrate how communicative acts can combine to generate another statement. This activity is two-fold: It is based on grammar and true statements.

Another task may be to ask the students to combine statements with the linking words. Another procedure is the labeling of diagrams and their descriptions by writing short descriptions. Summaries are often the best way of teaching writing after the reading stage as we have mentioned before. Moreover, project works in the subject-matter of the students are also interesting and may enhance the writing skill in the case of Computer Science students. We can assess the students according to their grammatical knowledge and knowledge of their field of study. It is very important for the students to avoid subjectivity through the use of the passive voice.

What is important is to understand the meaning of the four skills, and how they should be taught effectively. Moreover, testing the student's ability in language is related to the four skills since they are means by which abilities are realized in the performance of tasks. In the next chapter, we will present some of the techniques that a teacher of English for Computer Science may rely on. In addition, vocabulary should not be neglected in the teaching of ESP. This is the theme of the next discussion.

II.5.2.5. Teaching Vocabulary

Vocabulary is crucial for the students for communicative purposes. It can be acquired by listening and reading authentic language. Usually, students can grasp the meaning of words according to contextual clues of a given text. They may also rely on cues such as pictures, diagrams, the sound and rhythm of the words. Knowledge of affixation is also important in the acquisition of vocabulary. It is clear that words don't occur at random in a text. The nature of the world is reflected through the use of different words, and there are various ways of saying things. Some of these ways are linguistic choices, and more particularly registers. Each register carries a great number of words.

The choice of appropriate vocabulary is problematic since the words and expressions are restricted to use in specific contexts. It is essential to show the students what aspect of vocabulary item you introduce to them. Form is the first step you can present; for example, what part of speech is the word, and how it is spelled. The second step is the meaning since one word can have several meanings. The last step is to ask the students about the restricted use of the vocabulary items (does it belong to a particular style or register). Generally speaking, students want to increase their store of vocabulary. According to Saville-Troike (1984), vocabulary knowledge is the most important area of the language competence. It is also clear to note that vocabulary learning and teaching is related to reading and writing. The main question that arises is 'what does it mean to know a word? According to Jordan (1997), this may mean the ability to recognize a word in its spoken or written form and the ability to relate it to an appropriate object. In the case

of ESP, the teacher needs to prepare learners to deal with specific words related to their discipline. Students should be familiar with technical terms, semi-technical terms or Academic.

In addition, Lexis is related to grammar, in the sense that grammar refers to the creation of patterns of language and to the ability to construct new sentences out of words and their combinations in order to express meaning. Lexis is related to reading, in the sense that learners may meet the language in realistic contexts and can see how items fit into the meaning of the text. Here, we are referring to co-text that provides exposure for learners to examples of language (Scrivener, 2005). Activities such as matching words with pictures, checking the meanings in the dictionary, matching words with their definitions, the labeling of diagrams, sentence completion with words from a given list are all interesting tasks that promote the learning of English. Moreover, learning a list of words is not a guarantee that students will succeed in remembering. This fact may involve several things. According to Scrivener (2005), it is necessary for teachers to encourage the students to remember about the lexical items they have learnt relying on certain procedures in their memory such as putting into storage, keeping in storage, retrieving and using. ESP learners focus on academic vocabulary.

In this context, Dudley-Evans and St John (1998) argues that academic vocabulary should be given priority in teaching because this type of vocabulary is used with high proportion in general contexts, and has a higher frequency in scientific and technical contexts. A technical word is related to a particular topic. It can be only learned in a specific discipline. In this context, Strevens (1973:223) asserts that:

'Learners who know the scientific field may have little difficulty with technical words; but a teacher who does not may have a great deal.'

Words such as browser, program, log, hypertext, internet in Computer Science are known by all the learners even if they are not studying the specific discipline since they are international; however, words such as the operating system, bubble memory, flowcharting, algorithm, binary system can be known only by students of Computer Science, and are easy only for them. Furthermore, the use of concordance seems to be very motivating and can promote vocabulary learning. Learners can meet words in context with different aspects of knowing a word such as collocates, grammatical patterns and homonyms. The use of visuals as we have mentioned before is very interesting. Jordan (1997:162) asserts ,

'With everything considered, the most effective way for students to increase their active vocabulary store is for them to be centrally involved in the learning process.'

This fact may be with the help and the direction of the teacher. Vocabulary plays an important role in the structure of language because of its function. To sum up, all possible means should be tried in order to promote the task of learning vocabulary in an ESP classroom. In practice, we will demonstrate some useful techniques of teaching vocabulary. Moreover, knowing a word means knowing its place in association with other words; knowing its use and function; knowing its composition and its different meanings. Harmer (1992:158) summarizes 'knowing a word' as follow:

WORDS	MEANING	• Meaning in context • Sense relations
	WORD USE	• Metaphor and idiom • Collocation • Style and register
	WORD INFORMATION	• Parts of speech • Prefixes and suffixes • Spelling and pronunciation
	WORD GRAMMAR	• Nouns: countable and uncountable, etc. • Verb complementation, phrasal verbs, etc. • Adjectives and adverbs: position, etc.

In fact, knowing a word implies more than understanding its meaning, so it is crucial for teachers to show students the lexical part. In this context, Wilkins (1976:56) states that:

'Without meaning grammar very little can be conveyed, without vocabulary nothing can be conveyed.'

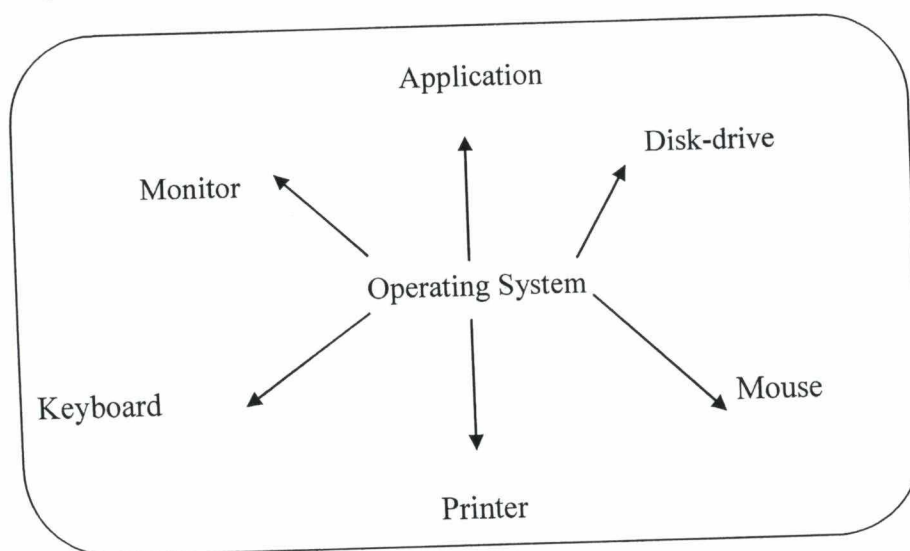
Thus, it is very important that the students learn vocabulary and the different methods of organizing words. According to Widdowson (1990), understanding utterances depends on the use of linguistic signs (meaning in context, knowledge and experience), being aware that words have different lexical items. Consider the following example:

Part One

1-I can speak Spanish.

2-I want a can of coca cola

The students should be aware of the indexical meaning of words in order to be able to use them adequately. Moreover, Ur and Wright (1992) speaks about 'brainstorming round a word'. Here, the students relate words semantically. Teachers can present a word in a circle and ask the students to join all possible words to the original one. Consider the following examples:



II.5.2.6 The Use of Translation

Language should be used in a natural way, in the sense that they should use the foreign language as they use their own language; however, they may encounter difficulties in finding equivalence since acts are differently realized in both languages. Translation in this case is not only a matter of language usage (form), but also a matter of language use (meaning); therefore, the learner should be conscious of the language functioning of language for effective translation. In this context, the task of the teacher is to show the students how to model L1 and L2 and process knowledge (negotiate meaning). Widdowson (1979) has suggested activities that develop an instance of

discourse in the L1 from an instance of discourse in the L2 (activities such as information transfer). For example, we can transfer a non-verbal representation to two instances of discourse L1 and L2. In solving these kinds of tasks, the learner should first rely on his/her linguistic competence and previous knowledge. In fact, they are not supposed to understand every word and find equivalents. What is important in this kind of operation is to guess the general meaning of the piece of discourse he/she is supposed to translate. Widdowson (1979:164) asserts that 'We try in short to set up the right conditions for authentic response.'

It is necessary to provide students with pragmatic and syntactic patterns for the translation of specific registers, and help them to avoid falling into lexical ambiguities. Moreover, the task of automatic translation is not easy, and the majority of the students rely on the machine in order to write summaries and abstracts. In this context, F.Bouhadiba (2005:27) in journal of translation studies says that:

'Des problèmes surgissent non seulement au niveau des équivalences sur le plan sémantique mais aussi surtout sur les plans de segmentation'.

He further asserts :

'Il est clair que la machine ne peut analyser de façon systématique des langues en faisant appel aux mêmes schémas de partition du matériel de langue puisque chaque langue présente-elle des caractéristiques qui lui sont propres.'

It goes without saying that automatic translation is not helpful, but may generate errors during the process of translation. This fact implies that only experts can use the machine, and not beginners. Students may learn to translate through practice, and his/her success may lay on his/her ability to comprehend deeply all the text. Thus, it is very

important to train students in specific area, and to show them how to acquire and command language and strategies of translation. This fact requires language ability and knowledge ability. We can ask students to write abstracts and summaries, and how to translate them from the source language to the target language. We focus on the writing and the translation of abstracts since the students will participate in seminars and write articles, CVs and reports in English. We can ask the students to translate individual words at the beginning, and then ask them to translate sentences. The followings are some of the examples presented in the classroom:

Hybrid computer: ordinateur hybride

General-purpose computer: ordinateur a usage general

Punched card: carte perforée

Sentences such as,

‘This device is used to enter information onto the computer as well as having normal type writer keys for specific purposes.’

‘ Ce dispositif est utilisé pour entrer des informations dans l’ordinateur. Bien normale de la machine a écrire comme les clés a des fins spécifiques.’(Translation mine)

Other examples will be presented in practice in this thesis. In the next discussion, we will shed light on the importance of the previous knowledge in comprehending a piece of discourse. Moreover, an exercise involving translation into the target language of paragraphs or a set of sentences can provide useful reinforcement of structures and sociolinguistic differences between both languages (L1& L2). This of course may improve accuracy. Therefore, it is useful to encourage students to translate words of a passage in order to check if they are able to do the transfer into the target language without falling into lexical ambiguities. These types of exercises help the students to develop confidence in finding equivalence. Furthermore, word for word or sentence for sentence translation out of contexts should be avoided. It is necessary to note that translation promote learners’ autonomy that we have discussed elsewhere. We can conclude with the following quote from Wilga Rivers (1992: 98) who asserts that:

'It may appear the contrastive technique par excellence in foreign language teaching is translation exercise. Here the student is confronted with language form and structures and required to produce the contrasting forms and structures of the foreign language.'

Therefore, translation requires knowledge of form and function in order to possess full control of the language.

II.5.3 The Schematic knowledge in ESP

Knowledge of the world, learning word meaning and learning ideas are all important for students with reading disabilities. In order to learn effectively, students need to integrate new material into their existing knowledge base and construct new understanding. On the other hand, students who lack sufficient background knowledge may encounter problems in comprehension. Teachers can facilitate the process of comprehension by helping them to build and activate background knowledge. The term background knowledge and previous knowledge are used interchangeably. Strevens (1980) defines background knowledge as *'what one already knows about a subject'*. (p151). The schematic knowledge (previous knowledge) is related to top-down processing. The top-down approach emphasizes readers bringing meaning to text based on their experiential background knowledge. In this view, the process of reading must be seen in its social context. As opposed to the bottom approach in which the meaning of a text must be decoded by the reader. It emphasizes the abilities to decode or put into sound what is seen in a text. It deals with teaching key vocabulary items, items of grammar and various cohesive devices. However, top-down processing may be easier for the poor reader who may be bad at word recognition but has knowledge of the text topic. As schema theory research has attempted to make clear, efficient and effective reading requires both top-down and bottom-up strategies. Carrell (1988:1-4) asserts the following:

'Both top-down and bottom-up processes, functioning interactively, are necessary to an adequate understanding of second language reading and reading comprehension'.

Moreover, all human beings possess rules or scripts that they use to interpret the world, and predict situations occurring in our environment. For example, if we are asked to recall a story that we are told, we are able to reconstruct the meaning of the story. In addition, schema is important not only in interpreting information, but also in decoding how that information is presented. The most crucial implication of schema theory is the role of prior knowledge in processing. In fact, *'Every act of comprehension involves one's knowledge of the world as well.'* (Anderson et al. in Carrell and Eisterhold 1983:73)

In addition, readers may develop an interpretation of a text through the interactive process of *'combining textual information with information a reader brings to a text.'* (Widdowson in Grabe 1988:56). Therefore, the reading process involves identifications of genre, formal structure and topic, all activate schemata. Relevant schemata may be constructed, including visual aids, real-life experience, role-plays and key vocabulary. We can assert that reading problems are not related to lack of schemata, let's say deficiencies, but because their schemata are not activated during the process of reading. In our case, it is interesting to employ activities that may activate the schematic knowledge of the students.

'Schema theory studies the relation between background knowledge, language and comprehension.'

Ronald Carter (1993:61-62)

The comprehension is based on the relationship between past and novel experiences. Thus, can we really assume that the schematic knowledge is enough for the interpretation of texts? In this sense, Widdowson (1990:108) points out

'Convergence need not be complete...We arrive at the degree of convergence necessary to the purpose of interaction and no more. Comprehension is never complete. It is always approximate and relative to purposes'.

As a rule, introductory material (previewing) before students read specific texts are very motivating since they may include important background information such as definitions of difficult vocabulary, translations of foreign phrases, and explanations of different concepts. One of the main tactics for helping students activate background knowledge is to write down what they know. Moreover, asking students to answer questions, such as 'what do you know about the topic of the text? This seems to be a good tactic of comprehension. Through an analysis of the students responses to question before reading the text suggested that students were able to activate their background knowledge. The followings are some of the tactics used to activate the students' background knowledge:

- Brainstorming: Students are asked to examine the title of the text. The teacher lists on the board all the information that the students will use to further recall.
- Discussions: Teachers may create debates, and ask the students to what extent they know about the topic.
- Diagrams: The teacher may draw a diagram that represents the information elicited from the students. Each time there is a new idea; the students may include it in the diagram.
- Questions: Questions addressed to the students provide purposeful reading. Questions asked by teachers may be a guide for the students as they complete their reading.

-Visual aids: Charts, pictures are interesting for the activation of the student's prior knowledge. Pictures may serve to retrieve knowledge.

-Real-life experience: Real objects or real situations may help the readers. In ESP teaching, we can teach vocabulary through demonstration.

Even the schematic knowledge is not enough for the interpretation of discourse. We need knowledge of the system of language, the context and the previous knowledge for the negotiation of meaning. Thus, it is very important for the teachers to design their courses according to the components of language abilities such as treatment of the four skills, their ability to construct schemata for the interpretation of texts and the context. In what follows, we will demonstrate clearly the role of context in language learning, and how it is important in language in use.

II.5.4. The Role of Context

Communication may fail because of context since each one brought one framework to a conversation and another person brought another. A context which is a set of circumstances provides a framework for understanding and helps us to communicate.

As a rule, language context is divided into two parts: Situational context and sociocultural context. Items of language in isolation have no function. They need a setting to give them meaning. Here, we are referring to function and meaning. The meaning of a word in isolation is not enough. Let's take the example of the word 'can'. Generally, students define it as 'the ability to do something'; however, this word may be simply 'the tin'. We have to be sure of what item of language is appropriate or acceptable. According to Halliday (1978), the situational context includes the setting, the way of talking and participants. For Hymes (1972), more elements are included, such as: setting, role, function, notion, style, stress, intonation, grammar vocabulary and language aids. These elements decide which language form is adequate.

In fact, there is a strong relationship between language context and Communicative Competence. Competence is an important insight in linguistics in terms of syntactic theory (Chomsky, 1965)), or in terms of social interaction (Hymes, 1972).

Sociolinguistic Competence which is one of the four types of Communicative Competence is necessary to language study. It is like if you travel to China, and you cannot understand a word of the language, but you can predict the meaning by observing the social context. The process of teaching involves an understanding of the communicative value of the linguistic elements in context in order to negotiate meaning. We communicate in discourse and not in isolated sentences. Both form and context are essential to convey meaning. Thus, it is very important to use certain signals to communicate. We can use strategic competence such as suspense and tolerance.

In the classroom, we can create situations when the students are asked to play roles. Over head projectors are interesting to see how native speakers talk. This will motivate the students. The teacher in this case is a helper rather than an informer. The students are engaged in real communications when they are asked to perform roles (doctor/patient). Another way for setting the language context is the use of paralinguistic features (gestures, facial expressions) will be convenient than using pictures or texts to be read. Demonstrations can be more interesting in our case (teaching with reference to objects). Moreover, students start to communicate in the language context, and must avoid memorization. Moreover, Context involves situating learning experiences in an authentic setting to allow students to deal with the real world.

In addition, context is important in the experience of Distance learning. Here, we can refer to learning across many contexts. Distance learning is influenced by variables, such as dialogues and learners' autonomy. Students need opportunities to learn language in context, and apply it with real situations. Learning a language should not be concerned with the production of isolated sentences, but in their use for the generation of discourse. Activities in the classroom should be contextualized by using authentic input. It is very important for the teachers to rely on Computer Technology to teach foreign languages (computer-assisted instruction, video, CD-ROM, the internet, electronic mail and the

World Wide Web. Podcasts are in fashion today, for example. These set of technologies help students to improve their linguistic skills. Teachers are encouraged to use multimedia materials based on videos. Authentic speech was seen only on TV, but today it is accessible on the screen of the computer. Language is no more taught as words and sentences, but as discourse and interaction in context. However, context can not only be learned, but experienced, so in this case, it should be textualized. Live data can transform lived contexts into texts.

Thus, technology can give us the data base to access original sources and commentaries of a film; for example, real interviews of the participants. The universe of technology both spoken and visual represents life. Lived contexts in which language is used can be transformed by the computer into readable discourse. Teachers should combine context and text in the teaching process to create successful communication. E-learning provides many opportunities to explore new forms of teaching and learning. In fact, what is required in an ESP course is a shift of the focus of attention from the grammatical properties to the communicative properties of language. Students encounter several drawbacks not only from some deficiencies in the language system, but also from unfamiliarity with English use. They do not understand how these sentences are used in the performance of communicative acts. It is very important for the students to use sentences in authentic contexts. When students can communicate in real-life, we can deduce that they have acquired communicative competencies since communication is conventional. This signifies that communication consists of the use of language in conventional ways. In fact, communication is conventional, appropriate and interactional. Appropriate, in the sense that it depends on factors such as, age, sex and the role of the speaker in a specific setting. On the other hand, it is interactional since discourse is built up of words which indicate how what will be said can be related to what has been said before. Moreover, it is necessary to think about activities and tasks that should be linked to real contexts.

In this view, it is essential to consider the views taken by the Communicative Approach, and to shift from form to communicative purposes of ESP. From a systemic point of view, language can be understood in relation to its context. In the classroom, spoken and written texts should not be dissociated from their contexts of production. In this view, the context of situation is the text; however, the environment of language as a system is its lexical items and grammatical elements which are called the context of culture (Halliday, 1978). Therefore, language can function only when we refer it to a real context. In this context, he argues the following:

'If the context is theorized in linguistic terms as another stratum in the organization of language itself, this enables us to model its variation and complexity, taking account of the different situational contexts for different levels and kinds of teaching/learning.'

(Halliday, 1978:1)

II.5.5. Needs Analysis

Needs signifies what the learners need to know. It is a set of procedures for the identification of the main parameters of a course of study. These parameters include the criteria and rationale for the selection and sequencing of course content methodology, course length and duration. As a rule, needs analysis (needs assessment) refers to the activities involved in gathering information that may serve as the basis for the planning of syllabuses according to the specific needs of the learners. The aim of this discussion is to stress on the importance of conducting a need assessment in ESP courses. Needs assessment can give two types of information. The first type helps the teacher to recognize the level of the students, and the second elicits information on what to achieve in ESP in the future work. This is essential in ESP, as many language problems arise as a result of teachers not paying attention to the learner's expectations. There are of course some

important steps to take into consideration such as surveys (in the form of questionnaire); interviews (structural and unstructural); analysis of statistics and records. We should know that NA is a process of determining the needs according to priorities. The identification of these needs is necessary in order to recognize the objectives for which the language is needed, the situation in which the language will be used, the level of proficiency and with whom the language will be used. Therefore, needs analysis is the first step to rely on in order to design a syllabus. Needs analysis and needs assessment are two terms that may be used interchangeably. According to Hutchinson and Waters (1987), needs analysis begins in the field of ESP; however, it should not be concerned only within the field of ESP. Even in the planning of General English, needs analysis may be essential. Hutchinson and Waters (1987:23) state the following:

'It is always possible to specify needs, even if it is only the need to pass the exam at the end of the school year'.

Moreover, he says that *'There is always an identifiable need of some sort'.*

Needs analysis should be the starting point for the design of syllabuses, courses and the selection of materials. It may include Target Situation Analysis; Present Situation Analysis; Deficiency Analysis; Strategy Analysis and Means Analysis. On the other hand, needs include necessities, demands, wants, likes, lacks, deficiencies, aims and objectives according to (Robinson, 1991; Mackay and Palmer, 1981). The starting point is to ask some questions for the type of analysis and data. The following questions can be asked:

- Whose needs are to be analyzed?
- Who decides what the language needs are? (Teacher, student, researcher)
- What is to be analyzed? (Target situation or present situation, deficiency necessities and lacks)
- How should the analysis be conducted? (Tests, questionnaires, interviews)

In broad terms, NA is described as identifying

'what learners will be required to do with the foreign language in the target situation, and how learners might best master the target situation during the period of training'. (West, 1994:1)

More recently, task-based NAs are gaining attention (Gilabert, 2005; Long, 2005) using multiple methods to gather data. The foundation of ESP is related to why learners need a foreign language? In addition, the main objectives of NA are to discern the characteristics of the students in order to design more interesting lessons. According to Brown (1995), the objectives should focus on achieving goals. Various instruments can be used such as (CALL) and (GELTA). The GELTA represents the goals of the courses. This instrument was designed to measure the curricular goals that match the students' perceptions of their own learning. The followings are an example of the GELTA instrument in NA:

Section one: Culture-oriented course

1-I need to learn concepts in cross-cultural communication

2-I need to practice many activities that make me understand my own culture and aware of cultural difference

Section two: CALL course

1-I need to practice making my home page in English

2-I need to take a class that uses authentic audio visual materials such as videos, CD's and audio

Section three: Listening course

-I need to practice listening to be able to understand stress pattern and intonation

-English Translation of some Items in the GELTA

This model is an example according to Brown (1995). We can rely on the GELTA model in our case. The model may take the following form:

Section one: Reading comprehension course

1-I need to understand various texts related to Computer Science

2-I need to read articles in order to extract information for my research

Section two: Listening comprehension

1-I need to listen to podcasts

2-I need to listen to various dialogues and conversations of native speakers

Section three: Translation

-I need to translate articles from French to English in order to be able to communicate in conferences and publish articles in journals

These questions can be addressed to Master 1 students of Computer Science within the LMD system since we are concerned with teaching LMD students at the department of Computing Science (USTO). In addition, Hutchinson and Waters (1987) point that the learning situations, the learners' knowledge, skills, strategies and motivation are of prime importance. In several regions in the Arab world, and more particularly in Algeria, some teachers don't rely on a need analysis procedure when designing their courses i.e., some of the teachers prepare their programs, a case that Medgyes (1986) calls 'tenor' (Teaching English for no obvious reasons). From this perspective, it is very important to draw attention of educators, language teaching professionals to rely on a need assessment procedure to make their courses effective. Unfortunately, teachers are not always aware of the importance of the ESP goals and the skills of evaluating the teaching materials. Even the learners are not aware of the fact that many professions require particular linguistic skills they must learn. Need analysis is an identification of the main difficulties of the participants in a target situation. NA provides the teacher with insights about the learners' interests, needs and hopes. For Coffey (1984), needs analysis is conceived as the

application of learning and teaching which considers the linguistic and communicative needs of the learners. In fact, interest in developing courses is increasing since the aim is to meet the linguistic and academic needs of the students. As we know, needs analysis is the first step in course design and it provides validity and relevancy for the design of courses and activities. According to Mumby (1978:32), the main parameters are the participants(age, present command of target language); communication needs processor (particular communication needs according to sociocultural variables); profile of needs (processing of data); meaning process (profile of communication needs converted into semantic subcategories); the Communicative Competence specification (target communicative competence of the participants). The aim of Mumby's model is to find the linguistic form an ESP learner is likely to use in various situations. Most researchers follow the model suggested by Mumby. However, the model of Hutchinson and Waters (1987) consists of asking a list of questions. They assert the following:

"In essence a matter of asking questions about the target situation and the attitude towards that situation of various participants in the learning process" Hutchinson and Waters (1987:59)

As opposed to Mumby's model, Hutchinson and Waters point out that it is time consuming to write a profile for each student based on Mumby's model, and it does not take into account the learning needs of the students and neglect the distinction between necessities, wants and lacks. On the other hand, Jordan (1997:26) gives importance to learning needs. He asserts the following:

"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 program;;e for the learner's own wishes regarding both goals and processes."

We agree with the model proposed by Hutchinson and Waters (1987), in the sense that we cannot focus on each student individually because the number of the students is very high. In our case, we have more than 250 students in Master one within the LMD system. The only solution is to divide the students into sections and groups.

To sum up, different approaches to needs analysis are proposed to identify the learners' expectations. Therefore what is important is to analyze their needs to be able to design an appropriate syllabus in ESP. Moreover, needs analysis is frequently used to provide data which can serve as the basis for evaluating and reviewing a program. The following chart shows us how to develop a new ESP course:

Needs analysis (Questionnaires for Students and teachers)



Objectives

(To Discern the Main problems)



Design of the lessons and tasks



Testing materials

(To measure the lessons and activities)



Evaluation



To test the final result

In addition, the procedures used in needs analysis are very important. The needs analysis matrix is a tool that suggests different ways of gathering information. The interpretation of the chart is summarized below for a further comprehension.

1-Questionnaire: This step requires an expertise to elicit information. Unnecessary items in the questionnaire may lead to wrong results.

2-Interviews: It is the easiest way of obtaining information. In interviews, specific questions written on a piece of paper are given to the students and teachers, and necessary information is gathered at the time of the interview. For example, in the unstructured interview, the subjects are asked predetermined questions on the problems and needs and their voices are recorded.

After having a clear idea of what to teach, how to teach and when to teach, goals are the final destination. For Graves (1996), goals are general statements. As a rule, needs signifies what the learners need to know. It is a set of procedures for the identification of the main parameters of a course of study. These parameters include the criteria and rationale for the selection and sequencing of course content methodology, course length and duration. Generally speaking, needs analysis (needs assessment) refers to the activities involved in gathering information that may serve as the basis for the planning of syllabuses according to specific needs of the learners.

The aim of this discussion is to stress on the importance of conducting a need assessment in ESP courses. Needs assessment can give two types of information. The first type helps the teacher to recognize the level of the students, and the second elicits information on what to achieve in ESP in the future work. This is essential in ESP, as many language problems arise as a result of teacher's not paying attention to learner's expectations. There are of course some crucial steps to take into consideration such as surveys (in the form of questionnaire; interviews (structural and unstructural) that we have seen at the beginning of this topic; analysis of statistics and records. The next step then is to select the appropriate material and finally to evaluate the outcomes. The next topic is

the importance of evaluation and the different kinds of testing; being aware that testing is a crucial component in evaluation.

II.5.6 Testing and Evaluation

Any course material design may depend on its construct validity. The objective of the evaluation is to identify in course material some drawbacks. Authentic materials play an important role in FLT. Through the process of evaluation, we can assess the effectiveness of the lessons planned by teachers, justify whether they are appropriate for the target learner's needs, help to equip students to use language effectively for their purposes and facilitates the student's learning process. In addition, Nunan (1989) asserts that the four skills should be taken into consideration; for example, the listening skill may include the ability in segmenting the stream of speech into meaningful words, identifying the rhetorical intent of utterances; the identification of information; successful speaking skills may involve mastery of stress, intonation and rhythm; a certain degree of fluency.

Moreover, evaluation seeks to tell us whether our strategies for meeting the various needs of the learners have been effective, and how we can improve what we have suggested. Even asking students about the content and the different methods used can be beneficial. Evaluation as defined by Brown (1995) is the systematic collection and analysis of relevant information in order to improve courses and to assess their effectiveness. Finch and Crunkilton (1999) define evaluation as the determination of the value of curriculum. For White (1988), evaluation is a way of judging the curriculum and not to assess the learner's achievement. Therefore, the main objective is to improve learning. Alderson (1992) comes up with the following points for evaluation:

- To justify future courses
- To compare approaches/methodologies and textbooks
- To motivate teachers

On the other hand, Brown (1995) provides the forthcoming:

- Product-oriented approaches which focus on the goals and instructional objectives, and to determine whether they have been achieved
- Static-characteristic approaches that are conducted by experts in order to make their own judgments.

According to Brown (1995), evaluation is both formative and summative. Formative evaluation is based on the information gathered during the learning process; whereas, summative evaluation is based on the information gathered at the end of the learning process. On the other hand, Bachman (1991) states that not all the courses can be suitable in formative evaluation, yet the success of an ESP course may depend on the ability of the learners to perform acts. Since ESP is a course that is based on the learners' reasons for learning, it is necessary to take into consideration the learners' needs. For Mc Neil (1996:66), evaluation is '*a collection of guidelines to make essential decisions about what to teach and how to teach*'. Again White (1986) asserts that '*evaluation is concerned with not with assessing individuals' achievement but with making judgments*'. In broader terms, evaluation is to determine the value of a program, and this process involves collecting data and analyzing it. Can we deduce that improvement and assessment of effectiveness are two crucial elements in evaluation? For White (1988 p.154)

'Evaluation is the way of judging and not a way of assessing the learner's achievement'.

According to him, evaluation is not a mean to assess the students, but it is a tool to identify the quality of a program. Alderson (1984) presents the following points as the purposes for evaluation:

- To decide whether the program has produced the intended effect.
- To support a decision.
- To compare approaches/methods/textbooks
- To motivate the teacher.

In this case, we can understand that evaluation is related to the teacher achievement and not the learner achievement. However, can we say that the effectiveness of a program can be evaluated without the testing of the learners' outcomes? Of course not, in the sense that a program can be evaluated after the testing process of the students. Therefore, testing and evaluation are two important components in the process of teaching and learning. It is very important to shed light on the different types of evaluation. In what follows, some definitions are proposed. According to Stake (1986), *'when the cook tastes the soup, that's formative; when the guest tastes the soup, that's summative'*. Formative evaluation is based on the information collected during the learning process; whereas, summative evaluation is based on the information gathered at the end of the learning process. Formative evaluation is a process used to identify performance. Summative evaluation is designed to gather data that indicates how effective a program is; in addition, it provides information on the program's efficacy. At the same time testing also helps teachers. Tests can help teachers answer the question: Have I been effective in my teaching? After each course, I usually ask myself if I have been effective, and if my students have grasped the lessons I have presented. Therefore, teachers diagnose themselves as well as their students. Since formative assessment can benefit students and teachers by confirming progress, we can say that formative evaluation go hand in hand with summative evaluation. This can be seen through tests such as proficiency tests and achievement tests.

As we know, testing is an important part of every language programme. A test is defined as *'a systematic method of eliciting performance which is intended to be the basis for some sort of decision making'* (Skehan, 1998:153). It is very important to understand that language can be learned by studying its part, and the acquisition of these parts can be tested. Therefore, knowledge of the elements of language is not enough unless the user is able to combine them in new ways to suit the situation in which he/she uses the language. In this case, we are no more concerned with usage, but with use. We rather shift from competence to the ability to use this competence. In this sense, testing communicative

language ability is proposed by Canale and Swain (1980); Canale (1983). Bachman (1990) proposed a model of oral testing in terms of the underlying structural model.

However, Skehan, (1998:86) notes that '*we need to know more about the way tasks themselves influence performance*'. Tasks should be rated in terms of planning, modality, stakes and opportunity for control. Kohonen (1999) proposes 'authentic assessment' as a process of evaluating Communicative Competence by using different forms of assessment in classroom activities (self-assessment, language portfolios). For Kohonen (1999), authentic assessment can enhance learning. He asserts that assessment is an integral part of instruction; each learner is treated as a unique person; emphasizes on strengths /progress (what learners can do), and encourages collaborative learning. In addition, authentic assessment is a learning tool, providing both learners and teachers. The focus is on student-centered; collaborative learning (Vigotsky, 1978); the process syllabus (Breen, 1984).

Authentic assessment in a task-based process implies a focus on language mastery (criteria-referenced performance) rather than relative performance (norm-referenced performance). This is highly motivating in the classroom. Criterion-referenced tests (CRTs) provide information about what the learner can actually do with the target language; however, norm-referenced tests (NRTs) give information about learners at ends of the scale (McLean 1995:146); (Hudson and Lynch, 1984). Moreover, there are some features that raise the question of how to measure and evaluate competences such as (the emphasis on outcomes, to understand what is being assessed and what should be achieved), and observations in work situations or observations of activities such as video tapes and references. These observations are the basis for measurement. The main question then, is how to use assessment, testing and evaluation to build from what students already know for expanding their content knowledge and increase language. Therefore, it will have to demonstrate their ability to read textbooks, learned articles. They have to show that they can use the following reading skills:

- Skimming
- Scanning
- Distinguishing the main ideas from supporting details
- Deducing the use of unfamiliar words from context
- Understanding the communicative function of sentences

It is very important to think about specific texts. Passages should be based on authentic texts illustrated with pictures and charts. In the followings, we try to present some examples in context:

Test tasks: questions should be related to the texts.

Finding headings

Completing diagrams

Information transfer

Short questions

Gap filling

Some theories of reading state that there are different constructs involved in reading such as skimming and scanning. For example, construct validation involves assessing how well a test measures the constructs. Bachman model developed a theoretical framework, developed for the purpose of test analysis (Bachman and Al: 1988). Here we are referring to Communicative Language Ability and tests method facets:

Communicative Language Ability

As we have mentioned earlier in this thesis, Communicative Competence is based on the recent version of Bachman (1990). Three components are the focuses: organizational competence, pragmatic competence and strategic competence. In order to be able to achieve these competencies, some pedagogical applications are supposed to be applied.

In the case of organizational competence, which wheels around grammatical competence (vocabulary, syntax, morphology, phonology, graphology) and textual competence (cohesion, rhetorical organization), consists of two types, grammatical and contextual. Bachman (1990: 88) defines Grammatical Competence as the competences involved in language usage; on the other hand, textual competence includes the knowledge of the utterances that may form a unit of language. According to Bachman (1990), this process is applied by using rules of cohesion and rhetorical organization. All these abilities are generalized as linguistic competence. Therefore, mastery of language is the fundamental principle to develop organizational competence. From this perspective, one can understand that language should fulfill a meaning rather than practicing a grammatical /structural model.

Pragmatic competence (ideational functions, manipulative functions, heuristic functions) concerns the relationships between different signs and referents, and between language users and the context of communication (knowledge of certain conventions to perform communicative acts). As Bachman (1990), without competence to interpret the illocutionary force, the listeners could have different meanings and interpretations.

To sum up, language competence consists of two types, organization and pragmatic. When learners are competent, it means that they are capable of applying the knowledge of grammatical rules and the cultural codes to particular situations in order to achieve communicative goals.

The Sociolinguistic Competence which relates to the rules of use and discourse is crucial in the interpretation of utterances for social meaning focusing on sensitivity to differences in a dialect or a variety, sensitivity to differences in registers, sensitivity in naturalness, and ability to interpret references and figures of speech, (Bachman, 1990: 4). As regard Strategic Competence, Bachman includes three main components in Strategic Competence: assessment, planning and execution. These could be used to compensate for the deficiencies in other competencies. So, Strategic Competence is a general ability for

the individual to make the most effective use of abilities to carry tasks (Bachman, 1990:106)

Having determined the purpose and the target population, test designers will need to identify a framework within which the test might be constructed. Needs analysis involve gathering information on what language will be needed? It might involve direct observation of people in target language use situations, to determine variables relevant to language use. The procedures used are questionnaire and interviews. Communication needs processor (Mumby, 1978) includes:

- 1-Participants (age, sex, nationality, domicile)
- 2-Purposive domain types of ESP involved, and the purposes to which it is to be put.
- 3-Setting (place of work, quite or noisy environment, familiar or unfamiliar surroundings)
- 4-Interaction: participants' role (position at work, people with whom he/she will interact, role and social relationship).
- 5-Instrumentality: medium, mode and channel of communication, monologue or dialogue, textbook or radio report
- 6-Dialect: British or American
- 7-Target level: required level of English
- 8-Communicative event (attending university lectures)
- 9-Communicative key: 'the tone, the manner and spirit in which an act is done'. (Hymes 1972)

Some other forms of needs analysis can be conducted by test developers. We can refer her to Hutchinson and Water (1987), Swales (1985), Robinson (1980). We would like to add some information about testing for a better comprehension. The quality of teaching may depend on the results obtained from a care review of the learners' assessment. In this context, Richard (2005) asserts the following:

'Assessment is a 'systematic approach to collecting information and making references about the ability of a student or the quality or success of a teaching course on the basis of various sources of evidence'. (Richard, 2005:63)

It is crucial to rely on assessment in the process of curriculum design since we make judgments about the learner's level and knowledge. In ESP, testing and evaluation should be conducted in accordance with the content and objectives. There are some forms of testing and evaluation such as written or oral presentations, classroom discussions and analysis. Moreover, testing allows measuring the knowledge acquired by each individual student. It also tests the validity of the teaching strategies being used.

*'A test which sets out to measure student's performance as fairly as possible without in anyway setting traps for them can be used to motivate them'.
(Heaton 1988:7)*

In this context, a test provides the teacher with the necessary data to know them better. We mean to know their level. According to Valette (1977:6)

'Achievement tests are designed to measure the effect of a specific programme of instruction or training; whereas, proficiency tests aim at determining whether the student's language ability corresponds to specific requirements.'

The main question then, is 'what and how should we test? The basis for an ESP test must be built upon the specification of objectives of the communicative needs. This fact will lead the students to acquire a positive attitude towards testing. Then, are we involved with testing the student's knowledge of specific discipline or are we testing the mastery of language?

In fact, we are testing their ability to communicate. This will imply the testing of knowledge; the testing of the mastery of language, and the testing of the ability of the students to communicate adequately. Thus, we are rather involved with language use which is our main concern in this thesis, and the ability to use language in context in the specific area of the students. Therefore, it is important to note that testers should not be

involved with lexical and grammatical features, but they should also be involved with the sociolinguistic and discourse characteristics of the language. Language should be tested beyond the level of the sentence. According to Widdowson (1978:57), '*Evaluation should reflect both the receptive and productive aspects of language communication*'. See just the interpretation of texts. There are different ways of interpreting a text, linguistic, lexical, grammatical items and situational contexts through the multiple-choice questions, wh-questions, summaries and true/false statements. The reading materials used in this test help us to evaluate the linguistic aspects of language as a means.

II.5.7 Reliability and Validity

"Not everything that can be counted counts and not everything that counts can be counted."

Albert Einstein.

When a test is used as part of data collection process, the validity and reliability of that test is crucial. In fact, we are relying on the results to show support for our theory like mathematics. Test validity refers to the degree in which our test is measuring what we want to measure.

According to many constructs that are different to measure, validity becomes something difficult to measure. Just see that $1+1$. This represents an addition, and it is a valid construct since it is measuring the student's ability to perform a basic addition. Therefore, construct validity is a test that measures a construct. On the other hand, test reliability is the constituency of a test or an observation. It is important to choose variables in an intelligent way in order to control your study. In the process of language teaching/learning, every assessment requires students to complete a task or an activity. Thus, a valid task should reflect knowledge or performance. A valid assessment does not require knowledge or skills that are relevant to what is being assessed (the ability to write, to read, and to understand the content...). Moreover, reliability refers to the constituency

of a measurement in the words of Linn and Miller (2005). But are we involved with perfect constituency? Obviously not, since there are psychological factors that may influence performance; for example, the case of the student's fatigue, memory and anxiety). Assessing oral presentations constitute a drawback since students are anxious. This can influence the validity of scores; whereas, written tasks can be more valid and increases reliability. Thus, it is very important as teachers to think seriously about the background knowledge of the students in the classroom during the process of assessment in order to avoid discrimination in assessing their performances. Just think about reliability as a quality; that is to say, a quality of any measurement. In our case, it is crucial to answer the following question: 'How can we know as teachers whether tasks and activities in the classroom are effective? How can we determine the outcomes? According to Brown (2001:43), *'Is the classroom practice designed to engage learners in the pragmatic, authentic, functional use of language for meaningful purposes?'* The objective of courses is to develop the student's ability to communicate in both written and spoken English. Therefore, the students need knowledge of the form of language, meanings and functions in order to communicate effectively and to negotiate meaning in different contexts. Here, we are referring to Larsen Freeman (2000). The tests should be as authentic as possible. A test task about how to ask a programmer to program the computer is highly authentic since it represents a real-world activity. In order to test the student's writing skill, the teacher can ask the students to describe how they spent their holidays. In our case, we can ask them to write down a short passage about the modelling system, or how to program a computer. To incorporate authentic tasks in the process of assessment prepares the students to perform the language in real-life. Thus, authenticity increases the motivation to learn the language, and this is the main objective of teaching today. Testing is crucial in teaching methodology. It is not only concerned with individual measurements of students, but also it tests the validity of didactic strategies. According to Heaton (1988:88), *'language testers, with very few exceptions, have ignored the ESP challenge.'* While Hutchinson and Water argue that *"An ESP course is set up in order to enable particular learners to do particular things with language"*. Hutchinson and Waters (1987:145)

In addition a test is important for both the teachers and the learners. Students should understand that tests can help them to see for themselves that they can perform in the target language; on the other hand, tests may help teachers to know their students and to evaluate their progress. The main question then is 'what are we going to test?'

As teachers of the language, we are not involved with testing the scientific knowledge of the students; for example, how a modelling program should be done by the programmers, being aware that there is an enormous gap between the student's knowledge and the teacher's knowledge unless the teacher has done some studies in Computing Science. For an ESP teacher what is important is how to form correct grammatical sentences, using a specialized vocabulary; how to understand a reading passage and how to converse correctly, but not necessarily fluently. In fact, can we choose achievement or proficiency test in this situation? '*Achievement tests are designed to measure the effects of a specific program of instructions or training*' in Anastasis's words (1976:398); however, '*proficiency tests aim at determining whether the student's language ability corresponds to specific requirements*' (Vallette, 1977:6). Moreover, tests should be accepted by the students in order to be successful; in other words, they should be part of the evaluation process. It is crucial to test the ability to perform communicative acts which require the language skills and knowledge of specific subject areas. Tests takers should be involved with language use and language usage since grammar is not enough on its own, so we cannot rely on it.

In fact, the contextualization of the norms in real situations is very important to test the performance of the learners. In what follows, we will shed some lights on authenticity and its role in English Language Teaching.

II.5.8 The role of Authenticity

Authenticity is described as the naturalness of form, and appropriateness of cultural and situational context (Rodgers and Medley, 1988). Authentic materials mean different

things for different people and generated by native speakers. Moreover, authenticity is related to validity, genuineness and reliability. It is also a main feature of syllabus design and Communicative Language Teaching. Materials development have been produced for purposeful objectives rather than teaching linguistic features. It is very important to think about the identification of authentic materials in ESP teaching and this should include the quality and appropriateness of the pedagogical sources. Syllabus designers should think about what is meant by authenticity. In the process of teaching and learning, the authentication of data is not only the concern of ESP, but we should think too about 'authenticating the teachers', in the sense that the role of the teacher is central since he/she is involved with the presentation of the authentic material in the classroom; in other words, it is the teacher who helps and guides the learners in the negotiation of meaning in a hard context which is the artificial setting (the classroom). According to (Nunan, 1988:99), authentic materials have been defined as '*those which have been produced for purposes other than to teach language*'.

More material developers try to integrate authentic materials to motivate learners, and to lead teachers to handle the foreign language they are teaching; for example, the content of textbooks needs to be realistic. The texts should be interesting and informative. It is the focal principle to have students speak or write on topics related to their profession. (Widdowson, 1979:50) asserts that:

'Language materials have in the past been largely derived from the products of theoretical sentence grammars. We need materials which derive from a description of discourse: materials which will affect the transfer from grammatical competence to what has been called communicative competence.'

In this context, we should be aware as teachers that authenticity which is part of the Communicative Approach is a fundamental construct of syllabus design and methodology. Moreover, authentic materials are defined as the real language used by

Chapter II

Theoretical Considerations

Part One

The Literature Review

native speakers for communicative outcomes. Using authentic texts, materials and tasks in Foreign Language Education is a must today. The integration of these materials in an EFL classroom satisfies both the teachers and the learners, in the sense that it enhances learning, and motivates the students in learning the language.

III.1.1 Introduction

The teaching of ESP is a relevant subject within Algerian technical universities since today it is a lingua franca for the scientific and technological developments. In the design process, didactic criteria should be established like the authenticity of materials and the relevance of texts. Some of the features that characterize the domain of ESP are the case of authenticity. The most important thing we should take into consideration is a shift from the sentence to the text and the context in teaching ESP. Dudley-Evans (2001) asserts that the use of a distinctive methodology is a valuable characteristic of ESP, and he argues too that 'ESP is materials-led field', and that the most materials are prepared by individual teachers for particular situations. According to McDonough and Shaw (1993:26), '*materials development is very complex, though rich*'. This is the concern of language use which includes function, context and language skills. From this perspective, we should think about presenting the students up-to dates materials. Designers of specific purpose language courses usually collapse the distinction between aims and objectives in ESP courses. In ESP, a distinction is made between aims 'the eventual target behaviours of the learners' and objectives 'the pedagogical constructs which may help them to achieve the behavioural targets'. The goals according to Widdowson (1983) is to provide learners with an ability to solve their own problems of communication outside the classroom, and this may lead us to understand that there is a problem between what the students do in the classroom and in the real world. Of course language use in specific domains is complex (the case of Computing Science). Thus, the study of pragmatics and sociolinguistics in different environments is necessary. For Bachman (1990), language must takes place in context and must be interpreted with reference to the context. He gives an example of attempting to produce a test of English proficiency for taxi-drivers in Bangkok by making a list of utterances the drivers might utter. This shows that the negotiation of meaning is so complex. He argues that '*there was probably a variety of conversational exchanges that may take place.*' (P. 312). A similar hypothesis is presented by Skehan (1984:216) in another domain (the waiter in a restaurant). He says that:

'Although at first sight waiter behaviour might seem to be a straight forward affair, we soon need to ask questions like: what range of customers needs to be dealt with? What range of food is to be served? One probes a little, the well-defined and restricted language associated with any role is revealed to be variable, and requiring a range of language skills.'

In fact, this may lead us to speak about authenticity and its relevance to language teaching. This term has been used to show a reaction against the artificial language of textbooks and tests. In this context, Widdowson (1979:54) argues

'many language teachers and testers have come to view authenticity as a property not of spoken or written texts themselves but of the users people put them to.....It is probably better to consider authenticity not as a quality residing in instances of language but as a quality.'

Thus, authenticity in this view is a function of the interaction between the reader, hearer and the text. He further makes a distinction between 'genuine' and 'authentic'. According to him, genuine means the actual spoken or written texts produced by the users and authentic which refers to activities or processes associated with instances of use. This distinction is a clear response for language teachers. This means that teachers should make a difference between texts and tasks that can be performed by the students in the classroom. The texts should be as authentic as possible such as articles from newspapers or magazines; on the other hand, the tasks should be based on real-life cases such as dialogues or charts and tables.

III.1.2 Historical overview

'Authenticity consists in having a true consciousness of the situation, in assuming the responsibilities and risks that involves in accepting it in pride or humiliation some in horror or hate.' Sartre (1959:120)

In this context, authentic learning is based on consciousness, experience, and reflection. The idea of authenticity is first proposed by Descartes who asserts that authenticity is 'to follow a moral inner voice and that makes individuals think and act responsibly, and for Rousseau, authenticity is a voice of nature. According to these philosophers, authenticity is related to knowledge, and this knowledge is based on consciousness and experience since there is a strong relationship between knowledge and doing an activity, and knowledge should be put in a situation for the transfer of meaning. In addition, when authentic activities are transferred to the classroom setting, their context may be lost. Sartre (1959:128) argues the following:

'The concept of authenticity and individuality has to be earned but not learned, and the authentic is life experience rather than knowledge.'

The main question then, is 'how does one distinguish between the authentic and the inauthentic? Widdowson (1990). Then, authenticity represents the real world, and not what we are supposed to learn. It is related to birth, life and all the activities we are supposed to perform on earth; whereas, unauthenticity is related to all the things we learn at school and on books. In fact, it is a reproduction. Moreover, Cooper (1983) comes up with the idea of 'self-concern' which means the distinguishing characteristic of being human. He argues the following:

'We should live as the kind of beings that we really are-ones distinguished, that is by the capacity of self-concern.' Cooper, 1983:16)

This view is derived from Heidegger's view of authenticity. According to Heidegger, 'authentic person' is 'resoluteness'. The authentic person is the person who is aware of the actions, beliefs and values that are open to him. Thus, authenticity is related to 'works in progress. In this context, Heidegger points out the following:

'Resoluteness, as authentic being-ones's self, does not detach Dasein from this world, nor does it isolate it so that it becomes a free-floating 'I'. (Heidegger, 1980:344)

Heidegger means that humans found themselves in a particular place and in a particular time. This fact implies that they found themselves with a set of beliefs, values and culture. Therefore, engagements with languages, context and culture realize a particular type of self-concern. So, self-concern is a type of authenticity. In addition, Heidegger adds the following:

'The only way to achieve authenticity is to live a life in pursuit Possibility, and that we pursue this through resoluteness.' (Heidegger, 1980:345)

In fact, living a life of pure possibility is not what it means to be authentic, because authenticity does not involve one becoming 'a free-floating' (a balance between actuality and possibility) in the words of Heidegger (1980). The ability to do something is linked to this balance. According to philosophers like Sartre and Heidegger, authenticity is seen as a very general concept. It concerns more a person's relation with the world. In addition, authenticity is related to creativity; for example, Sartre associates authenticity to various

human activities such as music and painting. On the other hand, Martin Heidegger associates authenticity with naturalness, and for him technology destroys the natural world. In this case, people are no more living in an authentic state of being. In fact, even if authenticity is related to a pure world; that is to say, a natural world and more precisely something new, it will be also related to what is ideal. This 'what is ideal' can engage human beings to creativity and progress, and to a better world. The main question then 'is this better world authentic? One can say that this better world will be sophisticated and unnatural because of Science and Technology. Therefore, we do agree with Heidegger's view on authenticity which is linked to naturalness. Everything can easily loose the beauty of being natural and real, thus inauthentic. The same phenomenon may occur in learning a foreign language. It will be no more authentic when it is brought to an artificial context. In fact, we dissociate it from its natural context. Even if teachers make efforts in trying to bring the real world into the classroom, it will never be a complete success. It will be only a representation, and by the way an illusion. Teachers can only be approximate by creating a balance between what is authentic and inauthentic; between what is possible and actual. Authenticity in this case may be linked to everything that can lead to creativity. To what degree the materials, methods, tasks and texts used by the teachers can be authentic? The answer to this question may be linked to the results obtained after the process of measurement in a teaching/learning process.

In order to be able to answer to this question, one must first of all ask the following question: What is authenticity? In what follows we will try to shed light on this concept.

III.1.3 Defining Authenticity

According to the Oxford English Dictionary (OED), authenticity is defined as 'being in accordance with facts, as being true in substance.' It is also defined by (OED) as 'being what it professes in origin or authorship, as being genuine.' This definition helps us to see that authenticity is rooted in creativity. It means too simply as 'something real, actual'.

In this context, authenticity is the quality of an object or a person. Can we really assert that authenticity is synonymous to reality, and inauthenticity refers to unreality? And can we link it to a quality and to some kind of ideal?

According to philosophers such as Sartre (1959) and Heidegger (1980), 'inauthenticity is inevitable'. Then, unauthenticity and unreality are features of everyday life. Goffman (1959:68) argues that:

'We wear masks and perform roles for others not because we fancy ourselves thespian-like histrionic characters, but because our expressive action is first and foremost directed at the maintenance of relationships through the saving of face.'

Therefore, the value of authenticity and inauthenticity lies in being a 'more or less person'. For him, a more or less person is an actor that understands social life (Goffman, 1959:70). We should consider authenticity as part of the process of interaction in everyday life. In philosophy, authenticity has been used for the notion of correspondence, and the notion of genesis in the words of (Cooper, 1983:15). On the other hand, in the field of applied linguistics, four types of authenticity are proposed:

- Text Authenticity (Guariento & Morley, 2001)
- Competence Authenticity (Canale & Swain, 1980)
- Learner Authenticity (Widdowson, 1979)
- Classroom Authenticity (Breen, 1985)

Text authenticity according to Guariento & Morley (2001) is from an authenticity of correspondence, and for Widdowson (1979); it is derived from an authenticity of genesis. What we mean by authenticity of correspondence, the correspondence between 'pedagogic' language, texts, materials, and real-world language. In this context, we shall take the term correspondence to mean a kind of agreement. Moreover, for Widdowson (1979), authenticity is achieved by the non-native reader in response with the text used in

the classroom and should respond to the types of texts used outside the classroom; therefore, texts may be authentic in terms of correspondence. In this context, Widdowson means by correspondence a similarity between the texts used in the classroom and the texts used in the natural world. In addition, authenticity should correspond to the performance of native-speakers. Grammatical competence does not guarantee performance for non-native speakers and does not imply correct usage since in conversations, NNSs use communication strategies as translation, and language switch. Therefore, incorrect utterances may be produced. In didactic materials, it is crucial to think about the authentication of data. Texts brought from the real-world to the classroom become decontextualized since they are used in a non-native speaking community, very far from the culture, the native speakers and their religion. The context is not the same. Can texts become inauthentic in this situation? According to Michael Byram (1989):

'Despite authentic materials imported into the foreign language classroom, the experience is a restricted and limited version of using the language in the foreign culture and society, and the principal focus remains on the language and on learners.' Byram (1989:40)

As teachers, we should bear in mind that authenticity is central in Communicative Language Teaching, and may depend on both the teachers and the students. It is obvious that the materials brought into the classroom may not be sufficient for the process of learning in the classroom, but it is the role of both the teachers and the students to encourage such engagement; in other words, students may develop their abilities when they perform other activities outside the classroom such as watching TV and listening to music. (Breen, 1985:61) suggests four types of authenticity:

- Authenticity of texts used as input data
- Authenticity of the learners' interpretation of the texts

- Authenticity of tasks
- Authenticity of the actual social situation of the classroom.

According to Widdowson (1998:58),

'the language presented to the students may be a genuine record of native-speaker behaviour, genuine; that is to say, as textual data, but to the extent that it does not engage native speaker response it cannot be realized as authentic discourse.'

Therefore, authenticity can be the interaction between the reader and the text. All this leads to understand that authenticity is related to situations being itself a 'social construct' in the words of Widdowson (1979). Following his view on authenticity, Kramsh (1993:178-184) asserts that teachers have to distinguish between language learning activity and language using activity. She further argues that we need to measure what really happening in the classroom in terms of activities is presented to the students in particular situations. In fact, what is happening in the classroom must reflect 'real life'. Generally, the texts are artificial simply because of the question that can be asked by the teacher 'what is x doing?'

Sometimes what is genuine for some can be unnatural for others, and what seems natural in a specific context may be unnatural in other contexts. Therefore, what is the difference between 'genuine' and 'natural'? In fact, what seems unnatural can never be used in a realistic situation. To present students with several passages and ask them to learn something interesting is not the same as to learn something about the language to be able to use it in concrete situations. The passages for Widdowson are genuine instances of language use. Therefore, genuineness is a characteristic of the passage, and authenticity in this case is the relationship between the reader and the passage. It is very important to make the difference between the texts and the users to which they are put. Moreover, the participants in the classroom (teachers/students) can create their own authenticity even if

we argue that the class is an artificial setting. The classroom is also real and natural. In this case, knowledge and experience can enable the participants to shift from usage to use. Through tasks and activities that can be performed, we can use the language system in acts of communication. Just see while teaching the present continuous to the students. We usually ask the following question: 'what are you doing?' And the students will say: 'we are listening' or 'we are taking notes'. In this context, we are not demonstrating how sentences are formed, but we are demonstrating how sentences are used in a real situation. Thus, we are involved with communicative acts. The learners in this situation are users rather than knowers. We can impose authenticity in the classroom through the use of adequate materials, tasks and methodologies. According to Morrow (1979:13) the authentic text is:

'An authentic text is a stretch of real language, produced by a real speaker or writer for a real audience and designed to convey a real message of some sort.'

While Harmer (1983:146) argues that:

'Authentic texts are those which are designed for native-speakers: They are real texts designed not for language students, but for the speakers of the language in question.'

Here, it is clear that texts are authentic since they are produced for the native speakers. Therefore, for the non-native speakers they represent naturalness, thus authenticity. So, we can deduce that authenticity is something natural. In addition, Hutchinson and Waters (1987:159) argue that authenticity is not a characteristic of a text itself. It is a feature of a text in a particular context. This means that a text can be authentic in the context which it was originally written, and this is the case of English for Specific Purposes. These definitions help us as teachers to understand the meaning of authenticity in relation to both

the teaching materials, tasks and texts. But what is important is to understand too that the classroom which is an artificial setting has its own authenticity according to the authors cited above. Now, the real question is 'how can we bring the real-world into this setting? This will be our next discussion.

III.1.4 Authenticity and Language Teaching

Authenticity is a crucial construct of Communicative Language Teaching. Even if course books are artificial, they can be very interesting and motivating. Brown (1990) argues that even if course books are simply pieces of English, students can be exposed to English as it is normally spoken, or they will only learn English signals. What is fundamental with authentic texts is to maintain the features that express real meanings. Widdowson (1990:67) asserts the followings:

'It has been traditionally supposed that the language presented to the learners should be simplified in some way for easy access and acquisition. Nowadays, there are some recommendations that the language presented should be authentic.'

In this context, we should think about appropriate texts and tasks that can be used in the classroom for appropriate response. ESP students can be motivated in learning the language when it is presented in an interesting way. By an interesting way, we mean up-to date texts in their subject-area. The texts should be realistic accompanied with pictures, charts and tables. Moreover, the tasks should represent real situations, such as dialogues, oral discussions, summaries and activities based on information transfer and diagrams. First of all, let's see some of the objectives of the reading texts. Reading is used for pleasure and for extracting information. Both are useful for ESP students, particularly Computer Science students. They may learn new technical terms in their specialty, the

scientific knowledge, and of course they will revise the grammatical norms; for example, how to form correct grammatical sentences. In our case, we usually ask students to find in the text the connectors such as the conjunctions and the subordinate conjunctions as well as to state the difference that lies between the use of the simple sentence and the complex sentence.

Therefore, authentic texts have been defined as 'real-life' texts not written for pedagogic purposes (Wallace 1992:145). This is true since they are written for Native Speakers in contrast to non-authentic texts that they are designed for language learning purposes. These texts usually contain well-formed grammatical sentences, and obviously they can be useful for teaching. These kinds of texts prepare the readers to deal with real contexts, such as articles in newspapers and magazines, songs and TV programmes. One of the most useful tools is the internet since it is up to date. Thus, authentic materials should be the kind of the materials that students will need. It is linked to specificity because they may help the learners to interact with the real language. In addition, a reading text can be interesting if a variety of texts are used especially in the case of ESP since students will find different terms related to their subject matter. Passages with pictures, tables and charts in the case of Computing Science are motivating, and may help them to see the real context, and to understand that it is a question of truth and real facts. The main question then is 'how to choose authentic reading materials?'

We can choose authentic texts according to readability and the suitability of the context (Readability in terms of difficulty, and suitability in terms of the needs of the learners). Now, we can ask the following question 'Does texts in this situation attract the students? According to Widdowson (1990:45), '*The language presented to them may be a genuine record of native speaker behaviour.*' Of course, authentic texts may interest the students and encourage them to read for pleasure and for extracting information when necessary. As a result, their level will increase, and they will master the language. However, it seems clear that one of the disadvantages of authentic texts is that they will require a good cultural knowledge, and a good scientific knowledge in the case of ESP.

On the other hand, authentic tasks should be taken into consideration in which students are required to perform. This fact will allow designers to think about appropriate materials where both texts and tasks reflect the language and behaviours required in the outside world. The main question then is 'what learners may achieve at the end of the courses? Can students be able to communicate in a natural way, and to what extent? In this situation, language has to be authentic. Authenticity then, is an illusion because it depends on the learner's engagement and not of the language. Learners are not competent as the native speakers, thus they cannot authenticate the language. For Widdowson (1990), authenticity is an illusion of reality. In this case, authenticity is linked to something natural. The focus here is on meaning rather than form; that is to say, on use rather than usage since there is a difference between what learners do in the classroom and in the real world. According to Bachman (1990:132), '*language must take place in contexts, and must be interpreted with reference to the context.*' He suggests a test of English proficiency for taxi-drivers in Bangkok to study some of the utterances produced, and noticed that these utterances were a failure, an example we have already cited in this thesis. This means that there is a failure in the negotiation of meaning. Thus, there is usually a problem with specific language ability. In fact, learners fail in achieving meaning in real situations. Even if learners have enough knowledge for communicative tasks, they may not achieve communicative goals. What is required then is to present students in the classroom with authentic tasks that reflect the real world. In what follows, we will see the syllabus design and methodology, and how teachers can gain success in the process of teaching and learning in an ESP context.

III.2.1 Introduction

The objective of this discussion is to examine the issues relevant to teachers that aim to create their own syllabuses. Therefore, it is very important to understand the linguistic theory, language learning and how they are applied in the classroom. The main focus of syllabuses has shifted from structures to situations, functions and notions to tasks. From this perspective, let us shed light on the most important insights that may help us understand deeply the concepts of syllabuses, methods and approaches

III.2.2 Issues in Language Teaching

Many changes occur in the history of education such as changes and innovations in ELT and changes in theories of the nature of language. Kelly (1966) and Howatt (1984) showed that issues in language teaching were not new. Today, it is English the most studied, years ago it was Latin. However, the question to be raised is 'who is implicated?' Linguistics may reveal facts about language, thus describes the language. The description of language is the way in which the language is broken down and described for the purpose of learning. Terms such as structural, functional, notional belong to this area. These terms are ways or attitudes to teaching. Usually insights are presented by the applied linguist and mediated by the teacher who is a facilitator. We will see in the late discussion the role of the teacher. However, the role of the applied linguist is to identify these insights and validate them. S.Pit Corder (1973) argues that *'the researcher is the producer of theories, and the teacher is the consumer.'* Moreover, Brumfit (1983) asserts that the domain of the researcher is that of the teacher. As modern languages enter the curriculum, they were taught using the same principles that were used for the teaching of Latin such as grammar rules, lists of vocabulary and sentences for translation. A typical text-book in the mid of the nineteen century consisted of rules of grammar and exercises (Plotz 1819-1881). From this, Grammar-translation method was generated in USA. Later; this method was rejected since its principles were to read literature, memorization of vocabulary and translation.

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Later on, there was a demand for the oral skill. Reformers believed that the study of the spoken language is primary. The direct method was introduced in France, Germany and USA. It was based on interactions, and grammar was taught inductively. In addition, for the audiolingualists, structuralism was a source of truth, and the focus was on inductive learning. They focused on the spoken skill. On the other hand, the transformationists have been cautious about the application of transformational grammar in Foreign Language Teaching. Chomsky (1966) argues the following:

'I have been rather skeptical about the teaching and the practices of languages, of such insights and understanding as have been attained in linguistics and psychology...It is difficult to believe that either linguistics or psychology has achieved a level of theoretical understanding that might enable it to support a 'technology' of language teaching.' Chomsky (1966:43)

According to him, principles of psychology and linguistics add useful insights to language teachers. In transformational grammar, the innate acquisition device LAD is crucial since it provides principles of grammatical organization. Data in TG is based on intuitions and judgments about sentences. The transformationists were more concerned with the system that underlies language. The focus here is on competence (grammar) rather than performance (doing). In this case, in order to generate sentences is a matter of innateness. In fact, language is a 'rule-governed thing' and not a matter of a set of habits. A person is ready to learn a language. The capacity to learn is genetically determined. Later on, Firth, Halliday, Wilkins and Sinclair say that learners master a set of grammar, but are unable to use them in context. This approach gave importance to speech acts, notions and functions and discourse. The notional/functional syllabus is a model. In order to understand these principles and insights, let us see the difference that lies between an approach, a method and a technique.

According to Anthony (1963) an approach is a set of assumption which deals with the nature of teaching and learning; a method is a plan for the presentation of language material. It can refer to the theoretical analysis of the procedures used for a particular field; a technique is a trick or a stratagem. It takes place in the classroom. For example, proposals at first can be at the level of approach, and a method is usually derived from an approach. Of course, the choice of a method implies the time involved; the availability of the aids; the size of the class; the learners' age and their needs. In order for an approach to lead to a method, it is necessary to develop a design for an instructional system. Usually, the term approach is related to the theories about language. It describes how language is used, and how learners acquire a language; whereas, a method is related to the realization of an approach. It deals with the types of activities, the roles of both the learners and the teachers, and the material used in the classroom. On the other hand, a technique is related to different types of materials such as video or tapes or to ask students to work either in groups or individually. Usually, teachers have no real ideas about what they are going to do before a lesson starts.

According to Harmer (2007:365), *'the lesson is created moment by moment with the teacher and the learners working with whatever is happening in the room.'* For him, this is called a 'jungle path' lesson. An interesting example of this is to ask the students about their holidays. In this case, the teacher will focus on both the form of the language and on the meaning. In anytime during the courses, the teachers can modify their plan. Harmer (2007:366) names this 'magic moments'. For him, magic moments mean when a conversation develops in a natural way and which is unpredicted. This moment starts when the students want to talk about an interesting topic and everybody want to say something. Therefore, it is very important to recognize the magic moment according to Harmer. In fact, all well-trained teachers, let us say experts can notice this in the classroom, and can appreciate this magic moment. Sometimes, the activities we plan may fail simply because of lack of time or because of the absence of some students. It is crucial to find other activities to fill the time in case our activities finished quickly, but how about

the absence of the students? Thus, sometimes it may be impossible to rely on our plan, and may fail. In what follows, we will try to discuss the syllabus and how we organize it.

III.2.3 The Syllabus: Definition

According to Widdowson (1990:98), *'a syllabus is inert and can be actualized through activities in the classroom.'* He also argues that *'It is concerned of as a collection of atomistic linguistic elements which are functionally and formally defined.'* In addition, it is seen as an organizational program, a plan of teaching. According to White (1988), there is a distinction between a curriculum and a syllabus. The curriculum is 'the totality of content' to be taught, and realized within an educational system; whereas, a syllabus is the content of one subject area. Syllabus design refers to the planning of courses. Moreover, a syllabus is a statement of content, methodology, aims and evaluation. Here, we can state the work of Johnson, k (2001). What is important in fact is to understand really that a syllabus is a guide that can help in the teaching process; however, it is the task of the teacher to think about an appropriate methodology in order to make it alive. Hutchinson and Waters (1987:80) say that a syllabus can be described *'as a statement of what is to be learnt.'* Moreover, Yalden (1987:87) argues that a syllabus is seen as *'an approximation of what will be taught and that it cannot accurately predict what we will be learnt.'*

In the case of ESP, syllabus design is based on needs analysis. Bell (1981:36) comes up with the following points which are crucial in the design of a syllabus: needs analysis, specification of skills, and the selection of teaching strategies, feedback and evaluation. We will tackle all these in the following discussion. It is of paramount importance to see that both syllabus design and methodology are necessary components in the teaching process. The syllabus specifies what to be learned and methodology tells how to be learned. Methodology is simply a way to transmit the content of a syllabus. For example, learners learn a language by using it to achieve meaning. This requires activities and up to dates resources to promote language use. It is necessary to go beyond language production. Activities such as role-plays, games, problem-solving and transformation

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exercises are encouraging for the production of language and the use of language in real-situations. Language in use encourages teachers to look carefully at the content of the syllabus. He/she can readjust, modify or delete if necessary. Since learners are involved with language in use in real-situations, it is crucial to think about activities that may enhance communication. In this case, students produce language in order to use it appropriately in context. The productions of correct sentences are not enough. They must be able to apply that knowledge. Teachers can teach the present continuous as follows:

What are you doing now? The students may answer 'we are writing'. Moreover, it is very interesting to ask them the following question: 'what is the difference between the use of the present simple tense and the present continuous'. Generally, in this case, teachers can demonstrate this difference by presenting examples in context. We will see this in the models we will present at the end of this work. Usually, language program are based on a grammatical syllabus, and may be described as communicative if it rests on a communicative methodology. In fact, these kinds of syllabuses are based on patterns that may illustrate communicative functions.

In ESP, this can work since ESP students in Algeria have serious problems when it comes to the production of sentences. The majority of the students don't know how to form correct grammatical sentences. Therefore, it is very important to focus on grammar and vocabulary at first. We really need to help them to be familiar with the most grammatical elements such as tenses, prepositions, the linking words, the modals; the passive voice...etc. It is good to base our syllabus on presentation, practice and production. At the presentation level, the teacher can model a form or a sentence pattern; however, the students are required to produce that form. At the practice level, the students may answer to a question using an appropriate form. On the other hand, the teacher may ask a series of questions:

- What are you doing in the afternoon?
- What are you doing at the weekend?

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At the presentation stage, the focus is on the form. It is difficult to see how activities can be regarded as communicative. A grammatical syllabus or a structural syllabus focuses on the production of grammatical sentences; whereas, a communicative methodology focuses on real communications. Therefore, can we call the presentation stage and the practice stage communicative? This is really a dilemma. However, in this situation, it is the role of the teachers to make their grammatical syllabus. They may teach grammar through the use of a communicative methodology. This may be possible if the content of the syllabus contains activities that can promote communication. The main question then is 'can students communicate without the production of correct grammatical sentences?' We cannot construct an ESP syllabus without focusing on grammar. In this case, grammar should not be neglected. It is also important to analyze deeply the term 'specificity of aims' in ESP to understand the development of a syllabus. According to Widdowson (1983:7), '*by aims I mean the purposes to which learning will be put after the end of the course*'. He also makes a distinction between competence and capacity that we have mentioned before. For him, competence means the ability to create meaning. In this case, objectives are linked to the linguistic system and the social rules for appropriate use. Capacity means procedures and techniques used for communication; on the other hand, competence means rules and norms of language. Teachers should develop in learners a capacity to achieve their learning objectives; that is to say, the use of language for effective communication. Therefore, '*the study of language independently from communication is seen as a perversity*.' Searle in Atkinson (1982:23). In fact communication is not semantic, but encoding and decoding meaning in sentences. A communicative view is a combination of both structural and functional views. The structural view is not enough. Consider the following sentence: Shall i go to the cinema? From a functional point of view, it may be a request-a suggestion; whereas, from a structural point of view, it is an interrogative. This sentence implies a shared interpretation; therefore, when we speak, we assume the hearer's comprehension. The knowledge shared is cooperation between us and the hearer, so communication is based on the cooperative principles too, Grice Maxims (1975). These principles help the participants to negotiate meaning, and to achieve communication. Over the years, a

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variety of syllabus types have been suggested. Many courses have been based on a grammatical syllabus; others have grouped their teaching items in sequences of topics (the weather, the travel, sport...). Functional syllabuses have listed functions such as inviting, and situational syllabuses have been based on situations (the bank, the restaurant, and the office). Other syllabuses are based on different tasks that can be performed in the classroom such as role-plays. Furthermore, a language teaching syllabus involves a combination of the subject matter (what to teach) and linguistic matter (how to teach). In fact, syllabuses deal with theories of linguistics and learning, and how they are used in the classroom. What is important in the teaching process is the way to determine the main elements in choosing a syllabus. In ESP, it is of paramount importance to ask ourselves the following question: 'what type of syllabus we can present to our ESP students? Can we neglect the grammatical syllabus as such? Can we think about a multi-dimensional syllabus?

In the context of language program in the ESP context, it is crucial to take the needs of the learners into consideration, and the context in which the language program is to be implemented. According to Hutchinson and Waters (1987:81)

'A syllabus refers to what is to be learnt with some indication of the order in which the items should be learnt.'

In this case, the main orientation of such a syllabus is determined by the needs of the learners, with an indication of how the content may be used to respond to the main expectations of the learners. Moreover, the syllabus will incorporate aspects of the students' discipline of study in order to motivate them. The syllabus in ESP should be based on the teaching of English language and the subject matter in order to help the participants in it to improve their skills. The major goal of this syllabus is that students will be able to understand the language when spoken or written. As we have mentioned before in this chapter, Widdowson (1983) suggests that syllabus objectives vary considerably. On the other hand, courses may be related to capacity, and in this case, the

objectives will lead to the development of procedural knowledge required to exploit the competence elements of language and its use. For example, many designers base their syllabuses on grammatical items; others may base it on functions and notions or tasks. In what follows, we will shed light on the different types of syllabuses.

III.2.3 Types of Syllabuses

The purpose of this distinction is to introduce the main different types of syllabuses applied in the domain of ELT. To begin with, it seems of great importance to define the term syllabus in order to have a better understanding of what it actually means and to which aspects of ELT it is related. For example, in recent years, the focus of syllabuses has shifted from structures to situations; functions and notions to topics and tasks. In this sense, Nunnan (1988:52) argues that '*the traditional distinction between syllabus design and methodology has become blurred*'. While Prabhu (1984:96) says that '*the function of a syllabus is to specify what is to be taught and in what order.*' In addition, syllabuses are not completely distinct from each other.

III.2.3.1 Synthetic vs. Analytic Syllabus Types

Synthetic syllabuses segment the target language into discrete linguistic items. Different elements of language are taught in a separate way. In this case, acquisition is a process of gradual accumulation (Long and Crookes, 1993). According to them, synthetic refers to the learner's role and his task is to re-synthesize the language that has been broken down (structures and functions). Lexical, structural, notional, situational and functional syllabuses are synthetic. On the other hand, analytic syllabuses are organized in terms of the purposes for which people are learning L2. It refers to the operations required of the learner. Procedural, process and task syllabuses are all samples of the analytic syllabus type. For Wilkins (1976), a synthetic syllabus is linked to a grammatical syllabus, though many people may argue that it is not necessary the case; however, the analytic syllabus is linked to purposes of learning. The starting point here is purpose and not the

structuring system of language. By purpose, we mean the communicative purpose in which language is used. Wilkins (1976) also distinguishes between a synthetic syllabus type A (product syllabus) and analytic syllabus which is type B (process syllabus). In type A, the focus is 'what is to be learnt'; whereas, type B focuses on 'how to be learnt' and is a matter of negotiation between the teacher and the learner (doing things for or with the learner).

The most syllabuses types are those which the syllabus input is graded and selected, and the content is derived from models of linguistic descriptions. It is very important too to understand deeply the concept of a syllabus. It refers to the planning of courses; whereas, syllabus design means the implementation, timing and evaluation of courses. Thus, a syllabus is a statement of content which carries with it methodological implementations. What is necessary then is that content is placed number one in any teaching program.

III.2.3.2 The Structural Syllabus

In this syllabus, units are constructed in terms of structures (how to order items).

- Simplicity: from the simple to the complex structures.
- Sequencing: Putting things together (some and any)
- Frequency: to teach the most frequent used forms (words with different meanings or structures.
- Utility: to teach the most useful items first.
- Teachability: to teach easy things before difficult things.

(Wilkins 1976:98)

Moreover, the content of the structural syllabus is formal and the consequence is linguistic competence. According to Wilkins (1976), a structural syllabus is 'constrained to ordered items to be synthesized in the learners' mind as knowledge.'

Again, we can say that any sentence can carry a communicative function and a formal category. In this sense, we can deduce that a synthetic syllabus defines its units semantically and the analytic syllabus works pragmatically. We should bear in mind that in the case of a structural syllabus, communication may or may not be achieved through classroom activities. Learners may acquire a set of grammatical structures and this fact does not imply necessary that they will achieve communicative acts in real contexts. The main question then is 'can we rely on the structural syllabus? Is it possible to construct the content and base it on the structures to be learned?

In ESP, the primary focus will be on the learners' needs and the objectives of learning the language, and the main objectives of the Computer Science students is to use language to communicate in authentic situations (using the computer, communicating orally in conferences, writing reports, summaries and articles and extracting information for their research objectives). Therefore, it is impossible to rely only on the structural syllabus, but this fact does not imply to neglect grammar as such.

III.2.3.2 The Notional/ Functional Syllabus

Wilkins (1976) includes in his book categories of communicative function doing things such as promising. A functional syllabus may take the following form:

- Requesting
- Offering (would you like me to...)
- Inviting

In fact, teaching functions is not enough. One should add other things for a wider syllabus. The notional/ functional syllabus implies that the subject is to be taught as units of communicative performance. The term notion means a particular context in which people communicate. A function is a specific purpose in a given context. The notion of shopping requires several language functions such as asking about prices or features of a

product. Proponents of the notional /functional syllabus (Van Ek and Alexander, 1975; Wilkins, 1976) help the learners to develop their ability to communicate effectively. Moreover a notional syllabus is organized in terms of content rather than form. Concepts such as linguistic categories; usage and use; significance/ value; correctness/appropriacy; sentence/utterance; proposition/ illocutionary act; cohesion/ coherence; linguistic skills/ communicative abilities are defined by Widdowson (1978) to distinguish between language as a formal system and language use as effective communication. Generally, students know their grammar, but lack communicative ability. The notional/functional syllabus adds a communicative dimension to their knowledge so that it can be used for doing things with language. Learners of English for Computing Science need more than knowledge of linguistic forms which correspond to communicative functions; that to say, the ability to actualize language in context. They must have a certain ability to understand linguistic structures and lexis. Knowing a language involves a grammatical knowledge and how it functions too. This knowledge has to be used in context in order to achieve meaning. We may define it as the ability to put knowledge in action. Thus, we are concerned with knowing a set of grammatical elements and lexis, and how they are used appropriately in context. Learners are not only concerned with what they know, but also with what to do with language. However, the main question is 'are we concerned with competence or performance in ESP? In this context, Hutchinson and Waters (1987:28) state the following:

'We need to make a distinction between the performance repertoire of the target situation and the competence required to cope with it. The competence providing as it does, the generative basis for further learning is the proper concern of ESP.'

In fact, the underlying forms of language (competence) are much important than performance, in the sense that knowing a language may help the learner to built correct grammatical sentences. Grammar in this case may be an emergency for them in the comprehension of unfamiliar passages; however, in ESP performance is crucial because

this kind of learners need to know what to do with language such as to cope with different situations. We can notice this in the case of Computing Science students. They need both the form of language and how to actualize this knowledge to negotiate meaning. Sometimes they learn grammar but when it comes to practice they fail. We can see this failure when we ask the students to summarize a text in their specialty, or to ask them to discuss a topic orally. Moreover, the notional/functional syllabus does not neglect grammar as such, but it is distinct from the grammatical syllabus in the sense that it has a communicative orientation. Widdowson (1990:131) says '*a syllabus which defines its content in functional terms is used for communicative competence.*' In addition, grammar and situational factors are superior to a grammatical syllabus. In the context of ESP, many designers opt for this syllabus because it is based on language in use. The ESP teacher should be concerned with materials that aim to explain how meaning is generated; for example, text diagramming type of exercises which are used to explore functions such as generalizing and exemplifying (Widdowson, 1979). On the other hand, Hutchinson and Waters (1987:28) state that the notional/functional syllabus may take the following form:

Properties and shapes

Location

Measurement

Quantity

In English for Computing Science, the objective of courses has been to look beyond the sentence (what we can do with language?) The approach we are using in this research is based on the belief that learning a language is not only a matter of learning sentence patterns and vocabulary, but also involving people to use these linguistic forms to communicate. The oral skill prepares the students for taking part in Academic discussions. The following is a syllabus based on the Communicative Approach:

-Function: Describing/expressing contrast

-Language form: The tenses (present, past...)

-Function: Expressing similarity and difference

-Language form: Whereas, unlike

-Function: Expressing cause and effect

-Language form: Because, since, consequently

-Function: Expressing possibility and obligation

-Language form: Have to, ought to, must, and may

It is very important to note that both the notional/functional syllabus and the structural syllabuses are complementary. The notional/functional syllabus is a structural syllabus in mind, synthetic in procedure and with an analytic result. Both syllabuses are concerned with content and with what to teach; for example, 'shall we go to the university?' This sentence has a communicative function; whereas, in the structural syllabus, it is an interrogative. Both syllabuses achieve communication, but differently. The structural syllabus denies the communicative aspect. This fact is very important. The structural syllabus does not encourage communication since it is based on a set of grammatical rules and a list of words to be learned. Many ESP teachers use this syllabus in order to avoid problems such as the scientific knowledge of Computing Science. We have seen teachers presenting a long list of terms linked to the field of Computing Science and their definitions and some grammar rules in order to teach them how to built sentences in English, and in few occasions, sentences to translate. Of course, this may be interesting but not enough. We hope that teachers of ESP should focus on a syllabus that fits the learners' needs and based on the Communicative Approach to language teaching. As teachers of ESP, we should know that learning a language includes learning the agreed meaning of certain strings of sounds and learning how to combine these units into larger units which also in their turn convey meaning. According to Roman Jakobson, '*language without meaning is meaningless*'. Therefore, we comprehend sentences because we know the meaning of the words, and we know the main rules for combining these meanings.

However, is this enough to learn a language? Knowing a language includes knowing the implications in the meaning of some words and certain sentences. Thus, the role of the teachers is to help the students to achieve comprehension beyond the sentence by choosing the right syllabus that fits these expectations. In the next discussion, we shall look at the task –based syllabus.

III.2.3.3 The Task-based Syllabus/ the procedural approach

The procedural approach is associated with the work of Prabhu (1987). He organized in Bangalore a programme named 'procedural syllabuses'. According to him, the best way of teaching grammatical structures is to focus on the meaning or the message rather than the structures themselves. The focus is on what is being said rather than on how it is said, or to pretend asking about the message when you are interested in form. This process analytic syllabus is based on tasks, information gap and reasoning. In the classroom, the focus is on the performance of tasks such as the interpretation of timetables, map readings and the translation of charts and tables. This can work in ESP, and more particularly in Computing Science since students rely on statistics, tables and numbers. Usually, we ask the students to transfer diagrams and charts into written texts, and these are tasks. Tasks refer to the work we are supposed to do. They can be the activities performed by the students in the classroom.

'Tasks are the things people will tell you they do if you ask them and they are not applied linguists.' (Long 1985:89)

Furthermore, this type of syllabus does not refer to what the syllabus designer does, but to the operations required of the learner. In this case, we are basing our approach on the learner's analytic capabilities. That type of syllabus relies on the learner's assumed ability to induce rules and the innate linguistic knowledge. In the Communicative Language Teaching Methodology, tasks are considered valuable because they encourage learners to modify and experiment with language. Moreover, Prabhu (1987) asserts that

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tasks can be graded according to difficulty. This syllabus is designed for completing meaningful tasks. Thus, this syllabus aims to develop language competence through the process of performing tasks. In addition, it promotes and encourages collaborative learning. We should bear in mind that each type of syllabus is of great significance, in the sense that it takes into account the learners' needs and contexts. However, it is crucial to note that a syllabus should involve a combination of two practical questions (what to teach and how to teach). The main objectives of the task-based syllabus are the followings:

- A focus on the learner's expectations
- A focus on learning to communicate through interaction
- To introduce authentic texts
- A focus on teaching real language through the use of authentic materials

In order to understand the notion of task, we need to define it deeply. There is a distinction between real- world tasks and pedagogical tasks that are suggested by Long (1985). Real-world tasks refer to use language in the world; whereas, pedagogical tasks are those that occur in the classroom. Long (1985) argues what follows:

'Real-world tasks or target task are a piece of work undertaken for oneself or for others; freely or for some reward. Thus, examples of tasks include painting a fence; dressing a child; filling out a form.....In other words, by task is meant the hundred and one things people do in everyday life, at work, at play and in between.' Long (1985:89)

This definition is non-linguistic. It just describes the kinds of things people can do in the outside world (the street). However, when these tasks are transformed from the real-world to the classroom they become pedagogical. By definition, tasks can be defined in terms of what the students will do in the classroom. Breen (1987) proposes another definition of pedagogical tasks. He proposes the following:

'Any structured language learning endeavour which has a particular objective, appropriate content, a specified working procedure, and a range of outcomes for those who undertake the task. Task is therefore assumed to refer to a range of work plans.' Breen (1987:23)

This definition means simply what the learner does in the classroom. By 'any structured language learning', the author implies that any work in the classroom is a task. Generally, not all activities presented by teachers in the classroom qualify a task because some activities deny the communicative aspect of language teaching. Asking students to read a text is not really a task, but an activity even if an activity is a task itself. We should be careful in defining these two concepts. Therefore, 'is there really a difference between a task and an activity?

Ellis (2003: 16) defines a task as follows:

'A task is a work plan that requires learners to process language pragmatically in order to achieve an outcome that can be evaluated in terms of whether the correct or appropriate propositional content has been conveyed.'

In fact, each definition of task depends on the purposes in which the task is used. Furthermore, the difference that lies between a task and an activity is that the task is a communicative act that does not usually focus on a grammatical structure and may have just a non-linguistic outcome; on the other hand, an activity which can just be a simple exercise may have a linguistic outcome. Usually, exercises are controlled by teachers and the focus can be on a linguistic skill, and it is not necessary communicative and authentic as opposed to tasks which are authentic, used in contexts and are focused on several skills.

In fact, syllabus designers are concerned more on how to satisfy the learners' needs to be able to interact in real-world context. In addition, activities are general frameworks in the classroom such as 'look at the text; discuss; write down'. On the other hand, tasks are specific works that students are asked to do such as discuss in pairs; make notes; compare and contrast; summarize. Such tasks require the students to practise specific skills of thinking and reasoning, and this process is very important for the students since it allows them to react naturally. Moreover, tasks are simply a work that allows learners to comprehend, handle, produce and interact in the language without focusing on grammar in order to be able to express meaning and to negotiate it. In this case, we don't imply to neglect form, but to concentrate more on meaning since form and meaning are connected. A further definition of task is proposed by Breen (1987:161) who states that a task-based syllabus is achieved in two types: 'communication task' and 'learning task'.

'Communication task prioritize the purposeful use of the target language in the negotiation of meaning; whereas, learning task aims to explore the workings of knowledge system'. Breen (1987:161)

Therefore, according to him the learning task aims to facilitate the participation of the learners in communication, and help students to solve a problem. This definition is the same as that of Prabhu (1987) who argues that tasks can be performed by the students in the classroom. Such tasks are problem solving. We will give some examples in practice. An example of the task-based syllabus is the procedural syllabus proposed by Prabhu (1987) as we have mentioned before. According to him, the objective of the procedural syllabus is the development of grammatical competence. Learners can achieve linguistic competence by accomplishing tasks in order to convey meaning. Therefore, learners of ESP can acquire communicative competence through the negotiation of meaning. When giving tasks, the teacher has to consider learning abilities (what the students are able to do with the language). Thus, the role of the teacher is crucial in this enterprise. We will discuss the role of the teacher in the late discussion. Now, we would like to present an

example of the task-based syllabus in teaching English for Computing Science. The following framework may be used in the creation of a task-based lesson. Later details will be given in practice. This framework is similar of that of Willis (1996). Three stages were suggested:

*Pre-task which includes a model of the task such as presenting a picture, or a video demonstrating the task.

*Task stage which requires the students to complete a task. For example, they can work in groups (role-plays). In this case, the teacher is no more than an observer. This methodology is student-centered. The students can also prepare a written passage and present it to the class.

*The language focus-stage: At this stage, the teacher reviews what happened in the task and analyses the problems of the students. The problems can be grammatical errors, or the miss-pronunciations of some words.

The language programme conducted by Prabhu (1987) as we have mentioned before was based on the structures that can be learned when the student's attention was focused on meaning. This project was criticized by Beretta (1989) for its poor results in the area of productive skills. Skehan (2002:294) states that language is:

'a rule governed system and learning is more likely to take place when individual learners, through engaging with naturalistic language material, notice things that are now, and then try to fill the gap that they have noticed.'

Of course asking the students to notice language forms in context in this way is interesting and very motivating. We do agree with Skehan since language is best learned

with up to dates resources and materials brought from the real world. This what Skehan means really by 'a natural way'. Therefore, the aim of the task-based syllabus is to stimulate language in use and create a suitable environment for learning. Basically, this model can be very interesting if we concentrate more on the productive skills such as speaking and writing without of course neglecting grammar as such. It is very important if we modify, delete or add other factors in order to make the syllabus more effective. In the followings, we will tackle some of the principles of applying a syllabus in English for Specific Purposes, and more particularly English for Computing Science.

III.2.4 Criteria for Applying a Syllabus

Some of the principles that can be applied in the organization of a syllabus are selection and sequencing (grading). One of the main principles is subdivision, in the sense that the content is subdivided and sequenced. This subdivision involves the division of the subject-matter (structures, functions) into units (topics, situations and grammatical elements). On the other hand; sequencing involves the development of the subject-matter.

It is important as designers to construct our plan according to the discipline; to the expectations of the students and to the context. Therefore, the syllabus may be sequenced on the basis of the learners' needs, the discipline and on learning. In this case, we can start by the subject-matter since it is the most easier to learn. Considering the idea of easiness seems to be not logical in some cases since we cannot predict which aspect of syllabus is difficult or easy. We always are approximate in implementing a syllabus in terms of fit. The designer cannot really draw a syllabus and implement it without trying it first. It is crucial for him/her to draw a plan, to try it, evaluate it, and finally to implement it. In this case, the plan can be a guide and serves for the activities for teaching and learning. We can only predesign at first. Thus, a syllabus is '*an organizational programme, a plan for teaching.*' (Johnson, K.2001)

In the construction of a syllabus, it is of paramount importance to state that a syllabus is a statement of content, methodology, objectives and evaluation. Usually, people who design syllabuses are familiar with what goes in the classrooms. This can pave the way to delete, modify or add what is necessary. Thus, we shall take the term planning to mean constructing the content, the materials and the activities for the purpose of learning and teaching. From this perspective, planning can be part of the organization of a syllabus. We don't have to stick at plans. Plans are made to help us in the classroom and can avoid us to absorb the routines. Moreover, ESP courses are determined by the prior analysis of the communication needs of the learner. The designers should take into consideration the level of the students and their expectations. These linguistic and pedagogic questions can help ESP teachers to design effective programmes. As a rule, the first and most important factor to be considered when designing materials is the learners. Here, we mean the level of the learner's competence, their needs, motivation, the students' experiences (life and educational background) and their purposes for learning English. In addition, Breen (1984) states that a syllabus is '*a plan of what is to be achieved through our teaching and our students' learning*', while Prabhu (1984:49) states that the main function of a syllabus is '*to specify what is to be taught and in what order.*' Moreover, Webb (1976) argues that '*a syllabus is understood as the organization of the selected contents into an ordered and practical sequence for teaching purposes.*' His criteria for syllabus design are the followings:

- *Progress from known to unknown matters
- *A proper variety of teaching units
- *Teachability
- *Creating a sense of purpose for the students.

On the other hand, Shaw (1976) sees the selection of content to be concerned with the followings:

- How much can we teach or how much can be learned by the learners
- Which items should be included?

He asserts that the criteria for selection are based on usefulness and difficulty.

While Pit Corder (1973:95) says that

'The ideal syllabus would be one which the sequencing of item taught logically derives from and presupposes the learning of some previous items.'

He also focuses on 'natural syllabuses'. However, it is not obvious to allow such a natural ordering. Wilkins (1976) suggests that language should be taught from the simplest items to the more complex in order to facilitate the task of learning. Brumfit however, points out that it is crucial that the content matter should be organized with priority with teaching purposes. He distinguishes two criteria for organization, 'intrinsic' and 'extrinsic'.

Extrinsic refers to the extent to which items in the syllabus are elements of a system. In fact, syllabus organization is determined considerably by extrinsic factors such as learners' needs and pedagogical factors. No matter how well a syllabus is developed if it is not implemented. There are factors that may affect the choice of a syllabus such as organizational, educational, learner, teacher, material and methodology. For instance, learner factors involve the age and background of the learners; however, teacher factors involve the training and experience of teachers. What is important is the achievement of the objectives, and more experienced teachers prefer freedom and responsibility in designing their syllabuses.

In our case, we usually grade the syllabus on the basis of the selection of grammatical elements, learnability and teachability. In the process of designing an English syllabus for Computing Science, we may consider the following:

- Language should be used for communication
- Learning should be used in a suitable environment (relaxed environment)
- Activities should engage the students in authentic language use
- Tasks that encourage cooperative learning

Since we have chosen the task-based syllabus, it is crucial to follow the principles below:

- The role of the learners/teachers
- The importance of authenticity
- Tasks that engage the students in oral interactions
- Tasks and activities that require the learners to arrive at outcomes from given information through the process of thought.

Generally speaking, items of a syllabus should be ordered according to the following criteria: simplicity, sequencing, frequency, utility and teachability. According to Harmer (2001:296), a syllabus is based on the following principles:

- *Learnability: to teach easier things first. We may start by teaching 'is' and 'are'
- *Frequency: to teach the most frequent items. For Harmer, the word *see* denotes vision first for the non-natives; however, it denotes understanding for the natives.
- *Coverage: there are some words that are more important than others (scope of use). Teachers must decide which items should be introduced first, the case of 'going'.
- *Usefulness: to teach the most useful words; for instance, words such as mouse, keyboard, screen, memory, processing which are useful in the classroom.

As a rule, we can say that a syllabus is a vital tool for mediating the expectations between students and teachers as opposed to using a textbook which cannot fit the learners' needs in our case. The syllabus refers to a particular plan of a course study and a document that details the structures of the classroom. Furthermore, it is the basic reference document that guides the students and the teachers through a course. Its functions are both informative and pedagogic in nature. Syllabus designers should take into account the proficiency level of the students. A course designed for Computing Science students should concentrate on improving the language proficiency and scientific competence of

the learners. We have to think about improving all the four skills as well as improving the mastery of the scientific content of the syllabus. The role of the teacher in this enterprise is of paramount importance. We will shed some light on the role of the teacher in English Language Teaching in general, and in English for Specific Purposes in particular.

III.2.4 The Role of the Teacher

The term role is defined as a part people play in society. Widdowson defines it as what follows:

'Prescripts or scripts which constrain the individual person to assume a persona in conformity to normal and expected patterns of behaviour.' Widdowson (1990:181)

Thus, a role is a particular behaviour linked to a particular situation. The classroom is the content where these roles are played. For Widdowson (1990), the classroom is not only seen as a physical place, but also as a social one. Hymes (1972:60) suggests setting and scene. Setting refers to the physical context; whereas, scene refers to the socio-psychological one. In fact, for Widdowson (1990:182), 'the scene defines the context'. The teacher seen as the protagonist, enters the scene to act, and the learners are there as participants to illustrate the scene of the theatre. Are not these roles that can be performed by teachers in an artificial setting which is the classroom?

In addition, teachers must create a suitable environment for effective teaching/learning. With advanced students, this may be possible and an easy task. In the teaching of Computing Science students, it is important to show the audience that we possess knowledge, being aware that the students are specialized in processing, programming, modelling, system software and many other fields in the domain of Computing Science. Therefore, the teacher must be well-trained in order to gain the confidence of the students. In addition, special attention is drawn to the question of the

roles of the teachers in educational setting. In fact, the teacher has different acts to play in the classroom. Widdowson points out the following:

'As in other areas of social life, success in transaction and interaction in the classroom depends on our knowing the parts we have to play and how they relate with those that others enact in the encounters in which we are engaged.' Widdowson (1990:182-83)

From this perspective, one can say that there are various roles played by the teachers. We usually speak about school master, school mistress, teacher, pupil, student and learner. All these names have symbols. For example, pupil/student shows a social category. Littlewood (1981:91-92) calls the teacher a facilitator of learning, and his task is to coordinate activities. Harmer (2001:236-237) suggests eight roles: controller, assessor, organizer, prompter, participant, facilitator, tutor and investigator. He/she is a Controller because he is in charge of the classroom. He/she is an assessor, in the sense that he/she assesses the level of the students, and an organizer because activities may depend on good organizations. According to Richards and Rodgers (1986:78), the role of the teacher is a needs analyst and group processor manager. Dudley-Evans and St John used the term ESP practitioner, and identify five roles: Teacher, course designer and materials provider, collaborator, researcher and evaluator. Generally speaking, teachers of FLT have been subject to a variety of methods, theories and philosophies which were the result of the changes that occurred in the field of education. Years ago, teachers needed some knowledge of the language and some methodology. Today, a wide knowledge is required to form and train teachers in order to fulfill their job. A shift is from teacher-centered to student-centered. For example; teachers should determine the needs of the learners taking into consideration some of the characteristics such as age, ability, motivation and previous language experience. Thus, the teacher should not represent authority in the classroom, but rather he/she is a manager of the classroom. In this case, they are seen as assistants. This word means to assist learners to develop a capacity to interact. Celce-Murcia (1983);

Brumfit (1979); Littlewood (1983); Madsen (1983) state that the teacher is a facilitator of the learners' learning. The major responsibility of the teacher is to establish situations that will promote communication. He/she may act as an advisor by explaining and answering the questions frequently asked by the students since the students are negotiators of meaning within the communicative approach. In addition, this approach allows students to learn tasks in authentic situations. In this case, teachers provide the tasks and the students practice functions that may apply to different settings. According to Larsen-Freeman (1986), the teacher can be a supporter and should encourage students to work freely. Sometimes this cannot work really when the number of the students is very high in the classroom. However, he/she can be a prompter, in the sense that he/she should encourage his/her students to participate in discussions and decision-making. According to Harmer (1983), the role of the teacher should go beyond the traditional classroom, but he/she should be a controller of the activities and an evaluator of correctness and errors. On the other hand, Peterson (2004) believes that the teacher should be a manager, administrator of material and a facilitator of the task of teaching. The teacher performing these roles may help the students to live in a real-life situation. Usually, the students think that teachers are people who know everything, and the main role of the teacher is to give his/her knowledge to them. This view is right, in the sense that teachers are 'knowers' of English, but learning English does not involve gaining knowledge. It involves developing the skills for effective communication. Furthermore, teachers can make the students good speakers or readers, listeners and writers. One should bear in mind that English teachers cannot just stuff students with English. They also need to do the followings:

- They need to make English study as attractive as possible relying on authentic materials (computers, overhead projectors, and podcasts)
- They need to teach students how to acquire English effectively
- Teachers should use interactive activities that encourage communication in the classroom.
- The courses should be designed with primary attention to content (computing science)
- They should promote cooperative learning through interactions

-Teachers should be needs analysts in order to be aware of the expectations of the students

In addition, it is necessary to expose students to learn by doing. They should expose the students to real situations, and help them to learn what they really need in order to accomplish goals. Furthermore, learning is more effective if both teachers and students are actively involved in the teaching/learning process. In the Algerian context, some of the English language teachers have the final word in the classroom. This can lead us to ask the following question: 'what makes a good English language teacher?' Therefore we propose the followings:

- A language teacher should be able to find out the main difficulties of the students
- He/she should be well-behaved and organized
- He/she should possess knowledge of the subject-matter
- He/she should be self-confident and create student-centered situations
- The teacher should correct students with a sense of self-respect
- The teacher should be able to stimulate students to acquire language
- He/ she should be a kind of 'a psychologist' if necessary

From these perspectives, teachers can become more student-centered, and engage students in effective learning. In the case of ESP, teachers need to be able to teach both language and content in a simultaneous way even if this is difficult. Therefore, it is very important to see who deserves to teach an ESP student?

Then, the ESP teacher is required to teach students with specific needs. It is important that he/she should be knowledgeable about the specific content of the discipline. Of course, he/she should reconsider his procedures, behaviour, techniques and motivation in order to create a suitable environment for the process of teaching/learning. One of the most important tasks that teachers have to perform is to allow students to perform various tasks and activities in the classroom. To sum up, They should be good leaders. Moreover, we need to listen properly to students, and to show that we are interested in what they are

saying. This fact allows students to be more interested and motivated. In this respect Harmer states

'Correcting students are always a delicate event. If we are too critical, we risk demotivating them, yet if we are constantly praising them, we risk turning them into praise junkies, who begin to need approval all the time.'

Harmer (2007:115)

This view seems to be obvious, in the sense that some students are happy to be corrected while others may react differently; however, respect is very important since it may encourage students to react positively, and be productive. It is crucial that the classrooms today within the CLT approach may imply new roles for teachers. Thus, the primary goal of the teachers is to follow the principle of learning through doing. The teacher is the initiator of conversations in the classroom. This does not imply that he/she is in control of the conversation, but rather a helper. The teacher is responsible for motivating and encouraging the students to interact. In this case, the students can control the topics and discourse. He/she may select the content and the classroom activities, based on the learners' needs that may promote language development; for example, teachers can let the learners take the initiative for interactions and take risks with the language. Moreover, they can teach learners strategies to negotiate meaning as to ask questions for clarifications.

The idea of 'focus on the learner' changed really the roles of the teachers in the classrooms. Teachers should equip themselves with new types of syllabus, materials, tasks and evaluation. These issues require adequate planning to ensure the objectives of the lessons. In this context, the teacher must be a facilitator as we have mentioned before who provides comprehensible input and give feedback to the students. This task requires responsibility. Teachers have to select appropriate language tasks to fit the students' linguistic backgrounds. Therefore, they have to create co-operation among the students.

On the other hand, students have to be collaborators, problem-solvers and evaluators. In the next discussion; we will shed light on the role of the ESP student.

III.2.5 The Role of the Learner

Students should feel free to ask questions, or express their ideas about a topic, not only to their teachers, but also to their peers. This allows them to build their own knowledge, and should also be motivated about their learning. The main task of the students is to think because when thinking, they should be able to find some prior knowledge to apply to their learning. Moreover, they should coordinate the tasks for themselves and for the other groups in the classroom. They should be responsible for collecting materials for assignments, when given directions by teachers. The roles of both the students and the teachers changed within the Communicative Approach, in the sense that teachers will find themselves talking less and listening more, 'becoming active facilitators of their students' learning' (Larsen-Freeman, 1986). However, the students are supposed to do most of the speaking in the classroom. In this case, they may gain confidence in using the language, and feel responsible of their own learning. The Communicative Approach promotes learner autonomy in language classrooms; in this case teaching shifted from traditional teacher-centered to more learner-centered. Nunan asserts that this fact '*is an offspring of communicative language learning.*' (Nunan, 1988:179). This requires learners to participate and negotiate in interactions in order to build meaning by themselves (Breen & Candlin (1980). Thus, the learner-centered approach is based on the idea that learners can learn better when they are really aware of their own objectives. This model focuses on a shift from what should be done to what is specifically done by teachers in their classes. Therefore, the main objective of the learner-centered approach is to place more responsibility in students to manage their own learning, and teachers in this situation should be only facilitators of knowledge to help them how to learn. We can encourage autonomy by creating a suitable learning environment through the use of communicative tasks. However, it is unrealistic to believe that students will be able to achieve their goals. In the Algerian context, we do believe that this can be possible if there will be cooperation

between teachers and students in the ESP classroom as opposed to EGP. We should first think about qualified teachers that can be able to develop learner autonomy since ESP is still in its infancy in Algeria. The majority of ESP teachers believe that it is not possible for the students to learn by themselves, and the teachers still play an important role in preparing the lessons and creating tasks in the classroom. It is obvious that the learner-centered approach could not be applied in ESP classes because of the nature of English since English is not the first language of the students. The students are dependent on the teachers' explanations; on the other hand, we notice as ESP teachers that the learner-centered approach is more suitable for motivated students rather than slow students. The main reasons for a failure of this approach are low motivation, poor English, large classes and lack of authentic materials. However, the development of autonomy implies better language learning. But what does it mean by autonomy? Little (1990:7) argues that autonomy is not a synonym for self-instruction, and is not limited to learning without a teacher. Autonomy involves the guidance of the teacher. It also implies interdependence (Benson, 2001). He asserts that:

'Autonomy is the capacity to take control of one's own learning, largely because the construct of control appears to be more open to investigation than the construct of change or responsibility.' (Benson, 2001:47)

In this sense, learning is individual, and the learner in this process controls his/her own learning, and effective learning may happen when learners are free to choose the ways of learning that suit them best. This fact does not mean that they will learn without the help of the teacher. The students can only organize their learning and evaluate it. In our case, autonomy is based on interactions in the classroom, ways of learning and self-evaluation. Learners can only decide about their learning outcomes. It is almost impossible to apply total autonomy in ESP contexts. Thus, the main objectives of the teachers are to help the students to develop active and independent attitude to language learning and language use. They should enable learners to control their learning goals and guiding them to change

their view of learning; therefore, constructing their own knowledge using adequate strategies. We shall take the learning strategies to mean a specific behaviour the students can develop for effective learning; for example, students should use vocabulary strategies such as constructing schemata to identify words in context. Even if we are attempting to implement the new learner-centered approach to CLT, there are factors we have mentioned before in this discussion that make it impossible to apply in the Algerian ESP classes. What is successful in other contexts may be unsuccessful in our context since we have not equipped our ESP classes with sufficient facilities, resources and learning environments. Since we have discussed all the necessary concepts and issues in syllabus design and methodology in this chapter, it is very important now to shed some lights on the new system applied in Algeria which is the LMD system. This reform is applied today approximately to all the universities of Algeria. In what follow, we will present an overview of the LMD system in the Algerian context, and more particularly at department of Computer Science (USTOMB).

III.2.6 The LMD System: An Overview

The LMD system is a process which has been named (licence-master-doctorat or Bachelor's-master's-doctorate in English), a consequence of the Bologna Process. This system is a framework for university courses which is implemented in Europe and these days in Algeria. The LMD at the department of Computer Science is organized around three types of degrees: Bachelor's degree (licence), Master's degree (Master) and Doctorate (Doctorat). Since 2004, higher education in Europe and hence in Algeria is organized around three degrees (LMD). This system enables students to undertake some of their studies abroad and to valid the degrees obtained, and it ensures the quality education. Each year is divided into two semesters of 4 months:

The first semester (from early October to the end of January)

The second semester (from February to the end of May)

The examinations are held at the end of each semester

The English module is taught in the first year, second year and Master 1. This module is also important as the other modules of Computer Science. The course objectives of English within the LMD system should combine all the skills, with emphasis on speaking and writing skills within specified content area of work place. Based on different topics on Computer Science context, students are encouraged to engage in real-life tasks in order to be provided with a broader knowledge of vocabulary related to Computer Science, and to strengthen their command of English. Discussions and debates following the selected tasks that focus on producing reports, articles and summaries; for example, describing graphic information, interpreting charts and summarizing articles. Therefore, the English courses will allow students:

- 1-To Understand different texts related to Computer Science such as the different types of memories, kinds of viruses, language programming, components of the computer...etc
- 2-Writing reports, articles, summaries, abstracts, curriculum vitae and cover letters in English
- 3-Expressing themselves in English, creating debates and oral discussions such as the interpretation of charts and tables
- 4-Listening to native-speakers
- 5-Using good pronunciations of both the general and high technical terms
- 6-Translating from the source language to the target language
- 7-Attending seminars and conferences in English

In our case, the first semester is devoted to vocabulary, phonetics and grammar in use, while the second semester is devoted to reading and comprehending authentic texts, translations and writing summaries, reports, and articles (see the appendix)

The semester as we have mentioned before is ended with a two hours exam which consist of a text followed by questions of comprehension, a grammatical exercise, vocabulary and a translation exercise. Therefore, it is crucial to set up the main objectives

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of the LMD system such as the renewal of the whole educational system; the implementation of effective program and adequate methodology which enable the students to gain access to the work at all levels, and the transmission of cultural values and to be knowledgeable with their subject content. Thus, it is necessary to think about English for Computer Science program that fits these objectives since the scientific research is based on English.

Chapter IV

IV.1 Introduction

Previous research in the field of Computer Science showed that English language is of paramount importance in the academic and professional lives of Computer Science students. Bastukam (1998) pointed out that English is an essential tool in education; moreover, English is of particular importance for Computer Science students because it is the principle international language of science, and is an effective means that may enable the students to become familiar with texts written in English, and to be able to communicate effectively. However, Computer Science students at university of Science and Technology (USTOMB) have been low-competent in the English language. Generally, students feel that they complete their studies without any benefit from the English language courses they have taken. As a result of their poor performance in English, most of the graduate students have not been accepted when applying for work, were not able to attend seminars and conferences in English, and were unable to write in English or even to interact with foreigners. According to Bouhadiba (2000:97), the reasons for low-achievement are that:

'No adequate responsive educational or pedagogical programs have been suggested so far. The BA curriculum dates back to 1980's and no substantial change has been brought about in spite of the drastic changes in the social-economic environment.'

In this sense, the development of a syllabus for Specific Purposes should be based on certain parameters such as the needs of the students, and to take into consideration the learners' ability to complete different tasks in order to achieve their aims. In fact, there are factors that might have caused the students' low-performance in English. The main reason is the choice of the English language programme offered to them. The English courses at the department of Computer Science were not developed on the basis of an analysis of the English language needs of the students. This fact indicates that the design of a syllabus suitable for them is a must. According to Hutchinson and Waters (1987), identifying the students' expectations should be the first step in designing an ESP syllabus.

IV.2 Research Design

This study aims at investigating the English language needs of Computer Science students on the basis of their perceptions. The design of the study was based on Hutchinson and Waters' (1987) target needs approach to NA. It is crucial to note too that among the variables that NA of ESP will identify a list of relevant skills that learners must master in order to accomplish the specific academic purposes for which they need specialized training. In addition, in order to investigate Computer Science students' English necessities, we tried to find out their perceptions of the frequency of their use of the English language skills and the importance of these skills to them. Thus, the research project was conducted by designing the questionnaire as the instrument for data collection. Two questionnaires were proposed: the teachers' questionnaire and the students' questionnaire. A pilot study was conducted among Computer Science students at the department of Computer Science within the LMD system. The participants were Master1 students. The questionnaire was delivered to assess the usefulness of various activities in English and learners' perceptions of their performance and achievements in these activities. Moreover, a placement test was proposed for assessing the level of the students at the four skills.

IV.3 Respondents and Research Methods

The respondents were students (Master1) who study Computer Science. There were 60 participants altogether. The subjects were both males and females at an intermediate level. The sample refers to the year 2010. Research employed two questionnaires as we have mentioned before: the teachers' questionnaire and the students' questionnaire. The students' questionnaire employed for the students was used to analyze the needs and assessments of the usefulness of various activities, and learners' reflections on their performance in various tasks as well as their perceptions on teaching materials. Based on the feedback received from the pilot group we put together a final version of the questionnaire which is presented in the appendix. The students submitted signed replies. After the administration of the questionnaire, item analysis was conducted. The length of

time to complete the questionnaire did not exceed 15 minutes. Questionnaire return rate of both the students and the teachers was good-all sheets were returned. After the participants had completed the questionnaire, we asked them to take a placement test (appendix) for the sake of reliability. We asked the students to take the test in the classroom. According to Creswell and Clarck (2007:3), '*a combination of both forms of data can provide the most complete analysis of the problems.*' In addition, it is crucial to note that from the responses to the questionnaire, we were able to notice the following differences among the subjects: the participants are spanning a range of variety in age and linguistic competence, and we have assumed that they have received the same type of instruction, and in general terms the same kind of exposure to English in the classes.

IV.4 The Interpretation of the Students' Questionnaire

According to Bosher and Smalkowski,(2002); Chaudron, Doughty, Long, Rivers and Urano (2005), needs analysis can best be implemented in curriculum development. Chaudron & all, (2005) conducted a task-based needs analysis for Korean students as a foreign language program at university of Hawai. They focused on target needs to develop authentic tasks. As we have seen in the previous chapters, needs analysis in language program and curriculum development is very important. One of the most important phenomena of language learning/teaching process is to make students reach the intended level in a shorter time. In order to be able to achieve this goal, programmes should be designed with great care. Considering the importance of programme design and development, evaluation has received much attention in research. In addition, needs analysis is a means that may help the evaluator. Basturkmen (1996) carried out a study to evaluate the communicative language needs of the students. Basically, questionnaires that were incorporated to collect data revealed that there was a difference between students' and teachers' perceptions concerning the importance and difficulty level of the basic language skills. Hutchinson and Waters' approach to NA offers a useful classification of needs. They provide a suitable framework for analyzing the target situation and also a framework for analyzing learning needs.

Question1: The participants

The sample as shown above consisted of 60 subjects (master 1). 35 females and 25 males. Table 1 illustrates the profile of the participants involved in this study.

	Male	Female	Total
Computer science Master 1	25	35	60

Table 1

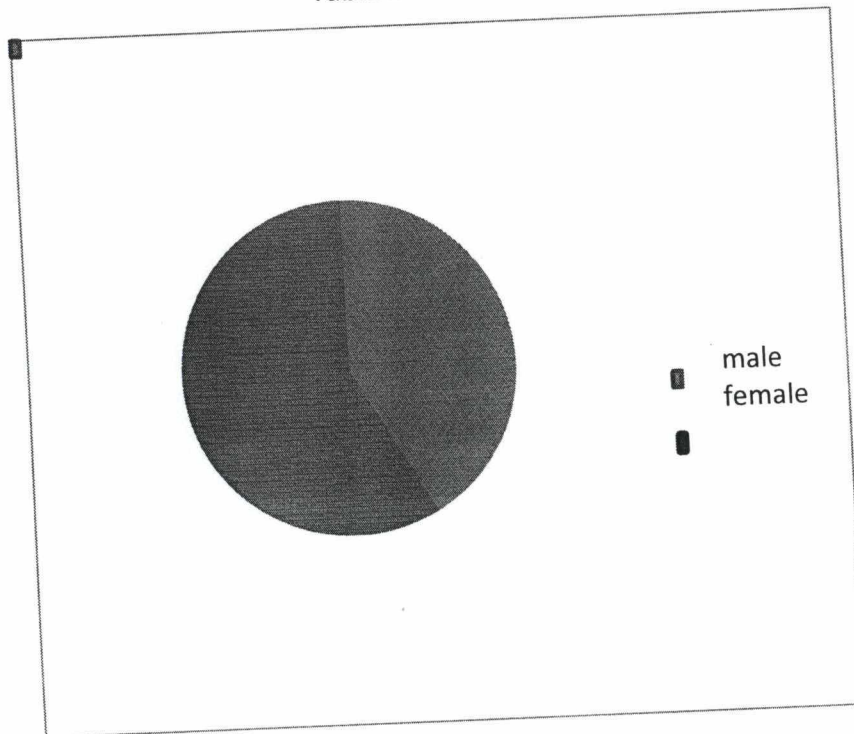


Figure 1

Question 02: How often do you perform the following tasks in English?

The table demonstrates the results obtained from the questionnaire, regarding the tasks performed in the class. The tabulated data present a comprehensive and broad picture of the tasks performed in English. As shown in table 2 and the figure below 0,583% of the

participants never write emails in English; whereas, 0,083 of the subjects write emails. Approximately all the students don't perform tasks in English. The major problem is that Computer Science students are unable to use English because of their low-performance, and face difficulties in grammar.

	Never	%	Rarely	%	Sometimes	%	often	%	every day	%
Email	35	0,583	16	0,267	5	0,083	2	0,033	2	0,03
phone call	58	0,967	2	0,033	0	0	0	0	0	0
writing letters	41	0,683	8	0,133	11	0,183	0	0	0	0
writing Projects	56	0,933	4	0,067	0	0	0	0	0	0
attending seminars		1	0	0	0	0	0	0	0	0
interacting with foreigners	28	0,467	10	0,167	12	0,2	10	0,167	0	0

Table 2

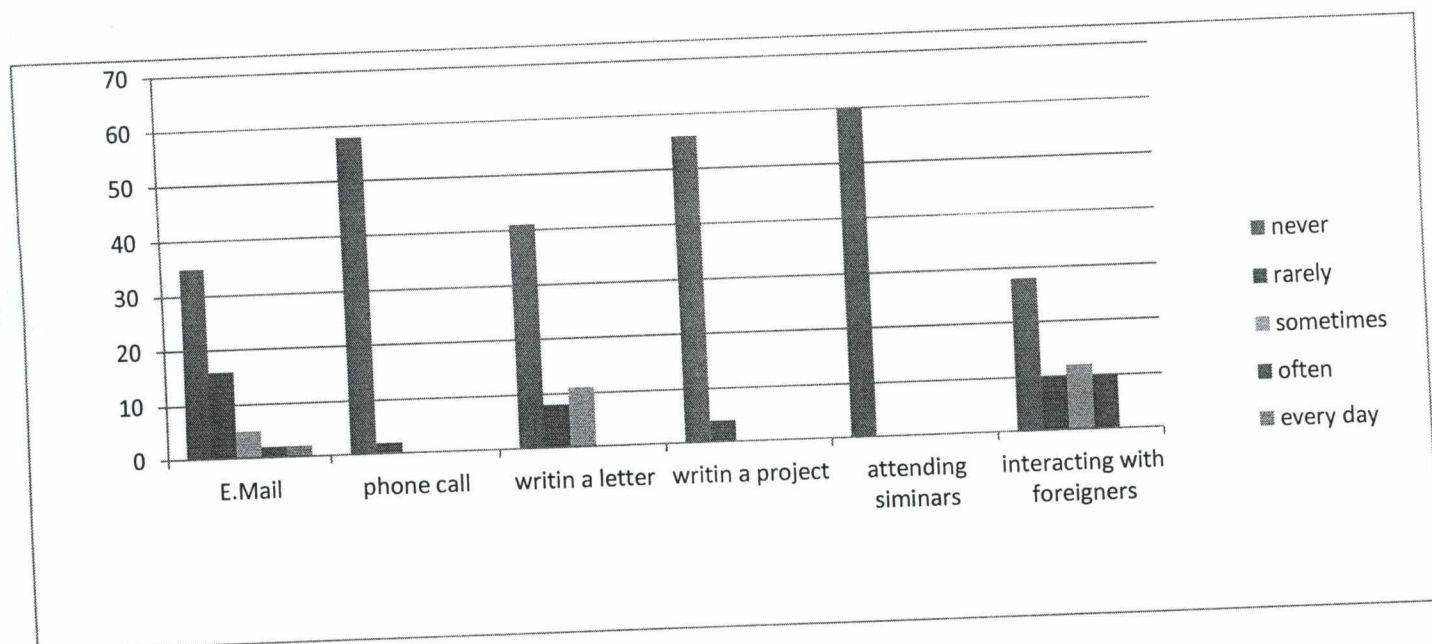


Figure 2

Question 03: What do you find most difficult

The results in graph 3 reveal that the majority of the students found that writing is the most difficult. 59% of them stated that summarizing is very difficult, followed by reading quickly (50%). Moreover, the participants found that writing coherent paragraphs are very difficult, followed by asking questions 42%. On the other hand, 18 participants found that understanding meanings is very difficult, and only 25 subjects found it easy. In addition, the majority of the students estimate that reading quickly is very difficult as well as speaking fluently, understanding different accents and key vocabulary; for example, only 6 participants among our study sample found that key vocabulary is easy. Figure 3 illustrates all the details.

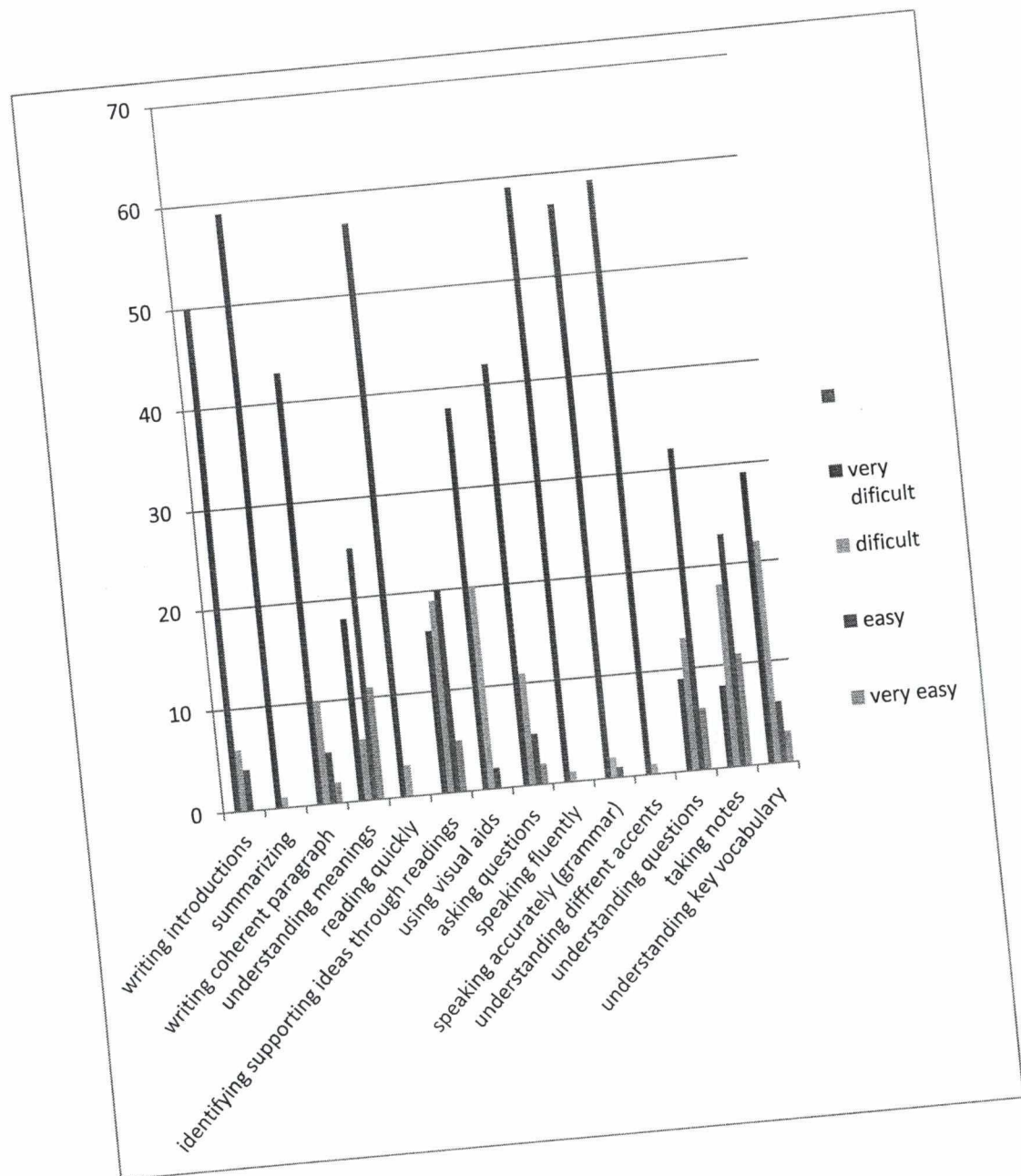
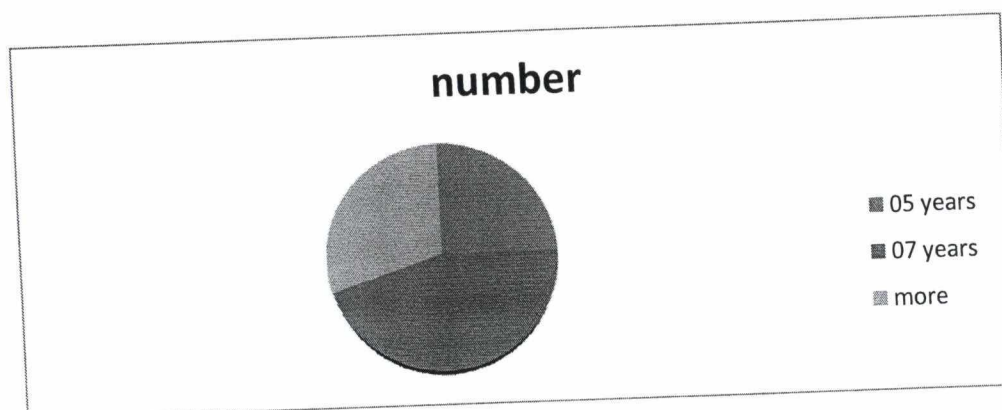


Figure 3

Question 04: How many years have you been studying English?

Both the table and the graph below show the results elicited from the questionnaire, regarding the years the students have been studying English. The majority of the students answered more than 7 years (30%) of the participants, followed by 45% who answered 7 years, and only 25% answered 5 years.

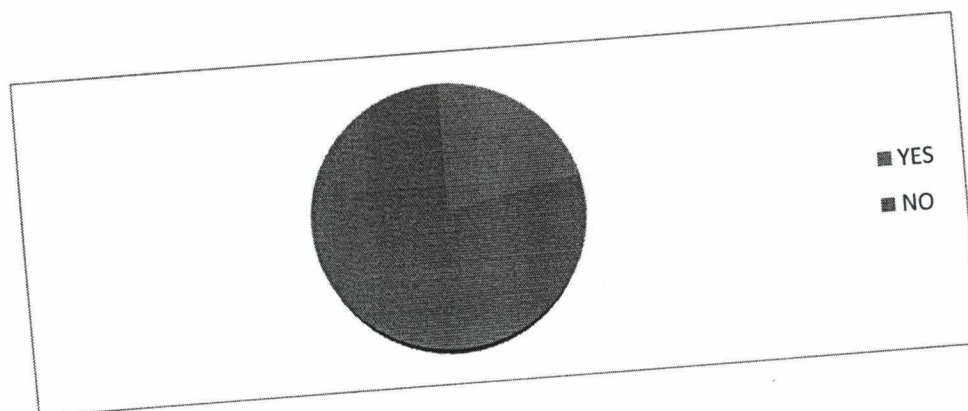
Number of years	Number	%
05 years	15	25%
07 years	27	45%
More	18	30%
Total	60	100%

Table 4**Figure 4**

Question 05: Have you talked to foreigners?

The table below demonstrates clearly that the students don't communicate and interact with foreigners. 78% of the subjects answered no, and only 22% said yes.

Answer	Number	%
YES	13	22%
NO	47	78%
Total	60	100%

Table 5**Figure 5**

Question 06: Do you think you would need English in the future work?

Table 6 displays the percentage of the need for English at work. This shows that 97% of the subjects need to use English. Only 3% don't need English in their future work. The majority of the participants constitute a large proportion of the study sample. According to the tabulated data, the majority of the students know that they really need English in the future.

Answer	Number	%
YES	58	97%
NO	2	3%
Total	60	100%

Table 6

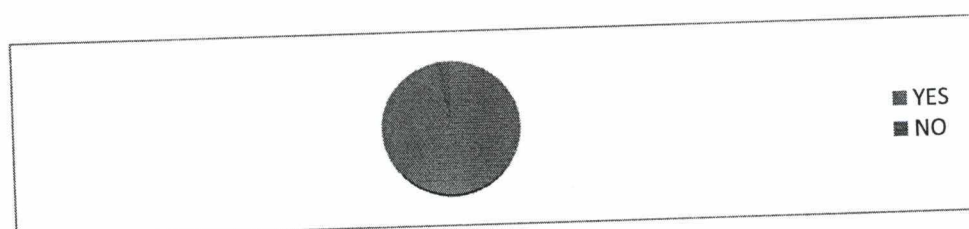


Figure 6

Question 07: what you think you would need English for?

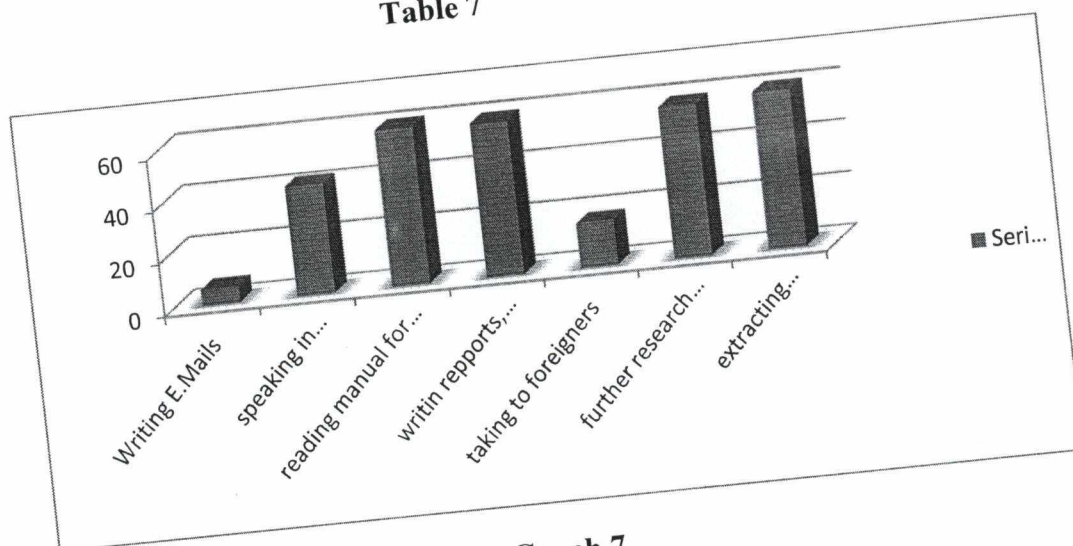
This question is very interesting in our study sample since it helped us a lot in determining the expectations of the students. According to Hutchinson and Waters (1987), determining the learners' needs is a must. The students' interest in using English for speaking accurately in seminars and conferences is slightly stronger than writing emails and talking to foreigners. Table 7 shows that all the subjects' choices regarding writing reports and research have higher scores. On the other hand, a small proportion of the

participants have fewer score such as writing emails (10%) and talking to foreigners (28%).

In fact, the majority of the respondents agreed on the fact that they need English in order to extract information for their research 100%, followed by writing reports, letters and manuals 98%. In addition, speaking as we have mentioned before is much needed, 70% among the participants estimate that it is necessary to learn English in order to be able to attend conferences in the world. Details in both the table and the graph below demonstrate clearly the needs of Computer Science students (master 1).

	Number	% / total
Writing Emails	6	10%
speaking in conferences and seminars	42	70%
reading manuals for instructions	60	100%
writing reports, letters and articles	59	98%
talking to foreigners	17	28%
further research (Doctorate)	58	97%
extracting information for your research work	60	100%

Table 7



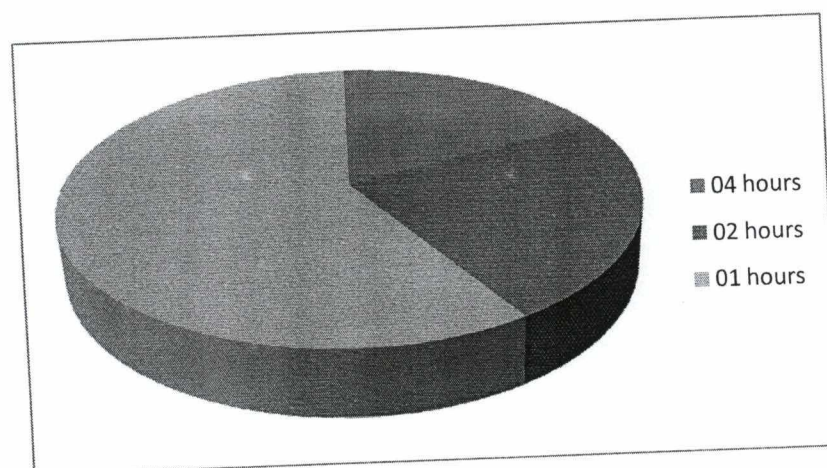
Graph 7

Question 08: How much time during the week are you willing to dedicate studying English?

This question is related to the time allocated for learning English. The table below displays the results of the students' responses to the time they are willing to dedicate for learning the language. Thus, the analysis of the data strongly affirmed our assumption that Computer Science had a practical need for English even if they don't want to dedicate much time to study English. 58% of the participants prefer only 1 hour in a week, followed by 23% of them who prefer 2 hours in a week. On the other hand, 18% of the subjects prefer 4 hours. These tabulated data does not encourage us, knowing that the length of time in ESP teaching is very important to improve the level of the students. The analysis estimates that the students want to learn English in a very short period of time, and this is not obvious.

Number of hours	Number	%
04 hours	11	18%
02 hours	14	23%
01 hours	35	58%
Total	60	100%

Table 8



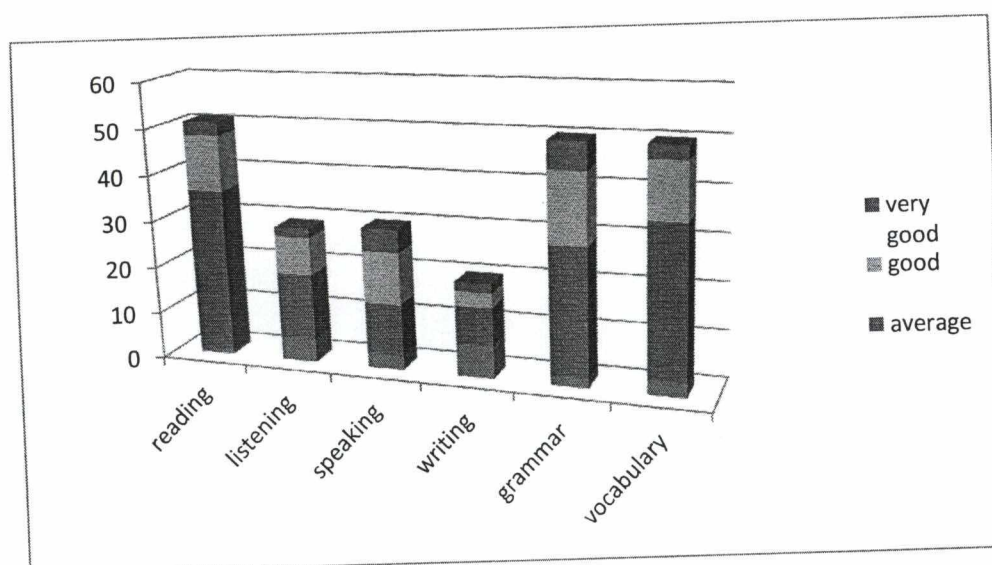
Graph 8

Question 09: What level of proficiency do you think you have?

In question 9, the respondents were asked about their level of English proficiency. They were asked to self-report what language of English proficiency they thought they had. This was an important question whose answers would be compared with the respondents' scores on a placement exam. In that way, the respondents would be given feedback on their real level of English proficiency. This may help us to design our syllabus. Table 9 shows the respondents' answers in terms of proficiency level. Moreover, in terms of listening, it can be seen that 8% of the respondents believed that they possessed a low level in oral skill. We believe this to be true because the students don't practice English in real contexts. It is quite evident that all the participants have some problems with listening as the frequencies in this skill are lower than the other ones. The highly significant correlation between listening and speaking highlights the need for giving both skills due attention. The total number of the participants is 60. The level of proficiency of the subjects ranges from weak to average. Thus, in terms of self-evaluation of performance in the English language, the students' rating varies from one skill to another as shown in the table. The subjects' responses indicated that their level in all the English language skills is either weak or average. Their perceived performance was lower for listening 8%, speaking 5%, Grammar 3%, vocabulary 5%. Moreover, their level of rating is the average for reading 58%, listening 23%, speaking 18%, writing 13%, grammar 45% and vocabulary 53%. Only 20% of the participants are good in reading, followed by 13% in listening, 18% in speaking. 25% are good in grammar and 20% in vocabulary; however, only 5% of the subjects are good in writing. On the other, only few are very good in all the skills. Further details are shown in table and the figure below.

	Weak	%	Average	%	Good	%	very good	%
Reading	1	2%	35	58%	12	20%	3	5%
Listening	5	8%	14	23%	8	13%	2	3%
Speaking	3	5%	11	18%	11	18%	5	8%
Writing	7	12%	8	13%	3	5%	2	3%
Grammar	2	3%	27	45%	15	25%	6	10%
Vocabulary	3	5%	32	53%	12	20%	3	5%

Table 9



Graph 9

Question 10: What English skill do you need to develop to achieve your professional goals?

As can be seen in the table below, those who do not need English at work constitute a small proportion of the study sample. Listening, speaking and writing are the least needed of the four skills, followed by reading 3%; moreover, as for those who need all the skills their number is very high. Among the participants, 93% need the four skills to achieve their professional goals. It is crucial to bear in mind that language skills are

complementary. This could be attributed to the fact that most individual skills involve one or more of the other skills when operating. Speaking involves listening for oral communication and writing for note-taking. We can deduce that not one skill could function in isolation of the other skills. Here, we can refer to Widdowson (1978) and his argument for integrating the four skills. The data elicited from the present research indicate that speaking is needed since the ability to speak is essential for most jobs in order to interact and convey information. Listening is crucial too to exchange ideas and identify what the others are uttering. In addition, writing is one of the language skills that receive much attention even if it is very hard for the learners. Writing may enable them to write cover letters, curriculum vitae and articles in English. At the present study, reading is also important and may enable the students to read manuals and understand written documents at work.

	number	%
Reading	2	3%
Speaking	1	2%
Listening	0	0%
Writing	1	2%
ALL	56	93%
TOTAL	60	100%

Table 10

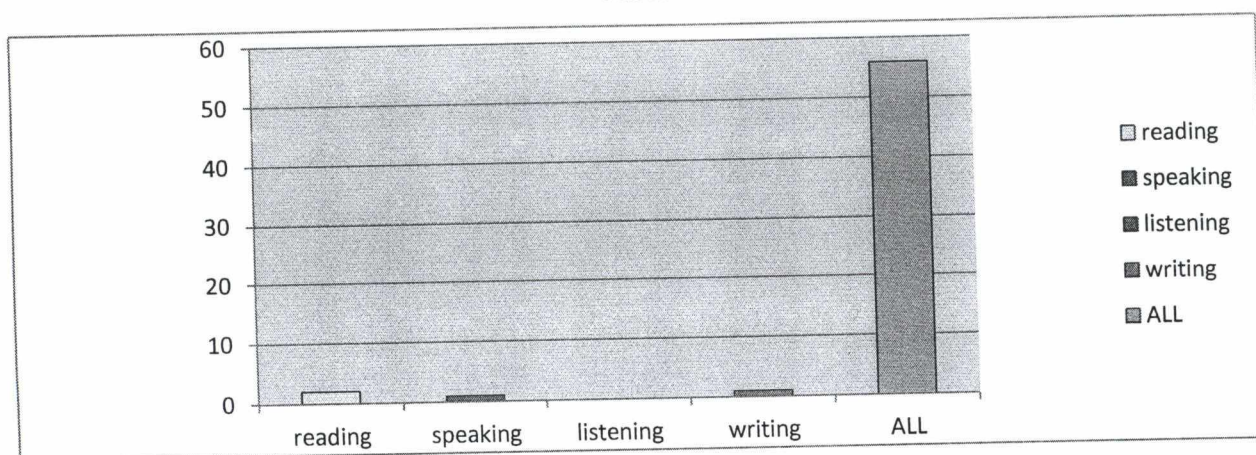


Figure 10

Question 11: What are the most important and useful tasks that you prefer?

This question is very important for our research since it is based on the students' assessment of the usefulness and preference of various activities in ESP classes and written learners' reflections on their performance in various tasks.

Question 1: Writing definitions of ESP vocabulary terms is beneficial for my linguistic development

Writing definitions of ESP vocabulary terms is beneficial for my linguistic development. The first row of the table demonstrates the respondents' perceptions of whether learning definitions of ESP vocabulary benefits linguistic development. 98% of the subjects strongly agree that vocabulary definitions are useful to learning.

Question 2: Writing summaries of texts is useful for improving any productive skills

Writing summaries of texts is useful for improving any productive skills. The second row in table 11 shows students' views on writing summaries of professional texts. 97% of the participants feel the need of writing summaries.

Question 3: Performing tasks in the classroom is useful for improving language skills

Performing tasks in the classroom is useful for improving language skills. The number of the students who strongly agree is very high (70%). 25% of the participants agreed, and only 5% are not sure.

Question 4: Oral discussions on topics of the subject-matter of the students are useful for linguistic development

Oral discussions on topics of the subject-matter of the students are useful for linguistic development. Discussions are the most popular activities. 67% of the respondents against

23% support oral discussions, and only 8% are not sure. Basically, there are few respondents (1%) who disagree.

Question 5: PowerPoint presentations are beneficial for developing speaking

PowerPoint presentations are beneficial for developing speaking. They seem to be the most useful tasks for the majority of the students. 47% agree, 28% strongly agree. Only few are not sure (13%), followed by 8% of the subjects don't support the idea of power point presentations.

Question 6: The use of authentic texts is very interesting

'As soon as texts, whatever their original purpose, are brought into the classrooms for pedagogic purposes they have, arguably, lost authenticity'.

Wallace (1992:79)

'Authentic texts can be motivating because they are proof that the language is used for real-life purposes by real people.' Nuttal (1996:176)

The use of authentic texts is very interesting. Surprisingly; the majority of the learners were positive about the use of authentic texts (78%) as it is shown in the table and the chart below. Some respondents were uncertain (5%). The subjects claimed that the use of authentic texts stimulate learning.

Question 7: The use of multimedia laboratories is good for enhancing learning

The use of multimedia laboratories is good for enhancing learning. A great majority of the participants expressed their positive attitudes for the use of multimedia means as well as the audiovisual materials in the preparation of the courses by teachers. In fact the use of

overhead projectors, cassettes and videos during English courses has many teaching advantages which enhance communication with students. Among the subjects, 87% strongly agree on the idea of using multimedia in the learning of English, followed by 8% who agree, and only 5% who are not sure. Details are shown in row 8 of the table below.

Question 8: The use of translation from English to French is useful for a better comprehension

The use of translation from English to French is useful for a better comprehension. Through our analysis, we noted that the majority of the ECS students strongly agree on the idea of the importance of translation for a better comprehension in the classroom (83%), followed by 13% of the participants who agree. Only 2% are not sure, and 2% who disagree. Translation for the students is an emergency; moreover, the students feel the need of learning some strategies of translation for translating articles from English to French for their research (Master and Doctorate).

Question 9: Podcasts are beneficial for listening skills

It is crucial to note that podcasts allow students to listen to authentic speech. Through the use of podcasts, students may improve their speaking skill. Through our research, we have noticed that students are more motivated when teachers use authentic materials. 72% among the participants strongly agrees on the idea of using podcasts in the classroom, followed by 8% who agree, and only 5% who are not sure. Among the subjects, only 12% disagree, and 3% strongly disagree. Either students did not understand what does it mean by podcasts, or because their level of English is very low. An innovative approach to teaching listening skills has been emerged due to the hi-tech developments the so-called 'podcasting': iPod and broadcasting which has become popular. The objective is to enable students to practice listening, and to listen to authentic speech. Rivers (1992:18) claims that '*listening involves active cognitive processing-the construction of a message from phonic material.*' While Brown (2004:28) states that '*authenticity is a concept that is little*

slippery to define, especially within the art and science of evaluating designing tests.'
According to him, authenticity may be presented as follow:

'The language is as natural as possible, items are contextualized rather than isolated, topics are meaningful which means relevant and interesting for the learners.' (Brown 2004: 28)

Similarly for Lynch (2007), learning from transcripts was discussed.

Question 10: The use of the mother tongue in the classroom

The learners' responses to the questionnaire on the utility of the mother tongue in the classroom are very low. The students sometimes are more interested and motivated when the teachers use the mother tongue in the classroom, especially when defining vocabulary terms since their level is low. However, 8% of the subjects strongly disagree, followed by 5% of the students who agree, and 8% of them who are not sure. On the other hand, 45% of the respondents strongly disagree. Through our analysis, we noticed that the students want to be in touch with authentic speech and want to use only English, being aware that there is no other context where English can be used.

Question 11: The use of the internet

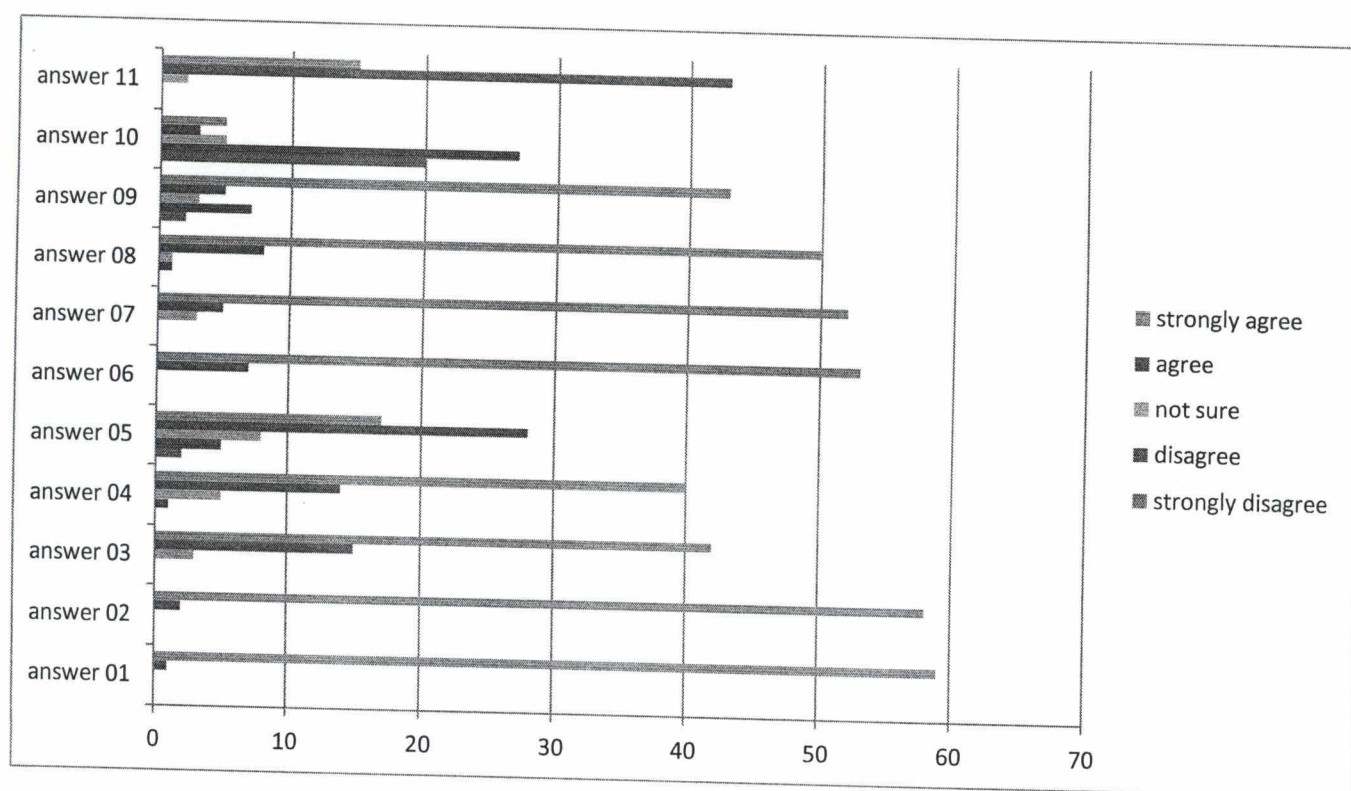
The tabulated data present a comprehensive and broad picture of the use of the internet in the classroom. This can be seen in the table below. It is widely recognized that a high percentage of the students today feel the need of the use of the internet in the classroom. 72% of the respondents agree, followed by 25% who strongly agree. Only 3% of the respondents are not certain of the use of the internet.

Chapter IV

Kozma (2005) asserts that the internet is used to improve 'the delivery of and access to education', and by learning ICTs are transforming classrooms by bringing in new curricula based on real world, providing tools to enhance learning.

	strongly disagree	%	Disagree	%	not sure	%	agree	%	strongly agree
answer 01	0	0%	0	0%	0	0%	1	2%	59
answer 02	0	0%	0	0%	0	0%	2	3%	58
answer 03	0	0%	0	0%	3	5%	15	25%	42
answer 04	0	0%	1	2%	5	8%	14	23%	40
answer 05	2	3%	5	8%	8	13%	28	47%	17
answer 06	0	0%	0	0%	0	0%	7	12%	53
answer 07	0	0%	0	0%	3	5%	5	8%	52
answer 08	0	0%	1	2%	1	2%	8	13%	50
answer 09	2	3%	7	12%	3	5%	5	8%	43
answer 10	20	33%	27	45%	5	8%	3	5%	5
answer 11	0	0	0	0%	2	3%	43	72%	15

Table 11



Graph 11

Question 12: Is the time allocated to the English course enough to use English effectively?

Table 11 indicates that 57% of the respondents answered yes while 43% answered no. One can conclude that the duration of the courses are not enough for ECS students at the department of Computer Science. This fact is not encouraging since to learn a language involves much time. Thus, the time allocated to English courses is not satisfying.

Answer	Number	%
YES	26	43%
NO	34	57%
Total	60	100%

Table 12

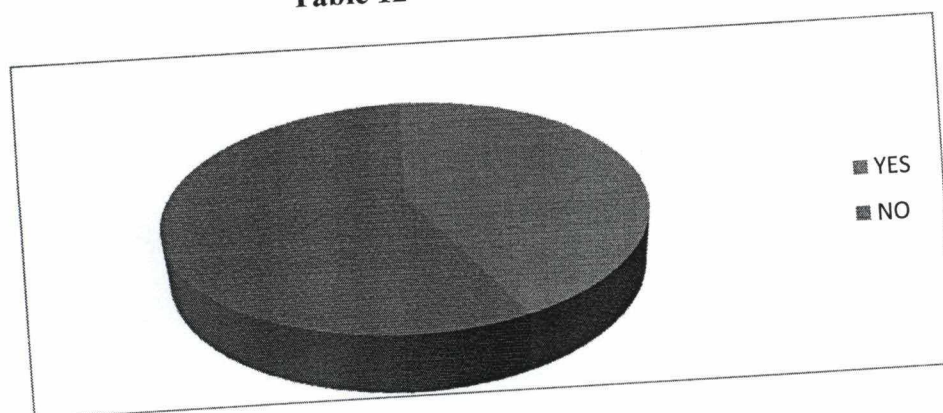


Figure12

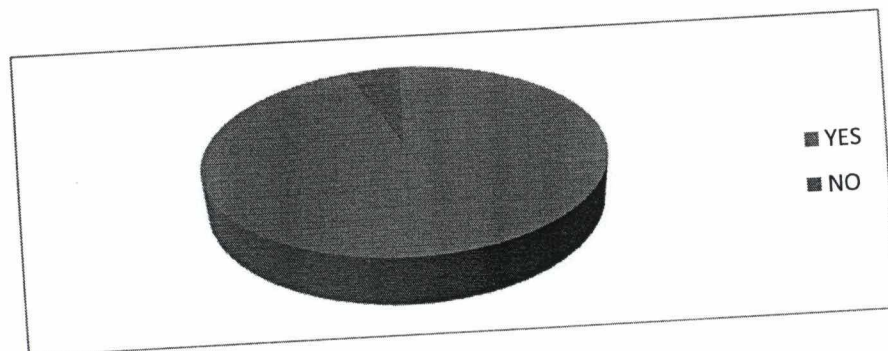
Question 13: Do you agree on the idea that teachers must design their own syllabus?

It is envisaged that teachers, as the best judges of their students' experiences, backgrounds and ability levels design their own courses. Textbooks will only serve as data that we use to build a course. Syllabus design demonstrates the principles involved in planning and designing an effective program. All the English textbooks available had been developed under the influence of the grammar-translation method and the audio-

lingual method; therefore, teachers had to write their own materials and design the most appropriate activities if they prefer to use the Communicative Language Teaching. Through our study sample, it seems that teachers don't design their own materials because they were overloaded and were not well-trained. In our case, the students preferred teachers who are able to design their programmes in order to be able to present for them up-to dates texts, and activities related to their subject-matter. In fact, an analysis of the students' answers indicates that 95% of the study sample agreed on the idea that teachers must design their own materials. Only 5% rejected this idea.

Answer	Number	%
YES	57	95%
NO	3	5%
Total	60	100%

Table 13



Graph 13

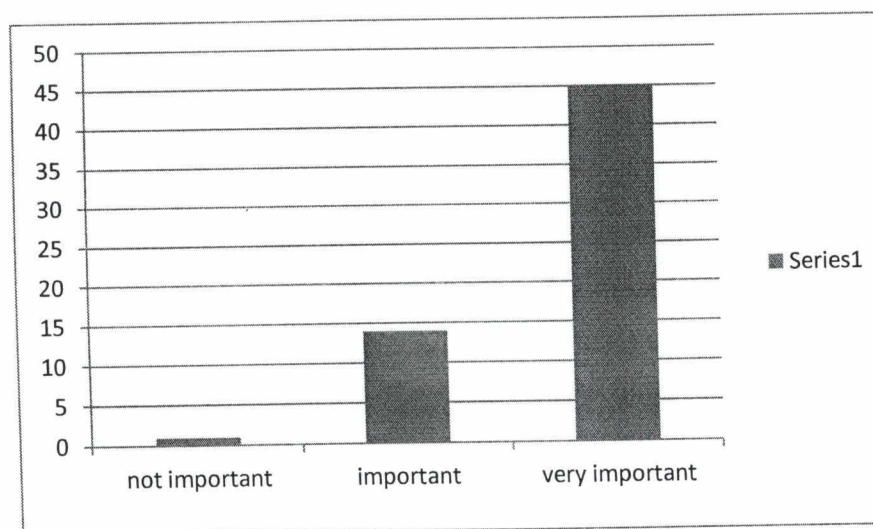
Question 14: to be able to speak and write English is:

In fact, writing and speaking activities require more the recognition of the language elements and guessing meaning in context. Both are productive skills and demand knowledge of the target language. Usually ESP students feel the need to speak fluently in order to be able to interact with foreigners and to be able to participate in conferences; moreover, they want to be able to write cover letters, reports, summaries, abstracts and articles in English. According to Widdowson (1978:144) '*what the learner needs to know*

how to do is to compose in the act of writing. Moreover, Nunnan (1991:68) asserts that *'success is measured in terms of the ability to carry out a conversation in the target language.'* Thus, the ability to communicate orally means the ability to use English to express thoughts and feelings. A big majority of the participants indicated that speaking and writing English is very important (75%), followed by 23% who answered important, and only 2% claimed that they are not important.

Answer	Number	%
not important	1	2%
Important	14	23%
very important	45	75%
Total	60	100%

Table 14

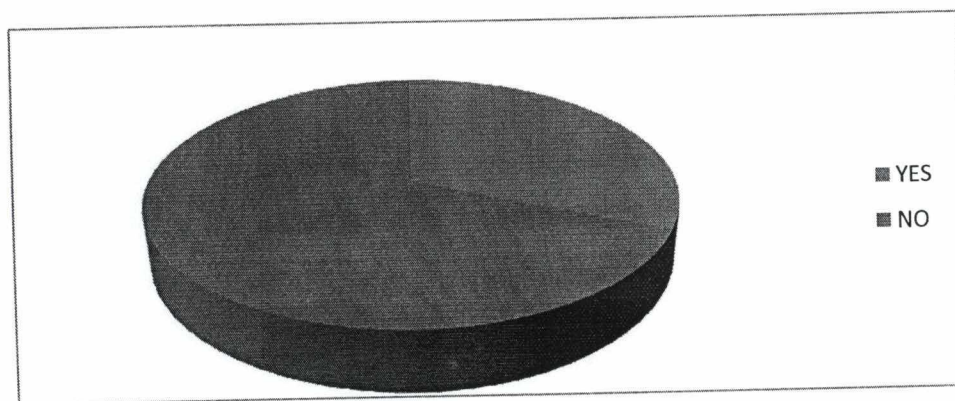


Graph 14

Question 15: what are the aspects of English you find most difficult?

It is clear from the table below that almost all the students (65%) stated that lexical items are the most difficult. 8% of the subjects had the view that grammatical structures are difficult. According to the tabulated data, it seems that the students had answered very quickly, being aware that grammar was a deficiency for the students. Generally, students cannot produce correct grammatical sentences. We think that they did not understand the question.

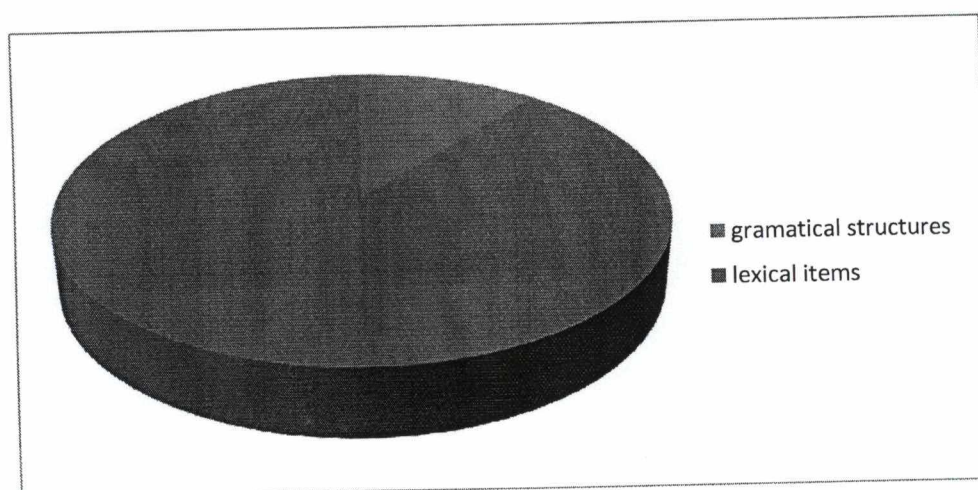
Answer	Number	%
YES	19	32%
NO	41	68%
Total	60	100%

Table 15**Graph 15**

Question 16: Are you satisfied with the English courses in your institution?

The table below highlights the results elicited from the questionnaire. It shows the students' attitudes toward the English courses presented in their institution. Among the participants 68% answer no and 32% respond positively. It is clear from the analysis that those who respond positively are not satisfied since they feel they are low competent. Many students seem to be dissatisfied with the English courses in their institutions.

Answer	Number	%
grammatical structures	5	8%
lexical items	40	67%
scientific terms and expressions	60	100%

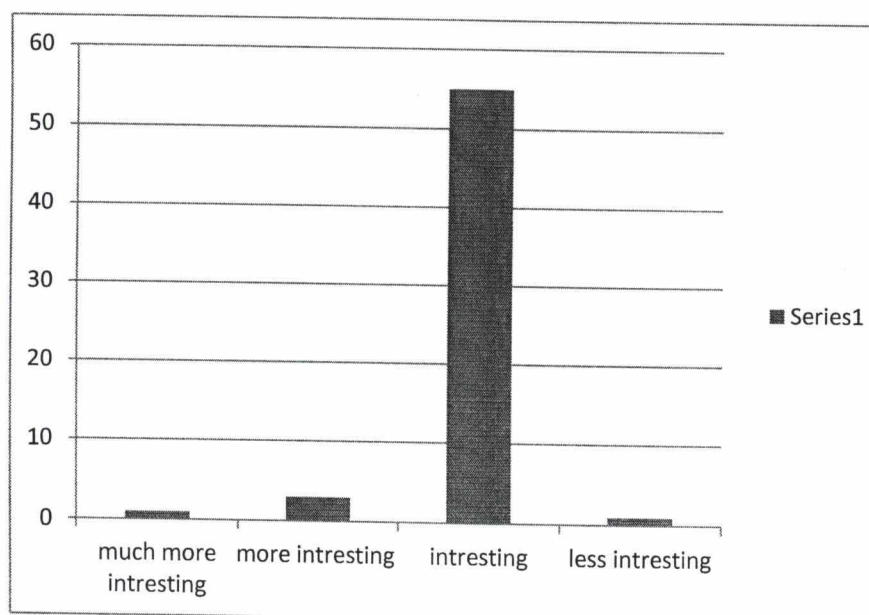
Table 16**Graph 16**

Question 17: Compared with the secondary school education, English courses are?

The table below indicates that 92% of the participants found that English courses are interesting at university compared to secondary education, followed by 5% who found them more interesting and only 2% said that they are much more interesting. Only 2% of the participants stated that English courses at university are less interesting. It seems that the students appreciate in general the English courses. Both the figure and the table below demonstrate clearly the sum of the ranks.

Answer	Number	%
Much more interesting	1	2%
more interesting	3	5%
Interesting	55	92%
Less interesting	1	2%
Total	60	100%

Table 17



Graph 17

Question 18: Which pedagogical activities are most exciting for you during the English courses?

As shown in the table and the graph below, the majority of the subjects stated that the oral skill was the most exciting (100%), followed by reading comprehension. (98%) among them said that reading was the most exciting skill too. Not surprisingly, their previous English studies made them better at this skill and more familiar with it than writing. 88% of the study sample enjoyed the writing activities since writing is a productive skill, and the students want to develop it for their future research. However, vocabulary was less motivating. These results are to a great extent consistent with those of Basturkman (1998). He found that ten skills and tasks were perceived by the students and their teachers as the most important skill for engineering students such as reading, writing and note-taking.

Answer	Number	%
oral expression activities	60	100%
reading comprehension activities	59	98%
writing activities	53	88%
Vocabulary	17	28%

Table 18

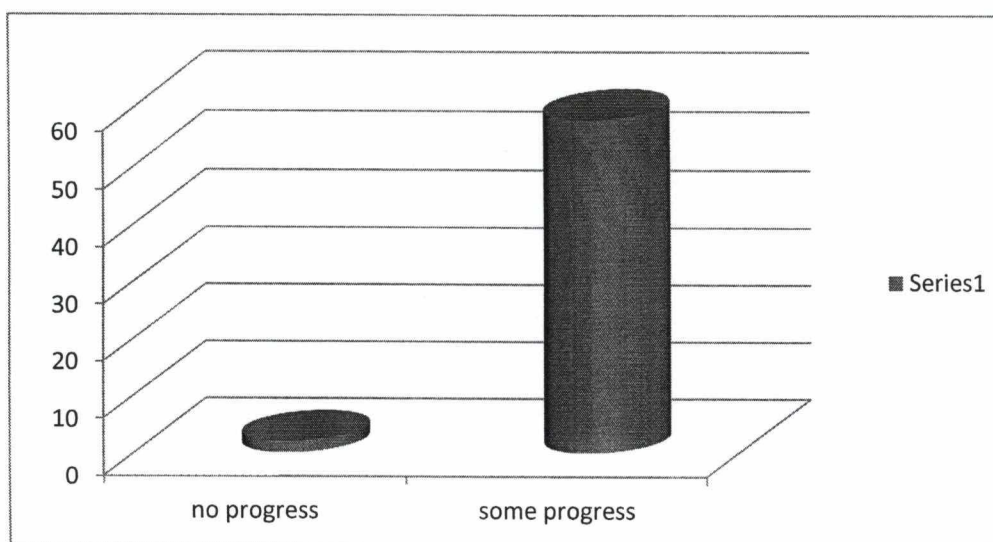
Question 19: How do you gauge your progress in English at university?

Table 18 displays the percentage of the attitudes of the students towards their progress in English at university. This shows that more than 97% of the subjects answered 'some progress' and only few (3%) answered yes. From the tabulated data, we noticed that the students answered somehow positively. Students cannot answer negatively to this

question. This implies that either the students are not sure or they are afraid to respond negatively.

Answer	Number	%
no progress	2	3%
some progress	58	97%
Total	60	100%

Table 19



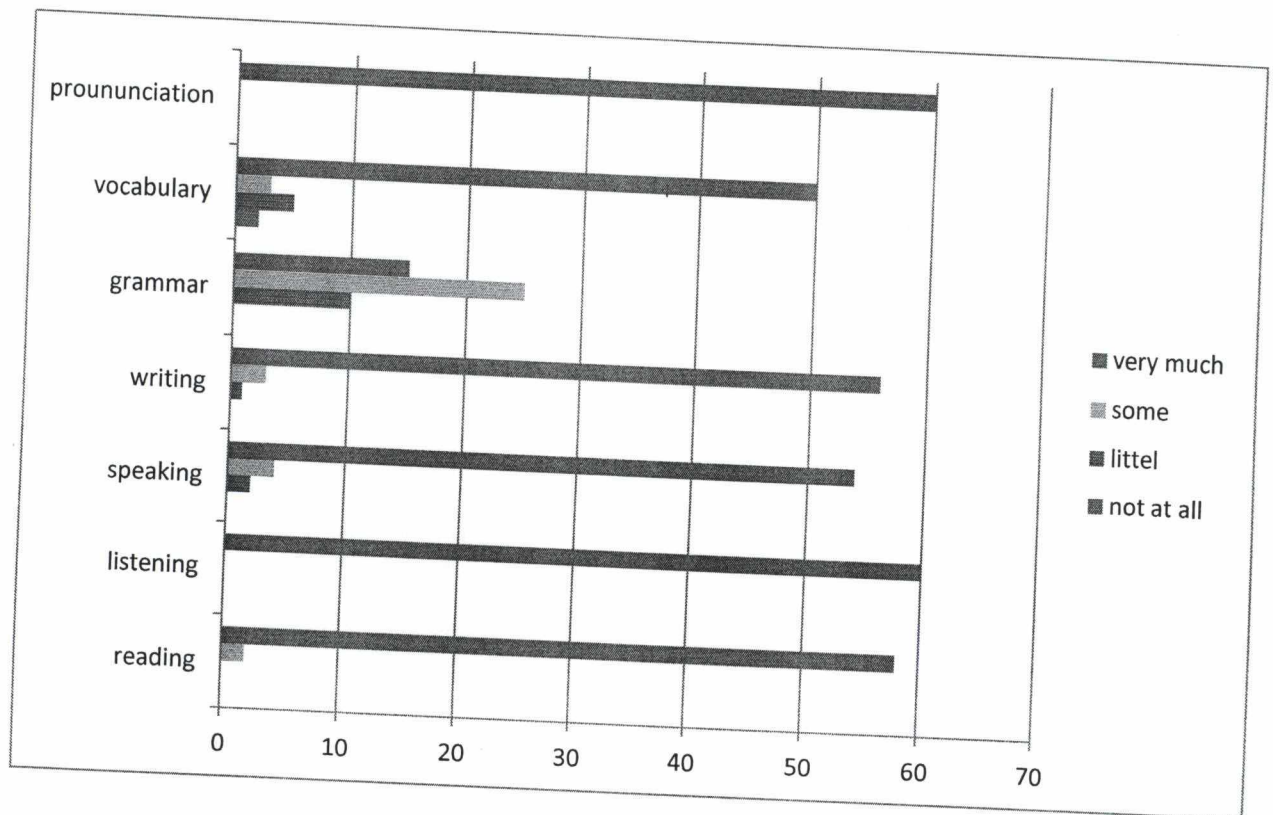
Graph 19

Question 20: what English skills you need to develop?

At the beginning of this questionnaire, we have asked this in a different way. This is done on purpose in order to have precise numbers for our study since this question is very important in syllabus design and methodology. The data elicited from the present research's respondents indicate a high need for the listening skill in order to be able to understand native-speakers. They want to be able to detect what the others are saying, and all the students too (100%) wanted to develop their pronunciation, followed by reading skills since without reading all the other language skills are at crucial disadvantage. Moreover, a high proportion of the subjects (93%) feel the need to develop the writing skill. Their main objective is to be able to write in English (letters, articles, summaries). The data elicited from the present study show a high need for developing the speaking skill. 90% of the respondents wanted to communicate orally. For vocabulary, 93% of the subjects answered that they need to develop this skill very much as well. Only 25% of the participants wanted to develop their grammar. It is quite evident that the students don't understand really the importance of the grammatical structures again, and that the ability to produce correct grammatical sentences is a must for being competent in the language.

	not at all	%	Little	%	some	%	very much	%
Reading	0	0%	0	0%	2	3%	58	97%
Listening	0	0%	0	0%	0	0%	60	100%
Speaking	0	0%	2	3%	4	7%	54	90%
Writing	0	0%	1	2%	3	5%	56	93%
Grammar	0	0%	10	17%	25	42%	15	25%
Vocabulary	2	3%	5	8%	3	5%	50	83%
Pronunciation	0	0%	0	0%	0	0%	60	100%

Table 20



Graph 20

IV.5 The Interpretation of the Teacher's questionnaire

A questionnaire was written in English and distributed to six teachers. The target respondents were teachers who have conducted English lessons at the department of Computer Science. The participants' profiles are summarized in table 1. All the subjects were females.

'The most important knowledge teachers need to do good work is knowledge how students are experiencing learning and perceiving their teachers' actions.'

Steven Brookfield

In this study, a questionnaire was used as the only method of enquiry. This questionnaire was designed to identify the teachers' perceptions regarding the English language course they are presenting. For the purpose of collecting data about the challenges faced by English language teachers at the department of Computer Science in Algeria, a number of questions were used to collect the relevant data. The challenged questionnaire was developed with reference to the relevant literature, our experience as university teachers and through contact teachers with teachers of English. Among the items which covered the challenges: the raising of the motivation of classroom students to learn English as a Foreign Language; a focus of some teachers on teaching English away from its communicative contexts; the modifications that English language syllabus sees without sufficient training of teachers on their application; rarity of consulting experts in the preparation and organization of English language courses; rarity of the materials of teaching; the confusion of teaching either communication or grammar of the English language, absence of preparing teachers in the field of ESP; negative attitudes of some students towards the English language; lack of experience; the gap between what the teacher received during university study and the practical field of teaching English at university level; lack of preparation in the subject-matter (Computer Science) and the pedagogy of English language. (Cohen & all, 2007.p.78) assert the following: *'The purposes of the research determine the methodology and design of the research.'*

IV.5.1 Purpose of the study sample

The purpose of the study was to establish the teacher related factors influencing the implementation of the English syllabus at the department of Computer Science.

IV.5.2 Objectives of the study

The study seeks to fulfill the following objectives:

- *To determine the academic backgrounds of teachers of English
- *To determine the appropriateness of the teaching/learning strategies used by the teachers of English
- *To find out how effectively the teachers of English utilize the time allocated in teaching

IV.5.3 Significance of the study

The study was necessary in that the recommendations emerging from the research will lead to improve strategies in the teaching of English for Computer Science.

IV.5.4 Research design

The study adopted descriptive survey design. The survey was chosen for its appeal for generalization (Macmillan and Macmillan, 2001)

IV.5.5 Target Population

The sample consisted of six teachers who taught at the department of Computer Science.

IV.5.6 Data analysis and Presentation

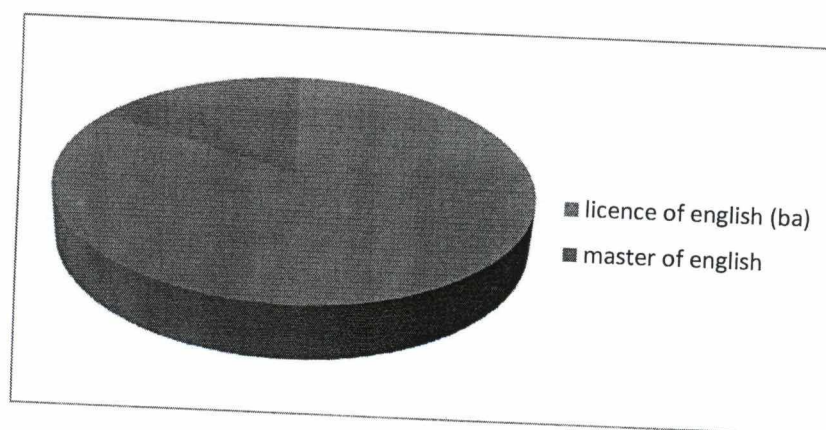
Data were analyzed using both qualitative and quantitative methods summarized into percentages, using tables and graphical representations. Hutchinson and Waters (1987:53) assert that *'there is always an identifiable need of some sort.'*

Question 01: What is your highest level of University Education?

The table below shows that 83% of the subjects have got a licence of English (BA); however, 17% have a magister. It is clear that the majority of teachers who have conducted English courses at the department of Computer Science were beginners in the field of teaching, and did not have much experience.

Answer	Number	%
licence of English (BA)	5	83%
Magister of English	1	17%
Total	6	100%

Table 1

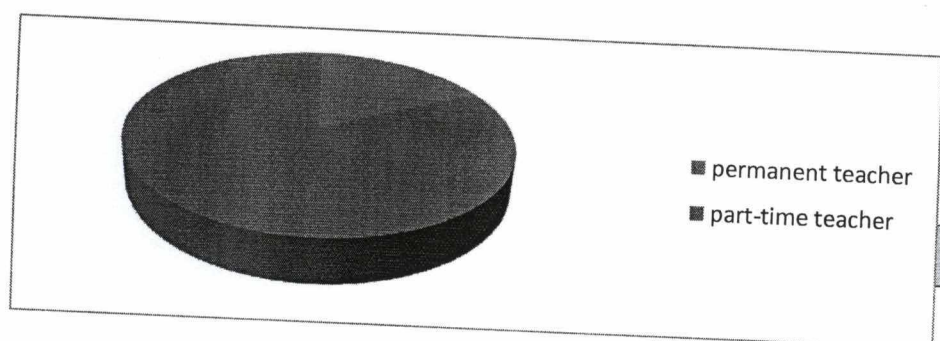


Graph 1

Question 02: what is your status?

Both the table and the graph below demonstrate that a large proportion of teachers are part-time teachers (vacataires) 83%, only 17% are permanent. This implies that teachers are not well-formed and lack experience.

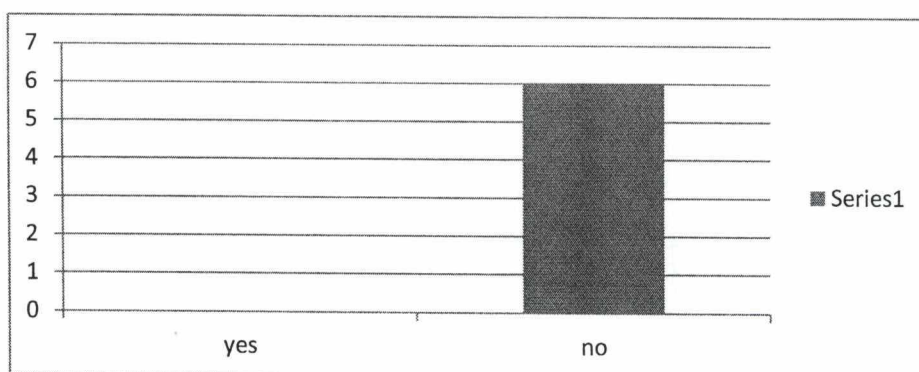
Answer	Number	%
permanent teacher	1	17%
part-time teacher	5	83%
Total	6	100%

Table 2**Graph 2****Question 03: Were you formed in English for Specific Purposes?**

All the participants answered no, and no one answered yes. Strevens (1988:43) argues the following: '*By contrast with EGP teachers, ESP teachers need much experience, extra training, great effort and new contributions.*' Thus, it is crucial that teachers should be engaged in the subject-matter in order to be able to be familiar with specialist knowledge. However, teaching General English will not serve in the case of Computer Science. Basically, students prefer materials that they feel are tailor-made for them.

Yes	0	0%
No	6	100%
Total	6	100%

Table 3



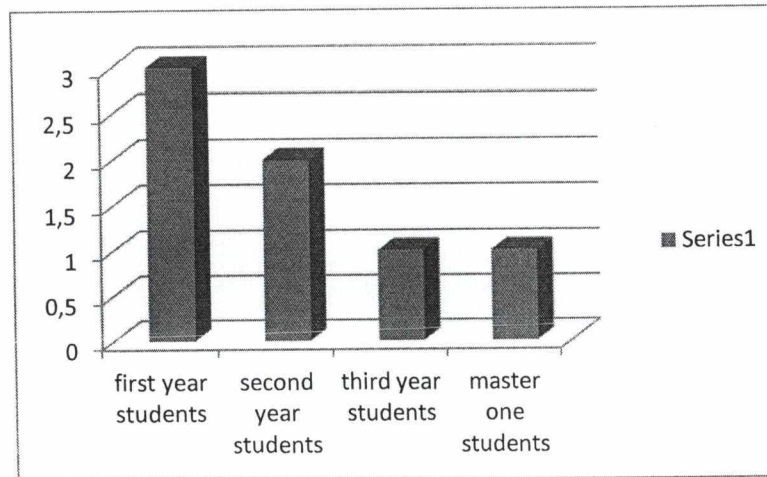
Graph 3

Question 04: Do you teach first year, second year or Master 1?

The majority of the respondents (50%) claimed that they taught first year, followed by 33% of them who taught second year, only 17% taught third year; however, 17% of the subjects taught Master 1.

Answer	number	%
first year students	3	50%
second year students	2	33%
third year students	1	17%
master one students	1	17%

Table 4

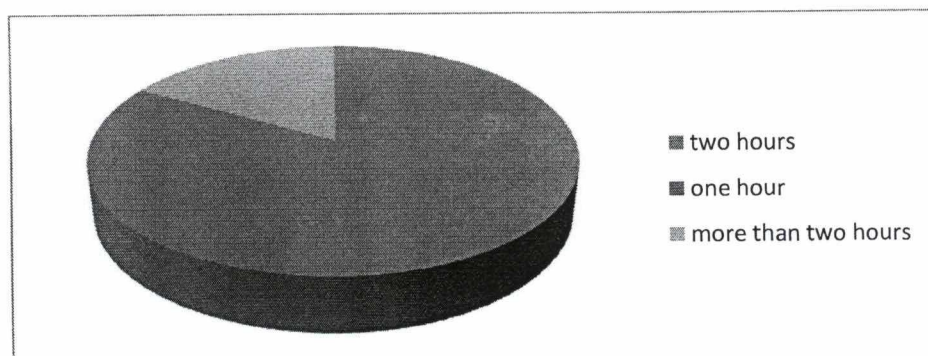


Question 05: How many hours do you have in the week?

Both the table and the graph below indicates that 83% of the subjects claimed that they have 2 hours in a week, followed by 17% who said they have more than 2 hours.

Answer	Number	%
two hours	5	83%
one hour	0	0%
more than two hours	1	17%

Table 5

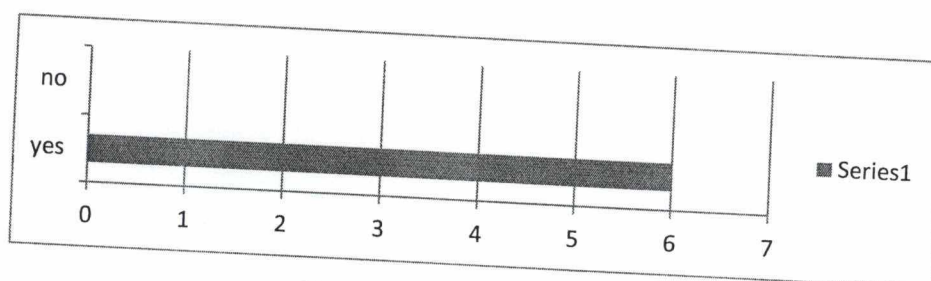


Graph 5

Question 06: Do you have large classes?

All the subjects who taught at the department of Computer Science answered yes. It is obvious that it is impossible to use authentic materials such as role-plays, oral discussions, pronunciation...etc. The majority of the teachers prefer writing on the board few grammatical exercises and a list of vocabulary items. The students are not allowed to interact orally; moreover, the exercises done by the students are not corrected.

Answer	number	%
Yes	6	100%
No	0	0%
Total	6	100%

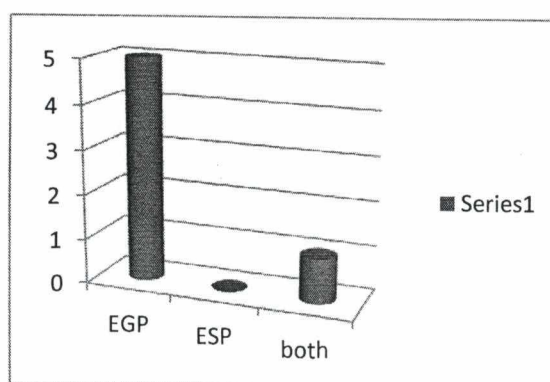
Table 6**Graph 6****Question 07: Do you teach EGP or ESP?**

The table below displays clearly that 83% of the participants claimed that they taught General English. This can be seen through the various grammatical exercises presented to the students (tenses, the passive voice, the conditional...) with examples in the context of General English. No teachers have taught ESP among our subjects, and 17% of them taught both. However, it seems that presenting a list of vocabulary to the students (high technical terms and their definitions) is teaching ESP. Moreover, it is important to

understand what does it mean by ESP? And that ESP '*is in contrast with General English.*' (Johns & al., 1991:298).

Answer	Number	%
EGP	5	83%
ESP	0	0%
Both	1	17%

Table 7



Graph 7

Question 08: Do you think that the teaching of the four skills is important?

According to the principle component analysis results in table 12, question regarding the teaching of the four skills, 67% of the subjects answered yes while 33% of them answered no.

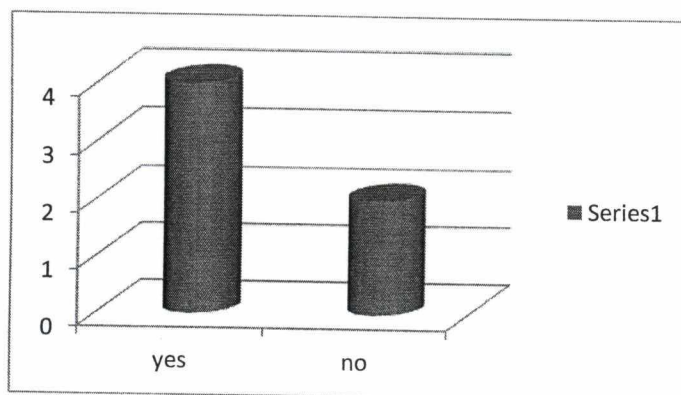
'What the learner needs to know how to do is to compose in the act of writing, comprehend in the act of reading and to learn techniques of reading by writing and techniques of writing by reading. If the aim of language learning is to develop the underlying interpreting ability, then it would seem reasonable to adopt an integrated approach to achieve it.

Widdowson (1978:144)

Thus, to be a competent user of the language, the student should be given opportunity to practice the four skills in a real context.

Answer	Number	%
Yes	4	67%
No	2	33%
Total	6	100%

Table 8

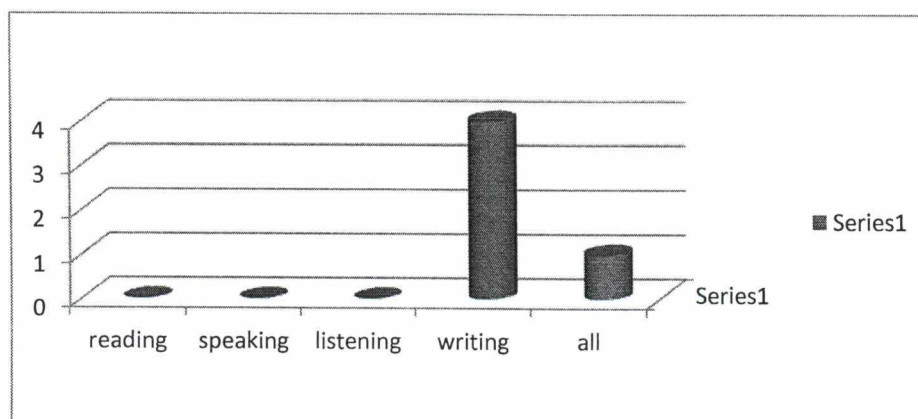


Graph 8

Question 09: what skills you teach most?

Both the table and the figure below indicate that teachers taught the writing skill. Among the subjects, 67% focused on the writing skill, followed by 17% who taught all the skills. On the other hand, no one taught reading, listening or speaking. It seems that the respondents did not pay great attention to this question since they followed a general syllabus based on textbooks in general. Language skills such as reading and speaking are seen as the key to successful learning even if teachers strongly acknowledged the necessity of reading ability. Therefore, it is crucial to focus on all the skills in order to promote communication. We all know that students did not feel a strong need for writing, while teachers wanted students to be able to perform communicative writing tasks.

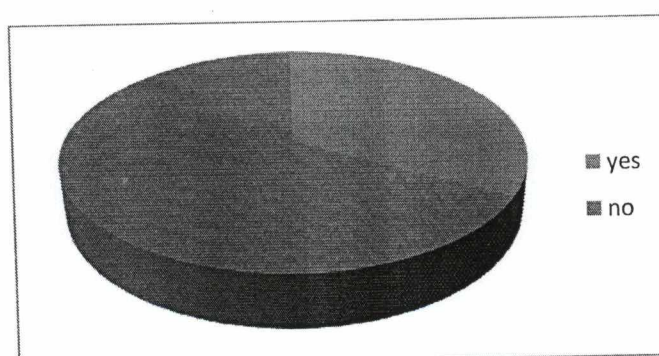
Answer	Number	%
Reading	0	0%
Speaking	0	0%
Listening	0	0%
Writing	4	67%
All	1	17%

Table 9**Graph 9**

Question 10: Do you focus on grammar?

The tabulated data in the table below show that 67% of the subjects did not focus on grammar in teaching English while 33% answered yes. According to our study, it is clear that they are still teachers who use the grammatical syllabus in teaching, neglecting the Communicative Approach to language teaching. Some language teachers focus on grammar as a set of forms and rules. The students in this case can produce correct forms on tests, but make errors when they try to use the language in real-situations. Although grammar is central to the teaching and the learning of languages, teachers should focus on the message rather than form (Prabhu, 1987).

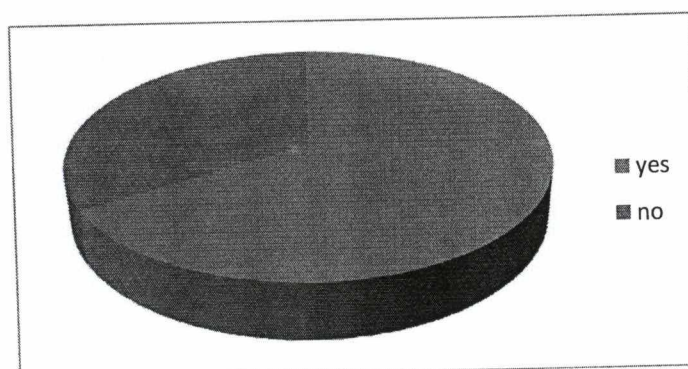
Answer	number	%
Yes	2	33%
No	4	67%
Total	6	100%

Table 10**Graph 10**

Question 11: Do you rely on the teaching of vocabulary?

Vocabulary is central to all language learning; therefore, teachers are interested in understanding ways to teach vocabulary. The belief that one could master the language by learning a certain number of words was wrong. Knowing a word implies knowing how to use it syntactically, semantically and pragmatically (Carter 1987:181). Some people prefer to teach grammar rather than teaching vocabulary, thinking that teaching vocabulary is time-consuming. On the other hand, Allen (1983:1-6), overemphasis on grammar in the language proved to be unsuccessful; moreover, Carter and McCarthy (1988:42) quote Wilkins stating the following: '*without grammar very little can be conveyed, without vocabulary nothing can be conveyed.*' The table and the graph below show that 67% of the participants answered yes; whereas, 33% of them answered no. As it is shown, the majority of the teachers preferred to rely on teaching vocabulary.

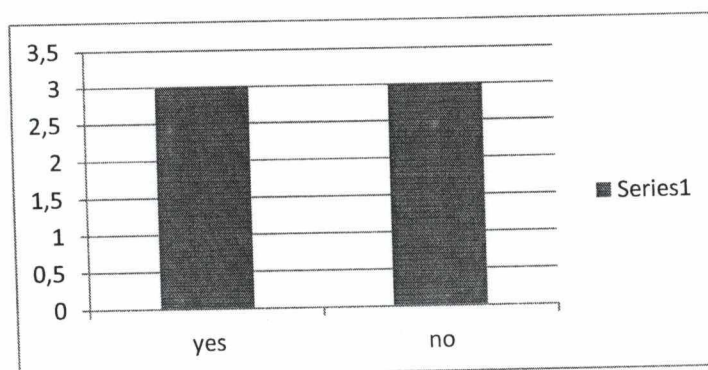
Answer	Number	%
Yes	4	67%
No	2	33%
Total	6	100%

Table 11**Graph 11**

Question 12: Do you use translation?

Interestingly, the responses to this question does not vary. 50% of the participants responded yes against 50% who responded no. According to G. Cook (2001:3) '*bilingualism and translation in the classroom are authentic*'. According to him, learners need a bilingual environment with a lot of translation. Translation makes the students to be aware of the differences between L1 and L2, and interference is likely to be reduced. However, teaching translation is not an easy task since the majority of the students think that every word or structure they encounter in English has an equivalent in the target language. In fact, many lexical items, especially idiomatic connotations make sense only in one language and cannot be transferred to others. In this context, Atkinson (1993:53) claims '*translation not only allows learners to think comparatively, but it is also a real activity.*' This is true because students who learn English for their jobs will probably need to know something about translation.

Answer	Number	%
Yes	3	50%
No	3	50%
Total	6	100%

Table 12**Graph 12**

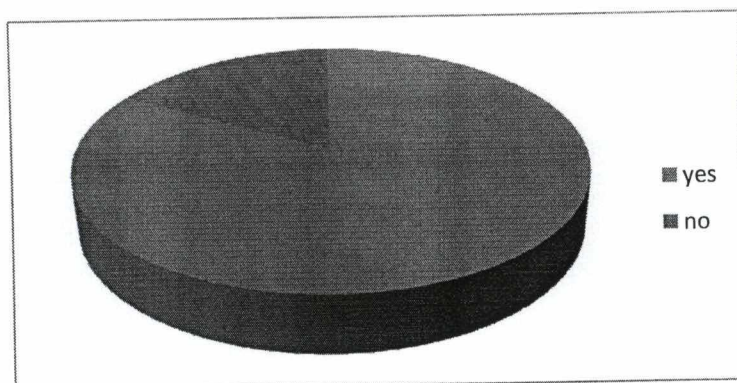
Question 13: Do you think that the use of the mother tongue is good in the teaching of ESP?

Teachers use only the target language in the classroom in order to allow learners maximum exposure to English. In this case, students can develop listening strategies and be discouraged from translating. Basically; the mother tongue can be used in the understanding of concepts behind structures. Asking students in the mother tongue to find equivalents in the target language seems to be a good technique in order to make students to distinguish between 'structural, semantics and pragmatic equivalents. However, excessive use of the mother tongue should be avoided since students will be unable to use the target language, and will express themselves only by using the mother tongue. Atkinson (1986) claims in this view the following:

'Students speak to the teacher in the mother tongue as a matter of a course; even when they are quite capable of expressing what they mean.' And he further says: *'students fail to realize that during many activities in the classroom it is crucial that they use only English.'* Atkinson (1986:246)

In our study, 83% of the subjects are in favour with the use of the mother tongue in the classroom against only 17% who responded negatively. According to the tabulated data in the table and the figure below, the majority of the teachers preferred the use of the mother tongue in the classroom. They argued that the mother tongue should be employed in such a way as to help students increase their awareness of the interaction between the mother tongue and the target language, and facilitate the task of comprehension, being aware that the mother tongue is time-consuming. Therefore, they should be aware of when and how to use L1.

Answer	Number	%
Yes	5	83%
No	1	17%
Total	6	100%

Table 13**Graph 13****Question 14: Do you rely on authentic materials in teaching**

Students prefer to work with authentic materials and there are many ways that teachers can incorporate it into every day lessons. According to Clarke (1989), the use of authentic materials has been one of the most characteristic features of material design. Moreover, Van Lier (1996:135) stated the following:

'If learners are to successfully authenticate their language learning environment and activities, they clearly need to develop a critical awareness of language and of educational purposes, and also develop the ability and will also take charge of their own learning.'

Similarly, Morrow (1991), have used weather forecasts on the radio to link classroom activities to real-world language activities in teaching listening. Unfortunately, no one has answered positively to this question. It seems that they neglected authenticity in language teaching. All the respondents claimed that they did not use the internet, podcasts and overhead projectors in teaching.

Answer	Number	%
Internet	0	0%
Podcasts	0	0%
overhead projectors	0	0%

Table 14

Question 15: Do you rely on textbooks or you produce your own materials?

Although textbooks are important in English for Specific Purposes, and are a resource for presentation material and a source of activities for student practice, they may contain inauthentic materials, and may not reflect students' needs. Cunningsworth (1995:7) states the following about textbooks:

- *A resource of stimulation and ideas
- *A resource of self-directed learning
- *A support for less experienced teachers

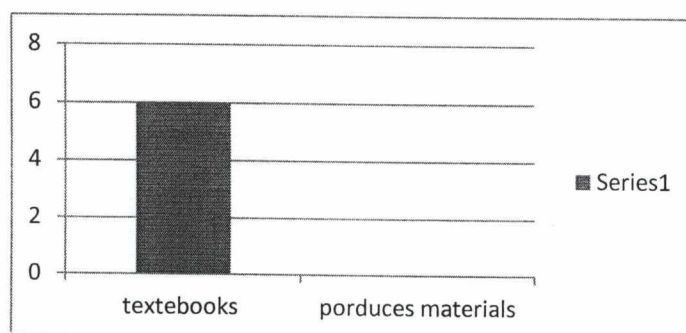
It is obvious that textbooks are only a guide to help the teachers in the teaching process. Moreover, it seems clear that there have been substantial differences between textbooks and authentic materials. The topics in textbooks, especially dialogues are not developed as they are in natural discourse. According to Widdowson (1998), some missing features make materials less effective such as some of the discourse features that

can be isolated from the textbook (the use of more explicit language than in a natural conversation). Of course, a natural speech is filled with repetitions and false starts as opposed to the conversations used in a textbook that should reflect perfect grammatical sentences. Generally, textbooks suggest systematic ways of accomplishing objectives. The main function of a textbook is to provide guidance for teachers; unfortunately in the case of teaching ESP in recent days, textbooks provide more than guidance. It is the sole source of classroom tasks, evaluation, grammar, reading and vocabulary. According to the teachers, the textbook was 'the syllabus'.

One disadvantage of using textbooks in the classroom is that inexperienced teachers may rely heavily on it, restraining the creativity of teachers. Thus, ESP teachers should produce their own teaching materials rather than to rely on published textbooks. Basically, there is no textbook that can fulfill all the demands and the needs of the learners. Even if materials production in ESP is a time-consuming and a very difficult task, it is also an art and not all the teachers can be good material designers. According to Hutchinson and Waters (1987), the teacher is no more a guide, but rather a practitioner, in the sense that he/she should produce his/her own materials according to the needs of the students. The table below shows the teachers' attitudes toward producing materials. All the subjects responded negatively. They did not produce their own materials for teaching English for Computer Science. This fact implies their inability to design ESP courses because of lack of time and they are not well-formed in the field of ESP. Teachers need to find and utilize teaching materials to aid their lessons if they cannot plan their own courses.

Answer	Number	%
Textbooks	6	100%
produces materials	0	0%
Total	6	100%

Table 15



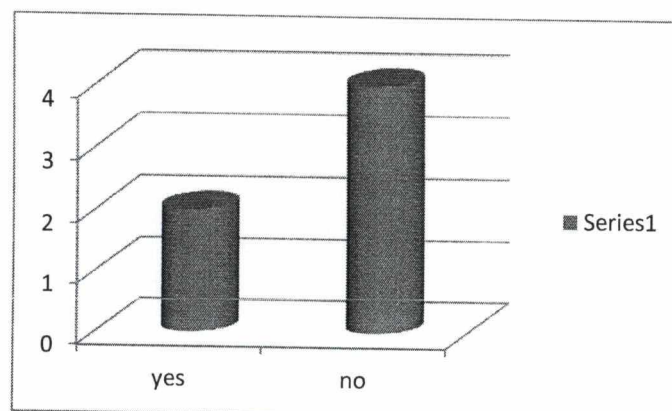
Graph 15

Question 16: Is the student's attendance to the English course compulsory?

The findings elicited revealed that the attendance of the students for the majority of the respondents (67%) is not obligatory; whereas, 33% of them answered yes. It is obvious that if a student is forced to attend a lecture just for the sake of attendance, he/she will not concentrate in the class; moreover, there is no evidence that a student with more attendance secures higher marks or is more successful. Obviously, those who are interested in studying will definitely come to classes without being forced. However, poor attendance will decrease the students' learning opportunities and increase the risk of failure. Therefore, it is the task of the teacher to motivate the students to attend the English courses. According to Rogers (2002), compelling students to attend makes for high attendance does not necessary correspond to increase performance. Not surprisingly, students are more likely to attend a class on a topic they are interested in than those they are not. Activities with high levels of credibility will contribute to the students' interest in the subject.

Answer	Number	%
Yes	2	33%
No	4	67%
Total	6	100%

Table 16

**Graph 16**

IV.6 The Placement test

The language to be taught should be related to the learners' needs, and the language should be taught to prepare learners for authentic communication. In order to achieve these objectives, ESP teaching and testing should focus on the elements of Communicative Competence Hymes (1971); Widdowson (1979); Wilkins (1976) as we have mentioned previously in the literature review. In this view, testing is an indispensable part of our teaching methodology. It allows teachers to measure the knowledge acquired by the students and the testing of the validity of the teaching strategies and didactic materials. Heaton (1988:7) asserts the following:

'a test which sets out to measure students' performances as fairly as possible without in any way setting traps for them can be effectively used to motivate them.'

The suggested test in our research work was designed to measure language ability through a general placement test. This way of testing language ability and language knowledge constituted an advantage of the syllabus itself because if language ability had improved then the syllabus as a whole could be considered effective. In order to determine

Chapter IV

the reliability of the questionnaire, a placement test on students' ability of the four skills was carried out at the beginning. Moreover, we have decided to construct our own language test although a number of professional language tests are on the market. These tests include testing reading and oral skills, we have noticed that no one of these tests meet the assessment needs of the students at the department of Computer Science. We have received some professional tests such as TSE (Test of Spoken English), TOEFL (Test of English as a Foreign Language). We have decided to develop our own. The tests mentioned before were not adapted for students of Computer Science; for example, lack of texts of reading comprehension in Computer Science; moreover, the tests are not suitable for the level of the students. The tests were presented to the students in the classroom. The duration of the suggested test was one hour for the reading test and the topic was related to the field of Computer Science. In addition, to assess the oral skill, we have constructed a test that consists of two tasks (a reading passage, and interpreting a chart (orally; the students are supposed to interpret a chart). The spoken test required 15 minutes approximately; for example, to defend an opinion, give a definition or interpret a graph. Although the test items do not appear to directly reflect the communicative requirements of any particular context, it elicits a variety of responses in a very short time. Our placement test was based on authenticity (real-life situations) in order to measure the students' ability to read, write, speak and listening to meaningful texts. Moreover, the written test was used for measuring the ability of the students for composing written discourse; for example, candidates will be asked to complete a short piece of writing. As indicated below, descriptions of performance are given at various levels from weak to very good. The table shows that the students are weak in grammar, vocabulary and the oral skill. The respondents are weak in grammar (70%), followed by 67% who are weak in the oral skill and 60% at vocabulary. On the other hand, 15% of the participants are good in reading and 42% of the subjects estimated their level to be the average at reading while 13% of them are good at vocabulary, and only 5% are good in the oral skill. Only 3% of the study samples are excellent in reading, followed by 2% who are excellent too at vocabulary and in the oral skill.

perceptions of the English language course, the results in terms of necessities, lacks and wants of Hutchinson and Waters' (1987) target needs framework, are discussed briefly. Firstly, regarding the Computer Science students' English language necessities in general; students have to know that there are many skills in order to function effectively in the target situation. This was evident from the results discussed earlier which present the frequency of English language skill use and the importance of these skills. Interestingly, all the skills have been perceived by the subjects to be important to acquire. Moreover, we have deduced that English plays a significant role in the Computer Science context. In addition, in terms of lacks in the English language, the study showed that the students do not have an adequate level of English ability. We rated their level to be weak in the most important skills. In general, their perceived level of performance was not satisfactory. In terms of wants, the subjects demonstrated interest in receiving training in speaking, listening and writing. Nunnan (1989:176) asserts ,

'The effectiveness of a language program will be dictated as much by the attitudes and expectations of the learners as by the specifications of the official curriculum.'

This study revealed that the English language courses are highly dissatisfying. Basically, the learners know exactly what they need English for and they know what the ESP course should offer them; for example, the majority of the respondents in the present study had the perception that all the four skills should be given priority when designing an ECS course. Moreover, the students showed that courses should be based on authentic materials and up to dates texts and tasks related to their subject-matter. We have noticed that the students' responses show that the English language course does not meet their language needs, and the time allocated to the course is not enough to enable them to use English efficiently even if the respondents wanted to learn in a very short period of time. Thus, it is necessary to design a new syllabus to meet the students' expectations. It is very important to take the perceived needs into consideration and should base the design of a syllabus on the four skills with emphasis on speaking and writing. In addition, the syllabus

should match the subject-matter of the students, and the difficulties, needs, motivation should be given much attention. Course designers should take the time-allocated into consideration, and the attendance of the students should be mandatory so that English becomes an essential course at the department of Computer Science. Generally speaking, NA would help to identify needs that can be used in developing objectives and content for a language programme. As such, the findings show that the current language course is not appropriate to the students. The obtained results pushed us to design our syllabus within the LMD system at the department of Computer Science. The findings revealed that there was a difference between students' and teachers' perceptions concerning the importance and the difficulty level of the language skills. While students stated that listening and speaking are the most important skills to be developed, teachers believed that approximately all the skills are important especially the writing skill. Moreover, there was a discrepancy between students' and teachers responses on the use of the mother tongue in the classroom. The majority of the students stated that they don't agree about the use of the mother tongue in order to be exposed only to English since there is no other context where to practice the language; however, teachers preferred to use English in the classroom for a better comprehension, and according to them this process facilitates the task of learning. More importantly, most of the students believed that activities should be authentic and related to real- life needs. This fact may provide them with the adequate training needed to improve their listening and speaking proficiency. In addition, we noticed that the students wanted courses that focus on the context of their subject-matter. Generally speaking, through our study sample, we noticed that the students preferred up to dates materials such as overhead projectors, the internet, podcasts since the use of authentic materials has been one of the main features of syllabus design, and therefore authentic materials should be taken into consideration. In addition, the analysis of the teachers' questionnaire indicates that the teachers were not well-formed since they were part-timers at the department, and lack the scientific knowledge (computer science). Basically, they focused only on the teaching of reading comprehension, neglecting the other skills such as writing, speaking and listening. The English courses were not interesting for the students, and their level was weak. To sum up, the aim of this survey was to reveal what different parties in the teaching/learning process; namely, English

teachers and the students' perceive the English language needs of Computer Science students to be. Through our study sample, we have noticed that the English courses at the department of Computer Science were not very motivating for the students. Master1 students were unable to answer even to the questionnaire without our help. It is quite evident that they have not learned English effectively during the previous two years (first and second year). They encounter difficulties at the level of grammar since they were unable to produce correct grammatical sentences, and they were unable to write summaries in English or to produce any piece of discourse. Moreover, the students were unable to utter sentences in English except few words of Computer Science such as data, software, mouse, and keyboard. In what follows, we will discuss some of the insights concerning our proposed syllabus based on the questionnaires we have administered to both the students and the teachers, and our experience in teaching three years as recruited teachers at the department of Computer Science within the LMD system

IV.7.2. Pedagogical Implications

In order to promote the status of ESP in the Algerian system of education, and more particularly in Computer Science, it is crucial to value the role of practitioners involved in the process of teaching English to ECS students whose needs are specified in advance. It is also very important to think about fully-fledged (permanent) teachers rather than part-timers from other institutions who often consider teaching as a secondary occupation. One of the main drawbacks that constitute a constraining factor is the lack of specialized teachers. Moreover, no attention has been given to the training of teachers aiming to teach ESP. As we have mentioned before in the literature review of our research study, needs analysis, aims and objectives, syllabus design, methodology and assessment are all fields in which research is needed in order to develop teaching English for Specific Purposes; for example, needs assessment implies a definition of both the learning needs and the future expectations of the students. In addition, in the context of designing a syllabus, it is of paramount importance to think about a language program that emphasizes the expectations of the learners. Thus, the main focus of a syllabus design is determined by the wants and likes of the students. In the context of ESP, assessment involves an

evaluation of the students' ability to communicate effectively in the target language in both spoken and written forms. In addition, evaluation aims to provide information on how the program can be improved through modifications. The suggested reform in English for Computer Science under scrutiny and discussions in our study sample, and that will be introduced in the near future at the department of Computer Science emphasizes the need for the design of teaching/learning programs. The aim put forward in this dissertation has been to emphasize the need for implementing an ECS at the department of Computer Science, characterized by a strong concern with the learning needs of the students as well as their perceptions of learning English in their future work and research. Therefore, our syllabus was prepared by making use of several materials according to the purpose of the course. They all aimed to satisfy the expectations of the students; for example, unit one of the program we have prepared focuses on the teaching of vocabulary and grammatical structures such as 'relative pronouns and articles' and various activities and tasks that enhance writing and speaking. We have followed models proposed by Widdowson (1978-1983). According to Widdowson (1983:7), ESP courses are drawn according to the degree of specificity of aims. *'By aims I mean the purposes to which learning will be put after the end of the course.'* In this case, the specific instances of language to fulfill the task become the aims. Moreover, it is very important to focus on the development of Communicative Competence. The rationale behind the models proposed, is a focus on oral communication since it fulfills a great number of pedagogical functions. Learning to speak is an important goal. It equips students with a set of skills such as making arguments, transmitting information and expressing themselves in future places. This can be possible with the application of the task-based approach that enhances oral communication in Academic settings. According to Prabhu (1987) a task is a device for organizing the content and methodology of language teaching. Skehan (1998:268) comes up with the following criteria of task-based approach:

- Meaning is primary
- There is a real-world relationship

While Widdowson (1978) argues that 'exercise' and 'task' differ with regard to the kind of meaning and goal. An exercise is used to develop linguistic skills while a task is

based on the assumption that linguistic abilities are developed through communicative ability. In sum, a task is realistic and engages learners to use language effectively in context; therefore, to be able to communicate in real situations and this is our objective within this study. Thus, the rationale behind constructing the suggested syllabus is to develop a course content that focus on all the skills with a primary focus on oral and written skills; for example, the tasks should develop good conversation; adequate phonological forms to use in speech; effective listening; participating in oral discussions and situations; writing summaries; writing reports and Academic articles; understanding written forms in order to be able to extract information for research. However, it is crucial that the students become aware about the goals of the course and their relevance to the program proposed. It is also necessary to assess students' performance at the four skills based on their prior knowledge and experience. Usually, our first session begins with an overview of the course content. Our intention is to motivate teachers to exploit their creativity and to develop their own materials, using their knowledge and experience as regard to the learners' expectations. Therefore, it is necessary to take into account some considerations with regard to the issue of teachers as practitioners and to present concepts and principles for adapting didactic materials. We believe that developing materials enhance teachers' pedagogical practices, in the sense that the teaching process should be based on learning objectives, preferences and expectations. Two principles are important in this process: the production of authentic materials based on real tasks and the importance of including students' view in order to update the teaching materials in terms of the way learners would like to learn and what they need to learn. Thus, materials used for language teaching should depend on how relevant they are to the learners. These principles can be applied when there is a match between the materials and the tasks proposed. Teachers should do their best to develop the most appropriate and flexible materials for the students. It is also important that materials development need an artistic inspiration. Novelty and variety are two crucial concepts that develop learners' communicative ability. Another important principle is the use of effective needs assessment that determine teacher decision making which may facilitates the task of learning. Basically, the selection of materials and activities for the students should

encourage the students to learn more effectively. Good materials make learners more comfortable and confident. In this case, students perceive the tasks practical to their lives.

IV.7.3 Course outline

The proposed courses ensure knowledge and skills required for Communicative Competence of the students in real-life situations. The English syllabus we are offering to the students of Computer Science was produced to meet their needs first. In terms of grammatical structures and functions, an emphasis on grammatical accuracy and the repetition of the structures is necessary. We do believe that correct knowledge of grammar is an essential part of communicative competence, and we have adopted the task-based approach in order to enable the students to use English adequately in context, thus to shift from usage to use. Form should not be neglected as such, in the sense that both form and meaning are two important notions in the process of learning the language. With respect to vocabulary, an emphasis on controlled activities should be taken into consideration. In this case, students are required to decipher meaning from context and should avoid learning a list of vocabulary even if this may serve sometimes. According to White (1997), frequency (the number of occurrences of an item in a given language); coverage (things which can be expressed in a given item); range (the amount of time); vocabulary (the readiness with which a word is remembered in certain contexts), and learnability which can play an important role in vocabulary selection are all important in the design of a syllabus. It is essential to produce materials that cover certain aspects of English, and to expose students to real-life language use. In addition, our objective is to enable students to read fluently and accurately a written passage. Readers should be able to decode words

and group them into meaningful phrases. Reading with good phrasing and expressions is very motivating. It is obvious that there is a combination between reading quickly (reading speed) and reading proficiency. Thus, the act of comprehension is part of fluency. In fact, there are ways to make students fluent in reading; for example, we can ask the learners to practice reading certain passages, and we have to read for them so that they develop an idea of what expressive and meaningful reading is about. This allows

students to develop automaticity. Even if this task is traditional, it may develop the ability of the students to practice listening skills. Thus the courses will allow the students to perform the followings:

- 1-To understand different texts related to Computer Science such as the different types of memories, kinds of viruses, language programming, components of the computer...etc.
- 2-Writing reports, articles, summaries, abstracts, curriculum vitae and cover letters in English
- 3-Expressing themselves in English, creating debates and oral discussions such as the interpretations of charts and tables orally
- 4-Listening to native-speakers through new technologies such as iPods and other listening devices
- 5-Translating from the source language to the target language

In our case, the first semester will be devoted to vocabulary, phonetics and grammar, while the second semester will be devoted to reading and comprehending texts, translation, writing summaries, reports and articles. As we have mentioned, we have insisted on translation since it constitutes an important component in the English teaching program. The aim of the course of translation (word, sentence and paragraph) will introduce students to translation practice. Students will learn how to translate the context, the meaning rather than translating a specific text word by word. They will learn the structures adequately, and how to write a coherent translated text. Each session of the course will include a survey of words, their structures, meanings and their different usage. We have noticed that the students are very motivated to study this course for the following reasons:

- *To know about the craft of translation
- *To know about the strategies of translation
- *To study language through translation

To sum up, the objectives of translation is to enable students to be good readers, good writers; thus good communicators. Moreover, the most important thing of translation is to

understand the content of the source text, and to translate its meaning in an appropriate way in the target language. In the following, we will propose the organization of the course content:

1-The structures: Computer Science students should be able to use the following structures with accuracy (the tenses, the connectors, the modals, the passive, the conditional, and the relatives); moreover, they should use punctuation adequately in sentences and paragraphs.

2- Vocabulary: The courses will cover technical and semi-technical vocabulary. The terms will be defined in context. The students will be asked to pronounce the words correctly, and they will be asked too to transcribe them phonetically. The majority of time, we translate them to the students into French.

3-Reading Comprehension: The selected texts are usually illustrated with graphs, charts or pictures in order to facilitate the task of comprehension. We add questions of comprehension to make the students to speak orally, and to create debates in the classroom. The first question we ask is to find the main idea of the selected passage. This is done to test the oral skill, and if the students are able to produce correct grammatical sentences.

4-Writing: students are asked to interpret a chart in the written form, or to write a summary of a chosen topic.

5-Speaking: We usually ask the students to interpret a chart orally, or to discuss a topic proposed.

6-Listening: Students can listen to tapes, podcasts or simply to the teacher, and then summarize what they have detected through their listening. Of course they are other realistic tasks that we will demonstrate in the appendix.

What is essential is to practice really these tasks in the classroom, and to use up to date materials such the overhead projectors, the internet if possible, the laboratories, podcasts. As a rule, we have to focus on authentic materials and tasks. Moreover, the time allocated to the English courses should be four hours a week. The students should be divided in groups of no more than 30 students in a classroom. The semester is ended with a two hour exam which consists with a text, followed by questions of comprehension, a grammatical exercise, vocabulary and a translation exercise.

IV.7.4 The Training of ESP teachers

Dudley-Evans and St John (1998), use the term ESP practitioner rather than the teacher to mean that the teacher construct his/her own materials, and facilitate the task of learning for the students although he/she is not supposed to be the primary knower. However, teachers should possess the scientific knowledge in order to generate communication in the classroom. Teachers should listen to learners, and take some risks in teaching ESP. Moreover, ESP teachers carrying out a needs assessment, designing courses and writing teaching materials need to be able to incorporate the findings of the research. They should be able to evaluate both the students and the courses of any teaching materials. Thus, it is necessary to think about the training of the teachers to achieve success. The followings are one of the objectives required for the training of the teachers in general:

- *To ensure a command of the language
- *To use adequate teaching techniques and classroom activities
- *To be able to assess the progress of the students during the courses
- *How to be able to manage classroom activities
- *To be able to prepare lesson plans
- *To provide teachers with the necessary scientific knowledge since an ESP professional must be able to switch from one professional field to another.

Basically, good ESP teachers should have some knowledge of the academic world; the ability to work in groups; the ability to listen to and motivate the students. In addition,

language teachers should have a responsibility to keep context, to select appropriate authentic materials for use in class, and to create learner-centered classrooms. It is necessary that ESP teachers should be knowledgeable in content areas and to be able to elicit knowledge from students. However, language teachers are trained to teach linguistic knowledge rather than a content subject. Hence, they may be able to teach subject-matters. It is necessary for ESP practitioners to possess a certain level of background knowledge in their students' Academic subjects. Moreover, ESP teachers should have several roles which require both content and formal schema knowledge in a particular field since the process of a language teaching program should be based on input, process and output; for example, the input, in the sense that teachers should identify the needs of the learners and material production. Process, in the sense that they should be able to implement a program, and output which means to be able to assess the students' level. Therefore, the ESP practitioners need to be course designers and material providers. Generally, teachers are not well-formed how to teach Academic English. They lack content knowledge and feel unprepared to teach authentic texts and tasks. The majority of the teachers try to teach English by means of translation without making sense of the content encoded in the text, and sometimes without knowing the strategies of translation. Thus, ESP teaching requires a specific approach to the training of the teachers. They should be provided with the necessary knowledge and adequate tools to teach the subject-matter of the students. We suggest a pre-service training after the undergraduate study. Teachers should be formed in ESP. They can attend professional courses in order to acquire a second field of expertise such as Medicine, Law or Computer Science. Moreover, it is necessary that ESP teachers participate in content teaching classes, and can ask assistance from content teachers. In our case, we suggest training teachers in innovative methodologies and approaches to teaching ESP, and to instruct them in ESP materials in order to be able to use modern technologies and the internet. To sum up, we suggest offering teachers with ESP courses in order to help them improve their teaching. Generally, local and international seminars are very useful in order to exchange ideas with colleagues from other universities. Self-training is a useful tool too for teacher development. In the context of language education, the primary goal is to foster the teachers' capacities to improve their language teaching

Chapter IV

practice since the training of teachers is one of the criteria for syllabus design. In this sense, the teachers may become well-qualified.

IV.7.5 Conclusion

It is crucial to set up a suitable syllabus for Computer Science students in order to promote learning, encourage and motivate the students to learn English. Our main focus within this syllabus is to facilitate the task of learning, and enable them to gain access to the work at all levels. This may be possible if we can design a syllabus based on their expectations, and on authenticity, a concept we have defined elsewhere in this thesis. Moreover, it is of paramount importance to think about recruiting permanent teachers of English at the department of Computer Science. In addition, the main focus in learning a Foreign Language is to be able to use it in the outside world. One of the most important tools in FLT and learning are the materials used during the lessons. Nowadays, there is a wide range of materials available for teachers to use; however, the courses may be more effective if teachers design their own materials based on the requirements of the learners and authenticity so that learners be able to communicate in any form. This process requires communicative competence or ability to know what to say and how to say it correctly in appropriate situations. Therefore, authentic language should be used whenever possible in the classroom. This type of learning based on authenticity and the Communicative Approach enables learners to transfer what they learn in the classroom to the outside world.

General Conclusion

The primary purpose of language teaching was communication in real situations, using up to date materials in order to fulfill the communicative needs of the learners. Therefore, specification of needs is an important development in the area of ESP. In this case, materials development will take new directions based on certain parameters such as data from authentic situations. Moreover, authenticity of the materials based on the needs of the learners play an important role in the process of teaching/learning, and helps the learners to communicate in realistic situations. It seems necessary to examine the existing ESP materials in order to evaluate their correspondence to the proposed model. Both MA students and teachers examined textbooks, and the existing materials. They noticed that the teaching programmes were not satisfying, and did not fit the criteria set by ESP models in general. We suggest that the current practice in ESP materials should be redesigned. In order to prepare a programme, needs analysis should be conducted, and adequate materials should be developed. In language teaching, the syllabus has been the starting point in planning a language programme. People learn a language best by using it to achieve meanings, and positive outcomes. This leads us to construct a wide range of tasks in order to promote language use. It is obvious that activities based on listening and repeating and controlled pattern practice involve the production of language but not its use. The emphasis on language use leads us to look at the content of the courses in terms of tasks and topics related to the field of Computer Science. The best way to guarantee that learners really use language is to put them in real-life situations. Even if we are able to teach the grammatical system, there is no guarantee that this would be translated into an ability to use language when it comes to practice. According to Widdowson (1978), a methodology which focuses on language form is deficient since students will simply produce correct grammatical sentences. Obviously, we can produce and understand acceptable sentences in the target language, but we are not sure if these sentences are appropriate as 'tokens of communications' (Widdowson, 1978). We all have to learn conventions of certain types of communication since knowledge of grammar and lexis is not enough; in other words, we must learn to 'deploy sentences' in discourse (Widdowson, 1978). We have to know what value these sentences have in discourse. Thus, the distinction between usage and use is very important in the process of teaching. We can

look at language in use and encourage learners to make generalizations. Moreover, learning language in use is designed to serve communicative purposes. Therefore, we must look for a methodology that offers language use in order to negotiate meanings in different contexts without of course neglecting form that enables the students to become competent. The use of authentic materials is possible if we accept the claim that ESP courses should be offered at all levels (intermediate and advanced levels). The use of such materials modified by teachers is common in ESP. In this context, students are encouraged to conduct research using a variety of resources such as the internet. The teachers can give students different tasks in order to prepare them for the preparation of papers, reading, note-taking and writing. On the other hand, teachers need to play different roles and acquire certain knowledge. Using skills as a framework of ESP, the teachers should be provided with the necessary knowledge and tools to deal with their own students' subject-matter. In addition, the main objective of teaching is to enable students to deal with authentic knowledge relevant for their specializations. Our own experience of using authentic materials in the classroom (Computer Science students, Master 1) was when given the task of designing an English programme. The students were exposed to real language being used in a real context. Other aspects which proved positive when using authentic materials were that they are highly motivating. The suggested courses also reflect changes in the use of language. There is a wide variety of texts and tasks. One of the main reasons for using authentic materials is that the students will not encounter problems in real contexts. Thus, the role of the teacher is to prepare learners to cope with eventualities in the future and understand how language is actually used. This research aims at testing the hypothesis that authentic materials could enhance the motivation of Master (1) students at the department of Computer Science in Algeria. Authentic materials provide students with up to date knowledge, expose them to the world of the target language and bring the real world into the classroom which is an artificial context. Moreover, innovative teaching materials give students stimulation in learning. One of the disadvantages of using authentic materials is that sometimes they are not teacher-friendly, and we may need to spend several hours watching videos or reading until we find what we need to use in the classroom. In addition, in a whole situation we may find just one instance of what we need to present in the classroom. To sum up, we need to have the time to research and gather the appropriate materials, and this is not the case of

teachers who are part-timers. As a rule, in this context, authentic materials are a suitable means of exposing students to the use of English for communication. One of the crucial priorities in designing a syllabus is that the material is drawn from the real world, and the students are an integral part of the syllabus. We use authentic materials in different ways, and we integrate other resources such as authentic texts and tasks and more often created activities. Each year brings new topics, ideas and interests, and also brings a new approach to teaching. Therefore, we hope that this investigation will encourage teachers of ESP to explore new trends of teaching.

An English Design Syllabus in Computer Science

(Communicative Exercise types for reading, vocabulary, writing, listening, speaking and translation)

Model 1: Communicative Exercise Types for Reading and Understanding

Text A:

A high level language is a problem oriented programming language; whereas, a low level language is a machine oriented. In other words, a high level language is a convenient and simple means of describing the information structures and sequences of actions required to perform a particular task. A high level language is independent of the architecture of the computer which supports it. This has two major advantages. Firstly, the person writing the programmes does not have to know anything about the computer on which the programme will be run. Secondly, programmes are portable, that is, the same programme can be run on different types of computer. However, this feature of machine independence is not always achieved in practice. In most cases, programmes in high level language are shorter than equivalent programmes in low level languages. However, conciseness can be carried too far, to the point where programmes become impossible to understand. More important features of a high level language are its ability to reflect clearly the structure of programmes written in it, and its readability. High level languages may be broadly classified as general-purpose. Almost all languages use letters and decimal digits, most high level languages use reserved words. Perhaps the most important feature of high level language is the way in which programmes in it are structured. The structure of a programme is specified by a set of rules (syntax). Much attention has been devoted in the development and use of high level languages, to the way in which programmes are split up into blocks. In some languages, notably Fortran, these blocks are called subroutines such as algol and pascal. An important aspect of high level language is the way in which they handle data items and data structures. Data items fall into two categories: variables and constants. Moreover, almost all high level language includes the notion of data types. In basic, the standard types are numeric and character strings. In most high level languages, numbers can be integers or real numbers. A pointer is a data type which contains the address of another item. Finally, the purpose of data types is to make programmes more meaningful, and to provide additional checks for errors.

From Wikipedia, the free encyclopaedia

Questions of Comprehension

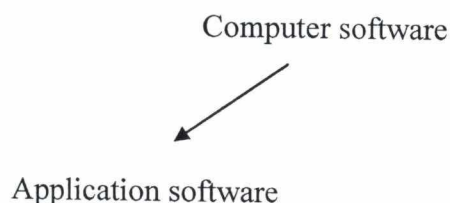
- 1-What is the main idea of this passage?
- 2-If a low level language is a machine oriented, how would you describe the relationship of the high level language to the computer which supports it?
- 3-What do you understand by reserved words? Give examples
- 4-Define the followings: Problem-oriented / machine oriented/ general purpose/ split up/ task
- 5-Summarize this text using your own words

Text B

Application software is a subclass of computer software. This should be contrasted with system software which is involved in integrating a computer's various capabilities, but does not directly apply them in the performance of tasks that benefit the user. In this context, the term application refers to both the application software and its implementation. A simple, if perfect analogy in the word of hardware would be the relationship of an electric light bulb to an electric power generation plant. The power plant generates electricity, not itself of any real use until harnessed to an application like the electric light that performs a service that benefits the user. Typical examples of software applications are word processors, spreadsheets and media players. Multiple applications bundled together as a package are sometimes referred to as an application suite. Some might bundle together a word processor and several other discrete applications. Thus, users create software themselves. In some types of embedded systems, the application software and the operating system software may be undistinguishable to the user, as in the case of software used to control a VCR, DVD player.

Question of Comprehension

- 1-Give a suitable title to this text
- 2-Summarize this passage using your own words
- 3-What is the difference between application software and system software?
- 4-Build sentences with the following words: Hardware/ word processor/ bundled/ embedded
- 5-State some examples of software and explain in your own words
- 6-Translate the text into a diagramme.Start as follow:



Text C

The history of artificial intelligence began in antiquity, with myths, stories of artificial beings endowed with intelligence or consciousness. The field of artificial intelligence research was founded at Dartmouth college in 1956. Many of the researchers predicted that a machine as intelligent as a human being would exist in no more than a generation. The earliest research into thinking machines was inspired by a confluence of ideas that became prevalent in the late 30s and early 50s. Robots are a good example. These machines were controlled by analog circuitry. When access to digital computers became possible, a few scientists recognized that a machine that could manipulate numbers could also manipulate symbols and that the manipulation of symbols could well be the essence of human thought. This was a new approach to creating thinking machines.

Questions of Comprehension

- 1-Give a title to this passage
- 2-State the new approach to creating the thinking machines
- 3-Do you think that a machine can really replace a human being?
- 4-Explain the following words without the use of a dictionary: Antiquity/ prevalent/analog circuitry/manipulate/network

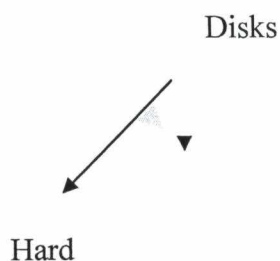
Text D

Magnetic disks are of two kinds, namely floppy and hard. The hard disks, in turn, are subdivided into fixed-head and moving-head disks which are either cartridge or pack. Floppy disks, or diskettes as they are called, are made from plastic, which makes them very light, flexible, and quite inexpensive; whereas, hard disks are made from a rigid. A disk cartridge is made of a circular disk called a platter, about the same size as a long-playing record.

Questions of Comprehension

1-Give a title of your choice

2-Transform this passage into a diagramme. You can start as follow



Text E

‘Direct Access Attack’

Someone who has gained access to a computer can install any type of devices to compromise security, including operating system modifications, software worms, key loggers, and covert listening devices. The attacker can also easily download large quantities of data onto backup media, for instance CD-R/DVD-R, tape; or portable devices such as key drives, digital cameras or digital audio players. Another common technique is to boot an operating system contained on a or other bootable media and read the data from the hard drive(s) this way. The only way to defeat this is to enCD-ROMcrypt the storage media and store the key separate from the system.

Wikipedia, the free encyclopaedia

Questions of comprehension

- 1-Find another title to this passage
- 2-State from the text two examples of devices that can be used in a computer
- 3-Explain in your own words ‘to boot an operating system’
- 4-Translate the underlined words in the passage

Model 2: Communicative Task Types for Vocabulary

Task 1

Find the right word for each definition

- 1-A series of interconnected computers and databases around the world————→
- 2-A part of a website that can be read on a computer screen————→
- 3-A piece of equipment that is used to send information from a computer through a telephone system —————→
- 4-To copy computer programmes electronically————→
- 5-The first page that you can see when you look at a website —————→
- 6-A connection between documents on areas on the internet————→
- 7-A computer programme which allows you to look at pages on the internet —————→

Task 2

Match the words in column A with the words in column B

- | | |
|-------------------|--|
| 1-Minicomputer | a-processing unit of microcomputer |
| 2-Primary memory | b-specialized secondary memory devices |
| 3-Miniperipherals | c-where operator can manually operate the computer |
| 4-Cartridges | d-internal storage |
| 5-Console | e-fixed word length of 8-32 bits |
| 6-Microprocessors | f-attached to minicomputers |

Task 3

Complete the following sentences using appropriate terms:

- 1-The most sophisticated computer will do nothing without.....to run it.
- 2-.....is untreated information.
- 3-Processed data or.....can be displayed on a screen
- 4-The.....is a picture of the logic of a programme.
- 5-A programme is translated into computer language by the
- 6-When you buy a computer the manufacturer usually supplies the
- 7-The abbreviations used in a flowchart are called.....

Task 3

Insert an appropriate word from the list below in the blanks. Rely on your previous technical knowledge)

Basic-the-some-plan-programme-set-code-before-after-must-processing

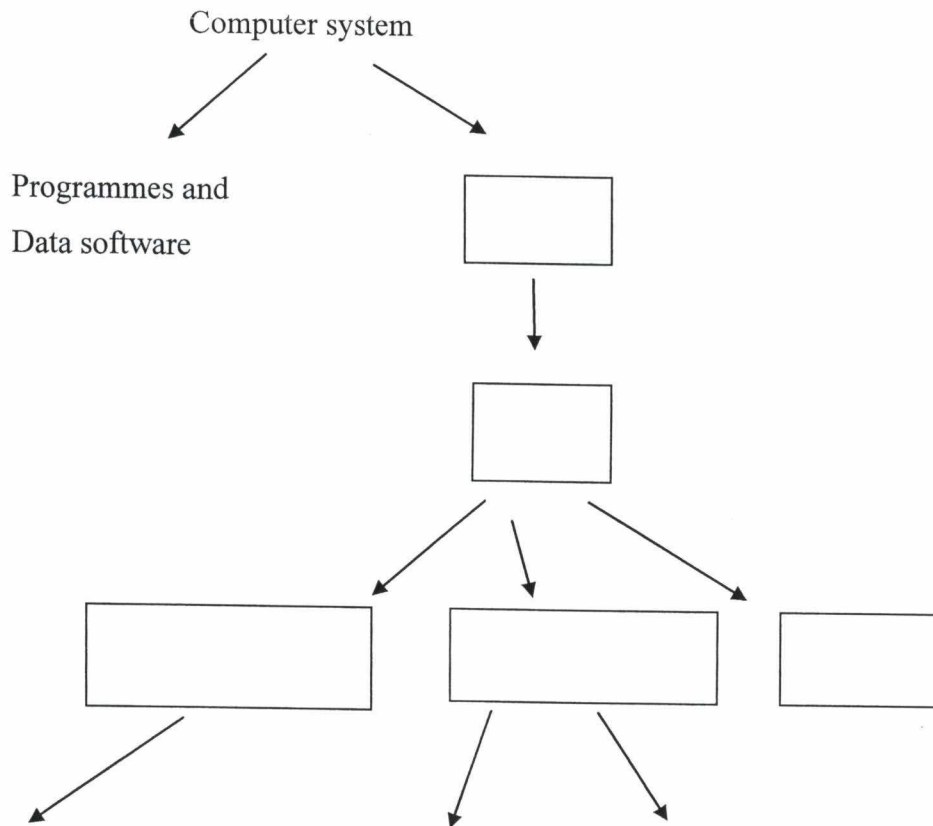
A programme is aof instructions that tells the computer what to do.....beginning to write a, a good programmer will.....and design the programme.....exact input and output.....be specified, and the.....way of producing.....output from the given input must be decided upon.the flowchart is drawn,programmer is ready tothe programme. There are.....important points to remember when coding in.....

Task 4 Build sentences using the words below.(Use a dictionary if possible)

Intranet-Buffer-Application-Bandwidth-mainframe

Task 5 Complete the following diagram using the words from the list below (the components of the computer)

Co-processor/programmes and data software/RAM/ROM/peripherals/main memory/CPU/mechanical and electronic equipment/hardware



Appendix 1

Task 6: The following words are the main components of control units. Try to explain them using sentences.

A counter- a register- a decoder- a clock

Task 7: Complete the followings using the words from the list below

Related- print- proceeding- to code- programming

- 1- The machine carries out the..... which the programmer gives it.
- 2- Fortran is one of the many..... available in the market.
- 3- The first two steps in your program are not..... they are basically different
- 4- I have..... my programme.
- 5- your name and address in block letters.

Task 8: State the main components of the computer, and the main components of the processor. Choose from the list below

The control unit- input- output- processor- the arithmetic logical unit- memory

Components of the computer	Components of the processor

Appendix 1

Task 9:

A) What is the difference between the internal memory (primary memory) and the secondary memory? Choose from the statements below the right definition

-It refers to the storage locations inside the computer.

-It refers to the storage in the peripherals

B) The followings are the main types of memory. Find their equivalents below

Core

a square rectangular piece of silicon upon which several layers of

An integrated circuit are etched

Chip

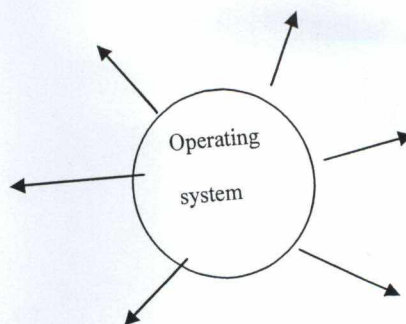
a small ferrite ring which is capable of magnetized and
Demagnetized in the memory of the computer

Task 10: Find words of the following statements

1-Enter the information →

2-Display the results on a printer (terminal) or store them on tape or disk →

Task 11: Label the chart below with the components of the operating system



Appendix 1

Task 12: Match the following terms from column A to column B

Multi-user	Responds to input
Multi-processing	Allows more than one program to run
Multitasking	Allows different parts of a single program
Multithreading	Supports running a program on more than one CPU
Real time	Allows two or more users to run programs

Task 13: Insert a suitable word in the following relying on the list below

User- boot- set -system software-programs- application software-computer hardware-

‘The Operating System’

An operating system (OS) is aofthat manage.....-.....resources, and provide common services for-.....The operating system is the most important type of.....-.....in a computer. Acannotan application program on the computer without an operating system, unless the application program is self.....

Task 14: Read the passage below, and try to explain it using your own words. Write possible definitions according to their context. Rely on your schematic knowledge

‘Computer Security’

Many operating systems support one or more vendor-specific or open networking protocols as well; for example, SNA on IBM systems, DECnet on systems from Digital Equipment Corporation, and Microsoft-specific (SMB) on Windows. Specific protocols for specific tasks may also be supported such as NFS for file access. Protocols like ESound or esd can be easily extended over the network to provide sound from local applications, on a remote system’s sound hardware.

Task 15: Find the words from the list below that correspond to the following definitions: Codec-configuration-bluetooth-browser-bandwidth-application

A program dedicated to a specific task —————→

The range of frequencies expressed in kilobits per second —————→

Chip technology enabling seamless voice and data connections between a wide range of devices —————→

A program that allows a user to find, view, hear and interact with material on the world wide web —————→

Short for compressor or decompressor. It is any technology for compressing and decompressing data —————→

This is a general purpose computer term that can refer to the way you have your computer set up —————→

Task 16: Group the following words to make a diagram. These words are related to the 'motherboard'

Brand and model-support CPU-CPU Socket type- CPU type-chipsets-memory slots-expansion slots-storage devices

Model 3: Communicative Task Types for Translation

Task 1: Translate the following words

Data processing manager /digits /disk drive /cartridge /logical unit /magnetic tape band/general purpose computer/ punched card/spooling/ light pen/ data packs

Task 2: Translate the following sentences (avoid translating word by word)

This device is used to enter information into the computer. As well as having normal type writer keys for special purposes.

Task 3: Translate the following passage into French

The CPU, or central processing unit, is just a tiny microprocessor chip, about the size of a postage stamp, but it holds more than one million transistors and functions as the nerve centre of the entire computer. The CPU is the part of the computer that processes data and instructions. Its key components are: a control unit, an arithmetic logic unit, a clock and some memory registers.

Task 4: Translate into English the followings:

Connecteur d'extension-processeur-synthèse de la parole-périphérique de stockage-logiciel système-tube à vide -tête d'enregistrement

Task 5: Translate the following words into French

Secondary memory

Sets of data

Monochromatic

Electrosensitive printers

Binary arithmetic

Block diagram

Model 5: Communicative task types for listening

Task 1: You tube in the classroom (the internet is used in the classroom)

Watch the video, and write down the main idea of the film. This video is about the procedure followed in calculating an employee's salary.

Task 2: iTunes video stores (the only video downloading service without the internet with the help of keepvid)

Watch the video, and try to write a short summary (no more than 5 lines). The video is about the history of computers.

Task 3: Listen to this extract, and try to discuss the topic orally. (Programmes and programming languages)

Model 6: Communicative tasks for Speaking

Task 1: Rely on the information below, and try to discuss the topic orally.

(How an ideal computer works?)

Algorithm information theory (how easily a computer can answer a question)

Complexity theory (how much time and memory does a computer need to answer a question)

Computability theory (can a computer do something)

Information theory (math that looks at data and how to process data)

Graph theory (math that looks for directions from one point to another)

Task 2: Interpret the chart below orally, using correct sentences

'Steps in Problem solving'

Define the problem



Formulate an algorithm



Translate the algorithm into a computer programme



Key punched the programme



Test the programme



Add the data and run the programme

Task 3: Answer to the Quiz below orally

- 1-What are the main parts of the CPU?
- 2- What is the typical unit used to measure RAM memory and storage memory?
- 3-What is megahertz?
- 4-What is ALU?
- 5-How can we store data and programmes?
- 6-What are the parts of the operating system?
- 7-What is the function of the operating system?

Task 4: Complete the following dialogue: This dialogue is between a journalist and a computer programmer. The topic is about a project for the blind. You can play the role with your classmate.

The Journalist: Can you tell me what kind of project you are working on it?

Computer programmer:

The Journalist: What is the minimum configuration that you need to adapt a desk top computer for a blind person?

Computer programmer:

The Journalist: How many expansions slots would be needed?

Computer programmer:

The Journalist: What sort of equipment do blind users find useful?

Computer programmer:

Task 5: Computers are vulnerable to attack, and this fact creates a battle between those looking to improve security, and those looking to circumvent security. In this context, try to discuss this topic orally. Rely on the following words:

Hackers-crackers-cyber attack-criminals-malware infections-website defacements-security breaches-worm attack

Model 7: Communicative tasks for writing

Task 1:

One of the most important characteristics of a computer is its capability of storing information in its memory. In this context, write a short passage about the main types of memory, and their roles. Rely on the information below:

Core memory-semi conducted memory- bubble memory-random access

Task 2: Use the following sentences to build a coherent paragraph, find the topic sentence.

1-The digital computer is an electronic machine which contains thousands of tiny circuits.

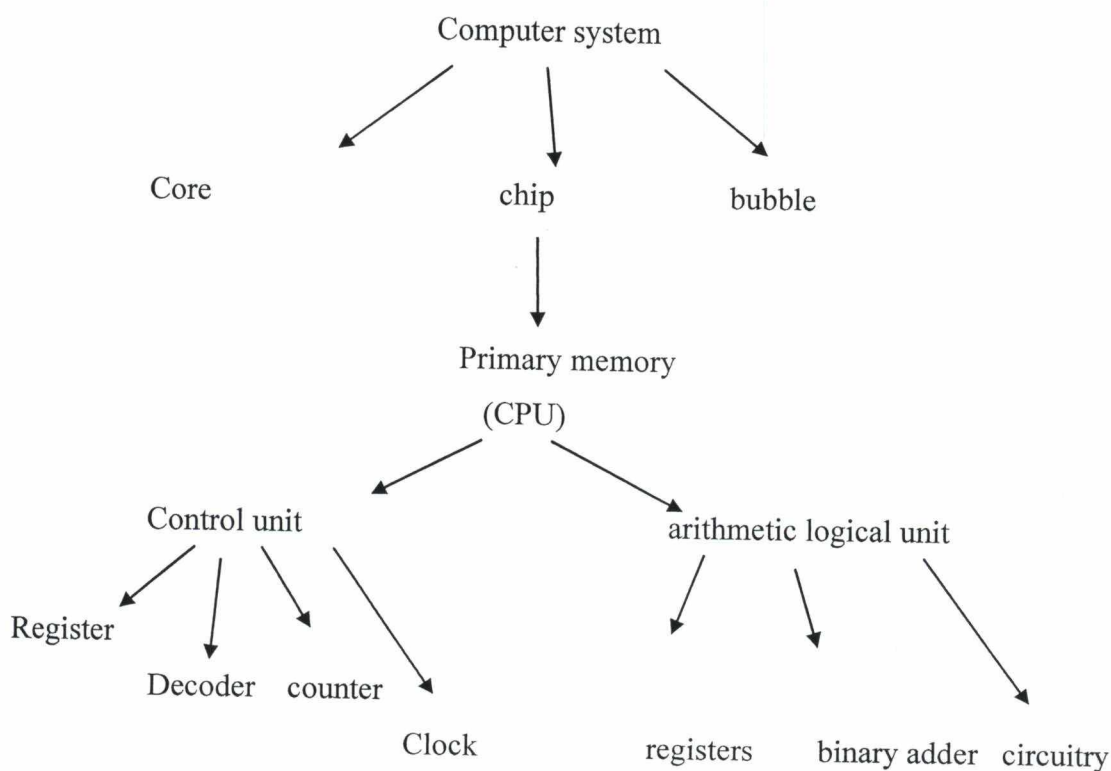
2-A complete circuit signifies that the electricity is on.

3-A broken circuit signifies that the electricity is off.

4-Through on and off states, the information is transmitted by the computer.

5-In everyday arithmetic, we use the decimal system, which is based on ten digits.

Task 3: Transform the chart below into a written discourse

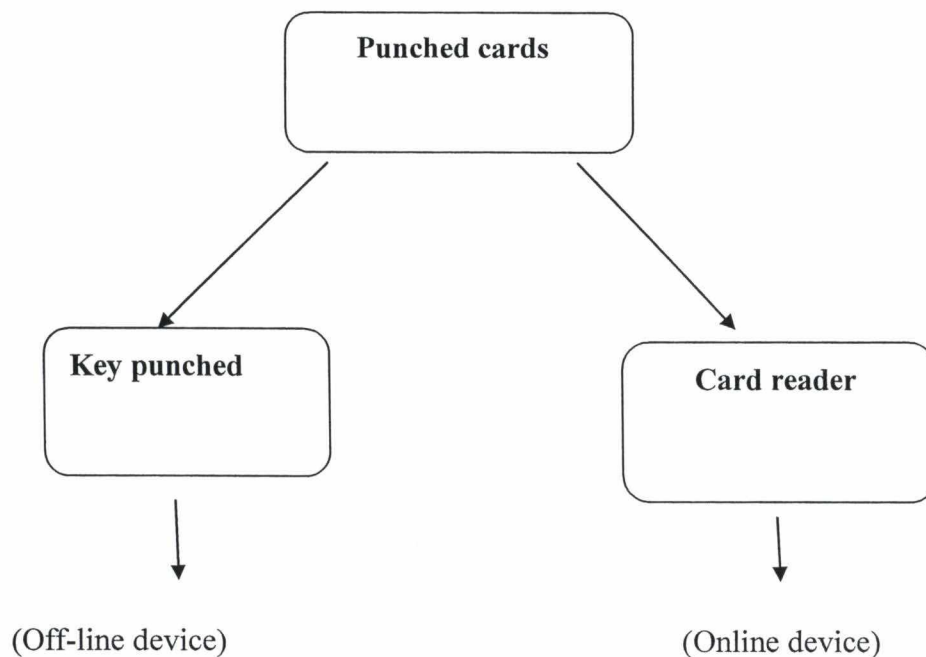


Task 4:

You are supposed to write a research article on the computer capabilities. Start by writing an introduction.(You can think about stating the main characteristics of the computer in the introduction).Your can start by the following definition:

‘Computers are machines designed to process prepared pieces of information which are termed data.’

Task 5: Use the information below to build a short passage about Cards and readers



Task 6: work project

Flowcharting is one of the main steps in programming, and indicates the logical path the computer will follow in executing a programme. Flowcharting is a drawing very much like a road map. In this context, write a mini project about the main steps that the programmer must follow in order to write a programme.

Appendix 1

Task 7: Reorder the following sentences, and then write a short composition

- 1-Recently, the introduction of terminals and screens has partly replaced the use of punched cards.
- 2-Moreover, he or she must be able to work under pressure when the workload in the data processing department is heavy.
- 3-Consequently, reduced the tasks performed by the keypunch operator
- 4-The keypunched operator must be both accurate and fast while punching programs and data onto cards.

Task 8: What are the tasks of a computer programmer? Rely on the information below to write a short passage

- To write programs
- To solve programs
- To write programs on time as they are needed

Task 9: Relate the following with the right statements, and then write a composition about the general types of viruses. You can use arrows

Worms

- * Are any types of viruses that damage your files

Trojan Horses

- * They infect executable code found in certain system areas on a disk

Generic computer viruses

- * Are programs that appear to be regular programs that help the computer do nothing, but cause harm to your files

System Sector viruses

- * Are malicious programs that modify or delete files and replicate

Model 8: Communicative tasks for grammar in use

Task 1: Complete the following table

Noun	Verb	Adjective	Adverb
Extension			
	Destroy		
		Peripheral	
			Specifically
Manipulation			
	Rely		

Task 2: Relate the following clauses by using suitable connectors, and punctuate adequately

1-The control unit transmits coordinating control signals and commands. The arithmetic logical unit performs the arithmetic and logical instructions.

2-Magnetic tapes are cheap. Access to specified data may take time in comparison with disks.

3-Computers have a means of communicating with the user. Certain computers are used to control directly things such as robots.

4-A computer can replace people in routine tasks. It has no originality.

5-Computers have often been thought of as very large adding machines. A computer can only respond to a certain number of instructions.

Task 3:

A) Fill in the blanks with prepositions

1-To find the average, divide the sum.....the number of grades.

2-To find the sum, add each new sum.....existing sum

3-To find the number of pounds; multiply the number of kilos.....2.2

4-To find the numberovertime hours, subtracts 40.....the total number of hours.

5-Add the time hours.....40.

6-Multiply the total number of hours.....hourly rate.

B) Put a suitable preposition in the text below

.....hardware functions such as input and output and memory allocation, the operating system acts as an intermediary.....application programs and the computer hardware, although the application code is usually executed directly..... the hardware and will frequently call the OS or be interrupted.....it. Operating systems are found on almost any device that contains a computer.....cellular phones and video game consoles.....supercomputers and web servers.

Task 4: Transform the following sentences into the passive

Example: We use electronic chips to make powerful computers.

Electronic chips are used to make powerful computers.

1-Science fiction writers have given people the wrong impression of computers.
.....

2-She is the senior programmer and is responsible for the organization of the programming department.
.....

3-The students applauded the professor at the end of the lecture.
.....

4-In this university, students often combine Maths with Computer science.
.....

5-These days children often make contact with computer through computer games.
.....

Task 5: Use in what follows a suitable time relaters such as at this point, now, simultaneous, meantime, when...etc

1-Computers might be used in the future as.....translating machines

2-....., computers are used for printing newspapers.

3-.....the first digital computer was developed, the fist analog computer had already been in use for some time.

4-....., computers have not created too much unemployment.

Task 6: Which kind of tense is used in the following paragraph, and why?

The central processing unit is the brain and the heart of the computer system. It is made up of three components: the memory, the control unit, and the arithmetic logical unit. The memory of the computer is its storage area. It is divided into very small parts called cells. Each cell is capable of storing information.

Task 7:

What is the difference between the simple sentence and the complex sentence? Give examples.

Task 8: Fill in the following sentences words that express non-equivalent from the list below:

Not as...as/ less....than/ fewer....than/neither.....nor/unlike/not the same as/not all

1-Leaning a computer language is.....difficult.....it seems.

2-For\$ 10,000 you could have a very good microcomputer.

3-Ten years ago, there were.....computers in use.....than today.

4-.....minicomputers.....microcomputers are not very flexible.

5-An analog computer is.....as a digital computer.

6-.....businesses have computerized their accounting departments.

Task 9: Correct the verbs between brackets in the followings:

The electronic computer (to begin) life during the Second World War as high-powered calculating machine for dealing with complex mathematical problems, but in the intervening forty years it (to change) a great deal. The vast majority of computers nowadays (to use) for relatively humdrum tasks, such as storing and retrieving information. This (to become) possible because of the cheapness of mass-produced chips.

Task 10: Construct sentences using the following linking words:

On the other hand- Moreover- nevertheless- in addition- whereas

Appendix 1

Task 11: Punctuate the following complex sentences adequately

1-Computers are very expensive however they are very useful.

2-In addition to their speed computers are accurate and can do repetitive operations

3-Computers have circuits for performing arithmetic operations such as addition subtraction division multiplication

4-The switches like the cores are capable of being in one of two possible states that is on or off magnetized or demagnetized

5-Mincomputers are expensive whereas they are very powerful.

Task 12: Complete the following table

Suffix	meaning	Examples
-al -ar -ic	Have the quality of	
-able -ible		
-ive	Quality of	comparable
-ing		
		programming

Task 13: Use in what follows items that express prediction at different levels of certainty:

Almost impossible-would-should- must-might-will

- 1- At the rate computer technology is growing, today's computers.....be obsolete by 1985 and.....by 1990.
- 2- Mainframesstill be occupying a lot of space if it were not for microminiaturization.
- 3- Programmers.....be able to write programmes.
- 4-The programmer.....always start by asking: 'do i understand the problem?
- 5-This programme is.....task.
- 6-If there is more than one variable to be printed, many images.....be used.

This questionnaire is part of a needs analysis to develop a Computer science English course. The information you provide is very important to identify Computer Science English tasks and to develop a computer English course based on the results. This questionnaire will take 15 minutes to complete. Please answer in English. Thank you very much for your participation.

Section one: Background information

1. Department.....
2. Position.....
3. Gender.....
4. Age.....

Section Two: English in General

1. How often do you perform the following tasks in English?

	Never	rarely	sometimes	often	everyday	answer
	0	1	2	3	4	3
a.E.mail	0	1	2	3	4	
b.phone call	0	1	2	3	4	
d.writing a letter	0	1	2	3	4	
d.writing a project	0	1	2	3	4	
e.attending seminars	0	1	2	3	4	
f.interacting with foreigners	0	1	2	3	4	

2. What do you find most difficult?

1=very difficult 2=difficult 3=easy 4=very easy

- a. Writing introductions
- b. Summarizing
- c. Writing coherent paragraphs
- d. Understanding meanings
- e. Reading quickly
- f. Identifying supporting ideas through readings
- g. Using visual aids
- h. Asking questions
- i. Answering questions
- j. Speaking fluently
- k. Speaking accurately (grammar)
- l. Understanding different accents
- m. Understanding questions
- n. Taking notes
- o. Understanding key vocabulary

3. How many years have you been studying English? Circle the answer

5 years 7 years more

4. Have you talked to a foreigner?

Yes no

5. Do you think you would need English in the future work?

Yes no

6. for what you think that you would need English? Put a tick

- a. writing e-mails
- b. speaking in conferences and seminars
- c. reading manuals for instructions
- d. writing reports, letters and articles
- e. talking to foreigners
- f. for further research (Doctorate)
- h. Extracting information for your research work

7. How much time during the week are you willing to dedicate studying English?

- a. Four hours a week
- b. two hours a week
- c. one hour a week

8. What level of proficiency do you think you have? Put a tick

Weak average good very good

Reading

Listening

Speaking

Writing

Grammar

Vocabulary

9. What English skills do you need to develop to achieve your professional goals?**Put a tick**

Reading speaking listening writing

10. What are the most important and useful tasks that you prefer?**Circle or write the appropriate number:**

1-strongly disagree/2-disagree/3-not sure/4-agree/5-strongly agree

- 1- Definitions of technical vocabulary terms is beneficial for my linguistic competence
- 2- Writing summaries of texts is useful for improving any productive skills
- 3- Performing tasks in the classroom is useful for improving language skills
- 4- Oral discussions on topics of the subject-matter of the students are useful for linguistic development
- 5- PowerPoint presentations are beneficial for developing speaking skill
- 6- The use of authentic texts are very interesting
- 7- The use of multi-media laboratories are good for enhancing learning
- 8- The use of translation from English to French is useful for a better comprehension

9- Podcasts are beneficial for listening skills

10-The use of the mother tongue in the classroom

11-The use of the internet

11-Is the time allocated to the English course enough to use English effectively?

YES

NO

12-Do you agree on the idea that teachers must design their own syllabus?

YES

NO

13-To be able to speak and write English is

a- not important

b- important

c- very important

14-What are the aspects of English you find most difficult? 1 to 3

Grammatical structures

Lexical items

Scientific terms and expressions

15-Are you satisfied with the English courses in your institution?

YES

NO

**16- Compared with secondary school education, English courses at University
are**

Much more interesting

More interesting

Interesting

Less interesting

**17-Which pedagogical activities are most exciting for you during the English
course?**

Oral expression activities

Reading comprehension activities

Writing activities

Vocabulary

18-Do you think the English course content is

a- Very convenient to your professional career

b- Convenient to your professional career

c- A bit convenient

d- Not convenient

19- Do you have the possibility at university to:

a- Use the internet yes no

b- Use software programmes to improve your English language level? YES

NO

c- Use CD –Roms yes no

d- Use a Language Laboratory yes no

20- How do you gauge your progress in English at University?

No progress

Some progress

21- In order to improve your English, what do you think is effective. Write down your answer in one or two sentences:

.....

.....

.....

.....

22- Which aspect of the English course would you suggest?

.....

.....

.....

.....

23- What English skills do you need to develop? Mark the right box

Not at all little some very much

Listening

Reading

Speaking

Writing

Vocabulary

Grammar

Pronunciation

Thank you

Dear colleagues,

The questionnaire you are going to answer will be used for research purposes. Please, try to be objective.

Subject: English for Computer Science teachers

Put a tick in the following boxes

1- State your degree

- a) Licence of English (BA)
- b) Magister of English

2- What is your status?

- a) Permanent teacher
- b) Part-time teacher

3- Were you formed in English for Specific Purposes?

Yes

no

4-Do you teach

- a) First year students
- b) Second year students
- c) Third year students
- d) Master one students

5-How many hours do you have in a week?

- a) Two hours
- b) One hour and a half
- c) More than two hours

6-Do you have large classes? Yes no

7-Do you teach EGP or ESP?

- a) EGP
- b) ESP
- c) Both

8-Do you think that the teaching of the four skills is important?

- a) Yes
- b) No

9-What skills do you teach most?

- a) Reading
- b) Speaking
- c) Listening
- d) Writing

10-Do you focus on grammar?

- a) Yes
- b) No

11- Do you rely on the teaching of vocabulary?

- a) yes
- b) no

12-Do you use translation?

- a)
- b)

13-Do you think that the use of the mother tongue is good in teaching ESP?

14-What do you think about teaching with the internet, podcasts and overhead projectors. State your view below:

.....

.....

15-Do you rely on textbooks or you produce your own materials?

- a) Textbooks
- b) Produce materials

Thank you

Appendix 4

English Placement Test (Grammar)

This placement test is designed to give students and teachers of English for Computer Science a quick way of assessing the appropriate level of a student's knowledge of English grammar and use. The test should take 45 minutes to complete. This test is about English for general purposes. We have done this on purpose since the students have not attended English courses in Computer Science.

1- He works as a teacher and his wife....., too.

- a) Do
- b) Is
- c) Work
- d) does

2- What is your university.....?

- a) Situated
- b) Age
- c) Like
- d) Located

3-The meat turns.....

- a) Off
- b) Up
- c) On
- d) At

4-She.....broken her leg

- a) Has
- b) Have
- c) Did
- d) Was

5-train are you taking, the train to Madrid, or to Barcelona?

- a) Which
- b) How
- c) Whose
- d) Who

6-How long.....married?

- a) Have you been
- b) Are you

c) Have you

d) Been

7-They.....go to the Theatre.

a) Tomorrow

b) Much

c) Rare

d) Seldom

8- He.....in the army for two years.

a) Was

b) Has been

c) Will be

d) Will have been

9- This is the best book I have.....read.

a) Never

b) Ever

c) Already

d) Still

10- She.....born on the 1st October 2001.

- a) Is
- b) Was
- c) Had
- d) Has been

11- They know that they.....to pay the taxes now.

- a) Had better
- b) Need not
- c) Should
- d) Ought

12-We haven't got.....British Friends.

- a) No
- b) Any
- c) None
- d) Some

1- I did not realize that the supermarket was.....the other side of the road.

- a) By
- b) For

c) On

d) In

15-My Friend has two sisters, but she does not speak to.....of them.

a) Both

b) Any

c) Either

d) Neither

English Placement Test (Reading Comprehension)

This test is designed to assess the student's level in English at reading and comprehending in their subject-matter (computer science). The time allocated is 1 hour. The following text is a short example.

'The basic components of a computer, the input, the output, the memory, and the processor operate only in response to commands from the control unit. The control unit operates by reading one instruction at a time from memory and taking the action called for by each instruction. In this way it controls the flow between main storage and the arithmetic-logical unit. Binary arithmetic, the logical operations and some special functions are performed by the arithmetic-logical unit. The primary components of the ALU are banks of bi-stable devices, which are called registers'.

Questions

- 1-Find a title to this passage
- 2-Define the following words from the text: processor /flow / registers/ arithmetic-logical unit
- 3-Which tense is used in this passage and why? Present, future or past
- 4-Build sentences with: However/ and/ on the other hand
- 5-Write a short paragraph about the components of the computer (5 lines)

Oral Placement Test

This test is designed to assess the student's level at speaking. The students are supposed to describe the components of the computer orally. The time allocated is 10 minutes for each student. The pronunciation of the high technical terms is very important in this test. They can present some terms to help the student to communicate.

English Placement Test (Writing)

Write a short passage about primary and secondary memory. Use the information below:

Storage-random access-files-processing –real storage- data

Use items of connection to relate your clauses such as however, nevertheless, on the other hand, but...etc.

Use items of cohesion such as generalization, definition, classification

English test (Listening)

Listen to the following extract about 'networking'. As you listen try to take notes. The duration of the extract is 10 minutes. Try to focus on the main idea.

English Test (vocabulary)

The time allocated is 15 minutes. The students have to answer orally

1-Answer to the following questions

a-What is the role of the auxiliary storage?

b-What is a compiler?

c-What is meant by the operating system?

2- Define the following terms:

Decimal system- digit-digital computer-byte-bugs-algol-binary arithmetic

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