# Needs Analysis Of EST Students,the Case of 1st and 2nd Year Master, Physics Department At Saida University

Dissertation submitted to the Department of English Language and Literature as a partial fulfillment of the requirements for the degree of *Master* in didactics.

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Date:……………………

# DEDICATIONS

I dedicate this work for my parents for their insightful pieces of advice and for my
Dear friends

# ACKNOWLEDGEMENTS

My thanks go to my supervisor Prof./Dr N.Khiati forhis/her help in completing this research work.

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# Abstract

English language is considered as the international language of science and technology which has become an important focus in the English and non-English speaking countries. The teaching of English for specific purpose (ESP) in general and English for science and technology (EST) in specific is significant and difficult task at the same time. EST is concerned with meeting the specific language needs of the learners in different fields. This study discusses the needs analysis of the master students and the problem of teaching EST in francophone educational system, taking into the count the case of master students' physics department at Saida University. This research has been achieved through a quantitative and descriptive analysis by using different data collection tools; an interview has been addressed to ESP teachers and questionnaire for first and second year master learners. The results show that the students face several difficulties in English language in order to complete their researches and studies as well as the reading comprehension, writing scientific articles, discuss scientific concept, that what the teachers confirmed. At the end some possible solutions are proposed to overcome these problems.

*Keywords:* ESP, EST, Needs Analysis, Teaching English,

# Table of Contents

**Chapter Three:**

# Liste of Figures

# General Introduction

The concept "needs analysis" has appeared during the revolution of the English for specific purpose (ESP) teaching, when the English language started to be the international language of science, technology, economic, business and others. ESP teaching resulted from the English language needs of the learners. Now it is so clear that needs analysis is the key stage in ESP and it is considered as the corner stone of ESP. Although, it is the first step for specific purposes language teaching. for this context, number of didactic and linguists argue that any language course should be based on the needs analysis. Which is aim to know learners as people, as language users and as language learners. Moreover it is aimed to know how language learning and skills learning can be maximized for a given leaner group. It is also aim to know the target situation and learning environment so that data can appropriately be interpreted.

.To simplify thy should be able to utilize the needs analysis to fulfill the lacks and the weaknesses of their student by developing a suitable language courses.

The study attempts to determine what the master students field of physique need English for, and what their present problem in this language. Moreover the choice of this topic is motivated by the intention to see if the teaching EST is as it should be, if not, what prevents it.

From the above mentioned research questions the following hypotheses have been formulated raised:

1) Considered the English as the language of science and the origin of the most research in the world. ST Master student physics field need this language to find more information about their field of study, to do their research, to communicate with foreigner students and teachers in the same field and to write an abstract of their dissertation.

2) Most common students' problems are; grammar, language structure and the lack of the vocabularies.

1

3) Teaching EST is still face big problems, that what make it not strong enough to meet all the needs of the students.

The present work is done by using descriptive method. In order to collect data the researcher use first informal discussion with the (ST) students' brunch physics then he uses technique of observation by attending some lectures with them and he takes notes. This two technique consider as an auxiliary tool in order to prepare good questionnaire and interview. The questionnaire was addressed to the master students of the field mentioned above and the interview for the ESP teachers.

This work consists of three chapters. The first chapter deals with the history of ESP development, then it shows the type and the main branches of ESP. Also this chapter talks about the roles of ESP teacher and what makes it differ from GE. Finally the chapter represents the definition of the needs analysis by explain its most key concepts.

The second chapter is about teaching English for science and technology (EST), it gives the definition of EST and discuss the main element of the EST teaching process. The third chapter is the practical phase of this work in which the hypotheses are tested. The data were collected by using the questionnaire for (ST) master student and the interview for their teachers. The results obtained are analyzed and discussed, and then some suggestions and recommendation are given in order to fulfill the gaps and help to cover the problems.

The researcher found some obstacles during the work. He was obliged to translate the questionnaire to the Arabic language to the students because most of them could not answer to the English version which was difficult to understand by them. In the other side, it was hard task to find teachers who teach English for scientific student because they were less than 10 teachers around the University in all scientific fields while the other were the contemporary who were newer in the domain.

## 1.1. Introduction

English for specific purpose known as acronym ESP ,has been a distinct activity in the field of English language teaching ELT since 1960 s .The flowering period of ESP has been identified due to many incidents like the second war in 1945 ,the rapid expansion in scientific , the growth of science and technology , the increased use of English as international language of science ,technology and business, the increased economic power of certain oil-rich countries and increased numbers of international students studying in English speaking countries. Needs analysis is the key essence of ESP

## 1.2. What is ESP

## 1.2.1. Historical development of ESP

According to Tom Hutchinson and Alan Waters (1987) the ESP considered as a phenomenon that grew out of a number of convening trends . Three major reasons are stand beyond the appearance of ESP , which are the demands of a Brave New World , the revolution in linguistics and the focus on the learner :

## 1.2.1.1.The Demands of a Brave New World

" *The end of the second World War "SSW" in 1945 heralded an age of enormous and unprecedented expansion in scientific, technical and economic activity on an international scale .this expansion created a world unified and dominated by two forces – technology and commerce – which in their relentless progress soon generated a demand for an international language . For various reasons , most notably the economic power of the United States in the post-war world , this role fell to English* " (p.6)

After that English language became a key to international currencies of technology and commerce , Moreover new generation occurred wanted to learn English because they needed it in their deferent fields . For example a doctors who needed to keep up with developments , a students those resource of research are only available in English . in addition Oil-rich countries opened their doors to western knowledge and wealth and naturally , a new era of ELT commence was scientific and technical knowledge that was needed to be transferred , ESP emerged as the most suitable discipline to accept the challenge ( Hutchinson and Waters 1987 , p.7 )

## 1.2.1.2. A revolution in linguistics

The revolution in linguistics was another major factor that paved way for the emergence of ESP during the 1960 's and early 1970' s . Hatchinson and Waters stated that the aim of traditional linguistic had been to describe the rules of English usage , that is the grammar . However the new study transfer from defining the the formal features of language usage to discovering the ways in which language used in real communication .

In other word to design the learner's course it should be possible to determine the features of specific situations where the language varies from situation to another .

" *The view gained ground that the English needed by a particular group of learners could be identified by analyzing the linguistic characteristics of their specialist area of work or study .' Tell me what you need English for and I will tell you the English that you need ' became the guiding principle of ESP* " (p.8).

## 1.2.1.3. Focus on the learner

" *New developments in educational psychology , also contributed to the rise of ESP , by emphasizing the central importance of the learners and their attitudes to learning ( e.g. Rodgers ,1969 ). Learners were seen to have different needs and interests , which would have an important influence on their motivation to learn and therefore on the effectiveness of their learning . This lent support to the development of courses in which ' relevance' to the learners' needs and interests was paramount. The standard way of achieving this was to take texts from the learners' specialist area – texts about Biology for Biology students etc. . The assumption underlying this approach was that the clear relevance of the English course to their needs would improve the learners' motivation and thereby make learning better and faster* " (p.8).

## 1.2.2. Type of ESP

In addition to the history of ESP , the identification of the  types of ESP  and their relationship with general  ELT world , this  can help and lead us to answer fully  the question :" *what is  ESP* ? " **.** Hatchinson and Waters (1987) suggested a tree of ELT , which represents some of the common division that are mad in ELT . See figure below
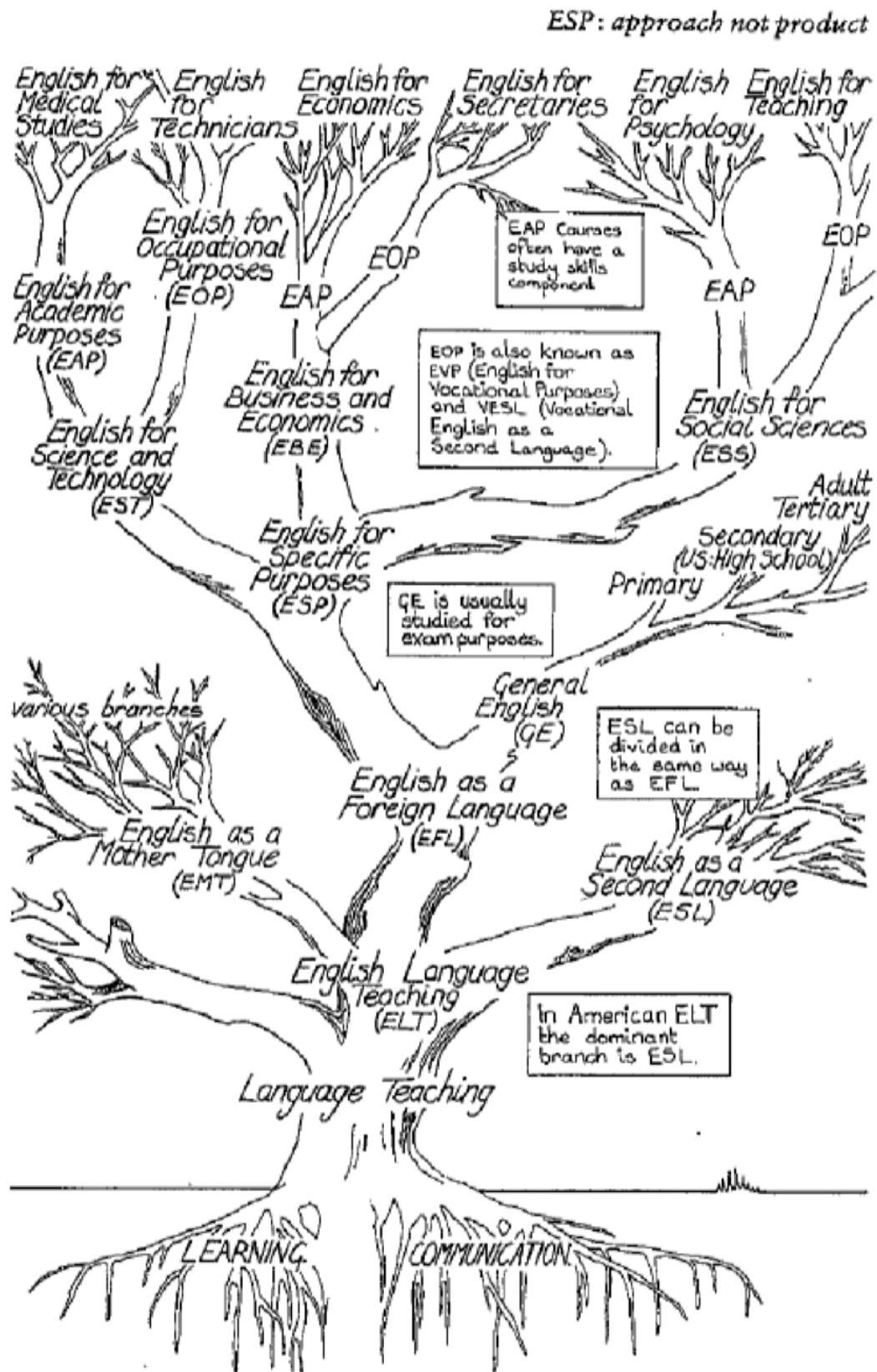
**Figure 1: The Tree of FLT**

Of ESP in detail, which individual ESP courses occurred. the branches indicate that ESP may be divided into two main types according to whether the learner learned study English for academic study, ( EAP) English for Academic purposes or for work / training ( EOP/EVP/VESL) : English for Occupational purposes / English for Vocational purposes / Vocational English as a second language . The topmost branches of the tree distinguish ESP courses by the general nature of the learner's specialism. Three large groups are usually identified: EST (English for Science and technology ) , EBE ( English for Business and Economic ) and ESS ( English for the Social Sciences ).

## 1.2.3.The Role of ESP

## 1.2.3.1. ESP teacher vs. GE teacher

To know the role of ESP, it is better to underlie the roles of ESP teacher inside the classroom, even those that identify him/her outside the pedagogical setting. But first of all it should be to distinguish between General English teacher ( EG teacher) and ESP Teacher . Strevens (1988), claims that ESP practitioners are only GE teachers being involved in special training courses to teach English for specific purposes to specific groups of learners .In a similar vein, William (2010) sees that GE teacher prepares only for the lessons and evaluation while GE teachers spend less effort then the ESP teacher. The latter, spend time in needs analysis, syllabus design, and "production" of materials. According to Anthony (1997), many ESP teachers can be considered as GE teacher using ESP approach. Moreover , Dudley-Evans & St. John( 1998) stated ESP teacher is the teacher who teach English to those students who learn the language for a particular work or study-related reason and ESP has always focused on needs analysis, text analysis and the training of learners to communicate effectively in the tasks prescribed by their academic or professional situation , in the other hand EG generally refers to the English language education at school levels where the students are made familiar with the structural/grammatical elements of English language to pass the exams (Hutchinson & Waters, 1987).

## 1.2.3.2.The Role of ESP teacher

Dudley-Evans & St. John (1998) have identified some specific roles of an ESP practitioner as a teacher, course designer and material provider, collaborator, researcher and evaluator .

- **As a teacher**

According to Robinson (1991)  ESP teacher considered first as a teacher, he must possess the qualities of a good general language teacher along with the specific qualities desired for his own field .It has been argued that ESP teacher are not specialists in the field , but in teaching English because their subject is English  for profession not the profession in English ( Malavic, 2006). Therefor the ESP teacher should be ready to teach students from one professional  field to another , and use tools, frameworks and principles of course design then applies them to new content subjects .

- **As a course designer and materials provider**

Role of ESP teachers as ' providers of materials ' thus involves choosing suitable publisher material , adapting material when published material in not suitable , or even writing material where nothing suitable exist .(  Dudley –Evans and St. John, 1998, P. 15) According to Jones(1990) , the ESP teacher  should select units from a number of course books , and write a number of extra units in order to produce a course that exactly meet the needs of a group of learners .

- **As a Collaborator**

As ESP practitioners work in various academic and professional genres, they need to have knowledge of their students' specialism to plan courses and teaching materials. Practically speaking, a teacher cannot master specific requirements   of all the disciplines, he is asked to teach. In such a situation, the collaboration with the subject specialists of the specific disciplines is advised (Dudley-Evans & St. John, 1998).

- **As a researcher**

As we said above , the ESP  teacher cannot master all their learner's disciplines , wherefore the ESP teacher need  to update and  support their knowledge by keeping constantly in touch with  the research in the number fields of  ESP .Moreover,  before the ESP teachers design courses or provide materials, they need to do research in order to investigate the genres of texts language, and skills required by the specific field of study (Dudley-Evans and ST John 1998).

- **As an Evaluator**

In the field of ESP there is two types of evaluation, ' students' testing and the evaluation of courses and teaching materials ' ( Dudley-Evans and St. John , 1998,P.16) . The ESP teacher  evaluates the linguistic knowledge and skills of students by several course tests and quizzes during an ESP  program in order to assess the progress of the students . furthermore , the evaluation of course design and teaching materials can  be very helpful to know the compatibility between course and materials taught and students' identified learning priorities and needs .

## 1.2.4. Definition of ESP

There are several definitions of ESP  by many linguists , authors and di didactic  for instance , Hutchinson and Water (1987) define ESP as an approach rather than a product which mean

That ESP does not involve  a particular kind  of language , teaching material or methodology .

Another definition by Anthony (1997) who stated   that is not clear where ESP courses end and General English courses begin because numerous non-specialist ESP instructors use ESP approach in that their syllabi are based on learners' needs analysis and their own specialist  personal  knowledge of English  for real communication . Steven' (1988) definition of ESP makes a distinction between four absolute and two variable characteristics:

## 1.2.4.1.Absolute caractéristiques

- ESP designed to meet specified  needs of the learners
- Related in content ( i.e. in its themes and topics ) to particular disciplines , occupations and  activities

9

- Centered on the language  appropriate to those  activities in syntax , lexis , discourse , semantic , etc , and analysis of this discourse
- In contras with  General English .

## 1.2.4.2.Variable characteristics

- Restricted as to the language  skills to be learned (e.g. reading only )
- Not taught according to any pre-ordained methodology.

Later on , Dudley-Evans and ST.John (1998) modified Stevens' definition as follow :

> ➢ **Absolute characteristics**

- ESP is defined to meet specific needs of the learners
- ESP makes use of underlying methodology and activities of the discipline may it serves
-  ESP is centered on the language appropriate to these activities in terms of grammar  , lexis , register , study  skilles , discourse and genre

> ➢ **Variable Charachteristics**

- ESP may be related to or designed for specific disciplines
- ESP may use, in specific teaching situations, a different methodology from that of General English
- ESP is likely to be designed for adult learners, either at a tertiary level institution or in a professional work situation. It could, however, be for learners at secondary school level
- ESP is generally designed for intermediate or advanced students.
- Most ESP courses assume some basic knowledge of the language systems

10

## 1.3. Needs Analysis

### 1.3.1 Definition of Needs analysis

Needs analysis is the key essence of ESP  because it has an essential role in  the process of designing and carrying out any language course . Needs analysis has been defined by number of scholars and linguists as the following:

According to Iwai et al. (1999), the term needs analysis generally   refers to the activities that are involved in collecting information that will serve as the basis for developing a curriculum that will meet the needs of a particular group of students

For Johns (1991), needs analysis is the first step in course design and it provides validity and relevancy for all subsequent course design activities

Nunan ( 1983) stated that NA considered as techniques and procedures for collection information to be used in syllabus .

### 1.3.2. Kinds of Needs Analysis

Different types of Needs Analysis have claimed by  different linguists . According to Nunan( 1988) there is two types of needs analysis ; Learner analysis that gives information about the learners , and Task analysis that gives information about the tasks used in the class room and expected by the learner .

Robinson(1991) suggested two other types of needs analysis which are Subjective Needs ( it carries information about the learner such as language proficiency , language difficulties , and use of language in real life .

Chambers ( 1980) presented  the term of ' target situation ' , after that  number other terms have been occurred : present situation analysis , pedagogic need analysis , deficiency analysis  , strategy analysis , means analysis , register analysis , discourse analysis and genge analysis . It will be explained in the following :

**1.3.2.1.Target Situation**

It tries to establish what the learners are expected to be like at the end of language course, and identifies the necessities , i.e . what the learners need to know in order to function effectively in the target situation .For Hutchison and Weter ( 1987) , the analysis of target situation   needs is done by asking a question about the target situation and attitudes towards that situation . Mumby(1987) mentioned  most of these  questions , which are summarized in the figure below :
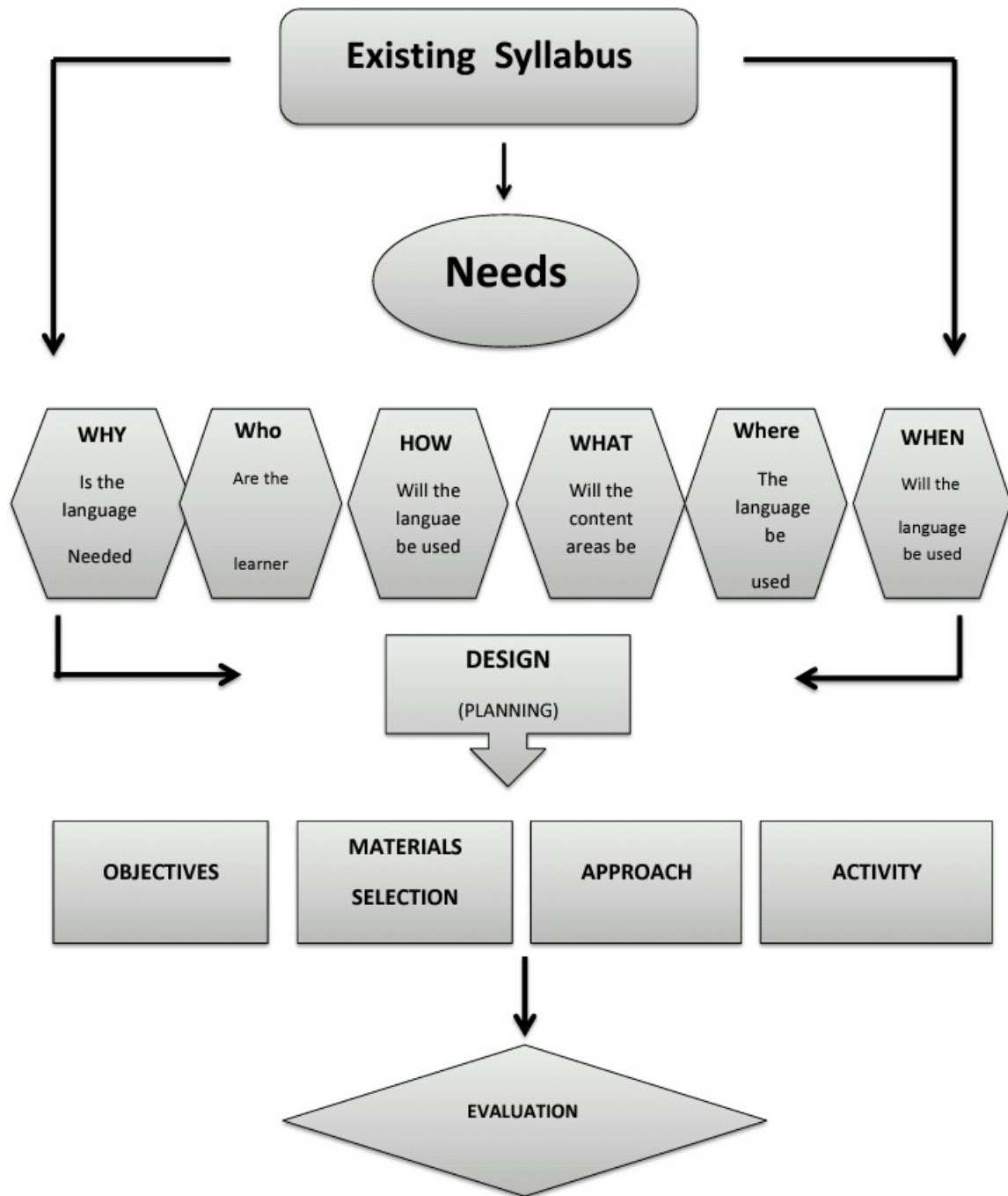
**Figure 2 : Syllabus Design**

### 1.3.2.2.Present Situation Analysis  (PSA)

(PSA) attempts  to identify the learner's  current  strengths and  weaknesses  in language , skills and learning  experiences  at the beginning of language course , in other word it is the information that are provided by the students  theselves  about their present abilities  Dudley – Evans and St.John (1998)

### 1.3.2.3.Pedagogic Needs Analysis (PND)

The terms ' pedagogic needs analysis ' cover and describe the next three types of needs analysis

1. **Deficiency Analysis :** From what  has already been said in (PSI) ,the term "Deficiency" refers to the lacks of the learners. Water (1981) which means the weaknesses  that are founded  in the (PSA) ; and the language syllabus are based on it in order to achieve  the target situation **.**

2. **Strategy Analysis / learning Needs analysis :** It clarifies what the learners need to do in order to learn in other word , it identifies the learner's preferred learning styles . According to Bower(1980), the student  learn better if what he wants to learn , not only what he needs to learn . Related to what Bower said , Hutchison and Waters (1987) stated that ESP is an approach not product in which the learner is centered –approach in the learning process .

3. **Means Analysis :** Dudley-Evans and St. John (1998) stated that Means Analysis helps to know what are the learning environment in which the course will be run . In the same context Swales(1989) suggested  five factors that related to the learning environment   which are : classroom culture , EAP staff , pilot target situation analysis , status of service operation and study of change agents **.**

### 1.3.2.4Register, Discourse, and Genre Analysis

These three elements are undergoing in the same context which is the language in ESP . The first one focuses on the sentence element (vocabulary and grammar) , while the second attempts to find out how the sentences are combined into discourse or a text , and the third type is   related to the linguistic behavior in institutionalized academic or professional setting.

### 1.3.3. Why Needs Analysis ?

Generally , most of linguist agree that Needs Analysis plays an important role in English as foreign language learning classes , because it is considered as a useful tool to identify students' needs , it is guide for course design , materials selection , assessment or even classroom activities .

Hawkey( 1980) and Berwick ( 1989) stated that needs assessment is important for decision planners to design the cousee .

McDonough ( 1984 ) that the information on the learners' language needs are the bases for course development .

Browers ( 1980) noted the important of needs analysis as a guide in syllabus development , materials and examination . Moreover, Needs Analysis is the first step in any language teaching project , that must be to design syllabus that will reflect the language needs and the learners wishes .

Richards ( 2001 ) claims that information got through Needs Analysis can serve the following purposes :

1. To find out what language skills a learner needs in order to perform well at the target situation .
2. To help determine if an existing course adequately addresses the needs and potential students .
3. To determine which student from a group are most in need of training in particular language skills .
4. To identify a change of direction that people in a reference group feel is important
5. To identify a gap between what students are able to do .
6. To collect information about a particular problem learners are experiencing .

In the case of EAP programs ( Students in public schools ) , Linse ( 1993 ) identifies the following purposes for needs analysis :

1. To assess their level of language acquisition in their foreign language

2. To determine their communicative abilities and their formal knowledge  of  English

3. To determine what English skills are necessary to enable students to participate in school and community activities in English .

4. To find out what prior experiences students have had with formal education .

5. To determine the attitudes of the students and their families toward formal schooling and education .

## 1.3.4 How Needs Analysis

## 1.3.4.1 The Main Data Collection Method For Needs Analysis .

According Dudley-Evans ans St.Jones ( 1988  ) , there are six main data collection for Need Analysis which are ; Questionnaires , analysis of authentic spoken and written texts , discussions , structured interview , observation and assessment .
Some of tools' characteristic  are shown in the following

- **Questionnaire**

The questionnaire is a popular way to gather information with regard to training needs. The questionnaire uses a predetermined set of questions to be asked to the participants to determine their views on knowledge requirements. Questionnaires use open-ended or closed question. The advantage of questionnaires is that the questioner can determine the size of the sample, as well as determining how that data will be analysed and participants can answer the questionnaire in their time. It is also a way to confidentially discover what participants are thinking and feeling with regard to their training needs . a questionnaire will provide reliable information with regards to participants needs specifically with regard to training skills, problem areas, perceptions and attitudes as well as opinions.

- **Analysis of authentic spoken and written texts**

The Maine source of this tool of data collection are ; written  documents or audio/video recording of lectures , meeting , telephone conversation and classroom activities . It works to identify the linguistic features of the genres to inform course design and material development .

- **Discussion**

It is informal talking  to the learners / employees , it is a conversation out of academic setting over coffee , lunch breaks ect . In this kind of conversation the learners feel more comfortable ,where they can speak freely about their difficulties , how they want the activities and so on .

- **Structured interview**

One-on-one interviews are a very effective way of gathering information on employee needs and issues. Interviews are one of the easiest tools to use and are quick for gathering the relevant data that one needs. Interviews can either be done face-to-face or telephonically. Interview questions should be prepared prior to the interview and structured in a way to correspond to a list of questions predetermined

- **Observation**

It is normally done in the workplace concerning the workers ( EOP) , and in the classroom for the (EAP) learners / students . observation is a good way to gather information  because the employee is able to be observed in their working environment and observing the employee is a good way to gather data.

- **Assessment**

Assessmets refer to all the diffrent ways in which teacher gather evidence about how well students are progressing toward the goals . It includes quizzes , classwork , assignment and tests .

## 1.3.4.2.  Frameworks for Needs Analysis

It is clear how the data collection work in the process of gathering information , now is time to take in the consideration a particular procedure for conducting a Needs Analysis .The selection of the procedures depends on the purpose of NA( see figure 1) . Hutchison and Alan waters        (1987) suggested the simple framework below determines the kind of information that the ESP teacher needs to gather from an analysis of target needs .

1. **Why is the language needed ?**

- For study

- For work

- For training

- For a combination of these

2. **How will the language be used ?**

- Speaking , writing , reading etc .

- Channel e.g telephone , face to face ;

- Type of text or discourse

3. **What will the content areas be ?**

- Medicine ,biology , and so on

4. **Who will the learner use the language with ?**

- Native speaker or non – native ;

- Colleague , teacher , customer , and so on

5. **Where will the language be used ?**

- Physical setting :eg. office , workshop , hotel,

- Human context :e.g. meeting , on telephone ;

- Linguistic context :e.g. in own country , abroad .

6. **When will the language be used?**

## 1.4.Conclusion

To conclude, a language needs analysis is a process that must be conducted prior to a language course and syllabus design, materials selection, teaching and learning methodology and evaluation. The ESP practitioners should be able to utilize the results of

needs analysis research which he or she conducts to develop a language course or training program that is suitable, practical and successful for a particular context.

## 2.1.Introduction

English language now considered as international communications in all fields of human activities Due to the constant and rapid developments taking place in science and technology, most of the traditional models of language education have become extremely inadequate to meet the challenges of the present day's demands and practices of the academy in the world of profession . The technologies and scientific ideas continue to be exchanged all round the world. In this fact it is importance that engineers and scientists, including the scientific students in the universities , to develop the language skills necessary to be active and contributive players in the competitive world .

## 2.2. Definition of English For Science and Technology ( EST)

EST is concerned with meeting the specific language needs of learners in various scientific and technological fields. In other word. it is specific information about a scientific and technical subject to specific audience for specific purpose.

## 2.3. Teaching EST

## 2.3.1. Feature of EST language

There is a lot of evidence that scientific English has distinctive features . However, language patterns and rhetorical forms which may be common in science may also be used frequently in other forms of academic writing. Scientific language has been described in terms of lexis and syntax, but scientific discourse involves a number of features related to linguistic, rhetorical and conceptual variables (Sharp, 1998). Trimble & Trimble, 1982; Huckin & Olsen, 1984; Trimble, 1985 suggests that EST reading and writing skills improve if direct study is made of the syntactic, lexical and rhetorical patterns characteristic of scientific English. We shall deal below with the most important features of English used in science and technology.

## 2.3.1.1. Grammar in EST

Teaching grammar in EST courses must differ from General-English courses in terms of prioritizing ordering and staging There are many areas of grammar which must clearly take the priority in terms of emphasis and reinforcement in EST courses as they are

more relevant to learners' needs than other areas.  We shall deal  in the following  with some of the areas that need special attention in EST courses .

- **Passive voice**

From all verbs in scientific English texts, the passive voice account for a very high percentage. According to some researchers like ( Swaler ,1971 ; Master, 1991 ) , and from many analyzing of several texts in science and technology , this high percentage was estimated  to be more than one third of verb form .

- **Relative clauses**

Relative clauses are very common in EST texts , it has three major  type  which are : Full relative clause that mostly used for scientific definitions and generalizations for example ( the scientists who work on the nuclear physics , suffered from the radilogies   ) , this sentence contain , the relative pronoun ( who) and the verb clause ( suffered from the radiogies )

The other types of relative clauses that are very common in scientific English, and in fact they are more common than full relative clauses in EST, are the reduced relative clauses , In these clauses, the relative pronoun and the auxiliaries are deleted for example (Scientists say that sugar is soluble in water. A solution containing water is called aqueous solution ) . The reduced relative clause (containing) modifies the antecedent (solution); the full relative clause is (which contains).

The third type is Defining (restrictive) and  non-defining (non-restrictive) clauses , Many of the full relative clauses already mentioned are defining (restrictive) and there are some non-defining (non-restrictive) clauses  which  are  separated  by  commas. These  two  types can easily be seen in the following examples :

(1) The students who did not attend lectures yesterday have been penalized

(2)  The students, who did not attend lectures yesterday, have been penalized.

In the first sentence, the relative clause (who did not attend lectures) is a defining (restrictive) clause which limits the application of the message to only those students who did not attend lectures yesterday. It also implies that there are students who attended lectures yesterday and have not been penalized by the Dean. In the second sentence, we have a non-defining (non-restrictive), relative clause (who did not attend lectures yesterday), which does not define the antecedent nor does it limit the application of the message. The message holds that all students have been penalized by the Dean and the relative clause just adds some additional information which is non-restrictive. Non-defining (non-restrictive) relative clauses are normally set off by commas, while defining (restrictive) relative clauses are not .

- **Complex nominal compounds**

A nominal compound, such as computer science, is a sequence of two or more nouns that together form a structure that itself acts like a noun. The interpretation of nominal compounds has been studied in the context of natural language processing and is potentially important for information retrieval .

- **Other grammatical devices involve the use :**

The conjunction and the coordinators such as ( and , but , although , however , in addition, therfore,thus and so on ) play an essential role in EST texts since they reflect cohesion within the discourse and  show a logical and progressive development of the discussion by establishing the necessary links between ideas   and  thoughts within the text and between paragraphs , they indicate how the subsequent sentence or clause should be linked to the preceding or the following sentence or part of sentence .

In addition there is some devices  which called cohesive devices , require the reader to seek knowledge of specific information in the text and scan backwards and forwards to link reference to the same entity or concept for example :

23

(A hot, metallic planet 339 light-years away has been detected. The planet is named K2-229b, which is about 20% larger than Earth, but its  mass of more than two and a half times, reaching a temperature throughout the day increasing About 2,000 degrees Celsius. Dr David Armstrong and his colleagues in the astronomy and astrophysics group at the University of Warwick led by a group of researchers at the University of Aix-Marseille, France, revealed the planet in general, and  other at Universidad de Porto using the K2 telescope. They then calculated the size, location and mass of K2-229b by measuring the radial velocity And find out how much "wiggle" stellar stars during the orbit, as a result of the gravitational pull of the planet, which changes depending on the size of the planet)

The items (others) in sentence 3 and (researchers) in sentence 2 in the text refer back to the item (astrophysics group ) in sentence . The term (k229b) and the phrase (which is about 20%) and (its) in sentence 2 refer back to the item (planet) in sentence 1. Cohesive  devices are very common in scientific English as they enable the writer to convey scientific information for the purposes of specificity and expansion.

## 2.3.1.2. Lexis in EST technical and sub technical vocabulary

These include lexical items that pertain to science and technology or what is usually referred to as "technical terms" and sub-technical items that are of high frequency of occurrence in a particular field . A text in physics English may contain items pertaining to solid physics , Radiology physics , Digital physics , physical cosmology , plasma physics , Nuclear physics ).this technical and sub technical items are obviously difficult to understand by anyone who is not specialist in medicine or who has no knowledge of physical English or who has not come across these terms . For example:

( we studies Allaige Husleaur based Fe-Co using methods based on first principals Density functional theory ( DfT) though the method of linearized Augmented Waves Planes (FP(L)APW) implemented WIEN2K Code . using approximation LSDA as developed by ( perdew , Burk and Ernzehorf) for the exchange and correlation , we have determined the electronic , magnetic and optical properties $Fe_3Co$ and $FeCO_3$ . We have also determined the total and local magnetic moments and we could access the magneto-optical Kerr effect through the optical conductivity.  )

24

The text in the above example contains several vocabularies which are specific for who study physics . we can see some technical terms like : magnetic , magneto-optical , Density function  and so on )

## 2.3.2.Teaching strategies and methods for science and technology

Teaching ESP and their sub branches    is very much a question of what the teachers want to do in class, then when, why and how they  want it to be done. It is a matter  of planning, structuring, integrating and management of various activities for the purpose of enhancing the learners'  attainments. According to Bell (2002) and Porcaro (2013) the ESP teachers need to cover the  knowledge of the learners' field of study in order to be able to select, adapt, simplify authentic texts and develop the manual that would meet the requirements of the NA, and then teach learners . However , Majority of ESP practitioners are not experts in the target field of the learners and have to struggle to comprehend materials they require learners to master . In fact it is real problem that faces most of ESP teachers , and the only solution is to employ an ESP teacher having a technical background relatively close to the field of study .

In the case of teaching (EST) teachers  should  provide and create  advanced English learning environment such as understanding   technical vocabulary, describing technical functions and applications, explaining how technology works, emphasizing technical advantages . In other  Effective language  teaching and learning can only be achieved when teachers are aware of their learners' needs, capabilities, potentials, and preferences in meeting these needs . The teachers of English in ST colleges ought to acquire a special set of competencies and get trained in  Teaching-Learning Strategies such as: Grammatical Competence , Lexical Competence( Technical Vocabulary) ,  and also English for Academic Purposes .

## 2.3.2.1 Communicative Language Teaching / Learning

A majority of  Didactics  such (Gregersen & Madsen, 2009 , Offord Gray & Aldred, 1998) agreed that communicative language teaching / learning (CLT) approach has a vital role in enhancing the learners' communication skills. CLT approaches considered as the most suitable for ESP teaching which let the learners have clear knowledge of the linguistic, phonological   cultural, and functional, inter-actional, grammatical, lexical,

socio-linguistic and social-cultural competence to attain 'communicative competence' in English . According to practitioners of CLA its most major features are:

(1) An emphasis on learning to communicate through interaction in the target language .

(2) Introduction of authentic texts into the learning situation .

(3) Provision of opportunities for learners to focus, not only on language but on the learning management process.

(4) An enhancement of the learner's own personal experiences as important contributing elements to classroom

(5) An attempt to link classroom language learning with language activities outside the classroom.

## 2.3.2.2.Teaching Grammar

ESP teachers use what called " Contextual Grammar teaching", where they provide meaningful input through context and provide an opportunity to put grammar to use,and relate grammar instruction to real life situations or to context in their field of study .

## 2.3.2.3.Teaching Lexical Competence

As we mentioned above , every field of science and technology has its own list of terms and phrases" Technical vocabulary" , this technical vocabularies are taught in order the learners may be trained to use words with appropriateness and precision for more effective communication. There are several strategies to teach and learn this specific items. According to (Huckin & Oslen, 1991) The teaching of lexical elements like these provides clues to the meanings of a large number of items in scientific contexts. Moreover the lexicon items can be understood  if they are broken down into separate elements. Here the role of the teachers is to Provide learners with the tools for dealing with technical words and help them to recognize the technical word by interpreting definitions, relating senses to a core meaning, and learning word parts.

## 2.3.2.4. English for Academic Purposes

Students are exposed to the expectations and requirements of their faculty particularly to the target language situation. The EAP courses are suggested for EST teachers in the  colleges to accomplish classroom based activities such as: oral presentation

skills, understanding lectures, note taking and note-making skills, academic writing, academic reading and vocabulary, and academic speech and pronunciation (V. Chandra Sekhar Rao , 2o17).

### 2.3.3. Assessment

According to Richard & Schidt ( 2002 ) assessment is a systematic  approach to collecting  information and making inferences about the ability of student  or the quality or success of a teaching course on the basic of variouse sourses of evidence . Moreover , Chinn(2011) said that assessment refer to all the different ways in which teachers gather evidence about how well the students are progressing toward  the goals . the assessment can take two form :  the first one is formative assessment where the teachers test their students by using different assessment activities such as short quizz , written assignments and so on , this process is done  during every lecture in order to monitor students' learning . The second one is summative assessment in which the teachers evaluate their student in the end of the semester or the year by using  what called final exams .

### 2.3.3.1Assessed courses in EST

ESP practitioners use different activities and tests in EST courses in order to:

(1) Provide information for learners about whether are doing well or not
(2) Pinpoint students' strengths and weaknesses
(3) Use the results of the assessment for designing a lectures and provide appropriate materials.

### 2.4.    Conclusion

In the era of teaching science and technology, the EST courses are different from a general-purpose language program in terms of objectives, content and expectations. EST teachers conduct a needs analysis for carrying out a specific search of relevant and reliable authentic materials, defining proper teaching methods, software and didactic approaches used in the educational process to develop and to improve the competencies/skills of the

English students of science  and technology and  get benefited in accomplishing their language needs .

## 3.1 Introduction

The third chapter deals with the practical phase of this work. It investigates the lacks, weaknesses, and the needs analysis of English language for science and technology master students from the physics department of saida University as a case of study for the academic year 2018/2019.

The main research tools to collect the necessary data are questionnaire for first and second year master students and interview for EST teachers. Their opinions and views are very crucial to test the stated hypothesis.

## 3.2 Data collection

### 3.2.1. sample

In this cross-sectional research, 40 respondents were selected from .Dr Moulay Tahar University, physics department. Their level of education is 1rst and 2ⁿᵈ year master. While 10 teachers from different science and technology department were interviewed.

### 3.2.2. Measure

The participants responded to a liker-type questionnaire, which was specially constructed for the purpose of the current study. The questionnaire combined 7 multiple-choice "close-ended" questions as well as 3 open-ended questions. The questions were given to the students in Arabic language in order to avoid any misunderstanding of the questions and also to be very clear for them. In the other side the teachers were asked to answer 10 questions, all of them them open ended questions except one  which was close-ended.

### 3.2.3. procedures

The questionnaire was conducted in (25/04/2018), in the campus of university of .Dr Moulay Tahar Saida. Initially, about 40 questionnaires were distributed among respondents. However, 10 respondents did not return their paper. In the end, 30 one completed answering the questions and gave back the papers. Each questionnaire took about 10 – 12 minutes to complete. Therefor, the analysis of the study results is based on the final sample of 30 respondents.

## 3.3. Data analysis

After data collection, the obtained results have been interpreted and then discussed.

### 3.3.1. Students" Questionnaire

**Question 1:** Do you know how to write a scientific report in English?

|  | Number of the participants |
|---|---|
| Yes | 2 |
| No | 25 |
| Somehow | 3 |
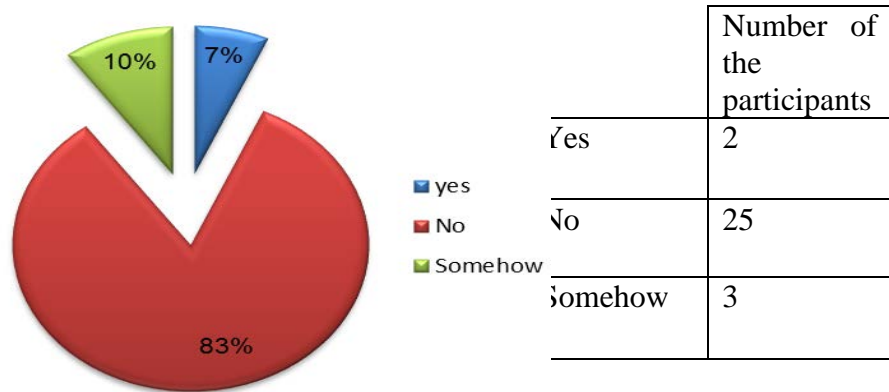
**Figure3:**

From the pie chart it is clear that the majority of the participants 83 % cannot write a scientific report in English, 10% of them try to write and only a small minority 7% can really write a good report.

**Question 2 :** Can you comprehend a scientific text in English ?

|  | N° |
|---|---|
| Yes | 10 |
| No | 6 |
| somehow | 14 |
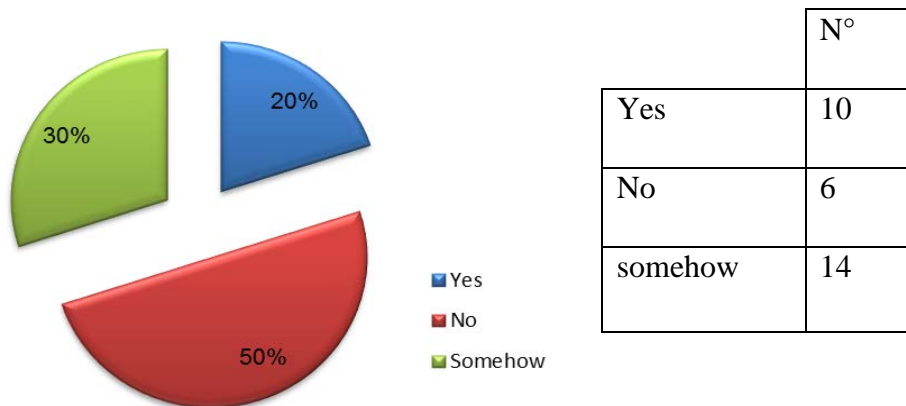
**Figure4:**

Regarding this question 50% of students said that they can understand little bit a scientific text or report which is written in English and 20% said that they are able to get the meaning from the texts. They claimed that most of the physics articles combine approximate 60% of the technical vocabularies which are relevant to their field of study and already know it from the last years. However the rest of them stated that they cannot.

**Question 3:**    Can you make notes from lectures?

| | N° |
|---|---|
| yes | **18** |
| no | **12** |
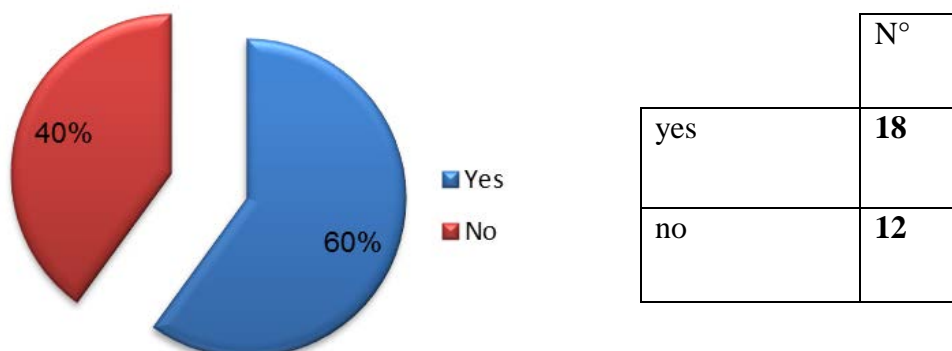
**Figure5:**

   The researcher found that 57% of participants were answering by yes they can, while 43% of them stated that they cannot take notes from the English lecture.

**Question 4:**    Can you discuss scientific concepts in English?

| | N° |
|---|---|
| Yes | 0 |
| No | 25 |
| Somehow | 5 |
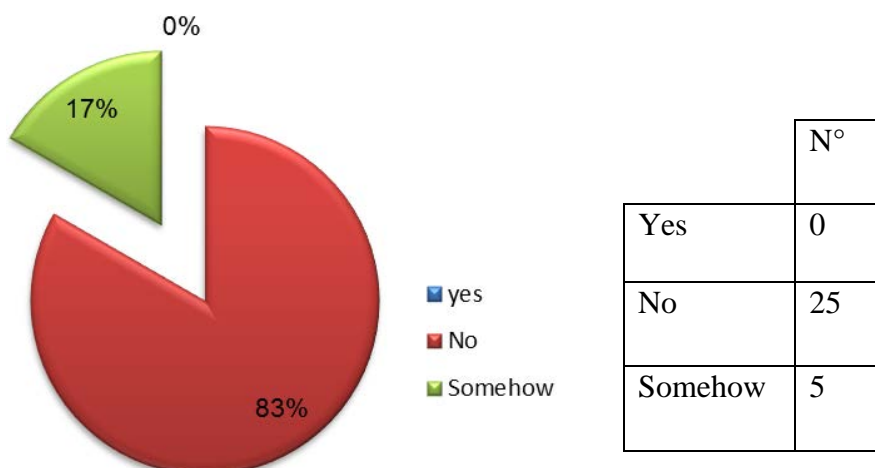
**Figure6:**

      The pie chart shows that the participants were divided into two group, the majority, that is 83% of them said that they absolutely cannot  explain in English, while the second group 17% stated that they are just try by using few, simple and incomplete sentences .

**Question 5:** Can you summarize a scientific text?



| | N° |
|---|---|
| Yes | 5 |
| No | 18 |
| Somehow | 7 |
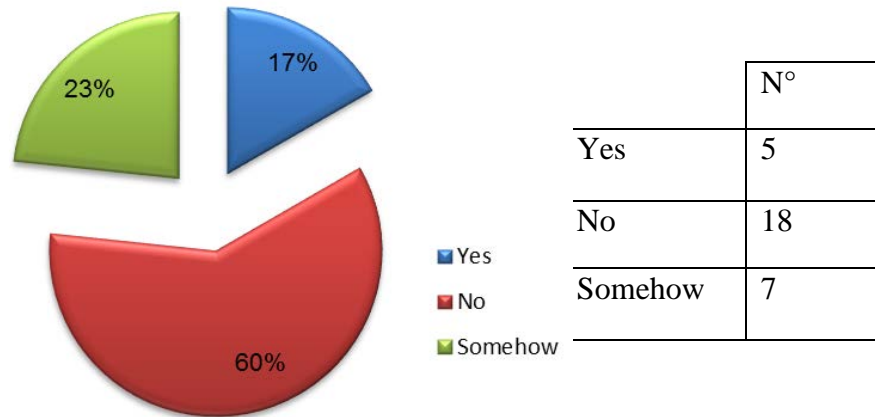
**Figure7:**

This graph shows that 60% of the participants can not summarize a scientific text in English, 23% of them stated that they just try to do this task**.** However, only a small minority can do it, they represent 17 % of the hole.

**Question 6:** What are the real problems standing behind your weaknesses in what we have said above ?

After asking the participants 5 questions about their abilities in English language, the researcher decided to know why they answered with ( no , somehow ) in the five first questions, in order to determine which troubles they are suffering from. We suggested two main reasons, then we asked them to choose and also to mention any other reasons.

The pie chart below illustrates the participants' answers



| | | | N° |
|---|---|---|---|
| A | Difficulty in understanding key concepts (general and technical vocabularies ) | | 2 |
| B | Grammar structure (sentence structure, verbs, pronouns) | | 4 |
| C | Both | | 24 |
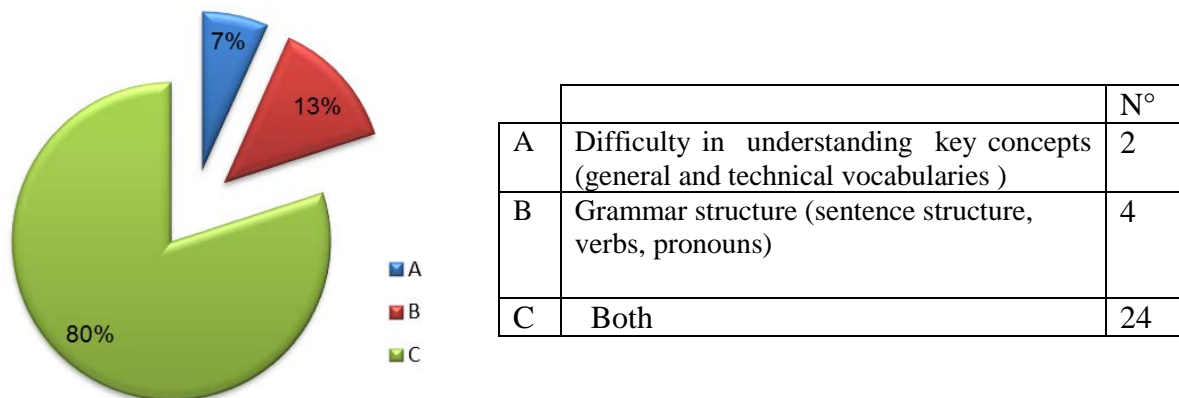
**Figure8:**

The researcher see that the majority of student have real problem with grammar rules and structure and the vocabularies. The rest said that their problem is more representing in the grammar rules and the sentence structures

**Question 7**: Did the English module in your program solve this problem (question6).



|     | N° |
| --- | --- |
| Yes | 17 |
| No  | 13 |
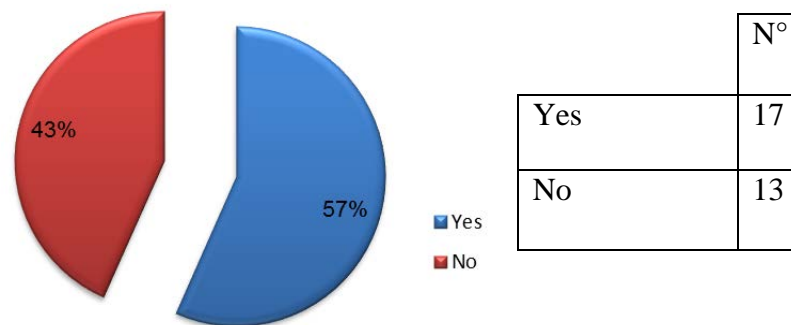
**Figure9:**

The researcher see from the chart that the English module do not solve the students problem by 57% and the minority answered with yes.

**Question 8:**    How many lectures of English module do you have during the week in your department?

All the the participants stated that they study English module just one session of 1 hour and a half  per week.

**Question 9 :** What do you need English for in your field of study?

The answers of the participants were very similar. The most frequent answers are summarized in the following:

- To write their , because they oblige unless to write the abstract in English
- To read books for their research
- All the references of their study are in English
- To research in the web site, because most of them in English
- To connect with teachers and students from other countries

### 3.3.2. Teachers' interview   analysis and interpretation

1.  Question 1: Which scientific field of study do you teach?

This question was used to know what are the scientific fields that our ESP teachers teach at the University of Saida. The researcher  found that three teachers teach physics students, two of them teach electronics and telecommunication students and the biology students were taught by two teachers.

2.  Question 2 : Did you follow a special training in the field  that you teach

All the interviewed teachers have not received a special training in ESP, this allowed the researcher  to know that they simply follow the methods of General language teaching.

3.  Question 3 : According to you what is/are the suitable approach(es) for teaching EST

The  interviewed teachers have idea about the method that they use, they stated that the English is taught in general as well as the other literature field but with more focusing on the technical and sub-technical terms.

4.  Question 4 : "*Most of EST teachers  follow the traditional methodology whereby language elements (e.g., grammar, vocabulary) are taught separately, and functions and communication tasks are often ignored* "  ( students' perspective ). Do you agree?

This question will allow the researcher to see if there is a link between the student's perspective and the the teachers' opinions. Indeed, our interviewed teachers agree of what the students said then stated that

5.  Question 5:  what are the language skills that the teachers should focus in the EST courses?

The answers of the interviewee for this question were the same in which all agree on that, they have to focus on the four skills but match more on the writing and reading comprehension skills, because in their opinion, the students need to write reports, texts and so on and also need to read textual information then comprehend it.

**6.** Question 6 :   According to you what are the language difficulties that cause problems comprehension and communication to your students

The teachers indicate that the real problem is started from the first years in the University and some of them see that it is back to the period before the university. They think that the students  passed from the high school to the University with poor baggage and weak level in English. They stated that the main problems are the language structure, Grammar and lexical mistake, lack of vocabulary and Pronunciation and spelling

**7.  Question 7:**  Which materials do you use   to solve these problems**?**

All the teachers said that it is a hard task to overcome these problems but they try to help them by different ways such as explanation the technical vocabularies, to provide texts in their field written in English and so on.

**8.  Question 8:**  What are the procedures that you follow in assessing your students in order to find out their needs?

From the results obtained, the teaches follow the traditional method for assessing, they use tests, activities, quizzes and moreover they treat their EST students like the GE students and there is no special procedures.

**9.  Question 9:**    According to you, does the actual EST program help student to achieve their target situation in their field of study?

In all the answers, the teachers agree that the actual program of English for the scientific students cannot help them the achieve their target situation. They justify their answers by giving set of problems which are pointed in the following:

- ✓ Most of the scientific students do not care about English module, even they do not assist the lectures
- ✓ Time frame, one lecture per week is not enough at all.
- ✓ Student's level in English
- ✓ Education system in which the English module considered as an additional module.

10.  **Question 10:**   According to you, how an effective EST program looks like?

Each teacher gave us different characteristic of an effective EST program; we summarize it in the following:

- ✓ More time , more than one lecture
- ✓ Focusing on the functional aspects of English
- ✓ Teaching with the communicative approach
- ✓ Providing materials which are relevant to the field of study

## 3.4. Discussion of the Results

### 3.4.1. Students" Questionnaire

The analysis of the questionnaire specially the first six questions reveal that the majority of master student do not have the necessary abilities either in functional aspect of English in order to explain, to discuss, and so one neither in academic communication for writing scientific  reports, comprehending authentic scientific text,  taking note from the lecture, summarizing and so on. The analysis demonstrates that these weaknesses are due to the grammar structure, and difficulties in the lexical. In other word, they have weak level in the four skills especially in writing and speaking skills. These sequences are related to several issues which are the students' baggage of English in the past years, the luck of motivation and the absence of the awareness.

The results obtained from the last four questions shows that the master students need English for many purpose (see question 9) in order to their research and complete their study. However the English module does not really touch these needs due to the tight time frame and the courses are commonly taught by teachers who know little or nothing about the field they teach.

The students argue that the lecture is about general rules of English grammar with general concept of the relevant field that no need to learn them. Moreover, most of them follow the traditional methodology when they are dealing with scientific master students. They know a little about the communicative approach which is needed for EST courses because they new or sometime ( vacateur )

### 3.4.2. Teachers Interview

The analysis of the five first questions of the teacher interview demonstrates that several teachers or most of them who teach scientific classes in different field are not follow any special training in the field that they teach. What interesting here that the teacher training allow them to develop some pedagogical technique such as analyzing language and skills in order to understand the learners' needs that help them to provide the relevant materials and to well planning courses.

Moreover, the results show that the interviewee teachers are still use the general methodology inside the scientific classrooms, in this fact, Hutchison and waters (1987) stated that teaching ESP is similar to the teaching general English in many ways, although there are features that are typical in different specialized subjects. In addition ESP teacher should based on the leaners' needs in their respective specialized subjects. He said that the teachers should be based on the principle of effective learning and teaching.

The interview analysis reveals that the majority of the teacher have the same ideas concerning the difficulties that face their student to learn English, they argue that the prior knowledge started from high school till the the last years in the university are very limited, they add that the students are not aware toward the English language even the education system see the English module in the scientific program as an additional module. One lecture per week is the time frame of this module which is not enough at all.

## Conclusion

Obviously, English language plays an important role in the scientific fields studies, in which the student beginning with  the foundation year and moving up into the other stages, especially the graduate one are in need of English for achieving academic success in their fields of specialization. They need it for comprehending lectures delivered in English, for understanding authentic scientific texts, for writing reports in English, for summarizing, for doing the researches and so on.

The master students, physics department at .Dr Moulay Tahar's University, face difficulties in these competences mentioned above. The results of the study show that the learners' problems can be seen as falling into the following:

- Language structure (grammar)
- Lacks of vocabulary
- Teaching material used in EST program
- The methodology used in EST courses

The researcher hops that teachers take into consideration these needs of students and work to meet it and try to overcome these problems by finding suitable solutions or take a look at the ones proposed in this chapter.

## 3.5. **Conclusion, Recommendations and Suggestion for Future Research**

EST courses are obviously distinct since they put great emphasis on scientific English and the selection of the appropriate target situation that are specifically related to science and technology. So in order to cope with knowledge and communication requirements in scientific and technological fields, learner need to develop their four skills. Therefor the research aims to determine what are the necessary competencies that are needed for the learners to develop and what are the problems that are faced students in English language and/or EST courses among two major educational actors; teachers and students.

In order to achieve good results, the researcher use more than one methodological tools, starting by attending some lectures and took the important notes, then he was making an informal discussion with 13 students one by one after that the results gained from the last auxiliary tools are used in order to design an appropriate question for both the questionnaire and the interview. The chosen population was 30 master students from physics department at Saida University.

From the results obtained, it is remerked that English language is very important for those who study science and technology especially physics, which is the key of their research and studies. Several necessary skills are needed for those students such as comprehending authentic scientific text, summarizing, writing reports and so on. However the EST courses find some difficulties to meet these needs. Within this context, the researcher going to give some features of the effective EST program.

Hatechison and Waters (1980) state that any language courses should be based on need analysis, what they mean is that is important for ESP teacher to carry out needs analysis study prior to developing and designing an EST syllabus, a course selecting, a teaching approach and other relevant process that require need analysis. But before doing this step, EST teacher should first exert effort to determine and comprehend the skills needed by the students; this can be accomplished by several instruments which are questionnaire, structured interview, observation, analysis of authentic spoken and written text, discussion, and assessment. Now the teacher should be able to use the results of needs analysis which are the conducts to develop a language courses that is suitable.

EST teacher should ask some basic question before designing any course such as who the learner are? What do they need English for? And what kind of text do they need? Moreover the EST teacher should select and adopt the available authentic textbooks, handouts and major journals and other references. Also he/she can modify the activities so as to suit learners' need or can write his/her own(Dudlely Evans and ST Tohn 1998).

With these materials at the hand the next step is to provide appropriate teaching approach and suitable method.it is great idea if the EST teacher follow the communicate approach which is the most suitable to teach grammar, vocabulary and other language elements. In the other hand a learner_centred approach facilitates learning through letting them have clear knowledge of the grammatical and lexical competence by providing them meaningful information through relevant context to their field of study. It is better for the EST teacher to make corroboration with other member of academic staff who teach the academic subjects in relevant departments because the EST teachers are experienced in teaching English as language but may they lack knowledge and information about science content of academic courses. On the contrary teacher of academic subject are competent scientific content but they generally lack the necessary linguistic background and language teaching experience.

This is only a small study that was compromised by a small population from EST field of physics and also limit number of EST teachers. It will be great study if all the ST departments in different fields are taken as a sample in order to determine a new needs and new target situations. Also it is better to make an interview with EST teachers from other University in addition to the local ones. The researcher propose to use written/oral tests and structured observation for gathering much more Data or even to make a number of practical lectures some EST classes in order to deal and touch their needs by himself. These tools and methodologies are proposed for the further research.

# Appendixes A( Students' Questionnaire )

*This study attempts to shed light the needs analysis of English language for science and technology master students. Therefore, you are kindly asked to answer the following questions by putting a tick ( √ ) on the appropriate box and expressing your comments when necessary.*

1. Do you know how to write a scientific report in English ?

   Yes ☐          no ☐          somehow ☐

2. Can you comprehend a scientific text in English ?

   Yes ☐          no ☐          somehow ☐

3. Can you summarize a scientific text ?

   Yes ☐          no ☐          somehow ☐

4. Can you make notes from a lectures ?

   Yes ☐          no ☐

5. Can you discuss a scientific concepts in English ?

   Yes ☐          no ☐          somehow ☐

If not, What are the real problems standing behind your weaknesses in what we have said above ?

   a) Difficulty in understanding key concepts (general and technical vocabularies )
   b) Grammar structure (sentence structure, verbs, pronouns)

   If others please specify :

   ……………………………………………………………………………………

6. Dose the English courses solve your problems?

   Yes ☐          no ☐

 if no say why ?

7. How many lectures of English module have during the week in your department ?

   …………………………………………………………..

8. What do you need English for in your field of study ?

   …………………………………………………………..

9. Dose the lectures meet what are you need ?

   Yes ☐          no ☐

If no say why  ?

**Appendixes A( Students' Questionnire Arabic version )**

هذه الدراسة تسلط الضوء على الاغراض التعليمية للغة الانجليزية الخاصة بطلاب ماستير علوم و تكنلوجيا , بعبارة اخرى تسعى لتحديد احتياجات الطلبة العلميين للغة الانجليزية في مجال اختصاصهم .على هذا الاساس, أطلب منكم تخصيص دقائق من وقتكم للإجابة بكل صراحة على الاسئلة التالية :

هل تعرف كيف تكتب تقرير علمي باللغة الانجليزية ؟

بعض الشيء ☐      لا ☐      نعم ☐

هل تستطيع فهم نص علمي بالغة الانجليزية ؟

بعض الشيء ☐      لا ☐      نعم ☐

هل بإمكانك أخذ نقاط أو ملاحظات خلال حصة اللغة الانجليزية ؟

لا ☐      نعم ☐

أيمكنك مناقشة مفهوم علمي باللغة الانجليزية ؟

بعض الشيء ☐      لا ☐      نعم ☐

هل تستطيع تلخيص نص علمي بالغة الانجليزية ؟

بعض الشيء ☐      لا ☐      نعم ☐

اذا كانت اجابتك ب ( لا ) او ( بعض الشيء ) في الاسئلة السابقة , فماهي المشاكل التي تقف خلف ذللك ؟

1. صعوبة في فهم الكلمات المفتاحية ( المفردات العامة و التقنية )
2. قواعد اللغة الانجليزية ( تركيب الجمل , أفعال ,الضمائر .... )
3. اذا كان هناك سبب اخر ,ادرجه من فضلك

.................................................................
.................................................................

هل مقياس ( module ) اللغة الانجليزية المدرج ضمن البرنامج يعالج هذه المشاكل ؟

لا ☐      نعم ☐

اذا كانت الاجابة ( لا ) اذكر السبب :

..............................................................................................
..............................................................................................

كم عدد حصص اللغة الانجليزية المدرجة خلال الاسبوع ؟

..................................................................

من أجل ماذا تحتاج اللغة الانجليزية في اختصاصك العلمي ؟

..................................... .....................................

..................................... .....................................

هل حصص اللغة الانجليزية تلبي هذه الاحتياجات ؟

لا ☐          نعم ☐

اذا كانت الاجابة ( لا ) اذكر السبب

..................................... .....................................

..................................... .....................................

شكرا لتعاونكم

**Appendixes B ( teachers' interview )**

*This study deals with the needs analysis of English for Science and Technology students (EST) , which aim to determine the lacks and weaknesses of master students in English language. We will pleased to share with them our research by having them to answering the following :*

1. Which scientific field of study do you teach ?
   ………………………………………………………………………………………
   ………………………………………………………

2. Did you follow a special training in the field that you teach ?
   Yes ☐   No ☐

3. According to you what is/are the suitable approach(es) for teaching EST

   ………………………………………………………………………………………
   ………………………………………………………
   ………………………………………………………………………………………
   ………………………………………………………
   ………………………………………………………………………………………
   ………………………………………………………

4. " Most of EST teachers follow the traditional methodology whereby language elements (e.g., grammar, vocabulary) are taught separately, and functions and communication tasks are often ignored " ( students' perspective )
   Do you agree ?  yes ☐    no ☐
   Why ? :
   ………………………………………………………………………………………
   ………………………………………………………
   ………………………………………………………………………………………
   ………………………………………………………
   ………………………………………………………………………………………
   ………………………………………………………

5. What are the language skills that the teachers should focus on in EST courses?
   • Listening skills
   • Speaking skills
   • Reading skills
   • Writing skills

   Please                          state                          why                          ?
   ………………………………………………………………………………………
   ……

…………………………………………………………………………………………………………
………………………………………..

6.  According to you  what are the language difficulties that cause problems for comprehension and communication to your students ?

………………………………………………………………………………………………
…………………………………………………
………………………………………………………………………………………………
…………………………………………………
………………………………………………………………………………………………
…………………………………………………

7. Which materials do you use  to solve these problems ?

………………………………………………………………………………………………
…………………………………………………
………………………………………………………………………………………………
…………………………………………………
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8. What are the procedures that you follow in assessing your student in order to find out their needs ?

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9. According to you, does the actual EST program help student to achieve their target situation in their field of study ?

Yes ☐      no ☐

If  no , please state why .

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10. According to you , how an effective EST program looks like ?

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*Thank you for your cooperation*