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*The Current Situation of English for Specific Purposes
Courses at University Level:
Analysis, Evaluation and Perspectives.
The case of: Fourth year classic students of architecture
at Biskra University.*

A Dissertation Submitted in Partial Fulfillment of the Requirements for the
Master Degree in English (Sciences of Language).

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Dedication

To the wise grandfather (baba)

I am indebted to all you have done for me. Thanks a lot for your love, care and support. This work would not have come to light without you. You are the first one I dedicate this work to.

To my life star: *the unique mother*

Thank you God for my mother's face
so full of beauty, love and grace

Thank you God for my mother's smile
so full of kindness and motherly pride.

Thank you God for my mother's mind
that is so inspiring and wise.

Thank you God for my mother's arms
that always encircle me with love.

Thank you God for my mother's heart
That has loved me right from the very start.

Thank-you God for my mother's breast
Upon which I lay my worries to rest.

Thank you God for my mother's womb
The most comforting home I have known.

Thank-you God for my mother's feet
That rush to save me from dangers I meet

But most of all thank-you God for giving me the most wonderful

Mother of All.

To my treasure: *the ideal father*

In a time when fathers are totally absent,

gone most of the time,

or physically present but mentally distracted,

you are there for me,

looking at me, listening to me,

understanding me, talking with me.

You make time for me,

even when it's inconvenient for you.

You make me feel important to you.

I learn from you when you teach me,

when I watch you doing things,

and when I observe you

just being you- a terrific father.

Every affectionate smile you give me,

every pat on the back, every hug

shows me you love me,

that you are proud of me,

these things I will always remember.

You are a great role model,

I hope I can realize your dream

and be your little Doctor.

To the spirit of my dear grandmother

For the funny beautiful lady that means so much to me
may be gone from the land of living but with me she will always be
because my memory holds her dearly, her love stays always in my heart
because a lady like my grandma, is rare and hard to find.

This humble work is also dedicated to my **grandmother** who never forgets me in her
prayers and the spirit of the ocean of tenderness my dear grandfather.

To the Sweetest two Sisters: Mouna and Sara

We are three sisters, three sisters are we.
We are not always together;
studies sometimes keep us apart;
but we are never separated; we are in each others' heart
God gave me lots of happiness and glee but the most special
thing he did was make us sisters, all three.

To the spoiled brother Hicham

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I'm proud that you're my teacher,
I enjoy each lecture you teach.
As my role model you inspire me
to dream and to work and to reach.
With your kindness you get my attention;
Every day you are planting a seed
Of curiosity and motivation
To know and to grow and succeed.
You help me fulfill my potential;
I'm thankful for all that you've done.
I just want to say, as a teacher, you're number one!

Thank you, **my Supervisor**,
for being my life's role model.
When I consider all you've taught me
and reflect on the kind of person you are,
I want to be like you—
smart, interesting and engaging,
positive, confident, yet unpretentious.
Well-informed and easy to understand,
thinking with your heart as well as your head,
gently nudging us to do our best,
with sensitivity and insight
giving your time, energy and talent
to ensure the brightest possible future.
for each of us
Thank you, for giving me a goal to shoot for.

ABSTRACT

The crucial problem encountered in teaching English for Specific Purposes at the university level is first in the misconception of the term ESP and second in the application of the ESP course. Our observation led us to wonder whether English teaching at the higher level of education obeys any strategy of predetermined objectives. The present work aimed at understanding teachers' conception of the term ESP, analyzing the ESP courses at the department of architecture as a case study, identifying students' needs and finally designing sample lectures that best meet those needs. This work attempted to show that the application of some strategies of predetermined objectives would better enhance the students' achievement in learning English for Specific Purposes. It would also serve teachers to better understand ESP, conduct needs analysis and design lectures that satisfy their students' needs. The research investigation was conducted with the students of fourth year fulfilling the requirements of scientific methodology. The most important outcomes were an objective and precise evaluation of the actual ESP course at the department of architecture and consequently the elaboration of a number of lectures that hopefully would improve the teaching of ESP at the department of architecture along with some very significant recommendations.

List of Abbreviations

EAP: English for academic purposes

EFL: English as a foreign language

EGP: English for general purposes

ELT: English language teaching

EOP: English for occupational purposes

ESL: English as a second language

ESP: English for specific purposes

EST: English for science and technology

EVP: English for vocational purposes

GE: General English

NA: Needs analysis

PSA: Present situation analysis

SE: Specific English

TEFL: Teaching English as a foreign language

TSA: Target situation analysis

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General Introduction.

The study of English for specific purposes has a long history. Different scholars (e.g. Hawatt 1984) suggest that English for Specific Purposes (ESP) has become a vital and innovative activity within the Teaching of English as a Foreign or Second Language (TEFL/TESL) since the 1960s. The rationale for the need of ESP may partly be due to the fact that ESP, as compared to English for General Purposes (EGP), is time and cost effective, relevant to the learners, successful in facilitating learning and related to content (that is in its themes and topics) to particular disciplines, occupations and activities (Stevens, 1988). Besides, Munby (1975) points out that while ESP is usually defined or specified by the prior analysis of learners' communicative needs, EGP is defined usually on the basis of predetermined goals set by an institution or other experts. This does not mean, however, that EGP totally is negligent of learners' needs. It is rather to imply that the emphasis given to learners' needs in ESP usually exceeds that of EGP. It is not only because ESP is more advantageous than EGP that makes it vital but possibly because it "comprises a diverse group of teachers and curriculum designers dedicated to the proposition that all language teaching must be designed for the specific learning and language use purpose of identified groups of students" (Johns, 1991, qtd in Molla, 2006).

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

It is, as scholars like Dudley Evans and St. John (1998) assume, the backbone of ESP. It is useful because "It asks questions about students' needs and wants the expectations of the institution, the features of the actual teaching situation."

Richterich and Chancerell (1987), cited in Basturkmen (1998) also strengthen this point when they say, "Not only to identify elements [needs] but to establish relative importance to find out what is indispensable necessary, or nearly desirable." As a result, it is possible to deduce that, needs analysis is difficult to be separated from the preparation of ESP courses.

Statement of the problem.

During the three years "2007-2010" of studying the English for Specific Purposes (ESP) course in the LMD system, we observed that what we studied theoretically about ESP teaching is not put into application by ESP teachers who teach ESP in other departments. We can note that there is not a separation between ESP and English for General Purposes (EGP) when it comes to syllabuses and methodology. English for Academic Purposes (EAP) and English for General Purposes (EGP) are considered to be one by the majority of teachers. In fact, what is taught in the general education or private institutions is typically English for general purposes and to some extent what is taught now in our universities under the term ESP is typical general English.

Needs assessment, which is a major component of ESP, rarely exists, and, if does, it is not systematic because it is only based on teachers' intuitions. Moreover, the methodology adopted in teaching in the majority of cases is uniform. That is, a teacher would enter a class with the same kind of methodology in mind regardless of the aims of each program. Unfortunately, ESP courses in different departments are always put "in the same basket" and labeled as programs for "Teaching English". As a matter of

fact, there are crucial parameters that ought to be taken into consideration when designing syllabuses such as the nature of language to be taught and used, the learners, the setting and the objectives to be realized.

Objectives

Main objective:

-To improve the teaching of ESP in general and particularly at the department of architecture.

Subsidiary objectives:

- To suggest procedures that make ESP teaching more effective.
- To conceive lectures and try to apply them.
- To evaluate their efficiency.

Significance of the work.

This research will be of great benefit for ESP teachers as it would enable them to:

- Be aware of Needs Analysis importance in the field of ESP;
- Conduct needs analysis;
- Design courses that meet their student's needs (The work will provide sample lectures designed by the researcher based on fourth year architecture students needs as a model of course design).

Research questions

In order to achieve the above stated objectives the researcher formulated the basic research question:

-What are the necessary requirements for the refinement of the current ESP courses at university level?

Besides, so as to strengthen the main question the following specific questions can be raised:

- How do teachers understand ESP?
- How do teachers teach ESP?
- Are there particular pre-requisites in ESP teaching?
- What are the parameters of success or failure of ESP teaching?

Hypotheses.

The following hypotheses are proposed to conduct the research:

Main Hypothesis:

- If ESP teachers are aware of how ESP should be taught, then ESP teaching will be improved.

Subsidiary hypothesis:

- Needs analysis is an essential procedure in making ESP teaching more efficient.

Methodology.

The choice of method.

There is no perfectly agreed scheme for classifying methods in the field of educational research .However, the nature of the problem, the type of the needed data, the objective of the research work, and the population are factors that impose the appropriate method (Turney and Robb, 1971).

The descriptive approach would certainly fit our purpose because our objective is to describe teachers' way of teaching ESP and then put into application the proposed procedure we are going to conceive.

Data gathering.

In this study, we would use a needs analysis questionnaire, focus group discussion and an interview. First, the “needs analysis questionnaire” would be directed to the fourth year students of architecture at Biskra University in an attempt to analyze and design lectures based on their needs. The focus group discussion also would be used

with the same population. In addition to the questionnaire, a structured interview would be conducted with the teachers who have been teaching the ESP course at the department of architecture, in order to find out their conception and application of the ESP course.

Limitations of the study

Fourth year students of architecture at Biskra University have been chosen to conduct this research for three main reasons:

- The facilities that have been offered to put the suggested designed lectures into application.
- The availability of material and data to be analyzed.
- The importance of ESP at the architecture department.

Part I: Review of Literature.

Chapter One:

Section I: General Overview of ESP.

1.1 Definitions of ESP.

There are almost as many definitions of ESP as the number of scholars who have attempted to define it. Many have tried to define ESP in terms of what it should and what it should not be, however, we would rather concentrate on finding out what ESP really means.

First, Mackay and Mountford (1978) defined ESP as the teaching of English for a “*clearly utilitarian purpose*” (p. 2). The purpose they refer to is defined by the needs of the learners, which could be academic, occupational, or scientific. These needs in turn determine the content of the ESP curriculum to be taught and learned. Mackay and Mountford also defined ESP and the *special language* that takes place in specific settings by certain *participants*. They stated that those participants are usually adults. They focused on adults because adults are usually *highly conscious* of the reasons to attain English proficiency in a determined field of specialization, and because adults make real use of special language in the special settings they work. They also argued that there is a close relationship among special settings and adults and the role, usually auxiliary, that English plays in those particular settings for those particular people.

Second, Hutchinson and Waters (1987) consider ESP as an approach rather than a product and say that the base of ESP is the question: why does this learner need to learn a foreign language? In relation to this, Dudley-Evans and St John (1998:3) state, "the answer to the question relates to the learners, the language required and the learning context, and thus establishes the primacy of needs in ESP."

Third, Strevens (1988) defines ESP as containing 'absolute and variable characteristics'. According to him, absolute characteristics of ESP comprises English language teaching which is designed to meet specific needs of the learner; related in content (in its themes and topics) to specific disciplines, occupation and activities; centered on language appropriate to those activities in syntax, lexis, discourse, semantics and so on and analysis of the discourse; and in contrast with 'General English'. On the other hand, the variable characteristics of ESP in the scholar's view state that it may be restricted to the learning skills to be learned (for example, reading only); and may not be taught according to any pre-ordinate methodology.

Fourth, Robinson (1991) accepting the primacy of needs analysis defines ESP based on two key defining criteria and a number of characteristics generally found to be true of ESP. The two criteria, she says, refer to the fact that ESP is 'normally goal-oriented' and ESP courses are produced based on needs analysis (which aims to specify as closely as possible what exactly it is that students have to do through the medium of English). Moreover, the general characteristics described by the scholar represent the key concepts as follows: ESP courses are taught to adults who are in homogeneous classes organized with respect to professional background or field of specialization and the objectives of the courses should be met, even if there is a limited time period.

Fifth, even if it is slightly similar with the above scholar's idea, Schleppegrell (1990) suggests that the common factor in all ESP programs is that they are designed for adults who have a common professional or job-related reasons for learning English, a common context in which to use English, content knowledge of their subject area, and well-developed learning strategies. Here it is possible to infer that the student brings to the ESP class a reason for learning and a context for use of English, knowledge of the vocational or professional field, and well equipped adult learning strategies.

However, all the definitions seem to have weaknesses. Dudley-Evans and St John (1998) assert that the emphasis on content in the absolute characteristics of Strevens' may confirm the false impression held by many teachers that ESP is always and necessarily related directly to subject content. At the same time, Robinson's mention of 'homogenous classes' as characteristics of ESP may lead to the same conclusion. Strevens' definition appears to be the most comprehensive of all the four.

Dudley-Evans and St. John (1998:4-5) have developed a complete definition of ESP which has revised the weaknesses of the above scholars and used absolute and variable characteristics in the definition as follows:

1. Absolute characteristics:

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

2. Variable Characteristics:

- * ESP may be related to or designed for specific disciplines;*
- *ESP may use in specific teaching situations, a different methodology (the nature of interaction between the ESP teacher and the learner) from that of General English.*
- * ESP is likely to be designed for adult learners, either at a tertiary level institution or in professional work situation. It could, however, be used for learners at secondary school level; and*
- * ESP is generally, designed for intermediate or advanced students. Most ESP courses assume basic knowledge of the language system, but it can be used with beginners.*

Here, Dudley-Evans and St John (1998) seem to make three definitions. In the first place, they explain that ESP teaching does not necessarily have to be related to content but it should always reflect the underlying concepts and activities of the broad disciplines. Moreover, Dudley-Evans and St John (1998) claim that ESP, linked to a particular profession or discipline, should make use of a methodology that differs from that used in General Purpose English teaching. That is to say, the methodology in ESP ought to refer to the nature of the interaction between the ESP teacher and the learners since the teacher sometimes becomes more like a language consultant enjoying equal status with the learners who have their own expertise in the subject matter.

Most importantly, Dudley-Evans and St John (1998:4) believe that language should be included as a defining feature of ESP. While the specified needs arising from needs analysis relate to activities that students need to carry out (rather than language), a key assumption of ESP is that these activities generate and depend on registers, genres and associated language that students need to be able to manipulate in order to carryout activity.

To conclude, most definitions of what ESP is concur on three key topics: the nature of language to be taught and used, the learners, and the settings in which the teaching/learning process would occur.

These three aspects of ESP are closely connected to each other, and can be combined to establish that ESP is the teaching of specific and unique English (specialized discourse) to learners (adults in their majority), who will use it in a particular setting (laboratory, police station, hospital, etc.) in order to achieve a utilitarian goal or purpose (communicate linguistically correct), which in turn will fulfill additional personal goals (promotional, economical, etc.). What ESP specialists do not seem to agree on is what type of language should be taught (vocabulary, register,

jargon, etc.) and how to teach it (in context with content knowledge, communicatively, collaboratively, etc.) However, even though there is this agreement and discrepancy among ESP scholars, it is important to note that their many definitions are unequivocally linked to how ESP has developed since it was first spoken of in the 1960s.

1.2 Historical developments of ESP.

1.2.1 Origins of ESP.

There are three reasons common to the emergence of all ESP: the demands of a brave new world, a revolution in linguistics, and focus on the learner (Hutchinson and Waters, 1987).

Hutchinson and waters (1987) comprises two key factors that breathed life into ESP. First, the end of the Second World War brought with "*an age of enormous and unprecedented expansion in scientific, technical and economic activity on an international scale. For various reasons, most notably the economic power of the United states in the post war world, the role of international language fell to English*" (p6).

Second, the oil crisis of the early 1970's resulted in western money and knowledge flowing into the oil-rich countries. The language of this knowledge became English.

The general effect of all this development was to exert pressure on the language teaching profession to deliver the required goods. Whereas English had previously decided its own destiny, it now becomes subject to the wishes, needs and demands of people other than language teachers (Hutchinson and Waters, 1987: p7).

The second key reason cited as having a tremendous impact on the emergence of ESP was a revolution in linguistics. Whereas traditional linguists set out to describe the features of language, revolutionary pioneers in linguistics began to focus on the ways in

which language is used in real communication. Hutchinson and Waters (1987) point out that one significant discovery was in the ways that spoken and written English vary.

In other words, given the particular context in which English is used, the variant of English will change.

This idea was taken one step farther. If language in different situations varies, then tailoring language instruction to meet the needs of learners in specific contexts is also possible. Hence, in the late 1960's and early 1970's there were many attempts to describe English for Science and Technology (EST).

The final reason Hutchinson and Waters (1987) cite as having influenced the emergence of ESP has less to do with linguistics and everything to do with psychology. Rather than simply focus on the method of language deliver, more attention was given to the ways in which learners acquire language and the differences in the ways in which language is acquired. Learners were seen to employ different learning schemata, and be motivated by different needs and interests. Therefore focus on the learner's needs became equally paramount as the methods employed to disseminate linguistic knowledge.

Designing specific courses to better meet these individual needs was a natural extension of this thinking .To this day, the catch word ESL circles is learner - centered or learning –centered.

1.2.2 Development of ESP.

According to Hutchinson and Waters there are different theoretical foundations upon which ESP was developed from. They are:

1)- Register analysis.

During the 1960's and 1970's, the trend in ESP switched towards the study of register analysis, based on work conducted by Peter Strevens (Halliday, McIntosh,

Stevens, 1964), Jack Ewert (Ewert & Latorre, 1969), and John Swales (1971). Register analysis is based on the premise that, for example, the language of engineering is different from that of medicine, and the analysis of discourse consisted of identifying the grammatical and lexical features of such registers. The purpose of doing this was to organize ESP courses that were more relevant to the learners' linguistic needs since the goal was to focus on the language forms learners would commonly come across within their fields of specialization, rejecting those that were not relevant.

Perren (1969) argued that it is useful to recognize language for special purposes or a variety of registers according to the different fields of specialization where they are used. Lee (1976) considered two aspects in the study of register. First, a lexical analysis of the language to deal with, focusing on frequency of occurrence of items and their presence or absence in the language used in specific settings and for specific purposes. Second, he referred to the syntactic analysis of that language. Robinson (1980) suggested that ESP must imply special language or special register. She added that often register is a term used to mean simply vocabulary and language use (collocations).

Even though, sometimes, there is no agreement on how to approach and define register, there exists a consensus on the need for greater precision and less generalization when it comes to describing the characteristics of "special registers." By describing register, curriculum developers were able to tailor their programs to the needs of their learners in their specific settings of use. On this, Spencer (as cited in Grève, 1972), criticized register studies because they were text oriented and suggested a shift to the use of role activities where, according to Candlin (1978) language can be used to achieve communicative purposes. Widdowson (1979) advocated a shift from a quantitative approach (the analysis of register and lexis) to a more qualitative approach (the development of learners' communicative competence as they perform language in

role plays.) He also argued that such a qualitative approach needed to be perfected and advocated an emphasis on discourse analysis and what has been called the communicative approach to the teaching of languages.

2)-Rhetorical or discourse analysis.

According to Hutchinson and Waters (1987), ESP was characterized by a switch from register analyses and the grammatical and lexical level of the sentence to the study of discourse or rhetoric analysis. Hutchinson and Waters (1987) emphasized the attention that should be given to the understanding of how sentences are combined to produce real meaning. Robinson (1980) referred to register as spoken interaction that is made up of units of meaning that have a certain hierarchy. She also defined register as a group of words spoken or written that had to be analyzed in terms of cohesion.

Widdowson (1979) suggested that such groups of words should be called *text* and not discourse because text would allow for the visualization of devices that signal structuring above the sentence level.

The devices Widdowson referred to are complex grammar structures and linguistic rhetorical devices that makeup the text ESP learners would usually encounter in their fields of specialization.

Hutchinson and Waters (1987) generalized the meaning of discourse to include considerations of “rhetorical functions for communicative purposes” (p. 20). Robinson (1980) cited Todd, Trimble and Trimble (1977), who identified description, definition and classification as the most common rhetorical functions, and rhetorical techniques such as time order, space order, and causality. They also mentioned two important rhetorical functions common to many scientific textbooks: interpretation of figures, and the rhetoric of instructions. Mackay and Mountford (1978) added some other important

functions such as the ones that involve learners in defining, identifying, comparing, classifying, organizing abstract and concrete phenomena.

What seems to be appropriate then is the argument that Allen and Widdowson (1974) put forth saying that the needs of ESP learners should be met by courses that teach learners how sentences are combined and used to perform accurately and proficiently to conduct such rhetorical functions in specific communicative settings.

3)-Target situation analysis:

Switching to a more communicative approach to the teaching of foreign languages, ESP shifted its attention to target situations. Hutchinson (1987) said that a target situation is one in which learners will use the specific language they are acquiring. He also said that during this stage, ESP curricula focused on identifying those special target situations for determined groups of learners in order to analyze the linguistic features common to those situations.

For instance, target situation analyses are seen as a precursor of linguistic and situational analysis. One of the most popular examples of a situation analysis and communicative settings is the one developed by John Munby in *Communicative Syllabus Design* (1978). There, he analyzed learners' needs in terms of communication goals, the setting in which specific language would be used to communicate important information, means of oral and written communication, language skills possessed by learners, function, and structures.

The emphasis on target situations as a form of *needs analysis* then involves what researchers have called *linguistic competence*. Linguistic competence is understood on the basis of linguistic performance, the ability to use language accurately, proficiently and fluently in a broad variety of settings. Based on this description, then, linguistic competence can be understood as made of grammatical, pragmatical, socio-linguistic,

strategic, and communicative sub-competencies. In turn, this concept is tightly linked to what language ability means in the context of specific language use settings.

Douglas (2002) stated that language performances always vary in terms of the different directions science and humanities have taken (specialization), and that a learner's language ability will be different from one performance target situation to another. Therefore, while a learner might have a great deal of knowledge about computer science, another might have lesser or greater knowledge in a different science, such as, architecture, medicine, laboratory work, and others.

By understanding those differences and by clearly defining the subject matter or specialization, curriculum developers will have a good starting point for developing appropriate curricula for ESP settings. Moreover, it must also be acknowledged that learning the needs ESP learners have would greatly influence the other elements of an ESP curriculum. It is because of this that needs analysis must be learner-centered (West, 1984).

4) - Study skills.

ESP had to do with the mental processes that imply the use of language, focusing on the development of skills and strategies learners need in order to acquire a second language. Hutchinson (1987) stated that there are reasoning and interpreting processes underlying all types of language use and that those processes enable people to extract and handle meaning from discourse. The focus then is not so much on the surface forms of language, but on the underlying strategies learners use to deal with the external or surface forms. He argued that some of those strategies could be understood, for example, as the ability to guess the meaning of a word from the context in which it is presented, the use of words that are similar in both L1 and L2, the use of discourse markers to ask for clarification or keep a conversation going, and others. Consequently,

no attention was given to special registers or subject registers because no specific underlying processes are needed to interpret them.

Hutchinson (1987) said that even though the focus of ESP courses has been on what people actually do with language (the surface and underlying forms of language and the mental processes learners use to deal with it), a more clear understanding of the processes of language learning is a more valid approach to ESP.

In this sense, he also argued that everything in the teaching process should aim at helping learners use their learning strategies in order to meet their learning goals. In order to do this, ESP curricula developers are encouraged to involve learners in the making of curricula from the beginning focusing on what their learning needs are and how they learn.

Needs analysis has then become a vital part of the designing and setting of any curriculum, especially in the ESP areas. The importance of conducting a needs analysis exercise lies in the fact that through it, curricula-designers can learn firsthand two important things: (1) what general and specific language proficiency learners have, and (2) what general and specific language proficiency learners need to acquire. Once curricula-designers discover these two important student-related facts, then they can write the course objectives, make decisions on what to include in the syllabus or for example, what functions, topics, vocabulary, and other language procedures should be given emphasis over others that students already master. Once the syllabus is in place, then decisions about how to teach it and when to teach it should be made.

This in turn will lead curricula-designers to design and create or adapt teaching materials that would fit the learners' linguistic needs, which in turn will shape testing of language learning. This is precisely the reason why it is often said that needs analysis drives the making of a curriculum as a great deal of importance is placed on needs

analysis, it is important to carry it out in a way to obtain as much information as possible from the learners.

It also comprises giving surveys and questionnaires (in the native language of the respondents, ideally) to the learners in order to obtain information about their professional and linguistic backgrounds, their preferred learning styles, learning strategies, their motivation, and their willingness to attend classes, do homework, and commit themselves to learning. Learners' linguistic proficiency and the probable lack can also be discovered by using tests and analyzing their scores in order to shape the syllabus and provide for quality teaching and teaching materials. Situational analysis cannot be ignored either and meetings, interviews should be reached between the language institution mandating the course and the instructors in order to decide on infrastructure, technology, support, and training.

In summary, a needs analysis exercise must be given special attention and always be carefully conducted. It should be conducted in a way that would enable curricula- to obtain a high-quality product that would not only allow the mandating institution fulfill its educational mission, but in the end empower learners through the acquisition of language that would help them reach their linguistic, professional, and personal goals.

Needs analysis, situation analysis, the analysis of special language or discourse, and the connection between special language and content seem to be the four most important aspects ESP specialists emphasize when designing ESP curricula nowadays, but content deserves special attention. Cerce-Murcia (2001) argues that content serves as a framework in which special language originates.

Content is also special language that originates as the sciences and technology continuously advance. For example, a new user's guide that describes how to install a

video card in a computer will be in the realm of the field of Information Technology in general (content), but it will also include special language such as *antialiasing* which is a configuration mode used to create high quality computer images.

What is important to emphasize here is the fact that ESP practitioners need to be aware of the type of content they would be dealing with, its importance and value, and its relationships with key concepts and vocabulary.

In turn, this will lead ESP practitioners to select content that motivates learners and that is relevant because it would be used in real language situations inside and outside the classroom.

5) - A learning centered approach.

The development of the learner centered approach to ESP came as a result of studies analyzing real language use across different areas. The basic idea that different types of occasions called for different uses of language led logically to the belief that the only way to develop the most appropriate language patterns in learners was to find out what situations or for what purposes the learners used or intended to use the target language. Thus, the central concept of learner needs was born. In ESP, learner needs act as a guide for specifically what material (real content) the teacher will teach. Of course the basis of this is the ongoing research in the different areas related to linguistic analyses.

The basic idea in ESP is that the teachers cannot teach if they do not know exactly how the students plan to use the language or in fact need to use the language right now. As mentioned above, this is the idea of efficiency. This efficiency is extremely important particularly in EFL situations where students have very limited time, but of course it applies to all adult learners in any case who always have limited

time resources for the learning of their language no matter how important it is that they do so.

The students then become the epicenter of everything which occurs in the classroom. All planning revolves around the students and what is known about them when from the onset and certainly every single class session needs to revolve around what the students need to do. Furthermore, a valuation relates as well to students and, as mentioned above, is often handled in a kind of continuous assessment scenario where the teacher needs to keep close tab on how each student is developing.

1.3 General English (GE) and English for specific purposes (ESP) in theory and practice.

Orr (1998) in differentiating between EGP and ESP states that:

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

The definition of EGP is unhelpful, particularly because the meaning of « general purposes » is typically left vague. A more helpful view is suggested by

Stevens, who prefers the term « English for Educational Purposes » (EEP) to account for a school –based learning of a language as a subject element within the overall school curriculum.

However, according to Orr “*English for Specific Purposes (ESP) is research and instruction that builds on EGP and is designed to prepare students or working adults for the English used in specific disciplines, vocations, or professions to accomplish specific purposes.*”

It is obvious that ESP context must be preceded by a sizeable background of general English. As it has been argued, ESP is associated with mature learners, because it has a strong relationship with specialization in different fields of concern.

Aside from the ‘rough separation’ at definition level, there exists overlapping connection and proportion between them. To clarify their relations, Widdowson (1983) accounts for distinctive features of ESP and EGP; among them these are the most important:

EGP	ESP
<p>*The focus is on <i>education</i>.</p> <p>* As the future needs of the student’s are impossible to predict, course content is more difficult to select.</p>	<p>*The focus is on <i>training</i>.</p> <p>*As the English is intended to be used in specific vocational contexts, selection of appropriate content is easier (but not ‘easy’ in itself).</p>

Much of the discussion presented up to now was brief and needed theoretical arguments regarding ESP and EGP. It is better to alter the perspective so as to get rid of theoretical assumptions and concepts. The investigators prefer to expand on the role of

GE (EGP) and its trace in a typical ESP classroom, so that one can have a better understanding of the actualization of their connection in a real context.

ESP and EGP (GE) in practice.

Some important points about ESP classes and their comparison with EGP ones:

1. Learners and purposes of learning ; ESP learners are usually adults who already have some familiarity with English language and they are learning the language in order to communicate a set of professional skills and to perform particular –job- related functions.

In EGP classes, age of learners varies from children to adults and learning English language is the subject of classes.

2. Based on the purpose of learning, aims of instruction are identified; in an EGP class, as a general rule, *four skills are stressed equally*. But in ESP, it is *needs analysis* that determines which language skills are most needed by the students, and the syllabus is designed accordingly. For example, in order to train a tourist guide, the ESP class should promote the development of spoken skills. Another example, one who intends to work in a business administration should be trained in development of reading skills.

3. In a typical EGP class, there is concentration on *teaching grammar and language structures* (mostly in isolation). But in ESP, the focus is on *context*, to ESP, English is not taught as a subject separated from the student's real world/wishes.

Language in context → **ESP** Language in isolation → **EGP**

4. Combination of subject-matter (which learners are familiar with) with English language creates a meaningful context which is highly motivating. This meaningful context increases motivation that is a positive indication of a successful learning.

5. Regarding the term 'specific' in ESP, it should be noted that not only does it mean English for specific purposes, i.e. English language at service of specific purposes, but

also implies specific purposes for learning English. In other words, the study of English through a field that is already known and relevant to it. Therefore, learners are able to use what they learn in ESP classes right away in their work and studies. This means that ESP enables them to use the English they know to learn even more English.

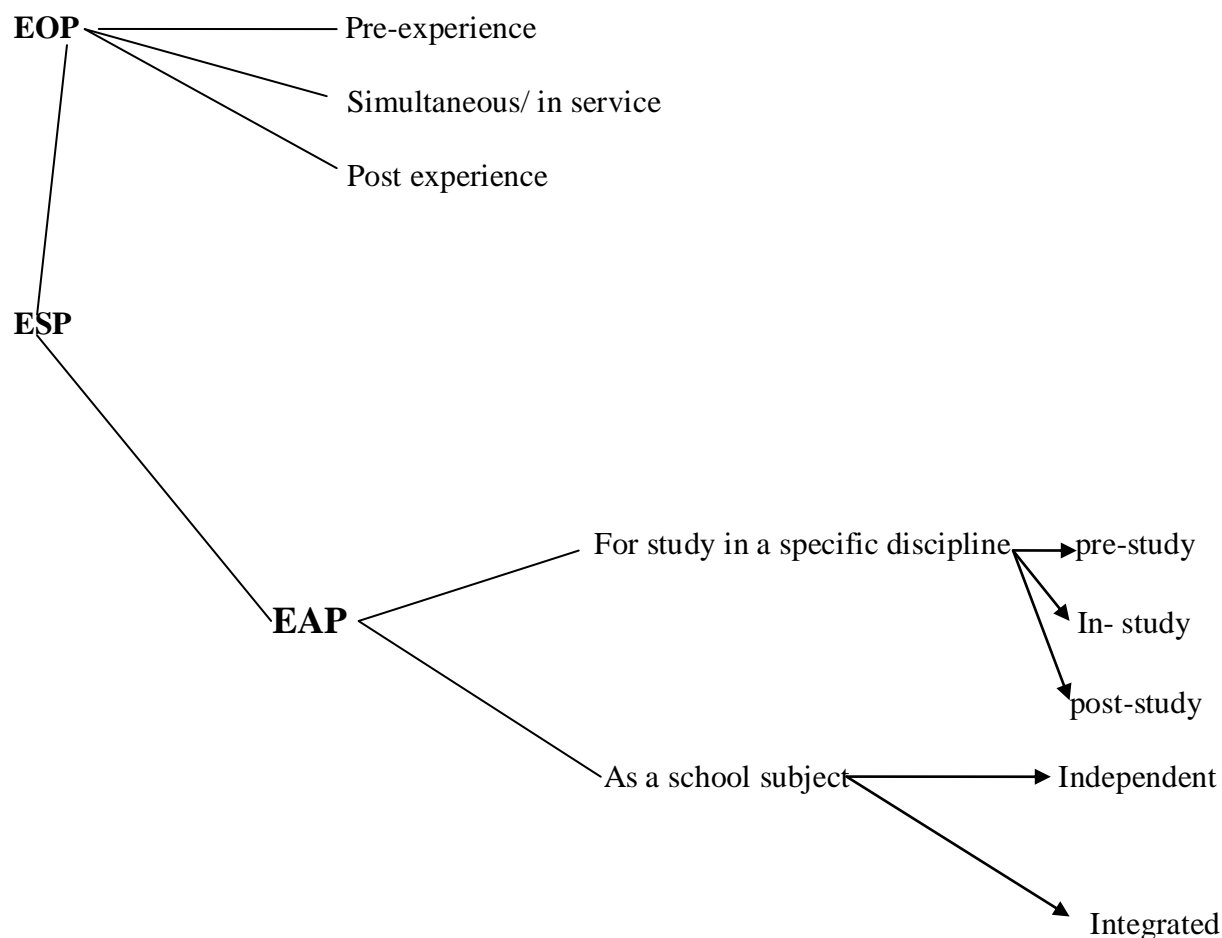
The following are some opinions on the relation of EGP and ESP: First, Hutchinson and Waters (1987) maintain that what distinguishes ESP from general English (GE) is an awareness of the need. Second, Robinson (1991) suggests that in an ESP class, language is a 'service' rather than a 'subject' in its own sake. Finally, Anthony (1997) notes that it is not clear where ESP courses end and general English (GE) courses begin.

In sum, ESP assesses and analyzes needs and integrates motivation, subject-matter and content with the help of relevant language skills.

For all of ESP curriculum design, it can be concluded that general English (GE) language content, grammatical functions and acquisition skills are important and dominant in curriculum development and course design. The problem concerning contrasting leading to emphatic separation of these two fields of study is sometimes because of ill-defined descriptions or ill described definitions.

1.4 Classifications of ESP

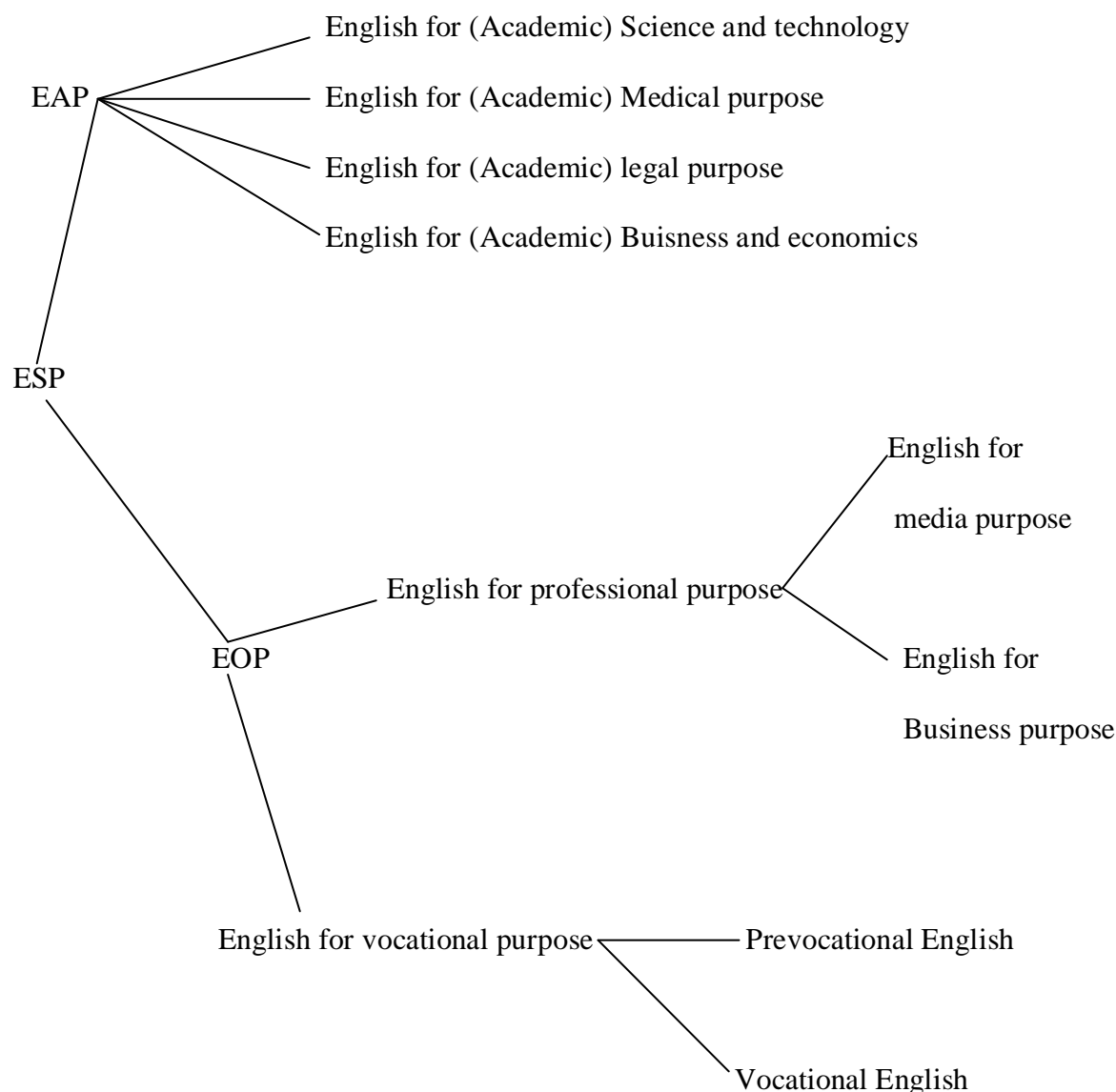
Traditionally, ESP is classified into two main areas: English for Academic Purpose (EAP) and English for Occupational Purpose (EOP). Robinson (1991) presents the classifications in tree diagrams as in figure 1:

Figure 01: ESP classification by experience.

Source Robinson (1991:pp.3,4)

The diagram makes an important distinction of courses into EAP and EOP together with when the courses take place. The distinctions are significant since they will result in effect on the extent of specificity relevant to the course. For example, courses offered simultaneously with the subject area study in an institution will give chance for specific or integrated work.

In addition to the classification based on experience, ESP can be typically categorized based on discipline or professional area as given in figure 2 two (John, 1991; Dudley-Evans and St John, 1998).

Figure 02: ESP Classification by Profession Area.

Source: Johns (1991, p.71) and Dudley-Evans and St John (1998, p.6)

In the above classification, we may distinguish between studying the language and discourse of, for instance, science and technology for academic purposes, which is designed for engineering students, and studying for occupational (professional) purposes designed for practicing engineers. In the same way, a language course may be designed for architecture students for some purpose: for academic or for professional, or for both purposes.

Finally, Dudley-Evans and St John (1998:8) criticize the use of tree diagram since it "creates a number of problems by failing to capture the essentially fluid nature of the various types of ESP teaching and the degree of overlap between 'common core' EAP or English for Business Purpose (EBP) and General Purpose". Thus, the scholars suggest that an additional perspective can be gained through the presentation of the whole of English language teaching on a continuum that runs from clearly definable General English courses through very specific ESP courses. The scholars have made a clear description of the continuum in figure 3, by providing examples.

Figure 03: Continuum of ELT Course Types

<u>Position 1</u>	<u>Position 2</u>	<u>Position 3</u>	<u>Position 4</u>	<u>Position 5</u>
English for Beginners.	Intermediate to Advanced English general purpose (EGP) course with a focus on particular skills.	English general academic purpose (GAP) English general business purpose (EGAP) courses based on common –core language and skills not related to specific disciplines or professions	Course for broad disciplinary or professional areas, for example, report writing for scientists and Engineers, medical English, legal English negotiation/meeting skills for business people.	1. An 'academics 'support' course related to a particular academic course 2. One-to-one work with business people

Source: Dudley-Evans and St John (1998:9)

According to scholars' view, it appears that in the continuum positions 2 and 3 have much in common and it is merely the general context of the program that determines whether or not a given course is classified as ESP.

Besides, Dudley-Evans and St John (1998) point out that the use of the continuum also makes a distinction between the nature of more specific ESP work. At position 4, the work is very specific in terms of the skills taught, but, strictly speaking, the groups themselves are not homogeneous. Thus, a teaching material designed for homogeneous groups needs to have acceptable and understandable context to all the branches.

However, in position 5, according to Dudley-Evans and St John (1998) the course becomes more specific. The course can be built to meet the specific needs of the target situation and of the individuals concerned, and can make extensive use of authentic material in their own subject area. The dominant characteristics of such course are that the teaching is flexible and tailored to individual or group needs as they arise.

Even though there is overlap and potential confusion created because of classification, Dudley- Evans and St John (1998) appreciate the attempt to define and classify what we mean by ESP.

Section II: Language Issues in ESP.

2.1 Grammar in ESP.

There are many misconceptions about the role of grammar in ESP teaching. Indeed, it is often said that ESP teaching isn't concerned with grammar while much of the skills oriented work in EAP does not concentrate on grammar itself. It is incorrect to consider grammar teaching as outside of the remit: grammar is taught as being a part of whole texts; it is within readings, discussions and lectures rather than separate from them. Therefore, Grammar is not a separate entity which students need to memorize knowledge of but rather needs to be viewed within the context of language use.

The specific grammar points mentioned in Dudley-Evans & St. John (1998) are:

- Voice;
- Tense – aspect;
- Articles;
- Nominalization;
- Logical connectors (Discourse markers).

Verb and tense:

Which tenses should be taught?

1) Present simple:

- Scientific and technical texts in English frequently use the present tense, since in most cases they state facts. Sometimes, the present perfect and simple past have to be used.

2) Present perfect:

- Use the present perfect for actions in the past with a connection to the present and when the time of the past actions is not important. Use the present perfect for recently completed actions and actions beginning in the past and continuing in the present.

3) Past simple:

- Use the simple past for actions in the past that have no connection to the present and when the time of the past action is important or shown.

Teachers should teach different tenses. They should be presented with due explanation about when and why students should use a particular tense instead of another.

Voice:

-The passive voice appears in scientific texts rather frequently. This is appropriate for an impersonal use of the language, where the acting person is of no importance and therefore does not have to be mentioned. The passive is also used to describe a process or experiment.

- The active form is used only to describe the procedural choices.

Modals:

-Modals like: may, might, could, would... are also important. They are used in order to show a degree of certainty.

Articles:

-Teachers should teach when their students should use 'a, an, or the'.

Word Formation: the Suffix -able/-ible

Adjectives ending in **-able/-ible** are often used in scientific texts, as they can replace longer verbal phrases, for example:

The specimen exhibits elongation **that can be appreciated**.

The specimen exhibits **appreciable** elongation.

Nominalization:

-It is the use of verbal nouns usually ending in suffixes such as:
ation, ition, ity, ment, ness....

Logical connectors:

-Logical connectors, such as moreover, however, therefore..... have always had a high profile in EAP teaching. They are generally seen as a key device to the understanding of the logical relationships in texts and therefore relevant to the teaching of reading and writing in EAP.

Pre-modifying participle:

-Swales"1974" discusses the function of the pre-modifying participle "*given*" such as: *a given element, a given reaction.....*

He points out that expressions of this kind are very common in scientific writing and consequently they should be taught by ESP teachers.

The first step in dealing with grammar in an ESP approach is to try to have the students analyze a text and see if they can identify the patterns which are inherent within that text. Ultimately, we are looking for patterns of usage. The next step of course is trying not just to identify, but understand these patterns of usage. This means the students, with the teacher's help, need to try to figure out how and why certain grammatical structures are used in certain places within a text. Once this is done, we expect the students to be able to produce their own texts using the appropriate grammatical structures for that genre or content area.

2.2 Types of vocabulary in ESP.

In teaching and learning vocabulary, it is essential to distinguish between different types of vocabulary which need different focus.

2.2.1 Technical vocabulary (Jargon):

Vocabulary used by special group or occupational class, usually only partially understood by outsiders. The special vocabularies of architecture, medicine, law, science, and technology all fall under the heading of "jargon", so the term jargon is

applied chiefly to the words and phrases that are used and understood by people within a specific profession or field of study but not by others. Examples of occupational jargon include such formal technical expressions as periorbital hematoma (black eye; to the lay person), in medicine; and escrow and discount rate, in finance etc....

2.2.2 Semi- technical or Core vocabulary:

It has often been pointed out by ESP teachers and applied linguists that the division of vocabulary in technical registers into specialized and general items is both simplistic and inadequate for the purpose of teaching English as a foreign language. Many have argued that the real difficulty with understanding scientific/technical texts, as far as the foreign specialist or learner is concerned, lies in the area of vocabulary generally referred to as "sub- technical".

The term "sub-technical" covers a whole range of items which are neither highly technical and specific to a certain field of knowledge nor obviously general in the sense of being every days words which are not used in a distinctive way in specialized texts. "Sub-technical" vocabulary has proved to be elusive and confusing for many teachers, the reason being that the term has neither been clearly nor consistently defined in the literature.

Moreover, it is as simplistic as the specialized/ general division in that it attempts to classify anything that is neither specialized nor general under the same heading. Common sense and experience indicate that this middle area between specialized and general is itself made up of several different types of vocabulary which require different teaching techniques. To illustrate this there are some types of items which have been referred to as "sub-technical" vocabulary by various linguists:

1) Items which express notions general to all or several specialized disciplines, e.g. factor, method and function.

- 2) Items which have a specialized meaning in one or more disciplines, in addition to a different meaning in general language; 'Bug' in computer science, for instance, is different from 'Bug' as in everyday use. 'Solution' has different specialized meanings in mathematics, chemistry, in addition to its general language meaning.
- 3) Items which are not used in general language but which have different meanings in different specialized disciplines. 'Morphological', for instance, means different things to linguists and botanists.
- 4) Items which are traditionally viewed as general language vocabulary but which have restricted meanings in certain specialized disciplines. In botany, 'effective' simply means "take effect", it carries no evaluative meaning. In the same discipline, genes which are expressed have observable effects i.e. more apparent physically, as opposed to being masked. 'Expressed' in botany is therefore not associated with emotional or verbal behavior as is the case in general language.
- 5) General language items which are used, in preference to other semantically equivalent items, to describe or comment on technical processes and functions. For example a recent examination of a corpus of biology in texts books (Holes and Baker) revealed that 'photosynthesis', and other processes such as digestion, do not, apparently ever 'happen': they overwhelmingly 'take place' and occasionally 'occur'. 'Take place' and 'occur' can therefore be regarded as sub-technical vocabulary.
- 6) Items which are used in specialized texts to perform specific rhetorical functions. These are items which signal the writer's intentions or his evaluation of the material presented. Johns and Dudley-Evans (1980) give the following examples of expressions used in plant biology lectures "one explanation is....", "others have said".....and "it has been pointed out by....."

2.3 The required vocabulary in ESP teaching.

In spite of the claims that teaching technical vocabulary is not the job of ESP teachers, there may be several circumstances in which ESP teachers should offer timely help.

Firstly, when learners are reading specialized texts with a large number of unknown technical words which cannot be ignored by learners because of their close connection with the topic being discussed, ESP teachers now need to help the learners to decide which words are worth focusing on.

Secondly, when doing ESP exercises exploiting a particular context with certain technical vocabulary, Dudley-Evans and St John (1998) "*it is important that both the teacher and the learners appreciate that the vocabulary is acting as carrier content for an exercise and it is not the real content of the exercise.*" (p .81)

Thirdly, ESP teachers may help learners when learners find it a bit difficult to deal with the general words used as technical words. For instance, 'wall' in biology, and 'resistance' in electronics. Fourthly, if a technical word is not cognate with the equivalent term in the student's native language, the teacher will have to give some explanations and introductions to the vocabulary to be learned. Fifthly, usually there is a one to one relationship between the terms in English and the learner's L1, but sometimes when there is an absence of one to one explanation, the teacher should check whether learners have fully understood the term and give them guidance in the use of technical dictionaries or other similar sources. Lastly, it is possible that difficulty with the pronunciation of some technical words could lead to poor memorizing of the words. ESP teachers can be of a great help in this respect.

2.4 Types of content in ESP.

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

2.4.1 Carrier content.

As defined in the book of Dudley Evans and St John “*refers to the subject matter of an exercise; it is contrasted with real content, which is the language or skill content of an exercise.*” (p.11)

2.4.2 Real content.

Is the linguistic content, progressive tense usage pattern, for example, which is present in the text. Dudley-Evans and St. John (1998) differentiate between real content and carrier content: “*In ESP, any teaching activity, whether its aim is to teach language or skills, is presented in a context.*” (p. 11)

So, an authentic topic is chosen to function as the context, as a vehicle to “carry” the real content, which may be certain language forms. For example, in a lesson on preparing and administering an injection, to teach the language of steps in a sequence, the task of giving the injection would function as the *carrier content*, while the language of sequence is the *real content*.

The Carrier content thus carries the Real content and while the students learn the Carrier content, the focus of language teachers is on the Real content.

The aim of carrier content is to motivate the students to learn the real content (grammar, vocabulary.....) as a result it makes the learning process easier and faster.

2.5 A sample lesson of real and carrier content.

The following is a sample lesson designed by the researcher in which both contents (Carrier and Real) are presented:

Modernity and Tradition in Dubai architecture.

«...Many elements of the architecture are imported from neighboring countries, such as the wind-towers and decorative panels from Iran as well as carved doors and balconies from India. The first thorough description of Dubai was given by the British Lieutenant Cogan in 1822, who recorded that the population then was around 1200 people, that there was a low wall around the town with three watch-towers and that the houses were made of mud. Lieutenant Cogan drew the first map of Dubai city and its evaluation from the sea. In 1841 smallpox broke out on the Bur Dubai side of the creek and as a result people moved to Deira side and started to build houses and markets. Consequently, Deira became larger than Bur Dubai. In 1894 fire swept through Deira, burning down most of the dwelling. Richer people began building their houses from coral stone and gypsum which was more fire resistant. G.G.Lorimer is considered one of the best historians and geographers to describe the Arabian Gulf at the beginning of this century....."»



Objectives:

By the end of this lecture you will be able to:

-Know the form of passive voice.

-Use the passive voice.

Revision

Form: The passive form of an active tense is formed by putting the verb "to be" into the same tense as the active verb and adding the past participle of the active verb.

Use: The passive voice is used in English when it is more convenient or interesting to stress the thing done than the agent of it, or when the agent is unknown.

-In scientific style of writing the passive voice is important as it is used a lot in describing experiments and reporting their results.

Activity one: from the text pick up the passive sentences.

Activity two: after picking up the passive sentences write five sentences of your own.

Activity three:

-Rewrite each of the following sentences so that they mean the same one given:

- 1) Many elements of the architecture are imported from neighboring countries.
- 2) The first thorough description of Dubai was given by the British Lieutenant.
- 3) Lorimer is considered one of the best historians and geographers.

NOTE:

The above text (Modernity and Tradition in Dubai Architecture) functions as Carrier content to teach the Real content (a point in grammar) which is in this lesson the passive voice.

Section III: The ESP teacher.

3.1 Who should teach ESP the specialist teacher or the English language teacher?

Teaching English for Specific Purposes has been a controversial issue among EFL teachers and others. Experiments were conducted to find out who is better qualified for the job: the EFL teacher or the specialist in the field?

One of the major goals of ESP courses is developing reading skills for specialist texts. Some scholars have indicated that university students mostly suffer from a limited range of general vocabulary rather than technical terms. Gilmour and Marshal (1993), for example, argue that many of students' problems in comprehending what they read are not caused by the specialist words of their subject matter, rather, the problems they face are mostly caused by general English words.

Spack (1988) thinks that overcoming the problems students have is not simply a matter of learning specialist language because more often the general use of language causes the great problem. She illustrates this by using her students' complaints about their problems in understanding specialist texts. These are not due to the technical terminology, but mostly because of poor general vocabulary. Also, some studies have shown that there is a positive correlation between English language proficiency and the academic success of students whose language of instruction is English (Graham, 1987). Wiwczarowski (2003) writes that *“in order to succeed in preparing our students, we as professionals need to first lay a proper foundation of competencies”*. Maleki (2006) demonstrated that low English language proficiency of EFL students hindered their academic progress. Thus, strong English language proficiency is needed to reach one of the major goals of ESP courses, that is, reading, at university level.

Studies in psychology show that for a reader to construct meaning from the text, two different approaches are utilized: syntactic and semantic approach (Clark and Clark, 1977; Field, 2003). In the syntactic approach, the reader divides the sequence of letters into words and their constituents and by using their linguistic knowledge and formal schemata, the reader constructs meaning. In the semantic approach, on the other hand, the reader uses content words, content schemata, and world knowledge and life experiences to construct meaning. According to Clark and Clark (and Field (ibid.) in most cases the reader mixes these two approaches to understand the text. Ziahosseiny (2005) argues that for the reader to utilize the two approaches, that they must have a command of the following pieces of information:

- a. the meaning and function of the key words in the text;
- b. the key grammatical structures in the text; and
- c. the cohesive devices and coherence in the text.

It seems that a professional EFL teacher and material designer is needed to reach that goal.

Ziahosseiny (2002), also believes that ESP readers should be engaged in activities that will give them a knowledge of formal schemata (key words and key grammatical structures), and content schemata (the necessary background knowledge).

Sadeghi (2005), citing Hutchinson and Waters (1987), argues that the ESP teacher should have the same qualities of the general English teacher. He continues saying that the ESP teacher should possess (a) English language knowledge, (b) thorough command of the course design, and (c) expert knowledge of the related field of science. Apparently, most subject teachers lack (a) and (b), which cannot be ignored.

Robinson (1991) asserts that the most important quality the ESP teacher needs is flexibility. For Robinson (ibid.), flexibility means changing from being a general English teacher to being a specific purpose teacher. Such a flexible teacher should cope with different groups of students. Therefore, it can be inferred from Robinson (ibid.) that it is the general language teacher's responsibility to teach ESP classes. Hutchinson and Waters add that ESP teachers do not need to learn specialist subject knowledge. They require three parameters only:

- A positive attitude towards the ESP content;
- A knowledge of the fundamental principles of the subject area;
- An awareness of how much they probably already know.

Therefore, the ESP teacher does not need to be an expert in the vocational area his students study or work in. He needs to have some understanding of the subject area.

Scrivener (qtd in Learning Teaching, MacMillan 2005, n.p) reassures the worried teacher when faced with teaching an ESP course for nuclear engineers that “you know about English; they know about the topic. Put them together, and you have the potential for some exciting lessons.”

He goes on to say that what ESP really means is: “Go on teaching all the normal English you already teach, but use lexis, examples, topics, and contexts that are, as far as possible, relevant to the students and practise relevant specific skills.”

The result of many studies showed that EFL teachers can fulfill course goals much better than specialists in the field. Therefore, ESP courses should be taught by EFL teachers rather than specialists in the field. Those specialists interested in teaching English should attain the necessary qualifications.

3.2 The role of the ESP teacher.

Most scientists admit that the ESP teacher's work involves much more than just teaching. Dudley Evans and St. John (1998) prefer the term 'ESP practitioner'. They distinguish the following key roles of ESP practitioner:

- Teacher;
- Course designer and material provider;
- Researcher;
- Collaborator;
- Evaluator.

The ESP practitioner as teacher:

The first role as 'teacher' is synonymous with that of the 'General English' teacher. It is in the performing of the other four roles that differences between the two emerge.

In ESP classes the teacher is no longer a "primary knower". In the case of very specific courses, the students themselves are frequently the primary knowers of carrier content of the material. The teacher's main role is to generate real, authentic communication in the classroom on the grounds of students' knowledge.

The ESP practitioner as course designer and material provider:

The role of the ESP practitioner as courses designer and material provider is to provide the most suitable materials in the lesson in order to achieve a set of goals.

The ESP Practitioner as researcher:

The ESP practitioner needs to make research about the field he teaches, the strategies and the methodology to be adopted.

The ESP teacher as collaborator:

Dudley Evans and St John (1998) also see the ESP teacher as a collaborator. By this term they mean cooperating with subject specialists.

In their perspective, it could be a simple cooperation in which the ESP teacher gains information about the subject syllabus, or tasks the students have to carry out in their professional environment or collaboration when there is integration between specialist studies or activities and the language.

When team teaching is not a possibility, the ESP Practitioner must collaborate more closely with the learners, who will generally be more familiar with the specialized content of materials than the teacher himself or herself.

The ESP practitioner as evaluator:

An evaluator is not a new function, and evaluation is actually performed in General English classes also, but in the case of ESP this role seems to be significant. All teachers should be involved in various types of evaluation: the most popular is testing students. Tests are conducted to evaluate the students' progress and teaching effectiveness. However, in the ESP classes, an additional kind of testing should take place, it is the evaluation of course and teaching materials. As ESP courses are often "tailor-made", their evaluation is crucial. General English courses have been well studied and improved by a group of methodology specialists. On the other hand, ESP courses are unique, as it is not possible to create one ESP course that would satisfy all ESP students; therefore, the evaluation of such a course is a must.

We agree with Dudley Evans statement that the evaluation should be on going: while the course is being taught, at the end course, and after the course has finished. Hence constant evaluation is an important factor to create a successful ESP course.

The role of the ESP teacher is more complex and his responsibility is greater than solely teaching General English. The ESP teacher is more than a teacher, he/she is rather a “practitioner”, who in addition to teaching, he should provide materials, designs a syllabus, collaborate with subject specialists, conduct research and evaluate the course and the students. The teacher’s role is also to organize the class: to be aware of the class objectives, to have a good understanding of the course content, as well as to be flexible and willing to cooperate with learners and at least have some interest in the discipline s/he is teaching because nothing is worse for learners than a teacher who is bored with his/her lessons.

Section IV: Teaching Skills in ESP.

Listening, reading, speaking, and writing are the four basic language skills. The needs assessment will show which of these skills should be emphasized in your ESP class. Emphasis will vary from situation to situation, but in many cases, students typically need ESP to understand English and will therefore expect priority help in developing their listening and reading skills. However, no skill should be taught in isolation. This section describes the language skills, lists objectives for the development of each skill, and gives guidelines and suggestions for classroom activities to give students practice.

4.1 Listening.

Listening comprehension, although vital for communication in English, is usually the most neglected of the language skills in English programs. Everything that you say in the classroom can be useful in developing the students' listening abilities.

To be effective, however, your spoken communications with the class must be comprehensible. Language which is not understood is just "noise" and does not lead to student language acquisition. For this reason, it is important for you to test your students' level of comprehension and adjust your speech to reflect their understanding. You should spend some time at the beginning of your course to be sure you are understood. Your students may be accustomed to hearing a British accent, for example, and may need time to adjust to yours. Look at your students carefully as you talk to get cues about their comprehension.

Check comprehension frequently by asking questions about content which require listening comprehension, or by allowing more clarification requests.

The cloze exercise is a good way to check your students' listening comprehension. Give them a short passage with some words deleted. Read the passage

aloud twice. If they are unable to fill in the missing words, they are unable to make sense of the passage. Other ways of using cloze exercises include deleting articles or verbs, for example, if you are working on these forms, to focus students' attention on these language structures.

The tape recorder is a valuable asset to the language teacher. If you have a recorder available, you can tape listening exercises in advance to allow yourself the freedom to circulate in the classroom as students complete them. You can also record other native English speakers reading or other passages to give the students practice hearing other accents and speakers of the opposite sex.

Give students practice taking notes as they listen. Your students may be used to writing notes down, as a dictation exercise, and will need practice in listening for main points of information. Help them to recognize clues to meaning introduced by the speaker. A summary of such clues includes:

- a) Numerical statements, such as "There are two reasons... "
- b) Rhetorical questions.
- c) Introductory summaries: "Let me first explain...n; "The topic which I intend to discuss is interesting because... "
- d) Development of an idea, signaled by statements such as: "Another reason... "; "On the one hand... "; "Therefore... "; "Since... "; "In "; etc.
- e) Transitions such as "Let us turn our attention to...n; "If these facts are true, then...n; etc.
- f) Chronology of ideas, signaled by "First...n; "The next... n; "Finally..." etc.
- g) Emphasis of ideas, such as "This is important because...n; "The significant results were... "; "Let me repeat..." etc.
- h) Summary of ideas signaled by "In conclusion... n; "As I have shown..."etc.

(Adapted from Mary Shleppergrell and Brenda Bowman, Teaching English for Specific Purposes, Center for Applied Linguistics, Washington, DC.)

Use graphics and visuals whenever possible with listening exercises. Students may also need help in learning to read graphics (maps, charts, etc.) because they may have had little experience with this skill. Listening comprehension activities can help them see how graphic information is read and analyzed.

4.1.1 Objectives for Developments of Listening Comprehension.

1. Students will understand short lectures in the content area when vocabulary is familiar, as demonstrated by their ability to answer questions about the lecture.
2. Students will understand spoken numbers, including percentages, fractions, decimals, and other numerical expressions common to the specialty field, as demonstrated by their ability to write those numbers when they hear them in context.
3. Students will be able to follow instructions given in class regarding assignments and activities, as demonstrated by their correct performance of such instructions.

4.1.2 Activities for Teaching Listening:

1. Mini-lectures. Give a short lecture every class meeting to provide students with opportunities to develop note taking and other listening skills. Make your mini-lectures as contextualized as possible. Demonstrations are particularly effective. Use visual aids and real objects at every opportunity to increase the comprehensibility of your presentation. If possible, go into the laboratory with your students and demonstrate an experiment or process. Organize practical. Following your presentation, ask true/false and yes/no questions to give students the opportunity to check the comprehension. You can do this orally, or make it a paper and pencil task and call it a self-evaluation test to allow students to assess their own progress.

If you have sufficient preparation time, it is also useful to construct a cloze exercise in which, following your mini-lecture, you re-read some parts to the students while they follow along and fill in the blanks. This exercise can be checked immediately in class so students receive feedback on their understanding.

2. Reading aloud to your students. They will enjoy listening to you. Read short passages aloud as they read them silently. They can listen to your intonation patterns and pronunciation and absorb some of the features of native speaker spoken language, which will provide additional clues for the interpretation of complex sentences which might otherwise be beyond the students' Competence. If possible, tape recordings of reading assignments can be made available to students out of class.

3. Dictation exercises. Dictation combines listening and writing practice. When dictating, read the whole sentence at normal speed three times, allowing time for writing between each repetition.

When evaluating dictation, do not focus on spelling as a primary goal of the exercise. If you think of dictation as a listening comprehension exercise, you can evaluate the product according to whether or not meaning is reflected in what is written.

For example, plural endings or past tense endings are necessary for correct interpretation of meaning. Spelling errors which reflect the irregularities of English orthography may not affect meaning.

4.2 Reading.

Reading is the primary channel through which your students will progress in English after your course is over. A good reading program provides instruction in the skills required at various levels of reading, along with plenty of practice in this skill, which can only be developed through extensive and continual practice.

Two types of skills are needed in reading: simple identification skills, (decoding) and higher level cognitive skills such as analyzing, synthesizing, and predicting. Your reading program should work on two levels to develop both types of skill.

In order to do this, your program should incorporate two types of reading tasks: intensive and extensive. Intensive reading is close analysis of a short passage and can be used to develop vocabulary, grammar skills, and comprehension. Extensive reading is faster reading of longer passages to develop understanding of writers' organizational strategies, to improve reading speed, and to focus on main ideas.

Fluent reading depends primarily on knowledge of vocabulary and subject matter, and secondarily on knowledge of grammatical structure and familiarity with the ways that writers organize texts in English. Vocabulary development, then, is a vital aspect of reading (and listening) development. Your students will need to develop a good vocabulary in English in order to be efficient readers and listeners. You will probably find that they already know quite a lot of technical vocabulary in English in their fields. You can help them to expand their technical vocabulary and develop the additional vocabulary they need for further study.

Vocabulary should be taught only in context, never in word lists to be memorized with dictionary definitions. Use real objects or pictures whenever possible to introduce new words. The vocabulary you teach should be words which are useful for the students in the situations in which they encounter English. Do not give long lists of words each week; instead, focus on useful words that are present in the reading and listening passages students are working with.

Grammar is best taught in connection with writing, but exercises related to the reading and listening passages the students have worked with can also help them to increase their reading comprehension. Help students focus on grammatical structures

which appear in reading texts, such as verb forms, possessives, adjectives and adverbs, and comparative forms.

Higher level cognitive skills necessary for good reading depend on knowledge of the subject matter of the texts and knowledge of the way that information is organized in writing. Your ESP students already bring their knowledge of the subject matter to the reading task, and their backgrounds in their fields will help make the reading materials more comprehensible to them.

Students' higher level cognitive skills can be tapped by giving them information about the texts they are asked to read, and by teaching them to preview texts before beginning to read. Previewing is a quick reading for general familiarity, in which students a) read the introductory paragraph; b) read the first sentence of each of the body paragraphs; and c) read the entire concluding paragraph. This should take students only a few minutes, and will enhance their reading comprehension.

The SQ3R technique is commonly used to help students get the most from their reading. SQ3R means Survey, Question, Read, Recite, and Review. Students are asked to complete these five activities:

- 1) To survey; looking over headings, reading introductory and concluding paragraphs, and identifying the core ideas of the passage.
- 2) To formulate questions from text headings.
- 3) To make a conscious effort to find the answers in the text as they read.
- 4) Having read the first section, to look away from the book and try to recite the answers to their questions, using their own words and trying to give an example.

Training in this procedure will help students to read more efficiently.

Students should receive practice in reading for different purposes, such as finding main ideas, highlighting specific information, or discovering the author's point

of view. Students should have a clear idea of the purpose of their reading before they begin. Background information is very helpful in understanding texts. Students need advance guidelines for approaching each assignment.

Knowing the purpose of the assignment will help students get the most from their reading effort. From the title, for instance, they can be asked to predict what the text is about. It is also helpful to give students some questions to think about as they read. The way they approach the reading task will depend on the purpose for which they are reading.

Use different texts for different reading tasks. Teach the skills of skimming and scanning. Skimming is quick reading to get the general drift of a passage. Students can be asked to skim a text to discover the author's purpose. Scanning is a focused search for specific information. Students can be asked to scan a text to answer a specific question.

Comprehension checks can be built into reading as well as listening exercises. Students read part of the passage, then mark statements as "true" or "false" based on what they have read, and then continue reading. You can also teach them to read the questions about the text first, and then read the text itself.

Use long articles as well as short passages. Students need practice with long blocks of text which they read for main ideas as well as intensive work with paragraphs and short passages. Long articles can be read outside of the class to provide background for the work that will be done during the class period. You can make long passages more accessible to students by dividing the text into sections and adding appropriate sub-headings.

Do not ask students to read aloud in class to test their comprehension. When reading aloud, the reader focuses on pronunciation, not comprehension. In any case,

listening to other students' inaccurate reading is boring and counterproductive. Students should read silently when reading is to be done in class.

Students will appreciate hearing you read aloud; it is one way to accustom themselves to the sound patterns of English.

Students often believe they must understand every word in order to read English. In fact, good reading means the ability to process chunks of language larger than single words, so striving for word-for-word recognition will actually slow students down and interfere with their overall comprehension. Encourage them to use the context of the passage to understand it, rather than reaching for the dictionary every time they do not recognize a word.

Be sure to get the most out of any reading passage you assign, using it in various ways so that students work with familiar material that they understand well in doing various types of reading and study skills exercises.

4.2.1 Objectives for Teaching Reading.

1. Students will demonstrate their understanding of authentic material in their content area, including stating the main points of the text and giving the author's point of view.
2. Students will be able to scan a passage quickly to find specific information.
3. Students will use an increasing large vocabulary in the subject area and in general academic language.

4.2.2 Activities for Development of Reading Skills.

1. Use fill-in-the-blank vocabulary exercises. This type of exercise also doubles as a listening comprehension exercise if you read the sentence aloud and ask students to write in the missing vocabulary word.
2. Vocabulary can also be developed through instruction about prefixes and suffixes that carry meaning in English. These include:

a) prefixes which convey negative meaning, such as un-; in-; non-; a-; dis-; anti-; de-; counter-; contra-; mis-; under-; over-. Examples: like/dislike; understand/misunderstand.

b) Noun-agent suffixes such as -er; -or; -ent; -ant; -ist; -ian. Examples: teach/teacher; science/scientist.

c) Verb-forming suffixes such as -ize; -ify; -ate. Examples: organize; specify.

d) Noun-forming suffixes such as -ation; -cation; -tion. Examples: organization, specification.

3. Have students use what they read in order to perform a task.

4. Encourage students to read extensively by asking them to report on material they have read outside of the class which is relevant to the topic under consideration.

5. If time permits, incorporate some time for silent reading into your instructional program.

4.3 Writing Grammar.

Although your students will probably place great emphasis on learning grammar, you should assure them that grammar is not the most important aspect of language learning. This is easily demonstrated by reference to the person who knows many grammar rules and yet cannot understand or express anything in the spoken language. Students whose language courses have always focused exclusively on grammar may urge you to spend lots of class time explaining various points of English grammar and structure. Such explanation is actually teaching English linguistics, and there is controversy in the field of EFL teaching regarding the real value of such instruction for language learners. Students may have a false sense that they are learning English, when, in fact, they are learning about English, but making little progress toward

comprehending and being able to use the language in the contexts for which they need it.

Understanding and communicating in English is within the students' reach even if they don't understand the fine points of grammar. The ability to function in English is not directly linked to accuracy of grammatical use or pronunciation.

Students need to be encouraged to use English even if they make mistakes. The main purpose of language use, after all, is communication.

Some instruction in grammar is necessary, however. Especially in written work, learning grammar rules can help students to recognize and correct their errors. In preparing to teach grammar, be sure you have a good understanding of the structures that you want to teach, so that your presentation is clear. It is also important that your students be able to use the grammar they practice. One way to ensure that students can make effective use of what they learn is to teach grammar in conjunction with writing, the skill in which it can best be practiced. In speaking, we do not usually have the time to remember and apply rules of grammar, but in writing we have the opportunity to monitor our usage. It is in writing that grammar instruction is most useful. The grammatical forms which are most useful and most learnable are those which control sentence level functions such as question form, negation, relative clause formation and other structures involved in subordination and coordination.

Development of writing ability takes lots of practice. Start with simple, structured exercises and allow students to develop confidence as writers before you give them longer free writing tasks. As in other skills, development of writing can be enhanced through the use of appropriate visuals.

According to previous works, the following are the most common errors found in the students' compositions

1. Subject-verb agreement.
2. Articles.
3. Word order problems: adverbs, win-clauses.
4. Present perfect tense.
5. Verb + Verb-ing (gerunds) vs. Verb + to + Verb (infinitive).
6. Passive Voice.
7. Spelling.
8. Punctuation.

4.3.1 Objectives for the Development of Writing Skills

1. Students will be able to summarize material which they have read.
2. Students will be able to take notes on lectures or readings.
3. Students will be able to compose coherent paragraphs on familiar topics.
4. Students will be able to write short letters in standard format.
5. Students will be able to write for a variety of purposes, depending on the needs of their specialty area.

4.3.2 Activities for Developing Writing Skills

1. Copying exercises are helpful for beginning learners, especially if their native language uses a writing system different from English.
2. Writing exercises include dictation and completion of cloze or fill-in-the-blank exercises. Completion of cloze exercises forces students to hypothesize and to recognize relationships between sentences.

3. Sentence-combining exercises require students to combine short sentences into longer ones. This gives them practice with coordination and subordination without requiring the composition of coherent prose passages.

4. Re-ordering jumbled sentences helps students build understanding of paragraph structure.

5. Note-taking exercises give students practice recording information. Guide them in developing good note taking style. Teach them that when they take notes they should include content words, important diagrams, correct figures (such as percentages, quantities), transitional expressions, and appropriate abbreviations and symbols.

6. Summarizing exercises can be combined with reading or study skills assignments. Such exercises can also be used to develop skills in paraphrasing and to caution students against plagiarism. For example, students can be asked to read and summarize information in preparation for writing a research paper. The teacher can evaluate the summary in terms of how well the students express the information in the article in their own words.

7. Writing descriptions can include descriptions of substances, places, and objects. At more advanced levels this might include interpretations of illustrations, graphs, and charts.

8. Writing descriptions of processes, including writing instructions or "how to" exercises as well as descriptions of how things happen over time.

9. Writing definitions.

4.4 Speaking

Your needs assessment will determine whether the development of speaking skill is a goal in your ESP class. For many ESP situations, development of speaking skills may be beyond the scope of what it is possible for you to provide. To provide

every student with practice in speaking is an inefficient use of classroom time. Discussion groups are difficult to manage. Aggressive students usually take and hold the floor, and it becomes impossible to give everyone the same amount of practice. Even if everyone did get the same amount of practice, in the typical class of 50 students and two hours of class time, each student could not possibly get more than two minutes of practice!

You and your students should not despair, however, because although in your situation the direct teaching of speaking may not be practical, studies have shown that increased listening comprehension leads to increased ability to speak. You can assure the students that the exercises they are doing to increase their listening comprehension will make them better able to hold conversations with native speakers of English.

Give students practice in conversation management. Teach them greetings and closings, and replies to greetings and closings. Teach them how to introduce themselves and others. Teach them forms they can use when they do not understand, such as "Pardon me. What was that again?" or "What does mean?" or "Please speak more slowly."

Role playing is an effective way to stimulate conversation in the classroom. You can use flowcharts to outline a situation which you want to use as a base for developing your students' speaking skills. You may want to select a small group of students to demonstrate this method until the whole class understands the procedure, once this is done, you can divide the class into groups, vary the flowcharts for each group, and then ask each group to act out their situation for the rest of the class.

Section V: Needs Analysis.

5.1 Definitions of Needs Analysis.

In ELT, needs analysis (NA) is assumed to be the cornerstone of an ESP course (Robinson, 1991; and Dudley-Evans and St John, 1998). Brown (1995) identifies the term needs analysis (also called needs assessment) as the activities involved in gathering information that will serve as the basis for developing a curriculum which meet the learning needs of a particular group of students.

Basturkmen (1998:2) defines needs analysis as "the identification of difficulties and standard situations by observation of participants functioning in a target situation in conjunction with interviews and questionnaires."

She further says, "Language needs analysis are most often used where the learners in selected situations face very similar difficulties." Moreover, Richterch and Chancerell (1987) as quoted in Basturkmen (1998:2) assert that "the aim of needs analysis is not only to identify elements but to establish relative importance, to find out what is indispensable necessary or merely desirable."

In language programs, the needs are language related. Once identified, needs can be stated in terms of goals and objectives which, in turn, can serve as the bases for developing tests, materials, teaching activities, and evaluation strategies. The purpose is to fill the "gap" of what a language program "lacks." This definition draws a line between needs analysis and evaluation. Needs analysis aims at determining the needs for a defined group of people, while an evaluation determines to what extent a program meets these needs. Furthermore, Soriano (1995) indicates that needs analysis collects and analyzes data to determine what learners "want" and "need" to learn, while an evaluation measures the effectiveness of a program to meet the needs of the learners.

Hutchinson and Waters (1992) define needs analysis on the basis of “necessities” and “wants” in order to classify between what the learners have to know and what the learners feel they need to know. The focus here is on the “lacks” that represent the gap between the required proficiency in the target situation and the existing proficiency of the learners. This definition views language needs as a process of negotiation between the learners and their society. Witkin and Altschuld (1995) define needs analysis as a systematic set of procedures undertaken for the purpose of setting priorities and making decisions about programs or organizational improvement and allocation of resources. According to this definition, needs analysis should fill the “gap” of needs between the current state of affairs and the desired state of affairs.

The above definitions base their concept of needs analysis around the terms “necessities,” “lacks,” “wants,” and “gaps.” However, all these terms have different interpretations from one individual to another. Therefore, linguists in the ESP field have not agreed exactly on the definition of the term “needs” itself. West (1994) comments on this issue by indicating that the term “needs” lacks a unified definition and remains ambiguous. Richards (2001) argues that the definition of “needs” depends on the perception of those making the judgment. Different interests and values are reflected in the definition. Teachers, learners, administrators, employees, parents, and stakeholders may all have different views as to what needs are. Accordingly, the difference between what learners can presently do with the language and what they should be able to do cannot be looked at from one standpoint. Braine (2001) indicates that linguists disagree on the definition, but they all agree that there are external factors that influence the definition. Factors such as staffing, time, and cultural attitudes should be taken into consideration when conducting needs analysis.

The aim of needs analysis can be summarized in three points: knowing the learners as people who learn and use language; knowing how we can gain the level best in both language and skills learning for certain student target population; and knowing the target situation together with the learning environment in way that we can interpret the data we have collected in the right way.

There are some fundamental points that we should know regarding needs analysis:

Firstly the results of needs analysis are not absolute or not unique since what we ask and how we interpret the responses depend on our particular view of the world (Robinson 1991; Dudley-Evans and St John, 1998).

Secondly, Martin Hewings and Dudley-Evans (1996); Rea-Dicking and Lwaitama (1995) argue that in a situation where we offer the EAP course repeatedly to a large number of students, substantial advance needs analysis may be possible and justified to devise a new course or revise an existing one.

Thirdly, we must make a distinction between overall needs and course needs of learners (Dudley-Evans and St John, 1998). For example, we must understand the difference between the question 'what do you need/want from the course?' (Which is asking the course needs of the learners) and 'what do you need English for' (which requires the overall language needs of the learners). Similarly, Chan (2001) recommends the distinction between three categories of language needs: academic, professional, and social needs.

Finally, ESP teaching is more motivating than General English; however, subjects that are familiar to the students can be boring. Thus, Croft (1977) as cited in Swales (1980) suggests that EAP material should concentrate in material that is parallel to the main subject course, but is not actually part of it; in other words, topics that could have been included in the main course, but were not taught.

5.2 Needs Analysis Models.

Different models under the ESP umbrella have approached this field in different ways. Jordan (1994) indicates that the main two approaches in needs analysis are the Target-Situation Analysis and the Present-Situation Analysis.

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

Tarone and Yule (1989) continued research within the same framework of the Target Situation Analysis approach. However, they added four components to Munby's model. Their addition consisted of the global level (e.g. situations, participants, communicative purpose, and target activities), the rhetorical level (e.g. organisational structure of the communicative activities), the grammatical-rhetorical level (e.g. linguistic forms required to realise the forms in the rhetorical level) and the grammatical level (the frequency of grammatical and lexical constructions in the target situation).

These additional levels were adopted from Canale and Swain's (1980) model of communicative competence (e.g. discourse competence). The purpose of adding these levels are to show how needs analysis incorporates linguistic form (e.g. register analysis) and functional form (e.g. discourse analysis).

Both forms are layers in the target and present situations that provide input data for syllabus design (West 1994).

The Target-Situation Analysis model has remained highly influential in the field of ESL/ESP needs analysis. It was the first needs analysis model based on the concept of communicative competence. Munby's categories of communicative activities and their relation to the communicative events of the target situation reflect categories of real world language use (West, 1994). In other words, they reflect the shift in the ESL field from language system to language use. As a result of this shift, most studies continue to follow this model in relating communicative needs to analysis of communication in the target situation. Consequently, needs analysis has become an integral element of the field of ESP as the basis for designing ESP courses (Dudley-Evans, 1991). However, this approach has received major criticism for being inflexible. The initial Target-Situation Analysis model by Munby was comprehensive and complex because his aim was to provide a wide range of needs profiles. However, he did not specify any priorities for his model of activities. This creates difficulties when applying the profile to different language situations (West, 1994). Practitioners overcome this difficulty by using different profiles based on their own circumstances.

It is important here to note that this model analyzes the four skills (listening, speaking, reading, and writing) in various job-related activities in terms of receptive and productive skills leading to generate a general profile of the language situation to be used as an input in course design (Jordan, 1997).

In language teaching, the provided information guides the teaching process in the classroom to set the priorities in scaling the communicative modes where the interpersonal mode links the receptive and productive skills, the interpretive mode relies on receptive skills, and the presentational mode relies on productive skills (Brecht and Walton 1995).

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

Based on Munby's work, Chambers (1980) introduced the term Target Situation Analysis however, Richterich and Chancerel proposed the term Present Situation Analysis as complement to target situation analysis. From that time several other terms have also been introduced: Pedagogic Needs Analysis (West1998), Deficiency Analysis, Strategy Analysis or Learning Needs Analysis (Allwright 1982), Means Analysis (Dudley Evans and St John 1998), Register analysis (Peter Strevens, Jack Ewer and John Swales) Discourse analysis (Lackstorm, Selinker, Trimble) and Genre Analysis (Swales 1981).

5.2.1 Pedagogic Needs Analysis.

The term “pedagogic needs analysis” was proposed by West (1998) as an umbrella term to describe the following three elements of needs analysis. He states the fact that shortcomings of target needs analysis should be compensated for by collecting

data about the learner and the learning environment. The term ‘pedagogic needs analysis’ covers deficiency analysis, strategy analysis or learning needs analysis, and means analysis.

5.2.2 Deficiency Analysis

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

5.2.3 Strategy Analysis or Learning Needs Analysis

As it is apparent from the name, this type of needs analysis has to do with the strategies that learners employ in order to learn another language. This tries to establish how the learners wish to learn rather than what they need to learn (West, 1998). All the above mentioned approaches to needs analysis, TSA, PSA, and to some extent deficiency analysis, have not been concerned with the learners’ views of learning. Allwright who was a pioneer in the field of strategy analysis (West, 1994) started from the students’ perceptions of their needs in their own terms (Jordan, 1997). It is Allwright who makes a distinction between needs (the skills which a student sees as being relevant to himself or herself), wants (those needs on which students put a high priority in the available, limited time), and lacks (the difference between the student’s

present competence and the desired competence). His ideas were adopted later by Hutchinson and Waters (1987), who advocate a learning-centered approach in which learners' learning needs play a vital role. If the analyst, by means of target situation analysis, tries to find out what learners do with language (Hutchinson and Waters, 1987) learning needs analysis will tell us "what the learner needs to do in order to learn" (p.54). Obviously, they advocate a process-oriented approach, not a product- or goal-oriented one.

For them ESP is not "a product but an approach to language teaching which is directed by specific and apparent reasons for learning" (Hutchinson and Waters, 1987: 16). What learners should be taught are skills that enable them to reach the target, the process of learning and motivation should be considered as well as the fact that different learners learn in different ways (Dudley-Evans and St. John, 1998). Jordan (1997: 26) quotes Bower (1980) who has noted the importance of learning needs:

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

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

1. Why are the learners taking the course?

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

2. How do the learners learn?

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

3. What sources are available?

- number and professional competence of teachers;
- attitude of teachers to ESP;
- teachers' knowledge of and attitude to subject content;
- materials;
- aids;
- opportunities for out-of-class activities.

4. Who are the learners?

- age/sex/nationality;
- What do they know already about English?
- What subject knowledge do they have?
- What are their interests?
- What is their socio-cultural background?

- What teaching styles are they used to?
- What is their attitude to English or to the cultures of the English speaking world?

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

5.2.4 Means Analysis

Means analysis tries to investigate those considerations that Munby excludes (West, 1998), that is, matters of logistics and pedagogy that led to debate about practicalities and constraints in implementing needs-based language courses (West, 1994). Dudley-Evans and St. John (1998: 125) suggest that means analysis provides us "information about the environment in which the course will be run" and thus attempts to adapt to ESP course to the cultural environment in which it will be run.

One of the main issues means analysis is concerned with is an "*acknowledgement that what works well in one situation may not work in another.*" (Dudley-Evans and St. John, 1998: 124), and that, as noted above, ESP syllabi should be sensitive to the particular cultural environment in which the course will be imposed. Or as Jordan (1997) says it should provide us with a tool for designing an environmentally sensitive course.

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

These considerations are:

- classroom culture;
- EAP staff;
- pilot target situation analysis;

- status of service operations;
- study of change agents.

5.2.5 Register analysis

Changing approaches to linguistic analysis for ESP involves not only change in method but also changing ideas of what is to be included in language and its description (Robinson, 1991). One of the earliest studies carried out in this area focused on vocabulary and grammar (the elements of sentence). This stage took place mainly in the 1960s and early 1970s and was associated with the work of Peter Strevens, Jack Ewer, and John Swales. The main motive behind register analysis was the pedagogic one of making the ESP course more relevant to learners' needs (Hutchinson and Waters, 1987). Register analysis, also called "lexicostatistics" by Swales (1988: 1, quoted in Dudley-Evans and St. John, 1998) and "frequency analysis" by Robinson (1991: 23) focused on the grammar and "structural and nonstructural" vocabulary (Ewer and Latorre, 1967: 223, quoted in West, 1998). The assumption behind register analysis was that, while the grammar of scientific and technical writing does not differ from that of general English, certain grammatical and lexical forms are used much more frequently (Dudley-Evans and St. John, 1998).

As noted, register analysis operates only at word and sentence level and does not go beyond these levels. The criticism on register analysis can be summarized in the following:

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

5.2.6 Discourse Analysis

Since register analysis operated almost entirely at word and sentence level, the second phase of development shifted attention to the level above the sentence and tried to find out how sentences were combined into discourse (Hutchinson and Waters, 1987). Also, West (1998) says that the reaction against register analysis in the early 1970s concentrated on the communicative values of discourse rather than the lexical and grammatical properties of register.

The pioneers in the field of discourse analysis (also called rhetorical or textual analysis) were Lackstorm, Selinker, and Trimble whose focus was on the text rather than on the sentence, and on the writer's purpose rather than on form (Robison, 1991). In practice, according to West (1998), this approach tended to concentrate on how sentences are used in the performance of acts of communication and to generate materials based on functions. One of the shortcomings of the discourse analysis is that its treatment remains fragmentary, identifying the functional units of which discourse was composed at sentence/utterance level but offering limited guidance on how functions and sentences/utterances fit together to form text (West, 1998). There is also the danger that the findings of discourse analysis, which are concerned with texts and how they work as pieces of discourse, fail to take sufficient account of the academic or business context in which communication takes place (Dudley-Evans and St. John, 1998).

5.2.7 Genre Analysis

Discourse analysis may overlap with genre analysis. Dudley-Evans and St. John (1998: 87) give a clear distinction between the two terms:

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

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

1. **Knowledge of the Code** which is the pre-requisite for developing communicative expertise in specialist or even everyday discourse.

2. **Acquisition of Genre Knowledge** which is the familiarity with and awareness of appropriate rhetorical procedures and conventions typically associated with the specialist discourse community.

3. **Sensitivity to Cognitive Structures**, that is, since certain lexical items have specialist meanings in specific professional genres, a number of syntactic forms may also carry genre specific restricted values in addition to their general meanings codified in grammar books. Thus, it is imperative that the specialist learner become aware of restricted aspects of linguistic code in addition to the general competence he or she requires in the language.

4. **Exploitation of Generic Knowledge**, that is, it is only after learners have developed some acquaintance or, better yet, expertise at levels discussed above, that they can confidently interpret, use or even take liberties with specialist discourse. Genre-analysis approach goes two steps beyond register analysis and one step beyond discourse analysis (though it draws on the findings of both).

As Bhatia (undated) states the main benefit of a genre-based approach to the teaching and learning of specialist English is that the learner does not learn language in isolation from specialist contexts, but is encouraged to make the relevant connection between the use of language on the one hand and the purpose of communication on the other, always aware of the question, why do members of the specialist discourse community use the language in this way?

Different approaches to needs analysis attempt to meet the needs of the learners in the process of learning a second language. Not a single approach to needs analysis can be a reliable indicator of what is needed to enhance learning. A modern and comprehensive concept of needs analysis is proposed by Dudley-Evans and St. John (1998: 125) which encompasses all the above-mentioned approaches.

Their current concept of needs analysis includes the following:

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

Today, there is an awareness of the fact that different types of needs analyses are not exclusive but complementary and that each of them provides a piece to complete the jigsaw of needs analysis (Figure 1). All the works done in ESP have sought to promote the communicative nature of language teaching, because starting with register analysis, ESP teachers have been very concerned with the needs of students as they used the language. For this reason, today needs analysis should not be (and is not) of concern only within the field of ESP, but also that of General English because the needs of the learners is of paramount importance in any language process.

The following jigsaw summarizes the aforementioned approaches to needs analysis:



Figure 04: Needs Analysis jigsaw.

Needs analysis may be seen as a combination of TSA and PSA. One cannot rely either on TSA or PSA as a reliable indicator of what is needed to enhance learning and reaching the desired goals.

Thus, The Target-Situation Analysis and the Present-Situation Analysis are the two landmarks in needs analysis studies. Researchers continue to use these models as their theoretical base depending on the circumstances of the conducted research.

5.3 Some Common Needs Data Collection Method.

Types of need	Method
Personal goals and priorities	Brainstorming, group discussion, individual interview, student diaries
Learning preferences	Interviews, group discussion, questionnaire, observation, diaries.
Background information (age, gender, prior learning, immigration status, L1, L1 literacy occupation, years in country)	Enrollment documents, individual interviews, classroom observation.
Current L2 proficiency (English literacy and writing experiences)	Placement of diagnostic tests, individual interviews, classroom observation.
Target behaviors	Interview with learners, interview with "experts", literature reviewer, genre analysis, examination of tasks, observation of target sites, questionnaire, case studies

Table 01: Some Common Needs Data Collection Method.

5.4 Instruments for needs analysis.

Questionnaires and interviews are two commonly used instruments for needs analysis. Kumar (1996) discusses the advantages and drawbacks of questionnaires and interviews. Questionnaires do not take long to administer and it is often possible to get information from a large number of respondents. The responses are anonymous and thus respondents will hopefully offer their opinions and ideas frankly. Interviews are time consuming and because of this the investigator can often only interview a few people.

However, in an interview the investigator can probe responses and thus gain an in-depth understanding of the opinions and information offered. Additionally, unclear questions or answers can be clarified during an interview.

Both types of data collection potentially have drawbacks. For example, people tend to think carefully about questionnaire items before responding. This may lead respondents to try to provide idealized responses (responses they see as socially desirable). Good interviewing skills do not come naturally to everyone and some interviewers may let their own opinions come across too strongly and lead to bias in the interview.

Questionnaires and interviews allow the needs analyst to explore people's opinions of needs, difficulties and the importance of language skills and areas. The following tables summarize the advantages and disadvantages of both the questionnaire and the interview:

Questionnaires	
Advantages	Disadvantages
Less time and energy consuming to administer.	Self-selecting bias. Not everyone who receives the questionnaire returns it and those who do may have different attitudes than those who do not.
Offer greater anonymity to respondents.	-Lack of opportunity to clarify issues.
	-Do not allow for spontaneous responses.
	Respondents may consult with one another before answering.

Table 02: Advantages and Disadvantages of the Questionnaire.

Interviews	
Advantages	Disadvantages
More useful for collecting in-depth information.	More time consuming.
Opportunity for questions to be explained and responses clarified.	-Quality of the data obtained depends on the skills of the interviewer.
	- The interviewer may introduce his or her bias.
	Less standardized. For example, the quality of the data may vary when different interviewers are used.

Table 03: Advantages and Disadvantages of the Interview.

Source: Based on discussion in Kumar (1996)

5.5 Questions for focusing on needs.

Goals	Questions	Types of information in the answer.
Language	What will the course be used for?	sounds
	How proficient does the user have to be?	vocabulary
	What communicative activities will the learner take part in?	grammatical Structure functions
	Where will the language be used?	set phrases and set sentences tasks
Ideas	What content matter will the learner be working with?	topics themes texts
Skills	How will the learner use the language?	listening
	Under what conditions will the language be used?	speaking
	Who will the learners use the language with?	reading writing degree of fluency degree of accuracy
Text	What will the language be used to do?	genres and discourse
	What language uses is the learner already familiar with?	sociolinguistic skill

5.6 The importance of Needs Analysis.

The discussions of the importance of needs analysis focus on its roles as a starting point or a guide for course design, syllabus design, materials selection, assessment or even classroom activities. Berwick (1989) says that needs assessment is important for decision planners to design the course. Assessment of a course needs involvement of learners changes concerning learner needs may have to be made during the course with consultation of the learners.

Hawkey (1980) says that needs analysis is a tool for course designer. This presupposes a "*language training situation with reasonably specific occupational or educational objectives involving a reasonably homogeneous group of learner.*" (p.81) Given the information about learner needs a course designer will be able to produce a specification of language skills, functions, and forms as required in the learner needs profile.

McDonough (1984) states that the language needs of the learner should be the bases for course development. He says, "*information on his or her language needs will help in drawing up a profile to establish coherent objectives, and take subsequent decisions on course content.*" (p.29). Riddell (1991) points to the crucial role that needs analysis plays in syllabus and course design. As he puts it, "*...through it [needs analysis] the course designer becomes equipped to match up the content of the program with the requirements of the student body [what learners need].*" (p.75). With reference to the third world context, he considers teaching materials as an important factor. Teachers can use published materials, adapt or write in house materials. Whatever option is taken, the assessment of student needs has to be taken into consideration.

Bowers (1980) notes the importance of needs as a guide in syllabus development, materials and examination. The importance of needs is quoted in Clark (1978), who says that, "*The first step in any language teaching project must surely be to design a syllabus that will reflect the language needs and wishes of the learner concerned, and that will accord with a responsible theory of language learning*" (p.67 in Bowers).

According to Jordan (1997), "*needs analysis should be the starting point for devising syllabus, course materials and classroom activities.*" (p.22)

In Schutz and Derwing (1981), needs analysis is considered as the first step that any course planner should take. They stated:

"Many well-intentioned language programs ... have foundered because either no consideration was given to the actual use the learner intended to make of the language or because the list of uses drawn up by the course designer was based on imagination rather than an objective assessment of the learner's situation, and proved to be inaccurate and in many cases entirely inappropriate to his real needs." (p.30)

Recognizing that language problems can also be traced through sociological context, Schutz and Derwing agree that, "*...a detailed analysis of the situations of language use is a pre-requisite even to the selection of the particular linguistic forms or structures that ought to be taught.*" (p.31)

Brindley (1980) argues that objective needs should be used as a starting point in course design. He says, "*If instruction is to be centered on the learners and relevant to their purposes, then information about their current and desired interaction patterns and their perceived difficulties is clearly helpful in establishing program goals which in turn can be translated into learning objectives.*" (p.64). He further states that needs analysis is essential in two different ways; (1) as a guide in setting broad goals, and (2) as a guide in the learning process.

Needs analysis should be carried out throughout the course in order to adjust the learning objectives as the need arises. In other words, feedback from the learner can be used as bases for modifying learning objectives. Savage and Storer (1992) discuss the role that learners can have in the process of needs assessment. Learners can contribute substantially to the course if they are actively involved at all stages of the course design; at the initial, during, and final stages of course evaluation.

5.7 Evaluating Needs Analysis.

Needs analysis is a kind of assessment and thus can be evaluated by considering its reliability, validity and practicality.

Reliable needs analysis involves using well-thought-out, standardized tools that are applied systematically. Rather than just observing people performing tasks that learners will have to do after the course, it is better to systematize the observation by using a checklist, or by recording and apply standardized analysis procedures.

The more pieces of observation and the more people who are studied, the more reliable the results. Valid needs analysis involves looking at what is relevant and important.

Consideration of the type of need that is being looked at and the type of information that is being gathered is important. Before needs analysis begins it may be necessary to do a ranking activity to decide what type of need should get priority in the needs analysis investigation. The worst decision would be to let practicality dominate by deciding to investigate what is easiest to investigate.

Practical needs analysis is not expensive, does not occupy too much of the learners' and teacher's time, provides clear, easy-to-understand results and can easily be incorporated into the curriculum design process. There will always be a tension between reliable and valid needs analysis and practical needs analysis. A compromise is necessary but validity should always be given priority.

Needs analysis is a key component in ESP course design and development. Johns and Price-Machada (2001, p. 49) argue that it is an obligatory step: *"In every genuine ESP course, needs assessment is obligatory, and in many programs, an ongoing needs assessment is integral to curriculum design and evaluation."*

Part II: Field Work

Chapter Two: Design of the Study.

This chapter is divided into four parts. The first part gives an overview about different methods in conducting needs analysis. The second part describes the setting and participants of the study. The third part presents the process of developing the focus group discussion and the interview. The last part discusses the piloting and validation process of the needs analysis questionnaire.

6.1 Overview

Robinson (1991) lists a number of different methods for conducting needs analysis. These include questionnaires, interviews, case studies, tests, and authentic data collection (e.g. analyzing actual manuals and written assignments). Jordan (1997) adds to these methods advanced documentation (e.g. requesting extra information that includes educational background, previously attended courses, and other relevant aspects), language tests at home, self-assessment, class progress tests, direct monitoring, structured interviews, learner diaries, previous research comparisons, and follow up investigations.

In all, the methods that can be used in needs analysis are highly varied. However, the most widely used methods are case studies, interviews and questionnaires West (1994).

A case study is a thorough method to investigate a learner's communication needs. It provides a close examination of what the learner needs to learn based on his/her personal language ability. However, the drawback of this approach is that it is not most effective. It requires a long period of time and it is not able to produce statistical and generalizable data. Interviews are another method to utilize in a language needs investigation.

Interviews usually contain open-ended questions aimed at guiding the subjects' responses. These give the researcher a wide variety of different responses that give a sense of the perceived language needs. However, the disadvantage of this approach is that the interpretation of the open-ended questions might not represent the intention of the subject. The subject also might be influenced in a face to face interview to give answers that satisfy the researcher. Moreover, in order to achieve a statistical generalization, the researcher needs to interview a large number of subjects which can be costly and time consuming.

For these reasons, the majority of studies in needs analysis use questionnaires as the primary method of data collection. Jordan (1997) indicates that the use of questionnaires is most convenient when dealing with large scale of data collection. Questionnaires enable the researcher to collect data from a large number of subjects in a short period of time. However, their main drawback is that the subjects might misinterpret the questions. Another drawback is that the response rate can be low, especially when the questionnaire is mailed to the subjects rather than distributed and collected in person.

On the whole, Jordan (1997) indicates that there is no single approach to conduct needs analysis. Every researcher has different circumstances that influence the choice of method in conducting his/her investigation. It falls to the researcher to choose the method that best serves his/her goals.

Questionnaires were determined to be the best means of investigation in this study. They were selected as the source of data collection for the following reasons:

- 1-The number of participants was expected to be fairly large.
- 2- They require minimal time from participants and provide a flexible and convenient way to participate in the study.

3- Participants could be assured of a certain degree of anonymity in their responses and could respond candidly.

6.2 Setting and participants:

6.2.1 Setting:

The research was conducted at Mohammed Khider University of Biskra specifically at the department of architecture.

6.2.2 Participants:

6.2.2.1 Teachers.

Three (03) teachers who teach the ESP course at the department of architecture were interviewed.

6.2.2.2 Students.

The Needs analysis questionnaire has been distributed to Sixty (60) architecture students from Biskra University. The researcher wanted to take the total population size so that the investigation would be manageable and appropriate considering the nature of the study and would lead to greater valid findings. As a result, the available population was used to provide equal chances for the respondents in order to indistinguishably enable them to contribute in accordance with their own language abilities (current competence) and their wants and needs from the course. Besides, the study selected the architecture students because, a) the researchers noted that the course being currently offered to architecture students is unlikely to meet their language needs, b) the researcher observed that students are provided with de-motivating content of their syllabus, have a poor command of the language, lack interest to learn the language.

6.3 Instruments:

6.3.1 Structured Interview for Teachers.

The second instrument the researcher employed was structured interview with three (03) English instructors who are currently teaching the English course at the department of architecture in order to find out their conception and; accordingly, application of the ESP course. It consisted of questions that were carefully thought out and selected in advance. Even if it was time consuming to interview and interpret the data, the researcher used it to gather valuable information that might not be gained through other types of instruments.

The interview was the best means for data collection in this case for the following reasons:

The main reason is that the researcher did not want information provided from books, articles, or Internet. The researcher needed authentic answers from teachers and this is why the interview is thought to be better than the questionnaire in this case.

The other reasons can be summed up as follows:

- With open-ended interviews, the interviewer may obtain rich details and new insights.
- The researcher can clarify or paraphrase some questions.
- Open-ended interviews allow the interviewer to ask the respondent for additional information.

6.3.2 Workshop/ Focus group discussion.

Students' workshop questions were designed based on ideas forwarded by various scholars: Hyland (2003), Basturkmen (1998), Dudley- Evans and St. John (1998). There are many advantages for group discussion, we can list some of them:

-The participants are able to raise their own issues that they feel are important.

-Unlike one-on-one interviews, focus groups allow the interviewer to be less intrusive, and discussion can take its own direction – people are often more candid and spontaneous in a group discussion.

-Discussion among focus group participants can generate new information and raise new issues providing a range of responses with useful information.

6.3.2.1 Procedure of conducting the focus group discussion:

-The workshop started by introducing the researcher and then explaining the purpose of the focus group and the value of the participants' views and opinions.

-The Workshop/ Focus group discussion was conducted among 60 students (there are four groups and each group is made of 20 students) who were divided into small groups (four students per group) to discuss and answer eight questions.

-Participants have been allowed to do most of the talking, and have been provided sufficient time to gather and write down their thoughts.

-The researcher stressed that everyone's view is important and there are no incorrect answers and almost everyone had the opportunity to speak.

-By the end of this workshop students have been asked to submit small reports of their discussion that will be taken into account to design lectures that best meet their needs.

6.4 Piloting and Validation of the questionnaire:

The questionnaire was designed in English; it consisted of three pages and was elaborated to be answered within twenty minutes. Dornyei (2003) indicates that the optimal length of a questionnaire in second language research is three to four pages. It should not exceed a 30-minute completion limit.

While designing the questionnaire, the researcher paid special attention to the layout of the questionnaire in terms of fonts, spacing, and paper quality. Oppenheim (1992)

argues that the professional quality of the layout can give a good impression about the questionnaire, which in turn affects the quality of the responses.

Dornyei (2003) indicates that respondents can be reluctant to give honest answers about opinions and perceptions. However, respondent confidentiality can encourage honesty and willingness to disclose. Therefore, the questionnaire was designed to avoid individually identifiable information. The respondents were not required to write their names. Moreover, the participants have been told that the data was to be used for research only and that all responses would be held confidential.

All the respondents were adults and participation was voluntary. The questionnaire did not ask about sensitive data. Therefore, the information elicited from the data reflected minimal risk on the respondents.

Next the questionnaire was piloted to check its validity, reliability, and applicability.

Piloting ensured that:

- 1- The questions were related to the respondents' field of study.
- 2- The questions were clear and easy to read.
- 3- The time taken to answer the questionnaire was reasonable.
- 4- All items were easy to understand.

Dornyei (2003) and Oppenheim (1992) indicate that 20 minutes is a suitable time for a successful questionnaire. Since the average time taken to answer the questionnaire among all respondents was within a time frame of twenty minutes, the length of the questionnaire was acceptable.

Chapter Four: Presentation, Analysis and Discussion of data.

7.1 Analysis of data.

7.2 Analysis of the previous given courses.

English for Specific Purposes (ESP) is used where English is learned with some specific vocational or educational purpose in mind. It concentrates more on language in context than on teaching grammar and language structures separately. It covers subjects varying from architecture, accounting or computer science to tourism and business management and is integrated into a subject matter area important to the learners.

In this part we are going to analyze the courses taught in the department of architecture in accordance with the requirements that have been indicated in the theoretical part.

In teaching ESP certain fundamental questions should be addressed:

- 1) How extensive should the ESP vocabulary be?
- 2) What grammatical constructions should be emphasized?
- 3) What is the purpose of giving texts from the discipline?
- 4) Which of the four skills should be given more importance in EAP?
- 5) How skills are taught?

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

- More focus is given to the teaching of technical vocabulary.
- The grammar taught is very general and not purposeful.
- Carrier content and real content are taught separately.
- Examples and activities are taken from the everyday life.
- Students are given only some reading activities.
- Total absence of teaching the other skills (Listening, Speaking, and Writing).

7.2.1 Vocabulary

One of the main problems of teaching ESP is vocabulary. Vocabulary plays a key role in teaching foreign languages in general and in professional course in particular. ESP teaching implies teaching the vocabulary of a special text. Indeed, the vocabulary of a special text consists of three layers: general words, scientific words and terms. Basic general words must have been learnt before the University studies. Terms are the gist of the specialty and are usually better known by students than by teachers. The emphasis, consequently, is on the scientific vocabulary which is, as it were, the bone of every special text. However, the general vocabulary is never taught properly at school and has to be acquired at the University level.

What we can notice in the teaching of vocabulary at the department of architecture is that more emphasis is given to the teaching of technical or specialized vocabulary.

It has already been mentioned in the theoretical part that it is not the job of the ESP teacher to teach professional or technical vocabulary. It consumes too much time and he/she will probably not do it well. ESP teachers must see that dictionaries for specialized fields are readily available and play an important role in the description of the specific language usage.

Instead, the English teacher ought to concentrate on "frame words" which although not technical terms or specific vocabulary are frequently used in technical/specialized writing e.g. contain, increase, combine, approximate etc.

ESP teachers shouldn't concentrate on the very specialized vocabulary items as students will get those from other sources that they already know.

7.2.2 Grammar.

The difference between ESP and EGP teaching is that the former is taught in context (example and activities are given from the discipline) while the latter in isolation (the grammatical structures are taught separately and examples are taken from everyday life). Unfortunately, it is the case of ESP teachers at the department of architecture who teach grammar by presenting the structures separately, and then giving activities to practise. However, with growing weight of evidence showing that language is best learned in context there is a strong case to be made for students learning grammar from texts i.e. the text is the starting point and the source of the language to be learned. The advantage of focusing on a structure or structures in an authentic text is that it enables the students to see these structures functioning in a genuine context.

The important first stage is to work through the text so that learners are familiar with the meaning: the students must understand the message, the vocabulary, and the general meaning implied by the constructions before starting to work on grammar analysis.

The point of focus will depend partly on the text itself (what features of the grammar are particularly well exemplified in this text).

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

7.2.3 Content.

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

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

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

7.2.4 Skills.

7.2.4.1 Reading.

Regarding the teaching of skills we can observe that more focus is on to the teaching of the reading skill. In addition to the analysis of the courses, a structured interview was conducted with teachers of the English course at the department of architecture. They were asked about the skills they teach and the strategies they follow to teach them, and they confirmed the researcher's observation; they replied "we teach the reading skill most often." They added: "we distribute the handouts, we read once and then each time we ask one of the students to read a paragraph".

Reading is one of the language teaching strategies. Reading activities should, from the beginning, be directed towards normal uses of reading.

-ESP students need reading because:

-they want information for some purpose;

-they need instructions in order to perform some task for their work or for their daily life; (they want to know how an appliance works, interested in how a building is structured).

-Teachers should teach reading activity to make the students:

- grasp the main idea, or overall meaning;

- decode its particular vocabulary.

In short, reading is of great importance in EAP teaching.

Note: How the four skills should be taught is mentioned in the theoretical part.

7.3 English Teachers' Interview Data:

Three English teachers who are currently teaching the ESP course at the department of architecture were interviewed.

The teachers have been asked about the degree they have we noted that two of them have got a B.A. degree while one of them is a second year Master student and none of them is a permanent teacher at this department. Hutchinson and Waters (1987: 160) state that: "*Many teachers who have trained for General English or for the teaching of Literature may suddenly find themselves having to teach with texts whose content they know little or nothing about.*"

The interviewer asked the instructors if they know what is meant by the term ESP and their answers were as follows: one teacher said: "I do not know what is meant by ESP", the second one replied "I do not know that much about it but all I know is that it is English for specific purposes" and the third teacher answer was: "of course I do know because I have studied the ESP course before."

The teachers were asked if they studied the ESP course and two of them replied “no”, this course was only part of the LMD curriculum. However, the teacher who is preparing her Master replied: “I had the ESP course for five semesters.” The two teachers who did not study the ESP course were asked if they have an idea about ESP teaching and one of them said “I think it is the teaching of specific English by using special lexicon and texts.” While the other teacher believes that ESP is the teaching of technical terms related to a particular field.

Regarding the use of needs analysis one of the teachers did not know what is meant by the term needs analysis. The second teacher said that she does not use it at all; however, the third one stated: “Needs analysis is a huge term that I do not actually use, but I always ask my students about their needs.” She added if I have not studied the ESP course before I would not be aware of what needs analysis is. The teacher was asked about the means she uses to ask about her students needs; she responded: “I ask them oral questions sometimes in public and sometimes I ask any one of them about what they need from the English course and based on their answers I design my lectures.” She confirmed that needs analysis is very important in any ESP teaching. Since the other two teachers do not use needs analysis; they were asked about the parameters they take into consideration when designing their lectures. They replied “we choose any text that is related to architecture.”

While they have been asked about the content they teach in this course all the three agreed that the content of their course includes architectural texts and vocabulary.

The interviewer wanted to know how these teachers teach vocabulary and the three of them use the same method. They bring texts related to the students’ speciality (architecture), depict its technical vocabulary, explain them and give some definitions; and sometimes they provide them with lists of vocabulary.

The type of vocabulary English teachers at the department of architecture teach is the technical one; however, one of the teachers diversifies the course using the two types (technical and semi- technical).

Teachers, then have been asked about grammar teaching and its importance in the field of ESP. One of them said that it is of great importance while the two others argued that it is important only for beginners and they rarely teach it to their students because they believe that teaching technical vocabulary is much more important. The researcher was curious to know about how they teach grammar and they agreed on one answer “we do not teach grammar from the texts but we teach it in isolation. We bring examples and activities from everyday life.”

The grammatical items they teach are: tenses, parts of speech, types and kind of sentences.

According to the teachers the texts were related to the students’ field.

In response to whether or not the tasks, activities, and examples in the course were related to the students’ field of studies, all the three English teachers said that the tasks and activities are taken from everyday life and are not related to the students’ field of study.

The English teachers were requested to indicate if the contents of the course were relevant to the students’ level. All the teachers agreed that the contents were partly relevant to the students’ level.

The teachers were asked what teaching aids they use to assist teaching and they answered that they only use the chalkboard and the handouts. One of them pointed out: “I would love to use ICT. It is something that I like to use in my class, but the means are not available.” This derives us to that the use of teaching aids is deficient.

Teachers were asked about how they select their texts and whether or not they collaborate with specialist teachers. Unfortunately, there is no co-operation at all between the language teachers and the subject teachers. Kennedy and Bolitho (1984: 13) put:

“A further aspect concerns the role of the subject teachers, since any decision to use an ESP approach relating to a specific subject will inevitably demand some degree of co-operation between language teachers and subject specialists.”

Hutchinson and Waters (1987: 162) put that: *“The teachers' competence is an essential ingredient in the teaching-learning process and must therefore, be able to influence such matters as the choice of texts.”* About the role of texts, Hutchinson and Waters (1987:162) specify that: *“Texts, in other words, should not be selected as texts, but as elements in a learning process.”*

The two skills that ESP teachers lay more emphasis on are reading and speaking. We can infer that the two other skills are neglected and according to the teachers they are not an absolute necessity. About the skills Kennedy, and Bolitho (1984: 69) show that: *“In any case, the skills are seldom practised in total isolation; a lesson focused on reading may involve any or all of the other skills.”*

The researcher wanted further information concerning the teaching of these two skills and the three of them reported that they teach reading by delivering texts they read once and then each student read a paragraph. Concerning the speaking skill three different opinions were stated: one believes that “she hits two birds with one stone” she said: “ when the students read the text they are training their speaking skill.”; the other teacher added that after reading she starts asking some questions about the text so that the students have the opportunity to speak. However, the third one asks her students some interesting questions in order to urge them to talk. The researcher was interested

to know the kind of questions she asks and the response was: "I ask questions like: why do not we have skyscraper in Algeria? Is it because of financial means or what?" she observed that such kind of questions motivate her students and consequently they find themselves trying to speak the English language by arguing, explaining etc.

As a matter of fact, Kennedy and Bolitho (1984: 69-70) provide one example of the use of the skills and state:

A sample teaching unit might consist of: (a) priming of the reading topic by discussion; (b) reading of the text with a task clearly defined; (c) a transfer exercise with the relevant information extracted from the text and written up in note or tabular form; (d) discussion of individual/groups results; and final version written up in full, rather than note, form. In this sequence of activities, although the main point of the activity is (b), the optional activities (a), (c), (d) and (e) can be introduced to provide an input and an output to the reading skill. This will provide practice in the other skills and also provide for a variety of different interaction between teacher, individual students and groups.

The two English teachers were requested if they found students' interest as high, average, or low. One of them said that is difficult to know whether they have great interest or not, and she generally attributes the students' interest to their poor language skill background at schools, but the other teachers noted that students have an average interest in the course.

Generally, it is possible to infer that students' average interest was only motivated by scoring good grades rather than improving their language proficiency.

The three teachers were asked if they have already taught in some other departments and two of them had previous teaching experience at Political Sciences and Arabic departments while the other teacher has not taught before.

The other question was whether the teachers had any specific training in the teaching of English as a foreign or second language. The three teachers have received a specific training in TEFL/TESL. Thus, Hutchinson and Waters (1987: 160) state that: *“ESP teachers need to arm themselves with a sound knowledge of both theoretical and practical developments in ELT in order to be able to make the range of decisions they are called upon to make.”*

Concerning students' attendance at the course, the respondents said that it is compulsory only in the classical stream, however; it is optional in the LMD system. ESP teachers believe that they would be more effective teachers if they were attracted by the students' specialty. One teacher added: *“I would be more effective if I taught at the department of computing because it is my cup of tea and teaching is all about love and passion.”*

The allotted time for teaching the ESP course at this department is only one hour and half per week which is according to the teachers not sufficient at all to realize the course objectives. Kennedy and Bolitho (1984: 12) put that: *“the need may not be so obvious and the study of English may have to compete, in terms of time and commitment. This can happen in cases where the decision to have an English programme at tertiary level is taken by administrators because it is regarded as essential for achievement in, say, chemistry or physics.”*

Teachers when interviewed were asked if they find difficulties in the preparation of their lectures and all of them said: “yes, we do face problems.” The researcher asked about the kind of problems faced by those teachers and the three find difficulty in understanding the technical terms and in selecting texts. One of them added “one word took me one week to understand, and once I delivered the lecture I was surprised because I realized that my students already know the meaning of the word.”

The other two mentioned: “the technical vocabulary is better known by our students and we always learn from them.” All scholars agreed that it is not the task of the EFL teacher to teach specialized vocabulary, all he should do in this respect is to check that dictionaries are readily available for his students.

7.4 Students’ focus group data.

The students’ workshop was done among sixty randomly selected students and on eight relevant points in order to analyze the situation of English language teaching-learning.

Regarding the expectations the students had of the course being offered, the majority of the students agreed that they expected it would help them to gain language proficiency applicable in their academic year and even in their professional career. More specifically, these students expected the course to offer them fundamental communication skills of writing essays, articles and reports, speaking in discussions, and in front of the class, and reading different texts.

A part from basic communication skills, most attendants of the discussion wanted the course to provide them with lessons of grammar and vocabulary, which are helpful to develop their speaking, reading and writing skills. Then the students discussed whether or not the course meets their own needs. In this regard, the groups had the same answer; sometimes it does and most of time it does not.

The students also discussed the relevance of the course to their level and most of them said that the contents of the course were up to their level. The students were asked if their teachers use needs analysis questionnaire before designing their lecture and unfortunately their reply was “no”.

In addition, the participants of the discussion agreed on the relevance of the tasks, activities, and examples to their academic purposes in general. However, they felt that the activities, tasks and examples were not always related to their field. They added that most examples provided (for instance in grammar) are not related to their field of study but taken from everyday life.

Concerning the use of teaching aids, all the students agreed that their English teacher does not use tape-recorders, videos, realia, language laboratory lessons or overhead projectors in the teaching-learning process; but the teacher frequently used handouts or chalkboard. However, this frequent use of handouts and blackboard did not satisfy the students learning preferences because they clearly indicated in their answers that they needed to learn through videos, overhead projectors, and so on.

The students in the discussion appreciated the occasional encouragement provided by their English teacher to involve the students in pair and group discussions. According to the participants, the teacher sometimes encouraged students to answer questions through discussion in English. The teacher did not want the students to sit individually and answer questions; instead the instructor preferred group discussion. Students also said that pair and group discussion were very important.

The students also agreed in the discussion they conducted that they had average not high interest in the course because first it did not meet directly their needs and second the instructor talked much about the activities and tasks instead of giving the learners the opportunity to practice the language skills.

At last, the findings of the group discussion results greatly emphasized the value of speaking in the course. Generally, it is possible to deduce that the course did not meet the students' learning needs and lacked the use of appropriate methodology.

7.5 Students' Needs Analysis Questionnaire.

Question 1: Do you consider English important to your studies?

-Yes

- No

This question has been asked in order to know the importance of English for this kind of learners. As Kennedy and Bolitho (1984: 6) point out: "*Much of the demand for ESP has come from scientists and technologists who need to learn English for a number of purposes connected with their specialisms.*"

Importance of English	Frequency	Percentage
Yes	53	88,33%
No	07	11,67%

Table 04: Importance of English

The table indicates that 88, 33% of respondents have answered "Yes" while 11, 67% have answered "No". Since a large proportion of fourth-year students have answered "Yes", one can conclude that English is very important for their studies, and therefore they are highly motivated to study the English course.

Undoubtedly, this motivation has to be taken into account in terms of specified needs expressed by the students. Kennedy and Bolitho (1984: 14) assume that: "*If it is possible to find out a student's motivation for learning English and match the content of the course to this motivation, the chances of successful language learning are increased.*"

Question2: How would you describe your attitude towards English language learning at the beginning of your studies:

- a. favourable?
- b. unfavourable?

The second question has been asked in order to make an appreciation of the attitude of the students towards English learning at the beginning of their studies. Kennedy and Bolitho (1984: 16) mention that: "*Attitude to an ESP course may be influenced by a student's previous learning of English.*"

Options	Frequency	Percentage
A	52	86,67%
B	8	13,33%

Table 05: Student's Attitude towards English Learning.

According to the results recorded in the table, 86,67% of the respondents have expressed a favorable attitude towards English learning while 13,33% have not.

Those who have expressed a positive attitude towards English learning might have acquired a valuable experience in their previous English learning. They may also feel a further need for learning English because of the specificity of their subject discipline. According to Kennedy and Bolitho (1984: 135), "*A learner is bound to approach an ESP course with heightened expectations.*"

If this is not the case for the other 13,33% who have showed a negative attitude, it may be explained by an unsuccessful previous English learning or perhaps by the feeling that English learning is not an absolute necessity.

Question 3: Do you find the number of hours provided for English learning:

- a. too much?
- b. sufficient?
- c. just reasonable?
- d. not sufficient?

The third question has focused on the students' perception of learning needs related to the period of time which is allotted to the English course.

Most needs analysts, in fact, consider that time is an essential factor which must be taken into account when conducting an ESP course.

Robinson (1989: 398) expresses this fact: "*...ESP courses are normally constrained by a shortage of time.*"

Thus, in the question, four options have been proposed in order to obtain a valuable appreciation concerning this main point.

Option	Frequency	Percentage
A	1	1,67%
B	9	15%
C	15	25%
D	35	58,33

Table 06: Students' Opinion about English Learning Period.

Table 06 summarizes the results that have been obtained for the four options. The distribution starts from the least percentage for the first option up to the highest percentage for the last option. The increase in the percentage is seen as such: 1, 67% for the first rank, 15% for the second rank, 25% for the third rank and finally 58, 33% for the fourth one. It clearly indicates that a large proportion of the sample think that the number of hours allocated to English learning is not sufficient, if not just reasonable.

Question 4: At the present time, do you use books/documentation in your own field printed in English?

- Yes

- No

Option	Frequency	Percentage
Yes	24	40%
No	36	60%

Table 07: Use of Scientific Books Written in English.

On the basis of the results shown in table 07, we notice that 40% of the respondents have answered "yes" whereas 60% have answered "no". The percentages indicate that the majority of students do not use specific documentation written in English, however, the rest do. In fact, reading documentation in English is seen a source "*providing access to technology and science*" (Kennedy and Bolitho, 1984: 11).

Question 5: If yes, what percentage of books or documentation printed in English do you approximately use?

a.25%

b.50%

c.75%

d.100%

Option	Frequency	Percentage
A	15	62,5%
B	06	25%
C	02	8,33%
D	01	4,17%

Table 08: Percentage of Use of Books or Documentation Written in English.

The results recorded on table 08, show that 62,5% of the students have taken the option "a", while 25% have preferred the option "b", for the option "c" the percentage of students is 8,33%. But the last option has got only 4,17%. The highest percentage appears in the option "a", which expresses a use of specific books written in English but in a reduced amount.

Question6: Do your architecture teachers encourage you to use specific documentation written in English?

- Yes
- No

Option	Frequency	Percentage
Yes	22	36,37
No	38	63,33

Table 09: Use of Scientific Documentation Written in English.

Concerning the use of this specific documentation written in English, we notice that the option "yes" has received 36, 37% of answers while the option "no" has received 63,33%.

Question 7: If yes, what are the objectives of the use of this specific documentation?

- a. to develop your knowledge in the domain of architecture.
- b. to write summaries/essays related to your field.
- c. to write a 'mémoire'/dissertation submitted to a board of examiners at the end of the fifth year.
- d. others (please specify).

Option	Frequency	Percentage
a	16	72,73%
b	06	27,27%
c	0	0%
d	0	0%

Table 10: Objectives.

The results that have been summed up in table 10 state that 72,73% of the students use specific texts written in English to develop their own knowledge in the domain of architecture; the option "a" has received 72,73%; the options "b" and "d" are equal in ratio, i.e.0%.

Among the objectives that have been listed, it is the one of developing knowledge through reading which interests most students. Then consulting books written in English for writing summaries constitutes a valuable importance, but it seems to be difficult for them. Kennedy and Bolitho (1984: 71) put:

“EAP groups at any level are certain to need reference or library skills. They will need to know how to use the catalogues in a library, how to look up topics in an index, how to get the best out of a bibliography, how to use dictionaries, encyclopedias and other works of reference. A student may be given a project or assignment in his special subject. He may well have available a list of recommended reading, some of which may be appropriate for his project.”

In reality, what is written and submitted to evaluation may determine success or failure. It seems that architecture students are not interested to write their dissertations in English, therefore, the option "c" has not been selected. The option "d" has been proposed as the last instance to encourage the students end the list of the items. Unfortunately, nothing has been added to enlarge our comprehension of some other objectives.

Question 8: Evaluate your level of English:

- a) - poor .
- b) - below average.
- c) - average
- d) - good.
- e) excellent.

The eighth question is seen as a means to assess the students' level in English at the present time with regard to the language learning that has been achieved during their studies in a successful or an unsuccessful way. In this question, the students have been asked to make an evaluation about their own level because their personal opinion is worth considering.

The aspect of level which is questioned here involves the linguistic skills and abilities acquired by the students in agreement with their needs of the language in their specific field. Thus, Robinson (1989: 396) puts: *“Many students all over the world are studying technical or academic subjects wholly or partly through the medium of English: their command of the English language must be such that they can reach a satisfactory level in their specialist subject studies.”*

Option	Frequency	Percentage
a	09	15%
b	10	16,67%
c	25	41,67%
d	14	23,33%
e	02	3,33%

Table 11: Evaluation of students' level.

Table 11 sums up the results recorded in the seventh question. Respectively, 15% of the respondents have selected the option "a" while 16,67% have preferred the option "b"; the option "c" has reached the highest score 41,67%; option "d" has received 23,33% and finally the option "e" scored the lowest percentage. This results indicate that almost all of the students have average level in English.

Question 9: What are the main problems that you face in the English Language?

- a) -difficulty in speaking fluently.
- b)-speaking incorrect grammatical sentences.
- c) -difficulty in pronunciation.
- d) -lack of confidence.
- e) -difficulty in Understanding English.
- f) -reading.
- g) -writing.
- h) - learning new words (vocabulary).
- i) - spellings.
- j) - difficulty in asking and giving opinions.

Option	Frequency	Percentage
a	25	17,48%
b	24	16,78%
c	15	10,49%
d	07	04,90%
e	11	07,69%
f	10	06,99%
g	03	02,10%
h	14	09,79%
i	13	09,09%
j	21	14,69%
Total	143	100%

Table 12: The students' main problems in English Language.

Table 12 summarizes the students' main problems in the English language. According to table 12 we can deduce that students' main problem is in speaking the English language where we can see that the highest score was in the two options "a" and "b". Students also find difficulty in asking and giving opinions as it is clearly indicated in the option "j". Students find less difficulty in the other proposed options.

Question 10: Which listening abilities do you want to improve?

- a)-To comprehend speech delivered with native speaker fluency.
- b)-To comprehend conversations on every day social and routine job-related themes.
- c)-To listen to extended lectures/briefs and summarizing main ideas in note form.
- d)-To recognize words in the context by the help of speech sounds.
- e)-To effectively and attentively listen to the information sent by the speaker.

Option	Frequency	Percentage
a	29	23,58%
b	27	21,95%
c	22	17,89%
d	18	14,63%
e	27	21,95%
Total	123	100%

Table 13: Listening abilities to be improved.

In listening 29 respondents (23, 58%) need listening to comprehend speech delivered with native speaker fluency. Students show equal importance to the two options "b" and "e" (21, 95%). However, 18 students (17, 89%) have chosen the option "c" those students want to improve their listening ability to listen to lectures, briefs and thus being able to summarize the main points. Students seem to be less interested to recognize words in the context by the help of speech sounds because it has received the lowest percentage (14, 63%).

Question 11: Which of the speaking skills do you want to improve?

- a) - to participate in discussions.
- b) - to form grammatically correct sentences while speaking.
- c) - to use the language appropriately in socio-cultural contexts.
- d) - to speak fluently and accurately.
- e) - to ask and answer questions.
- f) - to pronounce words clearly and correctly.
- g) - to be confident while speaking.

Option	Frequency	Percentage
a	34	17,08%
b	32	16,08%
c	27	13,57%
d	28	14,07%
e	32	16,08%
f	23	11,56%
g	23	11,56%
Total	199	100%

Table 14: Speaking skills to be improved.

Table 14 indicates that students want to form grammatically correct sentences "a" 17, 08% , ask and answer questions "e" (16,08%) and hence being able to participate in discussions "b" 16,08%. Speaking the language accurately, fluently and appropriately in socio-cultural context has received almost the same percentage 14, 07%, 13, 57%. These two options "c" and "d" are students' second objective to achieve. The two remaining options "f" and "g" 11, 56% are the least important from the students' point view.

Question 12: Which of the following reading skills do you want to improve?

- a)-to read a range of general authentic texts on every day social and routine job related themes.
- b) - to read notes/books/articles/reports related to architecture.
- c) - to make summaries and deducing unknown words.
- d) - skimming (reading quickly for the main idea or gist.)
- e) - scanning (reading quickly for a specific piece of information.)
- f) - to understand a wide range of technical/ academic vocabulary.

Option	Frequency	Percentage
a	24	17,02%
b	31	21,98%
c	19	13,48%
d	19	13,48%
e	21	14,89%
f	27	19,14%
Total	141	100%

Table 15: Reading skills to be improved.

Table 15 indicates the students' reading needs. 31 of the respondents 21, 98% need to read notes/books/articles/reports that are related to architecture. 19,14% want to understand a wide range of technical/ academic vocabulary.(17,02%) are interested to read a range of general authentic texts on every day social and routine job related themes. 14,89% want to be good scanners to get quickly the specific information they are looking for. 13,48% represents an equal need for the two other options "c" and "d".

Question 13: What do you want to read in English?

Most students want to read books, articles, documentation related to architecture.

Question 14: Which of the writing skills do you want to improve?

a) - to write articles, reports etc...

b) - to use a wide range of technical/academic vocabulary in writing.

c) - writing formal and informal correspondence and documents on practical, social and professional topics.

d)-to write to find a good job.

e) - to summarize and paraphrase information in paragraphs or an essay.

Option	Frequency	Percentage
a	21	19,63%
b	25	23,36%
c	24	22,43%
d	26	24,30%
e	11	10,28%
Total	107	100%

Table 16: Writing skills to be improved.

Concerning the writing skill, students have shown almost equal needs for the four options "a", "b", "c" and "d". 24, 30% need to write to find a good job. 23,36% want to use a wide range of technical/academic vocabulary in their writings. 22, 43% feel the need to write formal and informal correspondence and documents on practical, social and professional topics. 19, 63% wish to be able write articles and reports. Only 10, 28% of the respondents have selected the last option "e". we can deduce that the majority of students are not interested to summarize and paraphrase information in paragraphs or essays.

Question 15: How good your grammar needs to be? I need to know enough about English grammar to be able to...

- a) - Write good English.
- b) – speak good English.

Option	Frequency	Percentage
a	30	39,47%
b	46	60,53%
Total	76	100%

Table 17: Grammar.

Students show high interest in the learning of grammar. However, the majority (60,53%) want to learn grammar in order to be good English speakers while (39,47%) need the mastery of grammar to be able to write good and correct English articles, reports etc.

Question 16: Personal learning goals:

At the end of this course what would you like to achieve?

The following are the students' main goals:

- learn a wide range of technical terms.
- be able to present architectural projects in English.
- master grammar.
- form correct sentences.
- discuss in English.
- speak fluently.
- use English in their future professional career.
- Participate in conferences.
- write articles.
- write criticisms about different projects.

The results of this needs analysis study indicate that a new ESP course focusing on speaking and reading skills should be developed. The ESP course should include oral presentations, specialized vocabulary, grammar activities and topics relevant to students' area of specializations.

Language teaching strategies would also help improve the ESP students' proficiency in the English language. The goal of developing an ESP course for architecture students would have to take into account the principal findings of this comprehensive needs analysis study. A newly designed ESP course would enable these

students to learn relevant specific language context that would serve to prepare them adequately for their academic year and future career in their area of specialization.

The analysis of the students' questionnaire has helped us to discover lacks and wants perceived by these students.

Chapter Four: Suggestions and Recommendations.

8.1 Suggestions for Improvement.

After analyzing and interpreting the findings, obviously it is necessary to propose some suggestions for improvement.

8.1.1 The Prerequisites of an Efficient ESP Practitioner.

Our work cannot be valid unless some suggestions are proposed as tentative solutions. Therefore, our main preoccupation is oriented towards the English teacher who undoubtedly plays a determining role in the process. This is why it seems appropriate to adopt a critical and positive attitude by considering a set of specified criteria imposed upon the language teachers by their own institution when they intend to implicate in an ESP enterprise. These criteria, in fact, should be considered as prerequisites so that the language teachers should be successful in their tasks. Not only an acceptable experience in EFL is needed but also a sufficient training in ESP is required as well. Adapting from general to specific English should be understood and accepted by most language teachers when they move to peripheral departments and scientific subjects. Fortunately enough, nowadays, the English language department is paying more and more attention to this aspect and in the present curriculum of EFL which is taught, an ESP subject is included. Consequently, future teachers can find in it a good opportunity to complete their knowledge.

The principle of team-teaching and collaboration between language and architecture teachers should be put in practice and emphasized during the ESP process because it can have a positive influence on both parts.

The method of team-teaching can be helpful to the language teachers who generally know little or nothing about subject-matter and who can overcome their difficulties or

ignorance by referring to the scientific competence of teachers of architecture on one side.

On another side, subject specialists can ask language teachers to solve language problems of their students especially when they use scientific documentation and authentic texts written in English. Both parts, of course, have to establish their exclusive roles and responsibilities in an atmosphere of mutual understanding and confidence. Hutchinson and Waters (1987: 165) explain the importance of this kind of relationship in:

“ESP teachers might, for example, find themselves having to work in close cooperation with sponsors or subject specialists who are responsible for the learners' work or study experience outside the ESP classroom. This is not always an easy relationship: suspicion of motives is common. The effectiveness of the relationship depends greatly on how it is handled by both parties, but, since it is usually the ESP teachers who have enlisted the help of the subject specialist it is their main responsibility to ensure that potential problems are anticipated and avoided, and that a harmonious working arrangement is created. One of the keys to success in this area is for ESP teachers to establish clear guidelines about their and the specialist's separate and joint roles and responsibilities.”

Language teachers should be aware of their roles as evaluators and researchers because it is in this case that the principle of continuation and improvement can have a full meaning. If they are acting as evaluators and researchers, they will surely investigate objectively the validity of their language teaching, of the methodology to be used, of syllabus and of materials design and content.

The language teachers should also be dynamic enough to negotiate means with the institution the students come from and to try to benefit from the technology and equipment when available to reinforce their teaching.

If this is not possible, they must be able to develop an attitude of flexibility and of adaptability to any inevitable conditions of the environment. Such a suggestion is emphasized by Hutchinson and Waters (1987: 163) who state it as follows:

“The ESP teacher may also have to negotiate in a more physical sense. Cramped classrooms, often in inconvenient locations, badly ventilated or heated, with a great deal of outside noise, are only too common. Equally, the teaching may take place in workshops or on the factory "shop floor" (as in, e.g. EOP), or on the premises of businesses and other concerns, often without such basic classroom "apparatus" as a blackboard. The role ESP teachers are called on to play here is obviously one of adaptability and flexibility. They need to be prepared to accept such conditions as to some extent inevitable, to strive to improvise while also patiently campaigning for improvements with the sponsors.”

Last but not least, the language teachers ought to be open-minded by having permanent discussions with the science students because they are clever and resourceful with their comments and suggestions about a language learning which they are highly expecting wants from. By making the architecture students participate in the elaboration of this teaching, the language teachers can express their willingness in a project where both parts are fully concerned and in which they can find a mutual agreement. Hutchinson and Waters (1987: 163) emphasize this positive attitude by stating:

"One final point to note is that, as with learner needs, teacher knowledge is not a static commodity. Many ESP teachers are surprised at how much knowledge of the subject matter they 'pick up' by teaching the materials or talking to students." It can result in: "...If there is to be meaningful communication in the classroom, it is essential that there is a common fund of knowledge and interest."

8.1.2 Change in the Status of English Teaching.

It is widely agreed that the English language is an international language for communication and for other purposes such as science and technology transfer. This perspective suggests that more attention should be paid to the status of English teaching.

8.1.3 The Role of the Institution.

For efficient English teaching/learning, the students' institution can positively influence it by proposing a set of instructions or recommendations about what should be done.

If this is not always possible, at least it should help the language teacher by providing the access to facilities and by offering a certain number of conditions (timetable, number and size of classrooms). In other words, its contribution infers the goals pursued by both language teachers and students in their activities.

8.1.4 The Role of the ESP Teacher.

In order to allow the English language gain the specific status it has today, the ESP teacher must be aware of his or her own role in the teaching-learning process. This is why he or she should participate actively in the main decisions, namely the ones where his or her opinion is determining.

8.2 Recommendations.

Teachers should concentrate on the learner's interaction (student-centered) rather than lecturing and overwhelming the course with exhaustive list of words and boring grammar exercises. Meaningful interaction with others speakers in the target language enhances the opportunity for competency. Therefore, we have to create opportunities for the learners to create effective communication skills in the classroom. Many researchers have revealed that especially adult learners differ very much in the ways they learn a foreign language. Therefore EFL teachers should be aware of the learning styles of their students.

We have large ESP classes of learners with different learning strategies and learning styles. Consequently, we have to make use of modern technologies in the classes, if not afforded the teacher might resort to utilizing audio visual aids to meet the learners' needs and to motivate them. In addition, there should be a variety of activities such as presentations, problem solving, role-play, field visits and interviews with experts using the target language exclusively.

We do believe that if our comments and suggestions are seriously taken into account, they may contribute in the improvement of ESP teaching/learning at all departments and particularly at the department of architecture.

General Conclusion.

Taking into account the main concepts of needs analysis, we have relied on the different contributions developed by specialists such as Munby (1978), Chambers (1980), Kennedy and Bolitho (1984), Hutchinson and Waters (1987), Richterich and Chancerel (1987) and Robinson (1989, 1991). In our research, we have focused on Present Situation Analysis (PSA) (Chambers, 1980; Richterich and Chancerel, 1987) and on Target Situation Analysis (TSA) (Munby, 1978) as tools of investigation. We have put in practice these fundamental methods in the study of students' needs in ESP at the Department of architecture.

It is vital to indicate the position that each kind of participants occupies in the process of English teaching/learning in the present case study.

If we consider the students, we can see that they express an urging demand of English with varied forms. For these students, learning English is strictly for a utilitarian objective.

Students are aware enough to formulate and to justify this demand of English. We can notice that dissatisfaction has been expressed by most of these students. As far as the timetable is concerned, we perceive that the subject of English occupies the less privileged place compared to the other subjects.

Furthermore, In the case of the English subject, there is no elaborated programme. As a result, this situation represents a real problem of programme content to the English language teacher who generally cannot predict this kind of difficulty.

Moreover, the institution considers that the English language teacher can solve this problem.

Finally, in the Department of architecture, only the science subjects are taken into account while the importance of the English subject is ignored: it has no effect on the success or on the failure of the student.

Regarding the language teacher, we have noticed that he or she belongs to one of the following two categories: either he or she is a teacher freshly graduated in general English or he or she is a teacher who has probably taught general English but is not fully aware of the ESP concepts. This aspect is important enough because it states the situation of the language teacher and more specifically the profile required for achieving such a function. The dichotomy of a novice teacher of general English and an English language teacher with a limited experience of ESP may make us deduce that it is difficult to reach a valuable level of attainment. The way that the language teachers are chosen to be sent to the Department of architecture to teach ESP is not regulated by any scientific prerequisites.

When the language teacher is pursuing his or her activities, he or she realizes progressively the difficulty of his or her role. Specialists in ESP have provided suitable definitions of the profile of an ESP teacher.

When we want to check these definitions in our case study, we can see that the profile of the language teachers sent to the architecture Department does not always obey to the features of such definitions. For instance, much more demand is expected from the language teacher who must express the different roles assumed by the “true ESP teacher or ESP practitioner”, that is, being a ‘teacher’, a ‘collaborator’, a ‘course designer and materials provider’, a ‘researcher’ and finally an ‘evaluator’ altogether (Dudley-Evans, 1997).

Works Cited

- Allen, J.P.B. and Davies, A. *Testing and Experimental Methods*. The Edinburgh Course in Applied Linguistics, Volume 4, Oxford: Oxford University Press, 1977.
- Allen, J.P.B. and Widdowson, H.G. "Teaching the Communicative Use of English". In Mackay R. and Mountford A.J. (Ed.) *English for Specific Purposes: A Case Study Approach*, pp. 56-77. London: Longman, 1978.
- Allwright, R.L. "What do we want teaching materials for?", *ELT Journal*, Vol. 36,1, pp. 5-18, 1981.
- Anthony, L. "Defining English for Specific Purposes and the Role of the ESP Practitioner". *Proceedings of the Japan Conference on English for Specific Purposes*, www.antlab.sci.waseda.ac.jp, 1998.
- Barber, C.L. "Some measurable characteristics of modern scientific prose". In *Contribution to English Syntax and Phonology: Gothenburg Studies in Linguistics*, 14, Stockholm: Almqvist and Wiksell, Reprinted in Swales (1988), pp. 1-14, 1962.
- Bates, M. and Dudley-Evans, T. *Nucleus-English for Science and Technology series*. London: Longman, 1976.
- Bazerman, C. *Shaping Written Knowledge*. Madison, Vol.1: The University of Wisconsin Press, 1989.
- Biber, D., Conrad S. and Reppen R. *Corpus Linguistics: Investigating Language Structure and Use*. Cambridge: Cambridge University Press, 1998.
- Brindley, G. "Needs Analysis in Adult ESL Programme Design". In K. Johnson (Ed.): *The Second Language Curriculum*, pp. 63-78. Cambridge: Cambridge University Press, 1989.

- Celce-Murcia, M. (ed.), *Teaching English as a Second/Foreign Language*, (2nd edition), New York: Newbury House, 1991.
- Chambers, F. "A Re-evaluation of Needs Analysis", *ESP Journal*, Vol.1, 1, pp. 25-33, 1980.
- Chih-Hua Kuo. "Problematic Issues in EST Materials Development". *English for Specific Purposes, An International Journal*, Vol. 12, 2, pp.171-181, 1993.
- Clark, R. "Procedures and Computations in the Analysis of Experiments". In *Testing and Experimental Methods*, Allen J.P.B. and Davies A. (Eds.), pp. 152. Oxford: Oxford University Press, 1977.
- Coffey, B. State of the Art: "ESP- English for Specific Purposes". *The British Council, Language Teaching*, vol.17, 1, pp. 2-16, 1984.
- Cohen, L. and Manion, L. *Research Methods in Education*. (Third edition), London: Routledge, 1989.
- Coleman, H. "Analysing language needs in large organizations". *English for Specific Purposes*, vol.7, 3, pp. 155- 169, 1988.
- Corder, S.P. *Introducing Applied Linguistics*. London: Penguin, 1973.
- Crystal, D. *English as a Global Language*. Cambridge University Press: Canto edition, 1998.
- Cunningsworth, A. "Needs Analysis: A review of the state of the art." *System*, Pergamon Press, vol.11, 2, pp.149-154, 1983.
- Davies, A. "The Construction of Language Tests". In Allen, J.P.B. and Davies, A. (Eds) *Testing and Experimental Methods. The Edinburgh Course in Applied Linguistics*, pp. 38- 104. Oxford: Oxford University Press, 1977.

- Dubois, B. "Something on the order of around forty to forty-four". Imprecise numerical expressions in biomedical slide talks. *Language in society*, 16, pp. 527-541, 1987.
- Dubois, B. "Citation in biomedical journal articles". *English for Specific Purposes*, Vol. 7, 3, pp. 181-194, 1988.
- Dudley-Evans, T. *Developments in English for Specific Purposes: A multi-disciplinary approach*. Cambridge: Cambridge University Press, 1998.
- Fanning, P. "Broadening the ESP Umbrella". *English for Specific Purposes, An International Journal*, Vol. 12, 2, pp.159- 170, 1993.
- Graddol, D. *A Guide to Forecasting the Popularity of the English Language in the 21st Century*. The British Council, The English Company (UK) Ltd, 2000.
- Grellet, F. *Developing Reading Skills*. Cambridge: Cambridge University Press, 1981.
- Hall, D., Hawkey, R., Kenny, B. and Storer, G. "Patterns of thought in scientific writing: A course in information structuring for engineering students". *English for Specific Purposes*, 5: 147-160, 1986.
- Harper, D.P.L. (Ed.). "ESP for the University". *ELT Documents 123*. Pergamon Press in association with the British Council. 1986.
- Holden, S. (Ed.). *English for Specific Purposes*. Modern English Publications, 1977.
- Hutchinson, T. and Waters, A. *English for Specific Purposes: A learning centred approach*. Cambridge: Cambridge University Press, 1987.
- Jacobson, W.H. "An assessment of the communication needs of non-native speakers of English in an undergraduate physics lab". *English for Specific Purposes*, Vol. 5, 2, pp. 173-187, 1986.

- Jenkins, S., Jordan, M. K. and Weiland, P. O. "The role of writing in graduate engineering education: A survey of faculty beliefs and practices". *English for Specific Purposes*, 12, pp. 51- 67, 1993.
- Johns, T.F. and Dudley-Evans, A. "An experiment in team-teaching of overseas postgraduate students of transportation and plant biology." *ELT Documents 106: Team-teaching in ESP*, pp. 6-23. London: The British Council, 1980.
- Johns, T. F. and Dudley-Evans, A. "An experiment in team-teaching of overseas postgraduate students of transportation and plant biology". In J. Swales (Ed.), *Episodes in ESP*, pp.137-155. Prentice Hall, 1980.
- Johns, A.M. "English for Specific Purposes (ESP): Its history, contributions and future". In Celce-Murcia M. (Ed.). *Teaching English as a Second/Foreign Language*, pp. 67-77. New York: Newbury House, 1991.
- Johns, A. M. and Dudley-Evans, A. "English for Specific Purposes: International in Scope, Specific in Purpose". *TESOL Quarterly* 25: 2, pp.297 314, 1991.
- Johnson, D. *Approaches to Research in Second Language Learning*. London: Logman, 1992.
- Johnson, R.K. *The Second Language Curriculum*. Cambridge: Cambridge University Press, 1989.
- Kennedy, C. and Bolitho, R. *English for Specific Purposes*. Hong Kong: Macmillan Publishers Limited, 1984.
- Littlewood, W. *Communicative Language Teaching: An introduction*. Cambridge: Cambridge University Press, 1981.
- Lynch, T. and Mc Grath, I. "Teaching Bibliographic Documentation Skills". *English for Specific Purposes*, Vol. 12, 3, pp. 219-238, 1993.

- Mackay, R. "Identifying the Nature of the Learner's Needs". In R. Mackay and A.J Mountford. *English for Specific Purposes: A Case Study Approach*, pp. 21-37. London: Longman, 1978.
- Mackay, R. and A.J Mountford. "The Teaching of English for Special Purposes: Theory and Practice". In R. Mackay and A.J Mountford (Ed.). *English for Specific Purposes: A Case Study Approach*, pp. 2-20. London: Longman, 1978.
- Morrow, K. "Authentic texts and ESP". In Holden S. (Ed.). *English for Specific Purposes*, pp. 13-15. Oxford: Modern English Publications, 1977.
- Munby, J. *Communicative Syllabus Design*. Cambridge: Cambridge University Press, 1978.
- Munby, J. "Communicative Syllabus Design: Principles and Problems", in Read, J.A.S. (Ed.). *Trends in Language Syllabus Design*. Anthology Series, 13, pp. 55-67. Singapore: SEAMEO Regional English Centre, 1984.
- Nunan, D. *The Learner-Centred Curriculum*. Cambridge: Cambridge University Press, 1988.
- Nunan, D. *Designing Tasks for Communicative Classroom*. Cambridge: Cambridge University Press, 1989.
- Nunan, D. *Research Methods in Language Learning*. Cambridge: Cambridge University Press, 1992.
- O'Malley, J.M. and Uhl Chamot, A. *Learning Strategies in Second Language Acquisition*. Cambridge: Cambridge University Press, 1990.
- Orr, T. *Models of Professional Writing Practices Within the Field of Computer Science*. Unpublished Ph.D. dissertation. Ball State University, 1995.
- Read, J. *Assessing Vocabulary*. Cambridge University Press, 2000.

- Richard, J.C. "Communicative Needs in Foreign Language Teaching". *ELT Journal*. Oxford University Press, Vol. 37, 2, pp. 111-119, 1981.
- Richterich, R. and Chancerel, J.L. *Identifying the Needs of Adults Learning a Foreign Language*. Prentice-Hall International, 1987.
- Robinson, P. "An overview of English for Specific Purposes". In Coleman, H. (ed.): *Working with Language: A multidisciplinary consideration of language use in work contexts*. Contributions to the Sociology of Language 52, pp. 395-427. Berlin: Mouton de Gruyter, 1989.
- Robinson, P. *ESP Today: A Practitioner's Guide*. New York: Prentice Hall, 1991.
- Schutz, N.W. and Derwing, B.L. "The Problem of Needs Assessment in English for Specific Purposes: Some Theoretical and Practical Considerations". In Mackay, R. and Palmer, J.D. (Ed.) (1981): *Languages for Specific Purposes*, pp. 29-49. Program design and evaluation, Rowley, MA: Newbury House, 1981.
- Skeldon, P. and Swales, J. "Working with service English timetables". *ELT Journal*, Vol. 37, 2, pp. 138-144, 1983.
- Stevens, P. "Special-purpose language learning: a Perspective". *Language Teaching and Linguistics: Abstracts*, Vol. 10, n°3, pp. 145-163. Cambridge University Press, 1977.
- Stevens, P. "ESP after twenty years: A re-appraisal". In M. Tickoo (Ed.), *ESP: State of the art*, pp. 1-13. SEAMEO Regional Language Centre, 1988.
- Swales, J. *Writing Scientific English*. London: Nelson, 1971.
- Swales, J. "ESP in the Middle East". In S. Holden (Ed.), pp. 36-38. London MET, 1977.
- Swales, J. "Writing 'Writing Scientific English'", in Mackay and Mountford (Ed.), pp. 43-55, 1978.

- Swales, J. "Aspects of article introductions". *ESP Monographs* n°1, Language Studies Unit, University of Aston, England, 1981.
- Swales, J. *Episodes in ESP*. Hemel Hempstead: Prentice Hall International, 1988.
- Swales, J. *Genre Analysis: English in academic and research settings*. Cambridge: Cambridge University Press, 1990.
- Trimble, L. *English for Science and Technology: A discourse approach*. Cambridge: Cambridge University Press, 1985.
- Weigle, C. S. (*Assessing Writing*. Cambridge: Cambridge University Press, 2002.
- West, R. "Needs Analysis: State of the Art". In Howard, R. and Brown, G. (Ed.) *Teacher Education for Languages for Specific Purposes*, pp. 1-19. Philadelphia: Multilingual Matters, 1994.
- Widdowson, H.G. *Teaching Language as Communication*. Oxford: Oxford University Press, 1978.
- Widdowson, H.G. *Explorations in Applied Linguistics*. Oxford: Oxford University Press, 1979.
- Widdowson, H.G. *Learning Purpose and Language Use*. Oxford: Oxford University Press, 1983.

الملخص

إن المشكل الأساسي في مجال تدريس الإنجليزية لأغراض خاصة على المستوى الجامعي يتمحور أولاً في نقص فهم مدلول الكلمة في حد ذاتها، و ثانياً في التطبيق الميداني لدروس الإنجليزية لأغراض خاصة. فالملاحظات المسجلة من طرفنا جعلتنا نتساءل ما إذا كان تدريس الإنجليزية على مستوى تربوي عال قد يخضع إلى إستراتيجية أهداف محددة مسبقاً. إن هذا البحث يهدف إلى توضيح مفهوم مصطلح الإنجليزية لأغراض خاصة، تحليل دروس الإنجليزية لأغراض خاصة بمعهد الهندسة المعمارية كحالة دراسة، تحديد حاجيات الطلبة و أخيراً وضع عينة لدروس قد تضمن تلبية أفضل لحاجيات هؤلاء الطلبة. إن هذا البحث يوضح أن تطبيق بعض الإستراتيجيات لأهداف محددة مسبقاً قد ينجم عنه نتائج أحسن للطلبة في مجال تدريس الإنجليزية لأغراض خاصة كما أنه سيساعد الأساتذة على فهم أفضل لكلمة الإنجليزية لأغراض خاصة، إضافة إلى القيام بتحليل حاجيات الطلبة و وضع دروس الهدف منها إرضائهم. لقد تم تناول موضوع البحث و التقصي مع طلبة السنة الرابعة بمعهد الهندسة المعمارية مع الأخذ بعين الاعتبار كل متطلبات المنهجية العلمية. إن أهم النتائج كانت عبارة عن جملة من الدروس المنحزة ضمن إطار رفيع المستوى و التي نأمل أن تؤدي إلى تحسين مستوى تدريس الإنجليزية لأغراض خاصة بمعهد الهندسة المعمارية إضافة إلى جملة من الإرشادات الهامة.

Appendix I: Interview with English Teachers of architecture.

Dear Teachers your true responses are very crucial for the success of the research. Thus, you are cordially requested to provide real responses to the questions I ask you. You are guaranteed the confidentiality of your responses. Thank you very much for sparing your valuable time and effort in this interview.

Q1-Which degree do you have?

- a. a BA (Licence) degree
- b. a magister or master degree?
- c. others (Please specify).....;

Q2-What is your status as a teacher:

- a. fully-fledged(Permanent) ?
- b. part-time (Vacataire)?

Q3-Do you know what is meant by ESP?

Q4-Have you already studied the ESP course?

Q5-If no, do you have an idea about it?

Q6-Do you use needs analysis before designing your lecture?

Q7-What are the parameters you take into consideration when designing your lectures?

Q8-What are the contents you teach in this course?

Q9-How do you teach vocabulary?

Q10-Which of the following types of vocabulary do you teach?

-Technical vocabulary

-Semi-technical Vocabulary

-General vocabulary

Q11- Do you think that grammar teaching is important?

Q12-Do you teach Grammar to your students?

Q13-If yes, how do you teach it from the text or in isolation?

Q14-What are the grammatical items you teach?

Q15-Are the texts related to your students field of study?

Q16-Are the tasks, activities and examples in the course related to your students' field?

Q17-Do you think that the contents of the course relevant to the students level?

Q18-What teaching aids do you use to assist teaching?

Q19- Do you collaborate with specialists in your texts selection?

Q20- In the course of your present teaching, which of the following skills do you tend to lay more emphasis on:

- Reading

Writing

Listening

Speaking

Q21-How do you teach this skill?

Q22-How do you find the students interest in your course? Why?

High average low

Q23-Have you taught in some other departments?

Yes

No

-If yes, please specify:.....

Q24-Have you had any specific training in the teaching of English as a foreign or second language?

Yes

No

Q25- Is students' attendance to the English classes compulsory?

Yes

No

Q26-Do you think that you will be a more effective ESP teacher if you are attracted by the learner's specialty?

Q27-Do you think that the allotted time assigned to the ESP course is sufficient to realize its objectives?

Q28-Do you find difficulties in preparing the lecture?

Q29-If yes, would you mention some of these difficulties.

Thanks a lot for your collaboration.

Appendix II: Focus Group Discussion

Dear Students:

Your answers to the questions are very crucial for the design and evaluation of the English course you are learning. Thus, you are cordially requested to provide real responses to the questions I ask you. You are guaranteed the confidentiality of your responses.

Thank you very much for sparing your valuable time and effort.

1. What were your expectations of the English Course?

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

2. What do you want from the course?

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

3. Does the course meet your needs? If not, what needs are not included?

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

4. Do your teachers use needs analysis questionnaire to design lectures that best meet your needs?

5. Do you think that the contents of the course are relevant to your level?

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

6. Are the tasks, activities, and examples related to your field of studies? If yes, how?.....

.....

7. What teaching aids do teachers use to assist the teaching? (Tape recorders, videos, language laboratory lessons or overhead projectors)

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

8. Does the course encourage you to discuss in pairs/groups issues related to your field of study?

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

9. How is your interest in the course? High, average, low and why?

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

10. Feel free to give your comments regarding the course vis-a-vis your language needs.

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

Thank you

Appendix III: Students' Needs Analysis Questionnaire.

'What help do you need with your English?'

This questionnaire asks for your answers to this question in order to

design lectures based on your needs.

Please read the questions carefully, and then answer the questions by putting a tick in front of the most suitable answer for you

Q1. Do you consider English important for your studies?

- Yes

- No

Q2. How would you describe your attitude towards English language learning at the beginning of your studies:

a. favourable?

b. unfavourable?

Q3. Do you find the number of hours provided for English learning:

a. too much?

b. sufficient?

c. just reasonable?

d. not sufficient?

Q4. At the present time, do you use books/documentation in your own field printed in English?

- Yes

- No

Q5. If yes, what percentage of books or materials printed in English do you approximately use?

a. 25%

b. 50%

c. 75%

d. 100%

Q6. Do your architecture teachers encourage you to use specific documentation written in English?

- Yes

- No

Q7. If yes, what are the objectives of the use of this specific documentation?

- a. to develop your knowledge in the domain hitecture
- b. to write summaries/essays relateour field
- c. to write a "mémoire" or a dissertation submitted to a board of examiners at the end of fifth year.
- d. others (Please specify)
.....

Q8. Evaluate your level of English:

- a)-poor
- b)-below Average
- c)-average
- d)-good
- e)-excellent

Q9. What are the main problems faced by you in English Language?

- a)-difficulty in Speaking Fluently
- b)-speaking incorrect grammatical sentences
- c)-difficulty in pronunciation
- d)-lack of confidence
- e)-difficulty in Understanding English
- f)-reading
- g)-writing
- h)-learning new words (vocabulary)
- i)-spellings
- j)-difficulty in asking and giving opinions.

Q 10. Which listening abilities do you want to improve?

- a)-to comprehend speech delivered with native speaker fluency
- b)-to Comprehend conversations on every day social & routine job-related themes

- c)-to listen to extended lectures/briefs and summarizing main ideas in note form
- d)-to recognize words in the context by the help of speech sounds
- e)-to effectively and attentively listen to the information sent by the speaker

Q 11. Which of the speaking skills do you want to improve?

- a)-to participate in discussions
- b)-to form grammatically correct sentences while speaking
- c)-to use the language appropriately in sociocultural contexts
- d)-to speak fluently and accurately
- e)-to ask and answer questions
- f)-to pronounce words clearly and correctly
- g)-to be confident while speaking

Q12. Which of the following reading skills do you want to improve?

- a)-to Read a range of general authentic texts on every day social and routine job related themes.
- b)-to read notes/books/articles/reports related to architecture
- c)-to make summaries and deducing unknown words
- d)-skimming (reading quickly for the main idea or gist)
- e)-scanning (reading quickly for a specific piece of information)
- f)-to Understand a wide range of technical/ academic vocabulary

Q13. Reading: What do you *need* to read in English?

Q14. Which of the writing skills do you want to improve?

- a)-to write articles, reports etc.
- b)-to use a wide range of technical/academic vocabulary in writing
- c)-to write formal and informal correspondence and documents on practical, social and Professional topics.
- d)-to write to find a good job.
- e)-to summarize and paraphrase information in paragraphs or an essay.

Q15. Grammar: How good does your grammar *need* to be? I need to know enough about English grammar to be able to...

Write good English

Speak good English

If others, please specify:.....

Personal learning goals:

Q16. At the end of this Course what would like to achieve?

_____ *Thank you for taking the time to complete this questionnaire.*

Appendix IV: The elaborated lectures.

Lecture 01:

Improving students' Speaking Skill:

Seminar Skills lecture.

Since our objective is to best meet the students' needs, this lecture aims at helping the students to be more aware of what is involved in seminar activity and to supply them with some of the interactional language that is used there.

Objectives: by the end of this lecture students will be able to use some phrases which will enable them to:

- present their projects;
- research papers;
- participate in seminars and discussions.

Some Phrases for Academic Presentations

Introduction (after greeting the audience and introducing yourself or being introduced)

The subject/topic of my presentation today will be ...

Today I would like to present recent result of our research on ...

What I want to focus on today is ...

Outlining the structure of the presentation

I will address the following three aspects of ...

My presentation will be organized as can be seen from the following slide.

I will start with a study of ... Next, important discoveries in the field of ... will be introduced.

Finally, recent findings of ... will be discussed.

Introducing a new point or section

Having discussed ..., I will now turn to ...

Let's now address another aspect.

Referring to visual aids

As can be seen from the next slide/diagram/table ...

This graph shows the dependency of ... versus ...

The following table gives typical values of ...

In this graph we have plotted ... with ...

Concluding/summarizing

Wrapping up ...

To summarize/sum up/conclude ...

Inviting questions

Please don't hesitate to interrupt my talk when questions occur.

I would like to thank you for your attention.

I'll be happy/pleased to answer questions now.

Dealing with questions

I cannot answer this question right now, but I'll check and get back to you.

Perhaps this question can be answered by again referring to/looking at table ...

Activity:

Choose any topic or project, you feel that you are interested in, related to architecture, prepare it then present it using the academic phrases that you have learned.

Lecture 02:

Writing Skill:

Objectives: Students will be able to use academic phrases to write articles, reports...

Some Phrases for Academic Writing

Introduction

In this paper/project/article we will focus on ...

In our study, we have investigated ...

Our primary objective is ...

Making a generalization

It is well known that ...

It is generally accepted that ...

Making a precise statement

In particular

Particularly/especially/mainly/ more specifically

Quoting

According to/referring to ...

As has been reported in ... by ...

Referring to earlier work of ...

Introducing an example

e.g. ...

if ... is considered for example

Interpreting

The data could be interpreted in the following way ...

These data infer that ...

Referring to data

As is shown in the table/chart/data/diagram/graph/plot/figure

Adding aspects

Furthermore our data show ...

In addition ... has to be considered

Expressing certainty

It is clear/obvious/certain/noticeable that ...

An unequivocal result is that ...

Expressing uncertainty

It is not yet clear whether ...

However it is still uncertain/ open if ...

Emphasizing

It has to be emphasized/stressed that ...

Summarizing

Our investigation has shown that ...

To summarize/ sum up our results ...

Concluding

We come to the conclusion that ...

Our further work will focus on ...

Further studies/research on ... will still be needed.

Detailed insights into ... are still missing.

Activity: Try to write a small report, or article about the topic that you have already presented by using the appropriate academic writing phrases.

Lecture 03:

Bridging the Gap

Measured by the effect they have on our spirits and imagination, bridges are the highest form of architecture. They stand as metaphors for such much in life. 'Let's cross the bridge when we come to it.' I remark when I went to put off thinking about some nasty dilemma. If I quit a secure job. 'I am burning my bridges'. If I make friends with strangers, I am building bridges. I say, 'it's all water under the bridge.'

Why do we hold bridges in such regard? One reason is surely that, because of their strategic importance, they are often scenes of fierce battles and thrilling heroics. A bridge can often embody the spirit of a city even an entire nation, as the Sydney Harbour or Brooklyn Bridges.

The bridge is a symbol of mankind's belief in its ability to overcome any natural obstacle, no matter how wide, deep or windswept. That belief has occasionally been tragically misplaced, but it has never been shattered.

What is indisputable is that our own age has seen one of the most innovative bursts of bridge building ever.



The Akashi Kaikyo Bridge in Japan is the longest, tallest and costliest suspension bridge ever constructed.

Connecting Kobe with Awaji-Shima Island, the bridge has been built to withstand hurricanes, tidal waves and earthquakes. It has a total length of 3,910 meters.



The Golden Gate Bridge spans the mile-wide mouth of San Francisco Bay. The total length of the bridge is 2,739 meters. The bridge expands on hot days and contracts when it is cold. On hot days the heat lengthens the cable. As a result the bridge becomes 4,9 meters lower and 1,8 meters longer. The bridge was opened on 21 Mai 1937 with a ‘pedestrians’ day, during which 200,000 people walked across the bridge. On the morning of the following day it was opened to traffic.



The Alamillo Bridge across the river Guadalquivir in Seville demonstrates how a striking new bridge can revitalize an old city. The bridge is supported by a pylon and cables which form the graceful shape of a harp. It has a span of 200 meters.



There has been a bridge over the River Vitava in Pargue, Czech Republic for several centuries, but the now famous **Charles Bridge** (Karlovy Most) was built in the 14th century and named after the king. It is unusual because it is made of sandstone, not hard granite, which required some maintenance work in the 15th century after a flood.

In 2005 further repairs started on the bridge. This work was scheduled to be completed within two years. Street artists and tourists can always be seen along its 500 meter length.

Objectives: The activities of this lecture are varied, students will be able to:

- scan the article to locate specifically required information;
- skim the article to get the general idea;
- learn new vocabulary through the use of idioms;
- Use different prefixes;
- use the passive voice; and finally
- share information with their pairs and produce a piece of writing.

Note: This lecture is designed to meet the students' needs. It is a sample lecture that may help teachers design activities that are well exemplified in a particular text, report or article.

Reading

1. Do you recognize the bridges in the photos?

What is the most impressive bridge in your country?

2. Read the introduction. Which of these reasons account for the importance of bridges?

- a)-They are essential for transporting goods and trade.
- b)-They have military significance.
- c)-They bring beauty into our lives.
- d)-They symbolize people or places.

e)-They give people more belief in their ability to achieve things.

3 a. Read the rest of the article. Which bridge:

-was made of soft stone?

-was built to resist disasters?

-changes its dimensions according to the temperature?

-look like a musical instrument?

3 b. Compare the bridges. Think about the following:

Age, length, appearance, use.

Vocabulary : idioms, prefixes

4. Read the first paragraph of the introduction again. Complete these sentences with idioms from the paragraph, in the correct form.

1. I am not leaving this job till I have got something to go to. I do not want to.....

2. We do not need to look at the problem failing sales yet. Lets.....

3. Do not worry about me anymore. It's.....

5 a. Look at these words from the article. Underline the prefixes, then match them with the meanings below.

Indisputable misplaced overcome

Revitalise unusual

1. again

3. wrongly

2. not (2 prefixes)

4. Be too strong/too much

5 b. Add prefixes to these words to change the meaning.

1. important

4. soluble

2. understand

5.define

3. Crowded

6.sensitive

Grammar : the passive voice

6 a. Look at the article again and underline examples of the past simple passive and the present perfect passive. How are these formed?

6 b. Look at these two sentences from the article. Match them with the forms below.

1. An earthquake added a metre to the bridge's length while it *was still being built*.

2. This work *was scheduled to be completed*...

a) passive infinitive

b) past continuous passive

7. Correct the errors in italics in the report.

Complaints *have received* about the recent construction of the Sheridan Hotel in Main Square. It *was completing* in November last year. While it *was constructing*, many residents and business people of the town suffered great inconvenience. Building materials *were delivering* at all hours of the day and night, and the noise level was unbearable. When the foundations *were digging*, the air became polluted and the streets were very dusty. Complaints *were making* daily to the Council but nothing *was doing*.

As a result, several shops *have been closed* for some weeks during the worst period and now several claims for compensation *have received* by the Council .The hotel *has now built* and the Council next week to discuss the complaints and what is *be done* about compensation. We expect the conclusions to publish by the end of the week.

8a Look at these two examples of the passive. Which use a) or b), matches each example?

1. The 'Gherkin' is an impressive example of modern architecture. It was designed by Lord Foster and Ken Shuttle worth.

2. Many tourists have been impressed by the new strange-shaped building in the City of London.

- a. It is more natural to put subjects which consist of a long expression at the end of a sentence.
- b. We prefer to start a new sentence with a familiar subject (something already mentioned).

8b Look at the highlighted passives in the text.

Which use from Exercise 8a does each one illustrate?

Speaking and Writing

9. Work in pairs. You have a photo of one bridge and information about two. Share your information, then write a paragraph about a famous bridge.

Lecture 04:

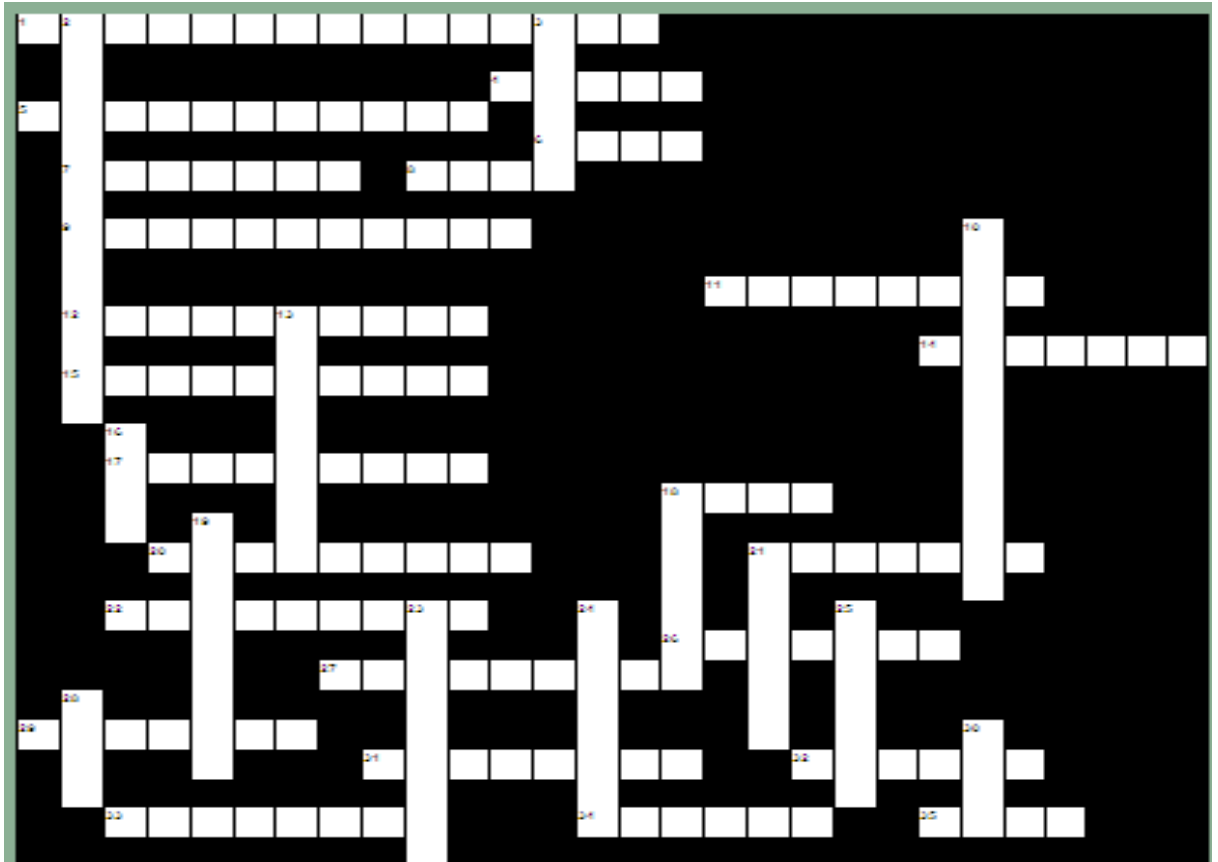


Bridges Vocabulary

Vocabulary. Based on the analysis of the questionnaire students feel the need to learn vocabulary and accordingly this lecture was elaborated.

Objectives:

-students will learn a wide range of both types (technical and semi technical vocabulary.) through the cross word activity.



Across:	Down:
<p>Any force that acts in order to lengthen, or pull apart the ends of, a structural element. When hanging from a rope, both the rope and your arms, will be under Tension.</p> <p>1.</p> <p>A framework of connected members, usually made from steel, which together bear the loads on a bridge.</p> <p>4.</p> <p>A tunnel used by designers to test the effects of high winds on a planned structure. This may be part of a full-size structure, or a small-scale model of the whole structure.</p> <p>5.</p> <p>The unsupported length of a bridge,</p> <p>6.</p>	<p>The simplest is the semi-circular, but a shallow, flattened semi-circle becomes an ellipse, and many mediaeval stone bridges were built with an...</p> <p>2.</p> <p>The physical demands laid upon an object or material by the forces acting on it.</p> <p>3.</p> <p>The internal force that prevents an object from bending freely under the action of the external forces. Sagging and hogging are visible signs of it.</p> <p>10.</p> <p>The build-up of oscillatory, or wave-like, motion in an object such as a</p> <p>13.</p>

<p>between its towers or piers.</p> <p>Any force that acts in order to lengthen, or pull apart the ends of, a structural element. When hanging from a rope, both the rope and your arms, will be under Tension</p> <p>7.</p> <p>A part of a framework that is carrying tensile forces, or keeping two elements of a structure together.</p> <p>8.</p> <p>Any force that acts in order to shorten, or push together the ends of, a structural element. When pushing your hands together, your arms will be under compression. The towers of a suspension bridge, and the piers of an arch bridge, are under compression.</p> <p>9.</p> <p>The central point of a structure. This is often where the structure is at its weakest, and the load at its greatest.</p> <p>11.</p> <p>The points at which the main cables on a suspension bridge are 'anchored' to the ground at either end of the bridge.</p> <p>12.</p> <p>A road or rail bridge of considerable length, usually carrying vehicles at an elevated height across a valley or round a mountain side, as opposed to simply across a specific obstacle.</p> <p>14.</p> <p>Materials whose properties derive from the mixture of their component materials. Individual glass fibres held together by a plastic resin forms the easily moulded, yet strong, 'fibreglass' material used for canoes, car bodies etc.</p> <p>15.</p> <p>The mouth of a river where it empties into the sea. Due to erosion, estuaries are often extremely wide.</p> <p>17.</p> <p>A rigid horizontal element that is used to carry a load. A beam bridge often consists of a road deck reinforced with girders.</p> <p>18.</p> <p>A simplification of the real-life object and situation that preserves their essential nature, and allows a solution using mathematics.</p> <p>20.</p> <p>The upwards bending in a beam,</p> <p>21.</p>	<p>plucked guitar string or the deck of a suspension bridge in a wind.</p> <p>The part of a bridge that carries the roadway. Usually horizontal, and often suspended from cables or resting on an arch.</p> <p>16.</p> <p>A structure, usually brick or stone, built against a wall for support or reinforcement to resist the sideways pressure of the weight of the building.</p> <p>18.</p> <p>An arch constructed by successive layers of brick or stone projecting further towards each other from either side of the arch, until the gap is spanned.</p> <p>19.</p> <p>The vertical rods or cables that are directly attached to the road deck of a suspension bridge, and 'hang' from the two main suspension cables that pass over the towers</p> <p>21.</p> <p>The side support at either end of an arch bridge, necessary to withstand the horizontal forces generated by the arch's shape.</p> <p>23.</p> <p>A cofferdam is a temporary watertight enclosure constructed on the spot where a pier is to be built. A cofferdam usually consists of sheets of steel driven into the ground to create a walled chamber.</p> <p>24.</p> <p>A beam, usually made from concrete or steel, that is designed to strengthen another structural element.</p> <p>25.</p> <p>A force that is to be carried by a structure. Examples include the weight of traffic on a bridge and the wind on the side of a tent.</p> <p>28.</p> <p>The part of a bridge that supports the horizontal element, and carries the load to the ground, especially the intermediate support in a multi-arched bridge</p> <p>30.</p>
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<p>usually over its piers, that is the counterbalance to sagging in other sections of the beam.</p> <p>22. A bridge design in which the road deck is supported by a series of cables attached to the top of one or more towers.</p> <p>26. The tendency of a beam to bend downwards, when acted on by a load, including its own weight.</p> <p>27. The trapezoidal stones that are often used to form a rounded arch.</p> <p>29. The stones at the base of a bridge structure that take the loads onto the foundations.</p> <p>31. The central stone in an arch, and begins the distribution of the vertical 'load' forces down and around the arch.</p> <p>32. An artificially-made organic material that forms very long and stiff fibres.</p> <p>33. A channel carrying water from its source (a lake or spring) to where it is needed.</p> <p>34. A part of a framework that is carrying compressive forces, or keeping two elements of a structure apart.</p> <p>35. A span that consists of an upwardly curved beam. The forces from the centre are distributed outwards.</p>	
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